Request for Proposal

for

Operation and Maintenance Services of Elevators and Escalator in Peshawar BRT System

Issued on.: December 19, 2025

Request for Proposal No.: TPC/OPS/OCB/Elv-Esc/2025-26/004

Procuring Entity.: TransPeshawar (The Urban Mobility Company)

Preface

This Request for Proposal is prepared by TransPeshawar (The Urban Mobility Company) and will be used for hiring Service Provider for Operation and Maintenance Services of Elevators and Escalators in Peshawar BRT System. The procedure of bidding is Single Stage- Two Envelope.

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Section 1 - Instructions to Service Providers

This Section specifies the procedures to be followed by Service Providers in the preparation and submission of their Proposals. Information is also provided on the submission, opening, evaluation of Proposals, and on the award of contract.

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Section 1 - Instructions to Service Providers

A. General

1. Scope of Proposal

1.1 In connection with the Invitation for Request for Proposal (RFP) as indicated in the **Data Sheet (DS)**, the Procuring Entity, as indicated in the **DS**, issues this Request for Proposal document for the scope of Services as specified in Section 5 (Schedule of Requirements). The name, identification, and number of contracts of the open competitive bidding (OCB) are provided in the **DS**.

1.2 Throughout this Request for Proposal document,

(a) the term "in writing" means communicated in written form and delivered against receipt;

(b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and

(c) "day" means calendar day.

2. Source of Funs

2.1 The source of funds required by the Procuring Entity for undertaking this procurement is as indicated in the **DS**.

3. Fraud and Corruption

3.1 It is required that Service Providers shall observe the highest standard of ethics during the procurement and execution of contract. Khyber Pakhtunkhwa Public Procurement of Goods, Works and Services Rules, 2014 defines corrupt and fraudulent practices as follows:

(i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

(ii) "Fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) "Coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(iv) "Collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;

(v) "obstructive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation

into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit rights provided for under these rules and

3.2 The Procuring Entity will reject a proposal for award if it determines that the Service Provider during bidding or while recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract apart from other remedies provided for under the relevant laws.

4. Eligible Service Providers

4.1 A Service Provider may be a natural person or private entity, or any combination thereof with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture or as indicated in **DS**. In the case of a Joint Venture,

(a) all partners shall be jointly and severally liable; and

(b) the Joint Venture shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the Joint Venture during the bidding process and, in the event the Joint Venture is awarded the Contract, during contract execution.

4.2 A Service Provider, and all parties constituting the Service Provider, shall have the nationality of Pakistan. A Service Provider shall be deemed to have the nationality of Pakistan if the Service Provider is a citizen of Pakistan or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of Pakistan.

4.3 A Service Provider shall not have a conflict of interest. All Service Providers found to have a conflict of interest shall be disqualified. A Service Provider may be considered to be in a conflict of interest with one or more parties in this bidding process if any of, including but not limited to, the following apply:

(a) they have controlling partners in common; or

(b) they receive or have received any direct or indirect subsidy from any of them; or

(c) they have the same legal representative for purposes of this proposal; or

(d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the proposal of another Service Provider, or influence the decisions of the Procuring Entity regarding this bidding process; or

(e) a Service Provider participates in more than one proposal in this bidding process, either individually or as a partner in a joint venture, except for alternative offers permitted under ITSP 13 of the Request for Proposal Document. This will result in the

disqualification of all Proposals in which it is involved; or

(f) a Service Provider or any affiliated entity, participated as a consultant in the preparation of the design or technical specifications of the procurement that is the subject of the proposals; or

4.4 Service Providers shall provide such evidence of their continued eligibility satisfactory to the Procuring Entity, as the Procuring Entity shall reasonably request.

4.5 Apart from above, the Service Providers shall provide their eligibility satisfactory to the Procuring Entity, as indicated in **DS**.

5. Eligible Materials, Equipment and Services

5.1 The materials, equipment, and services to be supplied under the Contract shall have their origin in eligible source countries and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Procuring Entity's request, Service Providers may be required to provide evidence of the origin of materials, equipment, and services.

5.2 For purposes of ITSP 5.1 above, "origin" means the place where the materials and equipment are mined, grown, produced, or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components.

B. Contents of Request for Proposal Document

6. Sections of Request for Proposal Document

6.1 The Request for Proposal document consist of Parts I, II, and III, which include all the sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITSP 8.

PART I Bidding Procedures
Section 1 - Instructions to Service Providers (ITSP)
Section 2 - Data Sheet (DS)
Section 3 – Eligibility and Qualification Criteria (EQC)
Section 4 - Bidding Forms (BDF)

PART II Requirements
Section 5 – Schedule of Requirements (SoR)

PART III Conditions of Contract and Contract Forms
Section 6 - General Conditions of Contract (GCC)
Section 7 - Particular Conditions of Contract (PCC)
Section 8 - Contract Forms (COF)

6.2 The Invitation for RFP issued by the Procuring Entity is not part of the Request for Proposal document.

6.3 The Procuring Entity is not responsible for the completeness of the Request for Proposal document and their addenda, if they were not obtained directly from the source stated by the Procuring Entity in the

Invitation for RFP.

6.4 The Service Provider is expected to examine all instructions, forms, terms, and specifications in the Request for Proposal document. Failure to furnish all information or documentation required by the Request for Proposal document may result in the rejection of the Proposal.

7. Clarification of Request for Proposal Document, Site Visit, Pre-Bid Meeting

7.1 A prospective Service Provider requiring any clarification on the Request for Proposal document shall contact the Procuring Entity in writing through EPADS on or before the date and time indicated in the **DS** or raise his inquiries during the pre-bid meeting if provided for in accordance with ITSP 7.4. The Procuring Entity will respond to any request for clarification in the manner as indicated in the **DS**. Should the Procuring Entity deem it necessary to amend the Request for Proposal document as a result of a request for clarification, it shall do so following the procedure under ITSP 8 and ITSP 20.2.

7.2 The Service Provider is advised to visit and examine the Premises and its surroundings and obtain for itself, on its own risk and responsibility, all information that may be necessary for preparing the Proposal and entering into a contract. The costs of visiting the Premises shall be at the Service Provider's own expense.

7.3 The Service Provider and any of its personnel or agents will be granted permission by the Procuring Entity to enter its premises and lands for the purpose of such visit, but only upon the express condition that the Service Provider, its personnel, and agents will release and indemnify the Procuring Entity and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

7.4 The Service Providers are encouraged to attend a pre-bid meeting, if provided for in the **DS**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

7.5 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be disseminated in a manner as indicated in **DS**. Any modification to the Request for Proposal document that may become necessary as a result of the pre-bid meeting shall be made by the Procuring Entity exclusively through the issue of an addendum pursuant to ITSP 8 and not through the minutes of the pre-bid meeting.

7.6 Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Service Provider.

8. Amendment of Request for Proposal Document

8.1 The Procuring Entity may amend the Request for Proposal document by issuing addenda at least five (05) days before the deadline for submission of Proposals.

8.2 Any addendum issued shall be part of the Request for Proposal document and shall be communicated in manner as indicated in **DS**

8.3 To give prospective Service Providers reasonable time in which to take an addendum into account in preparing their Proposals, the Procuring Entity may, at its discretion, extend the deadline for the submission of Proposals, pursuant to ITSP 20.2.

C. Preparation of Proposals

9. Cost of Bidding

9.1 The Service Provider shall bear all costs associated with the preparation and submission of its Proposal, and the Procuring Entity shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

10. Language of Proposal

10.1 The Proposal, as well as all correspondence and documents relating to the Proposal exchanged by the Service Provider and the Procuring Entity, shall be written in the language specified in the **DS**. Supporting documents and printed literature that are part of the Proposal may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the **DS**, in which case, for purposes of interpretation of the Proposal, such translation shall govern.

11. Documents Comprising the Proposal

11.1 The Proposal shall comprise two separate files submitted simultaneously through EPADS portal, one called the Technical Proposal containing the documents listed in TABLE-1, “CONTENTS OF TECHNICAL PROPOSAL” and TABLE-2, “CONTENTS OF FINANCIAL PROPOSAL” under Section 4 (Bidding Forms) of Request of Proposal document.

11.2 In addition to the requirements under ITSP 11.1, Proposals submitted by a Joint Venture shall include, in Technical Proposal, a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful Service Provider shall be signed by all partners and submitted with the Technical Proposal, together with a copy of the proposed agreement.

12. Letters of Proposal and Schedules

12.1 The Letters of Technical Proposal and Financial Proposal, Schedules along with attachments, and all documents listed under Clause 11, shall be prepared using the relevant forms in Section 4 (Bidding Forms), if so provided. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information as required.

13. Alternative Proposals

13.1 Unless otherwise indicated in the **DS**, alternative Proposals shall not be considered.

14. Proposal Prices

14.1 The prices quoted by the Service Provider in the Letter of Financial Proposal, EPADS and in the relevant Schedule (s) shall conform to the requirements specified below.

14.2 The Service Provider shall submit Proposal for complete scope of services as indicated in Section 5 (Schedule of Requirements) on given forms as identified in Section 4 (Bidding Forms). Proposals submitted for incomplete scope shall be rejected.

14.3 The Price to be quoted in Letter of Financial Proposal and in the EPADS shall be the total price of the services. Absence of the total price in the Letter of Financial Proposal and on EPADS portal may result in the rejection of the Proposal. In case there is discrepancy/difference between the Price quoted in Letter of Financial Proposal and the one entered in EPADS portal, the proposal shall be rejected summarily.

14.4 The offered price shall be inclusive of taxes, as per requirement of Letter of Financial Proposal, and Service Provider shall be liable for payment of all applicable taxes, duties, minimum wage, and other levies under the Contract as per relevant law.

14.5 The entered prices shall be typewritten or if written by hand, must be in indelible ink. The relevant schedule not presented accordingly may be considered nonresponsive.

15. Currencies of Proposal and Payment

15.1 The rates shall be quoted by the Service Provider entirely in Pak Rupees.

15.2 The currency of payment of contract price shall entirely be in Pak Rupees.

16. Period of Validity of Proposals

16.1 Proposals shall remain valid for the period specified in the **DS** after the Proposal submission deadline prescribed by the Procuring Entity. A Proposal valid for a shorter period or absence of period of validity shall be rejected by the Procuring Entity as nonresponsive.

16.2 In exceptional circumstances, prior to the expiration of the Proposals' validity period, the Procuring Entity may request Service Providers to extend the period of validity of their Proposals. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITSP 17, it shall also be extended 28 days beyond the deadline of the extended validity period. A Service Provider may refuse the request without forfeiting its bid security. A Service Provider granting the request shall not be required or permitted to modify its Proposal.

17. Bid Security

17.1 Unless otherwise specified in the **DS**, the Service Provider shall furnish as part of its Proposal, in original form, a bid security in the form, amount and currency as specified in the **DS**.

17.2 Unless otherwise specified in the **DS**, any Proposal not accompanied by a substantially compliant bid security shall be rejected by the Procuring Entity as nonresponsive.

17.3 If a bid security is specified pursuant to ITSP 17.1, the bid security of unsuccessful Service Providers shall be returned promptly upon the successful Service Provider's furnishing of the performance security pursuant to ITSP 37.

17.4 If a bid security is specified pursuant to ITSP 17.1, the bid security of the successful Service Provider shall be returned as promptly as possible once the successful Service Provider has signed the Contract and furnished the required performance security.

17.5 The bid security may be forfeited, if

(a) a Service Provider withdraws its proposal during the period of proposal validity, except as provided in ITSP 16.2; or

(b) the successful Service Provider fails to

(i) sign the Contract in accordance with ITSP 36;

(ii) furnish a performance security in accordance with ITSP 37;

(iii) accept the arithmetical correction of its Proposal in accordance with ITSP 30.

17.6 . The bid security of a Joint Venture shall be submitted as indicated in **DS**.

18. Format and Signing of Proposal

18.1 The Service Provider shall prepare Proposal comprising the documents as described in ITSP 11.

18.2 The Proposal shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Service Provider. This authorization shall consist of a written confirmation as specified in the **DS** and shall be enclosed in Technical Proposal. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Proposal, except for unamended printed literature, shall be signed or initialed by the person signing the Proposal. If a Service Provider submits a deficient authorization, the Proposal shall not be rejected in the first instance. The Procuring Entity shall request the Service Provider to submit an acceptable/valid authorization within the number of days as specified in the **DS**. Failure to provide an acceptable/valid authorization within the prescribed period of receiving such a request shall cause the rejection of the Proposal.

18.3 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Proposal.

D. Submission and Opening of Proposals

19. Sealing and Marking of Proposals

19.1 Service Providers shall submit their Proposals electronically by uploading PDF file through the KP-EPADS portal (kp.eprocure.gov.pk) under the Single Stage – Two Envelope Bidding Procedure. Procedures for sealing, marking and submission of Proposals electronically is specified in **DS**.

20. Deadline for Submission of Proposals

20.1 Proposals must be submitted through EPADS portal not later than the date and time as indicated in the **DS**.

20.2 The Procuring Entity may, at its discretion, extend the deadline for the submission of Proposals by amending the Request for Proposal documents in accordance with ITSP 8, in which case all rights and obligations of the Procuring Entity and Service Providers previously subject to the deadline shall thereafter be subject to the deadline as extended.

21. Late Proposals

21.1 In accordance with ITSP 20, the EPADS portal shall not permit the submission of any Proposal after the deadline prescribed for submission. Any attempt to submit after the deadline shall be system-restricted, and such Proposals shall neither be received nor considered by the Procuring Entity.

22. Withdrawal, Substitution, and Modification of Proposals

22.1 A Service Provider may modify, substitute, or withdraw its Proposal – Technical or Financial – at any time prior to the deadline for submission of Proposals, by using the relevant functions available in the EPADS portal, if any. The system shall record the latest version of the Proposal submitted before the deadline as the valid Proposal.

22.2 A Proposal withdrawn through the EPADS portal in accordance with ITC 22.1 shall not be accessible to the Procuring Entity at the time of opening.

22.3 No Proposal may be withdrawn, substituted, or modified in the interval between the deadline for submission of Proposals and the expiration of specified period of proposal validity.

23. Proposal Opening

23.1 The Procuring Entity will open the Technical Proposals in public at the address, on the date and time and procedure as specified in the **DS** in the presence of Service Providers designated representatives and anyone who chooses to attend. The Financial Proposals along with original bid security will remain unopened until the specified time of their opening.

23.2 All Technical Proposals shall be opened one at a time, and the following read out and recorded:

(a) the name of the Service Provider;

(b) the presence of an affidavit stating that a bid security amounting to 2 percent of proposal price without indicating the figure in the letter, has been placed in the Financial Proposal; and

(c) any other details as the Procuring Entity may consider appropriate.

Only Technical Proposals and alternative Technical Proposals, if any, read out and recorded at Proposal opening shall be considered for evaluation. No Proposal shall be rejected at the opening of Technical Proposals.

23.3 The Procuring Entity shall prepare a record of the opening of Technical Proposals that shall include, as a minimum, the name of the Service

Provider, the presence or absence of an affidavit (s) and submission of bid security. The Service Providers representatives who are present shall be requested to sign the record. The omission of a Service Provider's signature on the record shall not invalidate the contents and effect of the record. A copy of the record may be distributed to the Service Providers if so requested.

23.4 At the end of the evaluation of the Technical Proposals, the Procuring Entity will invite Service Providers who have submitted substantially responsive Technical Proposals to attend the opening of the Financial Proposal.

23.5 The date, time, and location of the opening of Financial Proposals will be advised in writing by the Procuring Entity. Service Provider shall be given reasonable notice of the opening of Financial Proposals.

23.6 The Service Provider will notify Service Providers in writing who have been rejected on the grounds of their Technical Proposals being substantially nonresponsive to the requirements of the Request for Proposal Document and return their Financial Proposals unopened.

23.7 The Procuring Entity shall conduct the opening of Financial Proposals of all Service Providers who submitted substantially responsive Technical Proposals, in the presence of Service Provider` representatives who choose to attend at the address, on the date, and time specified by the Procuring Entity. The Service Provider's representatives who are present shall be requested to sign the attendance.

23.8 All Financial Proposals shall be opened one at a time and the following read out and recorded:

(a) the name of the Service Provider;

(b) Amount of Bid Security:

(c) the Proposals Prices; and

(d) any other details as the Procuring Entity may consider appropriate.

Only Financial Proposals read out and recorded during the opening of Financial Proposals shall be considered for evaluation. No Proposal shall be rejected at the opening of Financial Proposals.

23.9 The Service Provider shall prepare a record of the opening of Financial Proposals that shall include, as a minimum, the name of the Service Provider, the Proposal Price, any discounts, and alternative offers. The Service Providers' representatives who are present shall be requested to sign the record. The omission of a Service Provider's signature on the record shall not invalidate the contents and effect of the record.

E. Evaluation and Comparison of Proposals

24. Confidentiality

24.1 Information relating to the examination, evaluation, and comparison of Proposals and recommendation of contract award, shall not be disclosed to Service Providers or any other persons not officially

concerned with such process until information on the Contract award is communicated to all Service Providers.

24.2 Any attempt by a Service Provider to influence the Procuring Entity in the evaluation of the Proposals or Contract award decisions may result in the rejection of its Proposal.

24.3 Notwithstanding ITSP 24.2, from the time of proposal opening to the time of Contract award, if any wishes to contact the Procuring Entity on any matter related to the bidding process, it may do so in writing.

25. Clarification of Proposals

25.1 To assist in the examination, evaluation, and comparison of the Technical and Financial Proposals, the Procuring Entity may, at its discretion, ask any Service Provider for a clarification of its Proposal. Any clarification submitted by a Service Provider that is not in response to a request by the Procuring Entity shall not be considered. The Procuring Entity's request for clarification and the response shall be in writing. No change in the substance of the Technical Proposal or prices in the Financial Proposal, accept as permissible under relevant law, shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Procuring Entity in the evaluation of the Financial Proposals, in accordance with ITSP 30 or as provided for under relevant rules.

25.2 If a Service Provider does not provide clarifications of its Proposal by the date and time set in the Procuring Entity's request for clarification, its Proposal may be rejected.

26. Deviations, Reservations, and Omissions

26.1 During the evaluation of Proposals, the following definitions apply:

(a) "Deviation" is a departure from the requirements specified in the Request for Proposal Document;

(b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Request for Proposal Document; and

(c) "Omission" is the failure to submit part or all of the information or documentation required in the Request for Proposal Document.

27. Examination of Technical Proposals

27.1 The Procuring Entity shall examine the Technical Proposals to confirm that it is in compliance with requirement of the Request for Proposal terms and conditions and that all documents requested in ITSP 11.1 have been provided, and to determine the completeness of each document submitted.

27.2 The Procuring Entity shall confirm that the all the documents and information have been provided in the Technical Proposal as per requirement of the RFP and in accordance with ITSP clause 11. If any of the document or information is missing, the offer may be rejected.

28. Responsiveness of Technical Proposal

28.1 The Procuring Entity's determination of responsiveness of Technical Proposal is to be based on the contents of the Technical Proposal itself, as defined in ITSP11.

28.2 A substantially responsive Technical Proposal is one that meets the requirements of the Request for Proposal Document including Eligibility and Qualification Criteria as stipulated under Section 3 (Eligibility and Qualification Criteria) without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

(a) if accepted, would:

(i) affect in any substantial way the scope, quality, or performance of the Services specified in the Contract; or

(ii) limit in any substantial way, inconsistent with the Request for Proposal Document, the Procuring Entity's rights or the Service Provider's obligations under the proposed Contract; or

(b) if rectified, would unfairly affect the competitive position of other Service Providers presenting substantially responsive Proposals.

28.3 If Technical Proposal is not substantially responsive to the requirements of the Request for Proposal Document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

28.4 Substantial responsiveness shall be pre-requisite for opening of Financial Proposal. Financial Proposal and sealed envelope of bid security of nonresponsive Service Providers will be returned unopened.

29. Nonmaterial Nonconformities

29.1 Provided that Technical Proposal is substantially responsive, the Procuring Entity may waive any nonconformities in the Technical Proposal that do not constitute a material deviation, reservation, or omission.

29.2 Provided that a Technical Proposal is substantially responsive, the Procuring Entity may request that the Service Provider to submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Technical Proposal related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the Financial Proposal. Failure of the Service Provider to comply with the request may result in the rejection of its Proposal.

30. Correction of Arithmetical Errors

30.1 During the evaluation of Financial Proposals, the Procuring Entity shall correct arithmetical errors on the following basis:

(a) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Service Provider there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.

(b) If there is an error in a total corresponding to the addition or

subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.

(c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a), and (b) above.

30.2 If the Service Provider that submitted the lowest evaluated Financial Proposal does not accept the correction of errors, its Proposal shall be disqualified and its bid security shall be forfeited.

31. Evaluation of Financial Proposals

31.1 The Procuring Entity shall evaluate Financial Proposal of substantially responsive Technical Proposals only. Price adjustment due to correction of arithmetic errors, if any, will be affected in accordance with ITSP 30.

32. Comparison of Proposals

32.1 The Procuring Entity shall compare all substantially responsive Proposals to determine the lowest evaluated Proposal, in accordance with ITSP 31.1.

33. Employer's Right to Accept Any Proposal, and to Reject Any or All Proposals

33.1 The Procuring Entity reserves the right to accept or reject any Proposal, and to annul the bidding process and reject all Proposals at any time prior to contract award, without thereby incurring any liability to Service Providers. In case of annulment, all Proposals submitted and specifically, bid securities, shall be promptly returned to the Service Providers.

F. Award of Contract

34. Award Criteria

34.1 The Procuring Entity shall award the Contract to the Service Provider who is substantially responsive to the requirements of Request for Proposal documents and/ or Eligibility and Qualification Criteria and whose financial offer has been determined to be the lowest evaluated financial offer and will be declared as successful Service Provider.

35. Notification of Award

35.1 Prior to the expiration of the period of proposal validity, the Procuring Entity shall transmit the Notification of Award using the form included in Section 8 (Contract Forms) to the successful Service Provider, in writing, that its Proposal has been accepted.

35.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

36. Signing of Contract

36.1 Promptly after notification, the Procuring Entity shall send the successful Service Provider the Contract Agreement.

36.2 Within 28 days of issuance of the Contract Agreement or as indicated in **DS**, the successful Service Provider shall sign, date, and return it to the Procuring Entity.

36.3 The original proposals submitted by the service providers shall be retained by the Procuring Entity

37. Performance

37.1 Within 28 days, or as indicated in **DS**, of the issuance of notification of award from the Procuring Entity, the successful Service Provider shall

Security

furnish the performance security in accordance with the Conditions of Contract, using for that purpose the Performance Security Form included in Section 8 (Contract Forms), or another form acceptable to the Procuring Entity.

37.2 Failure of the successful Service Provider to submit the above-mentioned Performance Security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event, the Procuring Entity may award the Contract to the next lowest evaluated Service Provider whose offer is substantially responsive.

Section 2 - Data Sheet

A. General

ITSP 1.1	The number of the Invitation for Request for Proposal (RFP) is: **TPC/OPS/OCB/Elv-Esc/2025-26/004**
ITSP 1.1	The Procuring Entity is: **TransPeshawar (The Urban Mobility Company)**
ITSP 1.1	The name of the bidding process is: **Operation and Maintenance Services of Elevators and Escalators in Peshawar BRT System** The identification number of the Request for Proposal Document is: **TPC/OPS/OCB/Elv-Esc/2025-26/004**
ITSP 2.1	Govt. of Khyber Pakhtunkhwa.
ITSP 4.1	A Service Provider must be an Association of Persons (AOP) or a Company incorporated in or registered with Registrar of Firms or Security and Exchange Commission of Pakistan (SECP) respectively or any combination thereof in form of a Joint Venture with a formal intent to enter into an agreement or under an existing agreement.
ITSP 4.5	The Service Provider must be/have: i. Registered with FBR for income and sales tax and reflected on active taxpayers list of FBR (In case of Joint Venture applicable to all members); ii. Registered with KPRA for sales tax on services (In case of Joint Venture applicable to all members); iii. A valid PEC license in category C-4 or above with EE11 or ME06 or ME07 or ME03 code of specialization (In case of Joint Venture applicable to one member); iv. not be blacklisted by any federal or provincial public entity in Pakistan, is neither insolvent nor bankrupt, is not in the process of winding up nor his/her properties are under the control of receiver nor his/her business activities have been suspended nor legal proceedings for any of the foregoing are imminent or have been initiated against him/her and has fulfilled all obligations under law for the time being in force. (In case of Joint Venture applicable to all members)

B. Contents of Request for Proposal Document

ITSP **7.1**	Requests for clarification should be received by the Procuring Entity on or before **January 01, 2026, 05:00 PM (PST).** Request for clarification shall be received and responded through EPADS.
ITSP 7.4	A Pre-Bid meeting will take place.

	Date: **January 01, 2026** Time: **11:30 AM (PST)** Place: Main Board Room, TransPeshawar (The Urban Mobility Company), First Floor KPUMA Building Near Main BRT Depot, Chamkani, GT Road, Peshawar, KPK, Pakistan A site visit conducted by the Procuring entity will be organized on the date fixed for pre-bid meeting, if so conducted, on the request of prospective service providers.
ITSP 7.5	Minutes of pre-bid meeting will be hoisted on website of the Procuring Entity and sent to all Service Providers who attended pre-bid meeting apart from publishing on EPADS.
ITSP 8.2	The addendum will be hoisted on website of the Procuring Entity or KPPRA or both apart from EPADS and may be published in newspapers if the Procuring Entity deems necessary and if the amendments are of substantial nature.

C. Preparation of Proposals

ITSP 10.1	The language of the Proposal is: **English**
ITSP 13.1	Alternative Proposals are not permitted.
ITSP 16.1	The Proposal validity period shall be one hundred eighty (180) days.
ITSP 17.1	Bid security shall be submitted in PKR from any scheduled bank of Pakistan to the amount of 2% of Total Proposal Price in shape Bank Guarantee on format as prescribed in Section 4, or in shape of Call Deposit Receipt in the name of Chief Executive Officer (CEO) TransPeshawar. The bid security shall be submitted from the account of the Service Provider who submits the proposal. The Bid Security in original form (in hard form) shall be submitted in separate envelop to the procuring entity on the address given below, on or before the deadline for submission of proposal. The copy bid security shall be kept in Financial Proposal. The Service Provider shall in addition, place an affidavit on E-Stamp paper of PKR150 or above, and duly notarized, in the Technical Proposal stating that a bid security amounting to 2 percent of the total proposal price, without indicating the figure in the letter, has been placed in the Financial Proposal. Otherwise, the Technical Proposal will be considered non-responsive and Financial Proposal will be not be opened. The original bid security shall be kept sealed until opening of Financial Proposal. **Procuring Entity Address:** **Attention:** Chief Executive Officer (CEO), TransPeshawar **Address:** TransPeshawar (The Urban Mobility Company), First Floor KPUMA Building Near Main BRT Depot, Chamkani, GT Road, Peshawar, KPK, Pakistan

	The sealed envelope shall clearly mark with: • Bidder's name and address; • Name of the procurement; and • The words "Original Bid Security" for [Name of Procurement]".
ITSP 17.2	Non-submission of bid security in prescribed manner shall be sufficient ground for rejection of proposal.
ITSP 17.6	In case of Joint Venture is submitting bid security in the Shape of Call Deposit Receipt, the Bid security may be in the name of any one member of Joint Venture in accordance with ITSP 17.1.
ITSP 18.1	In addition to the original Proposal, the number of copies is: **Not Applicable**
ITSP 18.2	The written confirmation of authorization to sign on behalf of the Service Provider shall consist of: The authorization is required if the Service Provider is a firm or company or any combination thereof. If the Service Provider is a sole proprietor or individual, he is not supposed to submit authorization if he is not represented by any representative. An authorization shall be provided on the format as given under Section 4 (Bidding Forms) specifying the representative's authority to sign the Proposal on behalf of, and to legally bind, the Service Provider. If the Service Provider is an intended or an existing Joint Venture, the authorization/power of attorney shall be signed by all partners individually and specify the authority of the named representative of the Joint Venture to sign on behalf of, and legally bind, the intended or existing Joint Venture on the relevant Schedule. If the Joint Venture has not yet been formed, also include evidence from all proposed Joint Venture partners of their intent to enter into a Joint Venture in the event of a contract award.
ITSP 18.2	The Service Provider shall submit an acceptable authorization within three (03) working days.

D. Submission and Opening of Proposals

ITSP 19.1	19.1.1. Once signed and stamped, each Proposal (Technical and Financial) shall be scanned and compiled into separate **PDF files**. 19.1.2. The files shall be clearly named as: • *"Technical Proposal* – Operation and Maintenance Services of Elevators and Escalators in Peshawar BRT System – *[Name of Service Provider]"* • *"Financial Proposal* – Operation and Maintenance Services of Elevators and Escalators in Peshawar BRT System – *[Name of Service Provider]"* 19.1.3. If more than one version of a file is uploaded, the version most recently uploaded **before the deadline** will be considered the **Final/Original Proposal**. 19.1.4. Physical sealing of proposals, except the document (s) required in hard, is not required. However, bidders must ensure that Technical and Financial Proposals are uploaded in **separate clearly named**

	PDF files as stipulated above. If the Technical Proposals and the Financial Proposals are submitted together in one file, the Procuring Entity will reject the entire Proposal. 19.1.5 Apart from the electronic submission the following documents shall be submitted physically (in hard form), in separate envelopes, on the address as indicated, on or before the deadline for submission of proposals. i. Original bid security ii. Original affidavits **Client Address Documents to be Submitted Physically:** **Attention:** Chief Executive Officer (CEO), TransPeshawar **Address:** TransPeshawar (The Urban Mobility Company), First Floor KPUMA Building Near Main BRT Depot, Chamkani, GT Road, Peshawar, KPK, Pakistan 19.1.5. Any document required physically in original form shall be sealed in an envelope, clearly marked with: • Bidder's name and address; • Title of the Procurement; and • The words *"Original Bid Security" and "Original Affidavits for [Name of Procurement]"*.
ITSP 20.1	**The deadline for Proposal submission is:** **Date:** January 12, 2026 **Time:** 11:30 AM (PST).
ITSP 23.1	The Technical Proposal opening shall take place at: Main Board Room, TransPeshawar (The Urban Mobility Company), First Floor KPUMA Building Near Main BRT Depot, Chamkani, GT Road, Peshawar, KPK, Pakistan **Date:** January 12, 2026 **Time:** 12:00 PM (PST).
ITSP 35	The following sub-clauses added to ITB 35: 35.3. The Successful Bidder shall establish/ incorporate special purpose vehicle (new company) within 07 days of Notification of Award. 35.4. The Contract Agreement shall be signed by TPC with the special purpose vehicle (new company) hereinafter called "the Service provider" 35.5. Prior to Contract Agreement signing, the Successful Bidder shall furnish Parent Company Guarantee for each of JV member (in case of JV) or bidder bidding in isolation.
ITSP 36.2	Within seven (07) working days of after submission of Performance Security, the Service Provider shall sign the contact
ITSP 37.1	Performance Security shall be provided within twenty-eight (28) working days of issuance of Notification of Award.

	The following clause is added to ITB 37 ITB 37.3: The Performance Security shall be submitted by the Successful Bidder on behalf of the Service Provider / special purpose company

Section 3 – Eligibility and Responsiveness/Evaluation Criteria

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1. Substantial Responsiveness of Technical Proposals

1.1. Substantial responsiveness of each proposal will be determined on the basis of following criteria:

(a) Technical Proposal shall be determined as complete in accordance with ITB Clause 27;

(b) Eligibility and Qualification of service provider will be assessed in accordance with the criteria outlined under Clause 2 and 3 below and in term of ITB Clause 4;

(c) Agree to perform services in accordance with Schedule of Requirements, Standards and best international practices;

(d) Over all in conformity with Request for Proposal Document.

2. Eligibility

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	

2.1 Country of Constitution

A Service Provider must be an AoP or a company incorporated in or registered with Registrar of Firms or Security and Exchange Commission of Pakistan (SECP) respectively or any combination thereof.	must meet requirement	Not Applicable	must meet requirement	Not Applicable	Schedule 1 or Schedule 1 &2 along with attachments

2.2 Conflict of Interest

No conflicts of interest	must meet requirement	Not Applicable	must meet requirement	Not Applicable	Letter of Technical Proposal

2.3 Registration with FBR

Registered with FBR for income and sales tax and reflected on active taxpayer list.	must meet requirement	Not Applicable	must meet requirement	Not Applicable	Schedule 1 or Schedule 1 &2 along with attachments

2.4 Registration with KPRA

Registered with KPRA for sales tax on Services.	must meet requirement	Not Applicable	must meet requirement	Not Applicable	Schedule 1 or Schedule 1 &2 along with attachments

2.5 Registration with PEC

A valid PEC license in category C-4 or above with EE11 or ME06 or ME07 or ME03 code of specialization	must meet requirement	Not Applicable	Not applicable	must meet requirement	Schedule 1 or Schedule 1 &2 as attachments

2.6 Not Blacklisted

The Service Provider is not blacklisted by any federal or provincial public entity in Pakistan, is neither insolvent nor bankrupt, is not in the process of winding up nor his/her properties are under the control of receiver nor his/her business activities have been suspended nor legal proceedings for any of the foregoing are imminent or have been initiated against him/her and has fulfilled all obligations under law for the time being in force	must meet requirement	Not Applicable	must meet requirement	Not Applicable	Schedule 1 or Schedule 1 &2 along with attachments (Non-blacklisting certificate on E-Stamp Paper of PKR.150 and dully notarized (affidavit) to the effect)

3. Qualification

3.1 Financial Soundness (Historical Financial Performance)

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Submission of audited financial statements for the last three (03) years (2022, 2023 and 2024) to demonstrate the current soundness of the Bidder's financial position. As a minimum, the Bidder's net worth for the last year (2024) calculated as the difference between total assets and total liabilities should be at least PKR. 30 million.	must meet requirement	Not Applicable	Not applicable	must meet requirement	Schedule 3 with attachments

3.2 Financial Soundness (Average Annual Business Turnover)

Minimum average annual turnover of one hundred million Pak Rupees (PKR.100,000,000) calculated within last three (03) years from submitted financial statements.	must meet requirement	must meet requirement	Not applicable	Not Applicable	Schedule 3 with attachments

3.3 Contractual Experience

Executed/ongoing one similar contract (operation and maintenance contract of electrical and/or mechanical systems) to the worth of two hundred million Pak Rupees (PKR.200,000,000) or more in last 5 years in JV or through separate contract.	must meet requirement	Not Applicable	Not applicable	must meet requirement	Schedule 4 along with attachments.

Section 4 - Bidding Forms

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Contents of Technical and Financial Proposals

The Bidders are required to submit their Proposals in two separate envelopes marked as "1. Technical Proposal" and "2. Financial Proposal" as provided below. All the forms/format shall be properly filled and submitted with required attachments. Incomplete or partially filled forms shall not be entertained and rejected.

1. Technical Proposal

"Technical Proposal" shall be comprised of following documents. Order/sequence of document while preparing technical proposal shall be observed to facilitate the assessment of proposals in a systematic manner. Moreover, Technical Proposal shall be numbered.

Table-1

Order	Document Number and Information Required	Check (Y/N)	Page No.
A	**Proposal Submission**		
1.	Letter of Technical Proposal		
2.	An affidavit on E-Stamp paper of PKR.150 or above and dully notarized stating that a bid security amounting to 2 percent of the total proposal price, without indicating the figure in the affidavit, has been placed in the Financial Proposal in accordance with ITSP 17.1.		
3.	**Schedule 5.** Affidavit of Integrity Pact on E-Stamp Paper of PKR.150 and dully notarized		
4.	**Schedule 6.** Authorization/Power of Attorney on E-Stamp Paper of PKR.150 and dully notarized		
B	**Eligibility**		
5.	**Schedule 1 or Schedule 1&2 "Bidder's/Lead Partner Information Sheet" and "Joint Venture Information Sheet"**		
(i)	Articles of incorporation or constitution and/or certificate of registration with Registrar of Firms or SECP		
(ii)	Certificate of Registration with FBR for income and sales tax and Active Tax Payer List (ATL) showing status		
(iii)	Certificate of Registration with KPRA for sale tax on services		
(iv)	A valid PEC license in category C-4 or above with EE11 or ME06 or ME07 or ME03 code of specialization		
(v)	Non-blacklisting certificate on E-Stamp Paper of PKR.150 and dully notarized (affidavit) to the effect that the Service Provider is not blacklisted by any federal or provincial public entity in Pakistan, is neither insolvent nor bankrupt, is not in the process of winding up nor his/her properties are under the control of receiver nor his/her business activities have been suspended nor legal proceedings for any of the foregoing are imminent or have been initiated against him/her and has fulfilled all obligations under law for the time being in force.		
(vi)	A copy of the Joint Venture Agreement or a Letter of Intent to execute a Joint Venture Agreement in the event of a successful Service Provider shall be signed by all partners and submitted with the Technical Proposal, together with a copy of the proposed agreement. (submitted in case of the Service Provider is a Joint Venture)		
C	**Qualification**		

Order	Document Number and Information Required	Check (Y/N)	Page No.
6.	**Schedule 3. Financial Soundness**		
(ii)	Audited Financial Statements of relevant years in accordance with schedule 3		
7.	**Schedule 4: Contractual Experience**		
(i)	Letter of Award/Acceptance or contract agreement or any other credible record of Executed/ongoing one similar nature contract (operation and maintenance of electrical and mechanical systems) to the worth of two hundred million Pak Rupees (PKR.200,000,000) or more in last 5 years in JV or through separate contract.		
(ii)	Contract Completion Certificate or anticipated completion certificate in case the contract is in progress or certificate / letter that the contract is in progress.		

Table-2

2. Financial Proposal

Order	Document Number and Information Required	Check (Y/N)	Page No.
1.	Letter of Financial Proposal		
2.	Break up of proposal prices		
3.	Original Bid Security in accordance with ITSP Clause 17.		

Letter of Technical Proposal

The Bidder must accomplish the Letter of Technical Proposal on its letterhead clearly showing the Bidder's complete name and address. In case of Joint Venture, if applicable, Letter Head of Lead Partner.

Date: .....

Request for Proposal Document No.: .....

To:

Chief Executive Officer (CEO), TransPeshawar,
First Floor, KPUMA Building,
Main BRT Depot, Near NHA Complex,
Chamkani, Peshawar.

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Request for Proposal Document, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 8.

(b) We offer to execute in conformity with the Request for Proposal Document the following Services:

[Insert Name of Procurement/Services]

(c) Our Proposal consisting of the Technical Proposal and the Financial Proposal shall be valid for a period of one hundred eighty (180) days from the date fixed for the Proposal submission deadline in accordance with the Request for Proposal Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

(d) If our proposal is accepted, we commit to obtain a performance security in accordance with the Request for Proposal Document.

(e) We are incorporated/registered in Pakistan.

(f) We do not have any conflict of interest.

(g) We are not participating, as a Bidder in more than one Proposal in this bidding process.

(h) We agree to permit the Procuring Entity or its representative to inspect our accounts and records and other documents relating to the bid submission.

(i) We understand that this Proposal, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

(j) We understand that you are not bound to accept the lowest evaluated Proposal or any other Proposal that you may receive.

Name of Authorized Representative .....

Designation .....

Sign of Authorized Representative .....

Name of Bidder with Seal. .....

Date .....

[Note: In case of Joint Venture Letter of Technical Proposal shall be signed by authorized representatives of all members constituting the Joint Venture along with affixing of respective seal)]

Schedule-1

(Eligibility)

Service Provider or Lead Member must fill out this form and attach respective documents indicated below.

Service Provider's/Lead Member's Information Sheet	
Service Provider's name	
In case of Joint Venture Lead member's legal name	
In case of a Joint Venture, legal name of each partner	
Service provider's/Lead member's country of constitution	
Service provider's/Lead member's year of constitution	
Service provider's/Lead member's Year of registration with FBR for income tax and sales tax	
Service provider's/Lead member's Year of registration with KPRA for sales tax on service	
Service provider's/Lead member's year of registration with PEC for category C-4 or above with EE11 or ME06 or ME07 code of specialization	
Service provider's/Lead member's legal address	
Name of Service provider's authorized representative in case the service provider is a firm/company (In case of JV authorized representative of JV) (name, address, telephone number(s), fax number(s), e-mail address)	

Attached are copies of the following documents.

- ❑ 1. Articles of incorporation or constitution or certificate of registration of a firm or company (In case of JV particulars of Lead Member);
- ❑ 2. In case of a Joint Venture, a letter of intent to form a Joint Venture along with copy of proposed JV agreement, or Joint Venture agreement;
- ❑ 3. Certificate of Registration with FBR for income tax and sales tax and reflected on Active Taxpayer List (ATL) (In case of JV particulars of Lead Member);
- ❑ 4. Certificate of Registration with KPRA for Sales Tax on Services (In case of JV particulars of Lead Member);
- ❑ 5. Valid PEC license in category C-4 or above with EE11 or ME06 or ME07 or ME03 code of specialization (In case of JV particulars of any Member);
- ❑ 6. Non-blacklisting certificate on E-stamp paper of PKR.150 and duly notarized to the effect that Service Provider/Lead Member is not blacklisted by any federal or provincial public entity in Pakistan, is neither insolvent nor bankrupt, is not in the process of winding up nor his/her properties are under the control of receiver nor his/her business activities have been suspended nor legal proceedings for any of the foregoing are imminent or have been initiated against him/her and has fulfilled all obligations under law for the time being in force. (In case of Joint Venture applicable to all members)

Schedule-2

(Eligibility)

Each member of the Joint Venture must fill out this form separately and attach respective documents indicated below.

Joint Venture Information Sheet	
Service Provider's name	
Joint Venture Partner's legal name	
Joint Venture Partner's country of constitution	
Joint Venture Partner's year of constitution	
Joint Venture Partner's Year of registration with FBR for income and sales tax	
Joint Venture Partner's Year of registration with KPRA for sales tax on service	
Joint Venture Partner's legal address	
Joint Venture Partner's authorized representative information (name, address, telephone number(s), fax number(s), e-mail address)	

Attached are copies of the following documents.

- ❑ 1. Articles of incorporation or constitution or certificate of registration of a firm or company;
- ❑ 2. Certificate of Registration with FBR for income tax and sales and reflected on Active Taxpayer List (ATL);
- ❑ 3. Certificate of Registration with KPRA for Sales Tax on Services;
- ❑ 4. Non-blacklisting certificate on E-stamp paper of PKR.150 and duly notarized to the effect that JV partner is not blacklisted by any federal or provincial public entity in Pakistan, is neither insolvent nor bankrupt, is not in the process of winding up nor his/her properties are under the control of receiver nor his/her business activities have been suspended nor legal proceedings for any of the foregoing are imminent or have been initiated against him/her and has fulfilled all obligations under law for the time being in force.

Schedule-3

Financial Soundness

Each Bidder must fill out this form.

Financial Data for last 3 Years		
Year 1: 2022	**Year 2: 2023**	**Year: 2024**

Information from Balance Sheet

Total Assets (TA)			
Total Liabilities (TL)			
Net Worth = TA – TL			

Information from Income Statement

Total Revenues			
Profits Before Taxes			
Profits After Taxes			

❑ Attached are copies of financial statements (balance sheets including all related notes and income statements) for the last 03 years, as indicated above, complying with the following conditions.

- Unless otherwise required by Section 3 of the Request for Proposal Document, all such documents reflect the financial situation of the legal entity or entities comprising the Bidder and not the Bidder's parent companies, subsidiaries, or affiliates.
- Historical financial statements must be audited by an external auditor approved by SECP having UDIN. In case of a firm the requirement of UDIN will be assessed as per relevant law.
- Historical financial statements must be complete, including all notes to the financial statements.
- Historical financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Schedule-4

Contractual Experience

Each Bidder must fill out this form.

Contract of Similar Size and Nature		
Contract No . . . . . **of**	**Contract Name**	
Award Date		**On Going/Completion Date:**
Total Contract Amount	**PKR.**	
If partner in a Joint Venture or subcontractor, specify participation of total contract amount	**Percent of Total**	**Amount**
Employer's name **Address** **Telephone number** **Fax number** **E-mail**		
Description of the Similarity in Accordance with Criterion 3.3 of Section 3 (Eligibility and Qualification Criteria)		

❑ Attached Letter of Award/Acceptance or contract agreement or any other credible record to substantiate information provided in Schedule 3.

❑ Attached Contract Completion Certificate of the relevant contract (if the project is completed) or anticipated completion certificate if the contract is in progress or letter showing that the project is in progress.

Schedule 5

Affidavit of Integrity Pact

(To be submitted on E-stamp paper of PKR.150 and duly notarized)

(In case of Joint Venture to be submitted by each joint venture partner)

_____ [Name of Bidder] hereby declares its intention not to obtain or induce the procurement of any contract, right, interest, privilege or other obligation or benefit from Procuring Entity/Government of Khyber Pakhtunkhwa (hereinafter called GoKP) or any administrative subdivision or agency thereof or any other entity owned or controlled by it through any corrupt and fraudulent business practice.

Without limiting the generality of the foregoing, _____[Name of Bidder] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or including the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from Procuring Entity/GoKP, except that which has been expressly declared pursuant hereto.

_____ [Name of Bidder] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with Procuring Entity/GoKP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

_____ [Name of Bidder] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to Procuring Entity/GoKP under any law, contract or other instrument, be voidable at the option of Procuring Entity/GoKP.

Notwithstanding any rights and remedies exercised by Procuring Entity/GoKP in this regard, _____[Name of Bidder] agrees to indemnify Procuring Entity/GoKP for any loss or damage incurred by it on account of its corrupt and fraudulent business practices and further pay compensation to Procuring Entity/GoKP in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by _____[Name of Bidder] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from Procuring Entity/GoKP.

Name of Authorized Representative .....

Designation .....

Sign of Authorized Representative .....

Name of Bidder with Seal .....

Date

Schedule 6
Authorization/Power of Attorney

[For a Service Provider participating in the bidding through a representative. In case of a Joint Venture, power of attorney shall be submitted separately by each partner]

[To be submitted on E-stamp paper of PKR. 150 and duly notarized]

[Incomplete/partially filled authorization/Power of Attorney or person authorizing signatory being incompetent shall be treated as deficient]

THIS POWER OF ATTORNEY is executed at _____ **[insert Place]** on this day of_____ **[insert Date]**, by _____ **[insert name of the Service Provider]** at _____ **[insert the address]** (hereinafter, referred to as the "Grantor"), which expression wherever occur in these presents shall also mean and include its successors-in-interest and assigns.

WITNESSETH

WHEREAS the Grantor intends to submit a proposal to the TransPeshawar (The Urban Mobility Company) (hereinafter, referred to as "the Procuring Entity"), in respect of _____**[Insert Name of Procurement/Service]** (hereinafter, referred to as "the Services"), and to do the follow up related actions (hereinafter, jointly referred to as "the Transaction"), and for this purpose, the Grantor considers it necessary and expedient to appoint a representative/attorney.

WHEREAS the Instructions to Service Providers contained in the Request for Proposal Document (RFP), for the Services, warrants submission of a Power of Attorney to the said appointment.

WHEREAS the Grantor represents and warrants to the Procuring Entity that all corporate and other actions required to give effect to this Power of Attorney have been duly taken and are subsisting.

NOW THEREFORE THIS DEED WITNESSETH the Grantor does hereby, irrevocably and unconditionally, nominate, constitute and appoint Mr./Ms. _____, son/daughter of_____, residing at _____and holding CNIC No. _____as its true and lawful attorney holding designation [**insert the designation**] (hereinafter, referred to as "the Attorney") to do or cause to be done all such acts, deeds, matters, and things which the Grantor may now do or in future may become interested to do in connection with the Transaction, including:

1. to visit and inspect the Site, seek clarification of the RFP, and attend the pre-bid meeting;
2. to prepare and submit a Proposal following provisions of the RFP;
3. to attend the Proposal opening event and the bidding process in respect of the Transaction and generally to take such actions and decisions as may be necessary for the bidding;
4. to negotiate, execute (underhand or under seal), sign, and deliver all contracts, instruments, deeds, agreements, applications, and other documents, to make amendments to the same whether or not material, and to submit the same to the Procuring Entity and/or any other interested parties;
5. to receive notices, instructions, and orders for and on behalf of the Grantor(s); and
6. to do all other things and to take all necessary steps incidental to the exercise of the above powers or which the Attorney considers necessary or expedient concerning the foregoing or the effective exercise of any power listed above.

The Grantor agrees that whatever the Attorney shall do or cause to be done according to this Power of Attorney shall be binding on the Grantor.

The Grantor agrees to ratify and confirm whatever the Attorney shall do or cause to be done under this Power of Attorney.

All terms used in this instrument, but not defined herein, shall have the meaning given to them in the RFP.

This Power of Attorney has not been revoked, amended or modified and remain valid and binding on the Granter.

IN WITNESS WHEREOF, the Grantor has executed this Power of Attorney on the date and place first written above.

WITNESSES: [Signature, Name, Father's Name, and CNIC]	[INSERT NAME OF THE GRANTOR] [Signature, Name, Designation, and CNIC]
1. _____	_____
2._____	_____

NOTARY PUBLIC: (Name, Signature, Seal, Number, and Date) _____

Letter of Financial Proposal

The Bidder must accomplish the Letter of Financial Proposal on its letterhead clearly showing the Bidder's complete name and address. In case of Joint venture on letter head of lead partner

Date: .....

Request for Proposal Document No.: .....

To:

Chief Executive Officer (CEO), TransPeshawar,
First Floor, KPUMA Building,
Main BRT Depot, Near NHA Complex,
Chamkani, Peshawar.

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Request for Proposal Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) 8.

(b) We offer to execute in conformity with the Request for Proposal Documents and the Proposal submitted for the following Services:

"**[Insert Name of Procurement/Service]**"

(c) The Total Proposal Price is:

[*amount in PKR in words*], [*amount in PKR in figures*]

The proposal price from the breakup of proposal prices should be entered by the Bidder inside this box. Absence of the proposal price in the Letter of Financial Proposal may result in the rejection of the Proposal.

(d) Our Proposal shall be valid for a period of one hundred eighty (180) days from the date fixed for the proposal submission deadline in accordance with the Request for Proposal Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

(e) If our Proposal is accepted, we commit to obtain a performance security in accordance with the Request for Proposal Documents.

(f) We understand that this proposal, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

(g) We understand that you are not bound to accept the lowest evaluated proposal or any other proposal that you may receive.

(h) We agree to permit the Procuring Entity or its representative to inspect our accounts and records and other documents relating to the proposal submission.

Name of Authorized Representative .....

Designation .....

Sign of Authorized Representative .....

Name of Bidder .....

Date .....

[Note: In case of Joint Venture Letter of Financial Proposal shall be signed by authorized representatives of all members constituting the Joint Venture along with affixing of respective seals]

Breakup of Proposal Prices

1. All Bidders must read items in conjunction with requirements stipulated under Schedule of Requirements and fill the table carefully.
2. All Bidders shall quote the unit rate and total rates and prices against each item inclusive of all applicable taxes excluding sales tax on services for completion of each activity/item in all respect.
3. No cutting or over writing is allowed unless otherwise initialed by the authorized person.

S.No	Financial Quote	Unit	Quantity (A)	Price/ Unit (PKR) (B)	Total Price in PKR (C)= A x B
1	Monthly Service Payments offered by the Bidder to TransPeshawar including cost of all taxes but excluding Sales Tax on services for provision of all services mentioned in RFP/ Contract including its attachments for Elevators (30) and allied services.	Months	60		
2	Monthly Service Payments offered by the Bidder to TransPeshawar including cost of all taxes but excluding Sales Tax on services for provision of all services mentioned in RFP/ Contract including its attachments for Escalator (31) and allied services.	Months	60		
Total Proposal Price Offered by the Bidder in PKR including all costs but exclusive of Sales Tax on Services (Amount in Pakistani Rupees in words and figures)					

Name of Authorized Representative .....

Designation .....

Sign of Authorized Representative .....

Name of Bidder .....

Date:

[Note: In case of Joint Venture the breakup of proposal prices shall be signed by authorized representatives of all members constituting the Joint Venture along with affixing of respective seals]

Bid Security
(Bank Guarantee)

[*Bank's name, and address of issuing branch or office*][1]

Beneficiary: [*Name and address of the Procuring Entity*]

Date: .....

Bid Security No.: .....

We have been informed that **[*name of the Bidder*]** (hereinafter called "the Bidder") has submitted to you its proposal dated **[*please specify*]** (hereinafter called "the Proposal") for the execution of "[**Name of Procurement/service"** under Request for Proposal ("the RFP").

Furthermore, we understand that, according to your conditions, proposals must be supported by a bid guarantee.

At the request of the Bidder, we **[*name of bank*]** hereby irrevocably and unconditionally undertake to pay you any sum or sums not exceeding in total an amount of [*amount in words*] [*amount in figures*] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the proposal conditions, because the Bidder

(a) has withdrawn its Proposal during the period of bid validity specified by the Bidder in the Letter of Technical and/or Financial Proposal; or

(b) does not accept the correction of errors in accordance with the Instructions to Bidder (hereinafter "the ITB"); or

(c) having been notified of the acceptance of its Proposal by the Procuring Entity during the period of bid validity, (i) fails or refuses to sign/execute the Contract Agreement, or (ii) fails or refuses to furnish the performance security, in accordance with the Request for Proposal.

This guarantee will expire (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder's proposal.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

[*Authorized signature(s) and bank's seal (where appropriate)*]

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[1] All italicized text is for use in preparing this form and shall be deleted from the final document.

SCHEDULE OF REQUIREMENTS

TransPeshawar is currently operating BRT System in Peshawar which has escalators and elevators installed in BRT Stations and KPUMA building. The operation and maintenance of these escalators and elevators make part of scope of work to the extent explained below in this SOR.

TransPeshawar (The Urban Mobility Company) has been handed over escalators and elevators in Peshawar BRT system which were installed and / or commissioned by Peshawar Development Authority (PDA) in 2020. These systems have completed five years of service by end of August 2025. TransPeshawar operated and maintained these equipment/ systems through service provider under service-based contract which are expected to end in 2025. TransPeshawar, in this Schedule of Requirements (SOR), requires detailed operations and maintenance services hereinafter called “Services” of these systems to meet their intended purposes for next five years or other term as may be extended in accordance with contractual requirements. These services will be provided at BRT stations and KPUMA Building.

This SOR outlines the scope, objectives, and requirements for the engagement of a qualified service provider to carry out the operation and maintenance of the elevators and escalator systems in Peshawar BRT System ensuring optimal performance, safety, and compliance with relevant standards and regulations. Furthermore, the Service Provider shall at its own cost and risk, coordinate with authorized agent or receive dealership from Original Equipment Manufacturer (OEM) or change equipment / software to provide services or enable Service Provider to provide services in accordance with Schedule of Requirements. This is the critical requirement of agreement as multiple OEM are involved and the Service Provider shall bear the cost of such management, coordination etc.

1.1 Scope Of Services

The Service Provider shall be responsible for all costs of required services mentioned in RFP, Agreement, this **SOR** and their Annexure/ attachments. The operation and maintenance services are required for following systems, sub-systems and Equipment:

a) Elevator includes but not limited to complete assembly of control units, software’s, sensors, doors, power and communication cables, Automatic Rescue Device (ARD), signage for elevator including backlit board, internal camera, ropes, cables, supports, pits, submersible pumps, protection wall of drainage at grade level, elevator pit and shaft, cladding, approach to Elevator (two meters around elevator) etc. and allied components which are required for its intended use/operation;

b) Escalators includes but not limited to complete assembly of control units, software’s, sensors, power and communication cables, approaches to escalators (two meters around escalator), supports, side railing, pits, submersible pumps, signs for escalators, pits, protection wall for drainage and allied components which are required for its intended use and operation; and

c) Mandatory Work which are required to be done by the Service Provider.

The detail documents, drawings summery of above mentioned Equipment are provided in following Annexes: -

i. Details of Elevators showing location and number (Annex-1)

ii. Details of Escalators showing location and number (Annex-2)

iii. Specification of Elevators (Annex-3)

iv. Specification of Escalators (Annex-4)

v. Operation and Maintenance Manual of Elevators (Annex-5)

vi. Operation and Maintenance Manual of Escalators (Annex-6)

1.2 Handing Over of Equipment for Operation and maintenance

1.2.1 The Equipment, systems, subsystems as mentioned in Section 1.1 of this document will be handed over to the Service Provider in the state handed over by previous Service Provider and the current Service provider will take-over these Equipment /systems for required operation and maintenance in accordance with scope of this Contract/Agreement. The Service Provider shall prepare a detail count to very minute details of each sub-system and submit to TPC for record with market-based pricing of each component duly signed within six months of the contract.

1.2.2 If both parties do not agree to extend the Agreement at Termination, the Service Provider shall seek in writing a Handing Back Certificate (HBC) from the TPC at least 60 days before the expiry of the Agreement. The TPC will issue such a certificate within 45 days provided that the Equipment handed back is in good condition. Upon obtaining the HBC, the Service Provide shall be deemed clear of all obligations. However, until issuance of HBC which does not affect liability of Service Provider to keep System in fully operational condition even after expiry of Agreement, the Service Provider shall be bound to continue rendering O&M services, and the TPC shall continue to pay for such additional O&M Services. In addition, during this period, TPC and the Service Provider shall work jointly to solve any pending issues (if any). The final Invoice from the Service Provider shall include any such period of Services, which in any case shall not exceed 45 days.

1.3 General Maintenance Obligations of Equipment

The Service Provider shall: -

1.3.1 Ensure that all Equipment are in satisfactory operational condition (fair wear and tear excluded) so that they conform to the operational standards of first-class bus rapid transit system and/or building. This means, in particular, that all Equipment should be clean, tidy, well-maintained, in running conditions and meeting all health and safety requirements;

1.3.2 Take responsibility for provision of all replacement parts and supplies for all maintenance issues of Equipment. The Service Provider shall procure any future spare parts and supplies (spare parts/critical spare parts/consumables lubricants, oil etc. for all equipment's in this Agreement and scope of work) pursuant to documentation provided by

the manufacturer, their agent, supplier or required for maintenance and / or operation of Equipment. The spare parts shall be genuine, brand new, non-refurbished, un-altered and imported through proper channel and incorporate all recent improvements in design and material. Service Provider shall provide proof of genuine and/or imported item/spare parts to TPC on demand;

1.3.3 The Service Provider shall devise a mechanism to keep himself continuously informed about the operational status/ performance/ efficiency of all equipment and facilities under his areas of responsibilities so as to respond against any malfunctioning, poor performance, non serviceability and failure in a timely manner;

1.3.4 In case of any fault/ failure or complaint the response time for the deployed manpower at the BRT for accessing the site and attending the fault shall not exceed 5 minutes;

1.3.5 Be responsible for all material and associated costs for repair actions of Equipment caused by theft or other scheduled / unscheduled incidents;

1.3.6 Keep record of each spare part used, reason for replacement, total spare used, remaining spare parts etc. and follow Protocol issued by TPC for use, record and inventory of the same. The Service Provider shall provide to TPC such record within three days or other such time notified by TPC;

1.3.7 Arrange spare parts store within the vicinity of BRT containing all necessary items / parts required for the maintenance of the said systems. This critical inventory list need be prepared on monthly basis;

1.3.8 Ensure that the critical spare part which may hinder the operation for prolonged duration are in stock/warehouse in sufficient quantity to ensure the smooth operations. TPC may notify such spare parts and their quantity to be always available in stock during period of the Agreement. Besides this, service provider shall maintain the inventory of critical spare parts for each month which should be at least 10 % of the installed items (covers in the scope of work) and other items separately in order to avoid any system failure in future. These critical inventory lists need be prepared on monthly basis;

1.3.9 Procure, transport and maintain any tools, software and diagnostic equipment, lifting equipment, machinery (boom buckets, lifters & cranes), calibrated test equipment, which are necessary to carry out the Services in accordance with the Agreement;

1.3.10 Coordinate with authorized agent of Equipment and /or Original Equipment Manufacturer (OEM) for defects / software issues/ maintenance/ overhaul or any other purpose to perform the required services at its own cost and risk;

1.3.11 Follow direction / Protocol of TPC regarding cleaning of Equipment, and submission of weekly, monthly and half-year maintenance schedule regarding Equipment if asked by TPC;

1.3.12 Maintain and provide tags to all electrical and mechanical equipment with QR Codes and 70 RFID tags (design and quality approved by TPC) to link equipment with Asset Management System of TPC;

1.3.13 Maintain all conduits /pipes relevant to the scope of work. Maintain, protect and provide replacement (where required) for all types of wires and cables (both data and power cables/control cables) connecting to Equipment of the same or improved specifications. The conduits / pipes shall be kept water tight so the rain water doesn't infiltrate through those conduits / pipes to other parts/location of the facility;

1.3.14 All equipment /works covered by this Agreement must be repainted if the existing paint is scratched or has deteriorated. The surfaces to be painted should be thoroughly cleaned and washed, and scraped as necessary, prior to applying the new paint, ensuring complete satisfaction of the TPC;

1.3.15 Maintain Asset register having details of all Equipment in his custody with asset number and facilitate TPC to include in their Assets management System, if asked by TPC. Furthermore, the Service Provider shall record inventory in Asset Management System, if authorized by TPC;

1.3.16 Prepare code of conduct for its staff with approval of TPC;

1.3.17 Ensure that all staff who work on the project are registered in biometric system provided by TPC at Stations, KPUMA and other facilities. This is mandatory for permanent staff, reliever, maintenance staff, operation staff, reserve or any other staff who access to the facilities of TransPeshawar in the performance of duties. Office staff of service provider are exempted;

1.3.18 Get insurance to recover damage or theft parts, passenger or staff injury or third-party liabilities;

1.3.19 Get additional information or missing information, at its own cost, about equipment, or its maintenance and operations requirements, if required; and

1.3.20 Ensure and maintain protective devices and earthing systems are operated and maintained to reduce the risk of passengers, to equipment and operations/maintenance personnel from hazardous voltages or currents. Maintenance of earth connection / continuity from equipment's end to station structure and measuring of earth resistance with the help of standard earth resistance test meter. The Service Provider shall report to TPC if the desired resistance value required by safety standards /equipment requirement are not maintained.

1.4 Operation and Control Obligations of Equipment

The Service Provider shall: -

1.4.1 Operate reliably Equipment to meet the operational requirements of bus operations, stations and buildings. The Equipment operational hours are 24 hours a day, 7 days a week and 365 days a year;

1.4.2 Engage suitable, skilled and appropriate number of human resources to satisfactorily discharge its obligations under this Agreement for safety of public, operation and maintenance of Equipment, and in accordance with minimum figures as mentioned in Section 1.13 (**Minimum Personnel Requirement**) of SOR or mentioned in agreement /SOR;

1.4.3 Be responsible for internal security of equipment against theft, damage etc. TPC has provisioned general security for stations through another contractor / service provider.

1.4.4 Staff deployed for the assignment must be experienced and trained in their respective areas and able to perform services to the entire satisfaction of the TPC;

1.4.5 Ensure deployment of skilled professionals/manpower at strategic locations for smooth operations, immediate response/activities in case of emergency and avoiding potential damage(s) to human life and equipment;

1.4.6 Perform operation management services as per OEM recommendations, BRT applicable standards, Operational requirements, TPC regulations, and Interface Requirements (in case of interfaces with other systems);

1.4.7 Be responsible for all costs including human resource regarding operation and maintenance of equipment's which includes replacement of parts for preventive, corrective, and operational maintenance and / or defective, Equipment damaged due to whatever reason (s). These includes costs of all services mentioned in the SOR and Agreement;

1.4.8 Provide staff or train authorized representative of TransPeshawar or other Service Provider staff to perform operation on/off activity of all systems at its own responsibility. The staff provided by the Service Provider shall be in proper uniform and the uniform includes Personal Identification Card, P-Cap, Jacket (in Winter), Shoes fit for the purpose (casual black shoes), full sleeve shirt in winter & half sleeve shirt in summer with Zu logo, and dress of color as approved for different categories by TPC;

1.4.9 Prepare Operation Control and Maintenance Procedure/ Manual for all equipment mentioned in this document, and shall submit to TPC for approval, if asked by TPC. Service Provider shall update Manual from time to time and the Manual shall include operation hours of equipment, routine checks/ daily check-list, preventive and corrective maintenance schedules, standard operation procedures of the equipment, training duration etc. Service Provider shall finalize the details format with TPC and update as and when needed;

1.4.10 Ensure safety tool in working condition and checked periodically as recommended by manufacturer. Provide safety equipment, personal protection equipment and other necessary materials as required for the execution of services under the Agreement;

1.4.11 Respond to operation and maintenance issues reported by TPC or any other approved mechanisms;

1.4.12 Follow instructions / Protocol of TPC regarding procedure of operation, duration of operation of all Equipment, Energy plan and schedule for operation of such Equipment;

1.4.13 Coordinate all hardware and software maintenance activities as well as routine maintenance activities in advance with TPC; and

1.4.14 Maintenance activities in stations shall be conducted at night time during non-operational hours of buses.

1.5 Early Warnings by the Service Provider

1.5.1 The Service Provider shall inform the TPC in writing at the earliest opportunity of specific likely future events, problems or circumstances whether on Service Provider's part or on TPC's part, that may adversely affect the quality of Services. The Service Provider should also carry out corrective measures required; and

1.5.2 If the Service Provider fails to give an early warning without any justified reason, it shall be held responsible for all the consequences thereof.

1.6 Detailed Maintenance Obligations Regarding Software / SCADA System

SCADA system / software is provisioned in the Equipment for escalators and elevators. The Service Provider shall maintain SCADA/Remote monitoring System, PLC, Distribution boards (DBs), wiring from DBs to IT room & Equipment, website, dashboard, storage, servers and associated equipment. Ensure remote operation of equipment through SCADA from control centre.

1.7 Detailed Maintenance Obligations of Equipment

The Service Provider maintenance and repair obligations shall include but not be limited to: -

1.7.1 The Service Provider shall procure any future spare parts, consumables and supplies for all equipment, systems and sub-systems (lube, lubricants, oil, supplies, wires, cables, switches, electrical/ electronic / mechanical gadgets / parts, electrical/ electronic/ mechanical material, etc.) i.e. PCB Cards, control cards, control module, display module, elevator inspection tool kit, overload sensors, escalator handrail belts etc, relays, grease, filter, batteries, switches, breaker, pumps, motors, sensors, cleaners, preservative, cotton waster etc.; tools i.e. safety facilities/jackets, personal protection equipment and other necessary materials as required for the execution of duties as required by this contract/Agreement and replace/provide new upon completion of useful life of any equipment/spare parts, batteries etc. if required, pursuant to documentation provided by

the manufacturer, their agent, supplier or required for maintenance and / or operation of Equipment;

1.7.2 A detailed daily, weekly, monthly, semi-annually and annual maintenance program (Master maintenance Schedule) as per OEM manuals and requirement for each particular equipment shall be developed and implemented by Service Provider. Such schedules shall be produced to TransPeshawar on demand. The operation staff shall maintain a daily operational log book and log sheet, for documenting the maintenance data, activities and events as per the requirements;

1.7.3 Preventive, corrective and operational maintenance including minor and major overhaul in accordance with the manufacturer's maintenance / operational manual shall be documented. The data documentation shall be in accordance with the maintenance requirements, mentioned herein and those which are given in the manufacturer's instruction manuals;

1.7.4 Rectify all faults occurred in relevant Equipment i.e., Water leakage, welding, short circuit, open circuit, phase sequence, under/over voltage, change, under / over voltage, phase missing, leakage current and earth faults etc or whatever reasons;

1.7.5 Any repair or replacement required, necessitated or caused as a result of, or generally resulting from, or in connection with, the following;

i) Accidental or intentional damage to Equipment;

ii) Labour disturbances attributed to the Service Provider's employee;

iii) Improper or negligent use of the Equipment;

iv) Use of Equipment in breach of the terms and conditions of the Agreement;

v) Incompetence's of the Service Provider or the employees, subcontractors or any third party in operating, handling, working, or otherwise dealing with the Equipment;

vi) Servicing, maintenance or repairs to the Equipment by any third party not in accordance with the OEM recommendations;

vii) Minor repairs strictly necessary and carried out in an emergency situation or breakdown;

viii) Theft of Equipment or their components;

ix) Failure to comply with the manuals applicable to Equipment,

x) Failure or malfunction of any component or equipment which is not provided by an OEM or TPC;

xi) Use of contaminated or non-OEM approved lubricants, additives or spare parts;

xii) Maintenance, repair or replacement, as the case may be, of or to the paintwork, side railing, approaches to Equipment, structure, stone damage, accident damage, etc. where Equipment are installed and handed over for operation and maintenance;

xiii) Attending to breakdowns and generally delivery to or collection or transportation from the point of service, salvage or breakdown;

xiv) Non-compliance by the Service Provider with any other obligations under the maintenance provisions specified in the Agreement;

xv) Tempering with the Equipment or its parts, controls and any specialized Equipment;

xvi) Operating the Equipment in a manner that may harm the Equipment, electrical, mechanical and other components;

xvii) Equipment component damage due to Service Provider negligence during maintenance and in checking and maintaining oil, lubricants and fluid levels as applicable in the applicable OEM operating manual; and

xviii) Breakdown of equipment due to whatsoever reason.

1.7.6 In addition to above, the Service Provider shall, among other things:

i) Protect the work area to ensure general public safety prior to start of any Equipment maintenance work;

ii) Perform the required regular checks, in accordance with the manuals and including the checking of coolant levels, lubricant levels, alignment, calibration, oil testing etc.;

iii) Replace lost parts, and safety tool of Equipment or components of Equipment;

iv) Keep reserve parts, material etc. available in enough number to keep system operational during claim period, if any. The Service Provider shall make good the Defects or damage as soon as practicable and at his own cost during claim period;

v) Protection and removal of accumulated water in elevators and escalator shafts/pits;

vi) Attend to the fitment, service or repair of any parts or equipment necessary pursuant to any applicable law which may come into force after the Signature Date;

vii) Carry out maintenance and repairs of the Equipment in accordance with industry best practices to maintain Technical Specification and meet functional Specifications;

viii) Keep and use the Equipment in a proper and prudent manner and ensure that only duly qualified and competent persons are allowed to operate the Equipment;

ix) Ensure that the OEM running-in instructions and proper responses to systems warnings are fully understood and properly observed;

x) Not use Equipment for any purpose for which it is not designed or its use is specified;

xi) Ensure that no components of the Equipment are removed or exchanged except where defective and in the course of normal service, repair or replacement and generally ensure that the Equipment are operated in complete condition;

xii) Take all reasonable steps and precautions to minimize damage to the Equipment and in particular, but without limitation, in the event of any defect or failure occurring in the Equipment;

xiii) Service the Equipment at relevant intervals in accordance with the relevant Equipment manual, best industry practices and/ or TPC's instructions;

xiv) Promptly repair the Equipment in accordance with the relevant Equipment Manual and instructions. The service provider shall provide feasible solution for repeatedly occurring faults resulting operational loss;

xv) Ensure that only spare parts and additive as prescribed by the OEM/TPC are used. In the event that the Service Provider proposes to use any alternative to the additive as prescribed by the OEM, first obtain authorization from TPC and reasonable conditions may be imposed;

xvi) Be responsible for maintenance and repair of all subsystems and equipment and recoup missing or theft items;

xvii) Allow TPC's Authorized Representative to inspect the Equipment, have access to and be entitled to, download, all information available from the Equipment (whether directly or indirectly);

xviii) Execute required improvements (holes, piping, welding, cutting, replacement, railing etc.), clear the site from all debris and restore the structure to original condition during the performance of his duties; and

xix) Responsible for all daily checks.

1.7.7 The Service Provider shall abide by the job safety and measures prevalent and laws in force in Pakistan and the Service Provider shall indemnify and hold harmless the TPC and its employees from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, in respect of the death or injury of any person or loss of or damage to any property arising in connection with the Services and by reason of the negligence of the Service Provider, or their employees, officers or agents. If any proceedings are brought or any claim is made against the TPC that might subject the Service Provider to liability under SOR, the TPC shall promptly give the Service Provider a notice thereof and the Service Provider may at its own expense conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. If the Service Provider fails to notify the TPC within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the TPC shall be free to conduct the same on its own behalf. The TPC shall, at the Service Provider's request, afford all available assistance to the Service Provider in conducting such proceedings or claim and shall be reimbursed by the Service Provider for all reasonable expenses incurred in so doing.

1.8 Special Obligation Regarding Escalators & Elevators

The Service Provider Shall: -

1.8.1 Ensure more than 99.9 % availability (for passenger services) of Elevators and Escalators system measure/evaluated in a month. Total number of Elevators are 30 and total number of escalators are 31;

1.8.2 Escalator and Elevator operational hours are from 5:45 AM to the arrival of last passenger trip (bus trip) in either direction or other such time as notified by TPC in special circumstances;

1.8.3 Promptly alert the Control Centre in case of malfunctioning issues pertaining to Equipment (Escalator and Elevator and allied component) and progress of troubleshooting;

1.8.4 Responsible for security of equipment sensors, doors, switches, ARD, buttons, pits, approaches, control units, inside elevator, and its allied component;

1.8.5 Assist Janitorial Staff of TPC contractor staff in cleaning of exterior of Escalators and Elevators and its allied equipment. Cleaning of pits and internal parts of Elevator and Escalator is responsibility under this Agreement. The Service Provider shall be responsible for removal of unauthorized stickers/posters, graffiti etc. within height of 6 feet of elevator cladding on daily basis;

1.8.6 Make all arrangements for removal of accumulated water in Escalator & Elevator pits so as to avoid spread of dengue and for protection of Elevator and Escalator. Protect the work area to ensure passengers/general public safety prior to start of any Escalator and Elevator maintenance work;

1.8.7 Maintain and ensure the remote restart function/control of Escalators & Elevators is available from the Control Centre in case of power shutdown or other similar situations and adequate staff is available for such purpose (if provided);

1.8.8 Ensure, in case of power breakdown, that system can be restarted manually by the Service Provider staff after power is restored and that manual restart system is always functional/available;

1.8.9 Be responsible for proper functioning of escalators and elevators as well as allied equipment. The Service Provider shall be responsible for injury or death of public, passenger etc. (if any) on escalator or elevator due to negligence of Service Provider or malfunctioning of equipment;

1.8.10 Be responsible of waterproofing using silicone or any other material in elevators cladding. Such activity shall be done initially two elevator per month and then after completion as need arise;

1.8.11 Be responsible for civil and mechanical rectification work in the escalator/elevator shaft/Pit, steel structure, GI sheet in gaps as well as elevator cladding on monthly basis and approaches to elevator and escalator in two feet;

1.8.12 Maintenance of bracket fan installed near elevator for elevator operator including wiring and breaker;

1.8.13 Removal of plastics stickers / wrapping from escalators and elevators;

1.8.14 Follow instructions of TPC regarding provision of critical spare parts, safety standards, replacement of damaged belt, sensor etc. The most of escalator belt have completed their life therefore the Service Provider shall procure at least 10 belts for critical escalator in first three months of contract signing.

1.8.15 Maintenance of elevator camera and associated cables from Equipment to IT room,

1.8.16 Follow Operation Manual of ZU Peshawar applicable to system and staff;

1.8.17 Maintain motion sensors and recoup any motion sensors at Escalator of BRT Stations;

1.8.18 Handle the emergency calls of passengers and station staff that pertains to Elevators and Escalators and paste such contact numbers in Elevators to rescue passengers; and

1.8.19 Perform any other actions which are required for the operations of escalator and elevators.

1.9 Mandatory Provision of Works/ Procurement in BRT System

The Service Provider shall execute the following mandatory works as part of the Agreement anywhere in corridor or stations as asked by TPC:

1.9.1 The Service Provider shall paint concrete surface with high quality of weather shield paint with approximately 500 square meter per month. The work includes preparation of surface, cleaning of surface and application of two coats in design and color as approved by TransPeshawar. The work shall include paint up to height of 8 meters and anywhere in the BRT System. The service provider shall be responsible for all costs associated with completion of activities and includes but not limited to transportation, scaffolding, labor, materials etc. including defect liability for one year of each paint starting from signing of acceptance form;

1.9.2 The Service Provider shall paint nine pedestrians crossing every second year. The road is six lanes and width is approx. 3 meters. The color shall be CR based road marking paint and in accordance with the standards for thickness (2mm). The Service Provider shall be responsible for maintenance of the same during the currency of contract.

1.9.3 The Service Provider shall be responsible for construction of one manhole of 6 X 6 feet dimension RCC slab (6 inch) along with 9-inch brick wall. The activity is required at least once in a year.

1.9.4 The Service Provider shall procure and place 05 waste bins per month in first year of contract of similar design as present in BRT bus stations (Annex-8).

1.9.5 The Service Provider shall be responsible for procurement of steel cover (2 x 2 feet) of 20 mm thickness including installation, fabrication, welding etc. along the corridor. The activity is required at least once in six months.

1.10 Service Provider/ Control Centre Executives Responsibilities at Control Centre

The Service Provider shall depute full time one (01) Control Centre Executives (CCE) at same time for Control Centre for 17 hours a day with not more than 8 hours per shift and 365 days a year. The CCE`s shall be Mechanical and/or Electrical Engineer. The CCE shall perform following activities in addition to his own tasks:

1.10.1 The CRE shall work as a liaison between TPC, Service Provider, and Other Service Providers and monitor / report the overall maintenance activities, and perform other duties related to the scope of the Agreement as per instruction of the TPC;

1.10.2 Coordinate with Station staff, field staff, control center staff of BRT system Service Provider / contractor, record incidents and emergencies in Incident Management System, respond to Complaint Management System, report emergencies and provide necessary support;

1.10.3 Prepare social media posts or other such graphic media required or asked by TPC. The Service Provider shall provide necessary training and provide software for graphic designing to CCE along with provision of software.

1.10.4 Prepare daily operation report and share with TPC next day both in summarized and detailed format as agreed with TPC;

1.10.5 Prepare daily operation and maintenance report and share with TPC next day both in summarized and detailed format;

1.10.6 Monitor escalator and elevators through SCADA from control center and generate reports as required by TPC;

1.10.7 Monitor the performance of field/ station staff, activities under the Agreement and equipment performance and ensure compliance of the contractual requirement; and

1.10.8 Any other task assigned by the TPC.

All the reports produced by CCE under the Agreement shall be duly signed by the project manager of the Service Provider each month or any other interval as required by TPC.

1.11 Service Provider/ Operator Responsibilities at Stations

1.11.1 The Service Provider shall engage at least one Elevator Operator at each elevator excluding KPUMA building elevator for 17 x 7 and 365 days with not more than 8 hours per shift. In addition, there will be one additional operator for 17 hours and 7 days a week at Kharkhano and Mall of Hayatabad stations to look after passenger flow at escalator and technical issues of escalator.

1.11.2 The Elevator Operator default position for in bus operation time shall be in-front of Elevator.

1.11.3 All staff of the Service Provider shall be registered in Attendance Management System of the TPC and record attendance of IN & Out accordingly. No Staff shall perform duty more than 8 hours.

1.12 Labor Laws Compliance for the Staff Engaged by Service Provider

The Service Provider shall ensure labor laws compliance related to the staff deployed by the Service Provider for the performance of the duties. The Service Provider shall not only ensure compliance but shall also perform the followings task and assume responsibilities: -

1.12.1 Submit salary payment schedule to TPC within seven (07) days of start of services and ensure payment within seven (07) days or other such period are paid to the staff;

1.12.2 Ensure that staff are getting regular weekly OFF, casual leaves, sick leaves and other legal leaves in accordance with Labor Laws. The Service Provider shall ensure 32 days of leaves per year against sick/ casual leaves or as per labor laws whichever is higher;

1.12.3 Ensure that staff who worked on special days (Eid Days etc.) are compensated in accordance with Labor Laws;

1.12.4 Nominate Focal person to pursue claims of the Staff in EOBI and ESSI for re-reimbursement, issuance of EOBI/ESSI Cards and other such facilitation required during service or post death by their families at Government Office;

1.12.5 Ensure Insurance for employees in accordance with labor laws. The Service Provider shall provide proof of claims of recovery or start of pension (whichever is applicable) is started within three months after the death of the employee or injury / disability or provide justification for delay;

1.12.6 Engage Reserve Staff against Staff Clause 1.13 to work on their behalf in case of weekly off, sick leave, casual Leaves and any other leave under the Applicable Law;

1.12.7 Ensure that Employee are insured (Group / Life Insurance) with minimum of following limits or as per Labor laws or any other applicable laws whichever is higher:

Death in case off-duty: PKR 1 million

Death in case of on-duty: PKR 2 million

If the Employees are not insured or paid timely then such amount shall be deducted from the invoice of the Service Provider for payment to the Employees or legal heirs along with LD`s for delay; and

1.12.8 The Service Provider shall not deduct any amount more than 3 % or any other amount notified in Labor Laws against Liquidated Damages for non-performance by the employee.

1.13 Minimum Personnel Requirement

The minimum personnel requirements are as follows: -

Staff Category	Requirement
Control Centre Executives (CCE)	One (01) staff per shift (total two shifts) for 17 hours a day and 365 days a year excluding reserve
One elevator operator 17 hours x 7 days and 365 days a year with not more than 8 hours a shift at 28 elevators	28 Staff per Shift (total two shifts) excluding reserve
Additional escalator operator for 17 hours x 7 days and 365 days a year with not more than 8 hours a shift at Kharkhano and Mall of Hayatabad Stations for dealing of technical issues at these stations	One staff per shift (Two shifts) at Kharkhano and Mall of Hayatabad stations This category excludes reserve staff.
The above are minimum Personnel and the Service Provider shall depute additional staff and calculate reserve staff as required to perform scope of work, and meet KPI's. The above is designation and Personnel shall not work for more than eight (08) hours a day. The Service Provider shall estimate reserve personnel accordingly. Service Provider shall get Uniform Approved separately for each category from TPC.	

1.14 Variation of Quantities / Additional Services

a) Out of 30 elevators, four (04) elevators are not handed over by Peshawar Development Authority and are expected to be handed over in next four months. The deduction, in case of non-handover of these four elevators, the deduction shall be made from monthly invoice in accordance with following formular.

Unit price in PKR per Elevator = UP= (Total monthly updated contract price of Elevators/ total number of elevators)

Monthly deduction = number of non-operational elevators x UP

b) In case Escalator and Elevators which are non-operated continuously for more than 7 days in invoice month due to reasons associated with non-performance of Service Provider then this will not constitute as Liquidated Damages instead considered as non-service and deduction will be made as per following details from monthly invoice:

Unit price in PKR = UP= (Total monthly updated contract price/ total number of elevator and escalator)

Between 7-15 days= 1 x UP per Elevator or per Escalator in invoice month

For 16-30 days= 1.5 x UP per Elevator or per Escalator in invoice month

For 31-45 days= 2.0 x UP per Elevator or per Escalator in invoice month

For 46-60 and above = 2.5 x UP per Elevator or per Escalator in invoice month

Note: Number of days shall be continued to counted from previous month if continuously non-operational

c) In case the Escalator or Elevator is not operated due to reason associated with TransPeshawar such as temporary stoppage of elevator or escalator due to construction or re-location then no deduction will be made in such case. The operator of such elevator shall be utilized at any other location.

d) In case of permanent removal or addition of elevator or escalator, the additional price shall be added to the contract as per following formula: -

Unit price in PKR per Elevator = UP= (Total monthly updated contract price of Elevators/ total number of elevators)

Monthly deduction/ Additional = number of elevators Added or Removed x UP

Unit price in PKR per Escalator = UP= (Total monthly updated contract price of Escalators/ total number of Escalators)

Monthly deduction/ Additional = number of Escalators Added or Removed x UP

1.15 Monthly Operation Report

No later than 17:00 PM on the 3rd Business Day of each month, starting on the last Business Day of the first Calendar month after the Commencement Date, the Service Provider shall submit to TPC a report on the Performance of its obligations under the Agreement (on TPC demand) during the previous month, covering at a minimum:

a) List of Staff /Operator working and updated on monthly basis for the duration of the Agreement by the way of an exception report indicating the incoming and exiting staff/Operator for implementation in attendance system of TPC;

b) Report on regarding spare parts usage & balance in warehouse;

c) Detail record of all service, repair and maintenance;

d) List of tools, software, diagnostic equipment etc. maintained;

e) Full details on any Severe Defect maintenance / operations on Equipment;

f) Performance on KPI`s;

g) Items required by TPC for monitoring and performance evaluations;

h) Payment made to EOBI and ESSI for the previous month; and

i) Other reports as directed by TPC.

1.16 KEY PERFORMANCE INDICATORS

i. The Service Provider's performance of operation, maintenance and services shall be evaluated by means of key performance indicators ("**KPIs"**). Failure to comply with KPIs

("**Failure Events"**) shall lead to the application of performance deduction as per the below table ("**Performance Deduction**" or **"PDP"**):

ii. The Service Provider shall pay the Liquidated Damages depending on its performance in achieving the agreed performance regime as measure during course of the Agreement.

iii. The Liquidated Damages for failure to achieve Key Performance Indicators (KPI) parameters will be implemented in accordance with Key Performance Indicators.

iv. Except for information available through SCADA system /Software, Network Monitoring System or complaint management system, or other system generated reports known to the Service Provider; any other information, if any, used by the TP to evaluate KPI will be transferred to the Service Provide once a week on request. The Service Provide will have the right to justify through concrete evidence the outcome of the aforesaid systems, on as-and-when basis, that are subject to Liquidated Damages as per KPI, prior to settlement of monthly payments, but in any case, no later than one week from the submission of the Invoice.

v. The Liquidated Damages is the final and full remedy of the TPC for the Service Provider failure to achieve the KPI targets, and such Liquidated Damages shall be deemed to have offset any breach whatsoever due to the lapses/deficiencies in performance. However, revenue loss shall be additional and deducted from monthly invoice.

vi. Any breach of defined service levels will entail Liquidated Damages which shall not exceed 10% of the monthly payments to be paid under the Agreement/Contract to Service Provider.

1.16.1 General Violations and Their Liquidated Damages applicable to the Agreement

Sr. No	KPI	Failure Event	Performance Deduction Percentage
1	Prevention of Severe Accidents	Accident involving Equipment and software due to the Service Provider fault or malfunctioning of equipment resulting in death or severe physical injury of a passenger or other person (**Severe Accident**) or If any passenger trapped in Elevator for more than 5 minutes	10% per occurrence

Sr. No	KPI	Failure Event	Performance Deduction Percentage
2	Prevention of Material Accidents	Accident involving Equipment and software due to the Service Provider fault or malfunctioning of equipment resulting in minor physical injury of a passenger or other person or material damage to the TPC assets (**Material Accident**)	5% per occurrence
3	Prevention of strikes	Number of operating minutes in which the Service Provider or its staff did strike and shutdown system partially or fully	5 % per incident which continue for more than 20 minutes plus loss of passenger revenue (if any)
4	Repetition of issues	Occurrence of same issues by more than 5 times in the same month in same or multiple equipment	3 % per 5 occurrences
5	Safeguarding of operational data	Some operational data irrecoverably lost	1% per occurrence
6	Transparent self-reporting	False or misreporting of monthly operations report	5 % per occurrence
7	Operations and Maintenance Manual	Operation and Maintenance activity not carried out in accordance with the Manual	3 % per occurrence
8	Delay of Mandatory Works or one-time activities in SOR	Failed to execute mandatory works or other one-time activity required in SOR *Note: This deduction shall be addition to non-service deductions if any*.	10 % per month beyond two months 20 % per month beyond three months *Note: This will be applied separately for each activity.*
9	Delay of Performance Security and Insurances	The Performance Security and Insurance are not submitted by Expiry Day of previous Performance Security or Insurance.	Holding of monthly payments of the month where expiry of Performance Guarantee or Insurance falls till the time Performance Guarantee and/ or Insurance submitted and 0.5 % per day for the delay period beyond Expiry Date.

Sr. No	KPI	Failure Event	Performance Deduction Percentage
10	Labor Laws Compliance	a) Minimum Wage Not Paid b) Insurance Amount Not Paid upon death c) EOBI & ESSI case not pursued of deceased or affected d) No compliance of any other aspect of Labor Laws e) Salary not paid within 7 days of starting calendar month (10 samples will be collected randomly each month)	a) Deduction of not paid amount + 0.05 % per employee b) Deduction as Non-Service from Invoice and 2 % deduction each month till amount is paid c) 2 % per occurrence each month per employee till amount is paid d) 1 % per occurrence e) LDs as follows: 10 % per occurrence for non-compliance in delay of salary for more than 50 % of sample 5 % per occurrence for non-compliance in delay of salary between 25-50 % of sample 2 % per occurrence for non-compliance in delay of salary below 25 % of sample
11	Control Centre Executives responsibilities, Service Provider KPUMA/CC responsibilities, Station Staff Responsibilities	Non-Compliance to any aspect related to responsibilities of CCE at CC and Staff at Station	5 % per occurrence for non-compliance related to qualification & availability 4 % per occurrence for absence of any member on permanent basis 3 % per occurrence for not performing duties in accordance with standards and requirements 2 % per occurrence for not provision of quality reporting 1 % per occurrence for any other minor violation

Sr. No	KPI	Failure Event	Performance Deduction Percentage
12	Failure to address / replace damage parts or stickers or remove illegal stickers/ advertisements/ graffiti etc. or any other item which is quite visible and can generate complaint due to aesthetic	Worn out stickers, damage buttons, damage cladding, sensors, loose wires, damage approaches to elevator / escalator, or any other similar items.	4 % per occurrence per item
13	Dragnet clause	Any act/instance that is non-conforming or a violation of Agreement, Schedules of Requirements, Instructions given by the TPC or violation of Protocol unless covered by another KPI or violation of Operation Manual issued by TPC	2.5 % per occurrence
14	Frequently occurred violations	Occurrence per violation listed in table below (Failure Event), unless covered by another KPI Note: This Liquidated Damages will be only applicable, if any other Liquidated Damages is not applicable under the Agreement/Contract	1.5 % per occurrence per item/ equipment

a) Frequently occurred violations. The table below defines the frequently occurred violations that are covered in the KPI`s.

Sr.No	Failure Event
1	Late arrival of staff at KPUMA/ control centre as defined by TPC (calculated per person)
2	Any equipment and system not functional (irrespective of power failure) (calculated per device)
3	Loose hanging parts of lights
4	Live video of specific camera is not available (calculated per camera)
5	Late opening or early closing of Equipment
6	Staff not available in the Control Centre (Per person per day)
7	Lazy work by staff/smoking at stations or prohibited space (per occurrence per person)

Sr.No	Failure Event
8	Staff seen spitting (per occurrence)
9	Not attending/responding complaints received on complaint management system or share through other mechanism devised by TPC (calculated per day) or reporting on incident management system
10	Reports in required format are not provided (calculated per month per report)
11	Late or non-submission of required report at start of the month (calculated per day) or date specified by TPC
12	Absence of the staff at designated points for more than 10 minutes (calculated per occurrence)
13	Failed to inform malfunctioning Equipment (per occurrence)
14	Failed to facilitate physically disabled person (calculated per instance)
15	Lack of policies that promote environment for female employee (calculated per instance)
16	Service Provider office in location that is not accessible by specially challenged persons (calculated per month)
17	Delay of repair to TPC property in TPC prescribed time caused by Service Provider (In addition to cost recovery of asset) (calculated per day)
18	Misuse of TPC infrastructure (per instance). LD may be multiplied by factor 1 to 5 upon discretion of TPC based on severity
19	Allowing passengers to BRT without security check or fare (per instance) or travelling without fare
20	Non-availability of online attendance of staff assigned to stations (calculated per day)
21	Tools and equipment, spare parts etc. are laying in non-designated location or creating safety issues
22	Failure of any equipment or subsystem or fail to maintain system accordance with standards and specification (calculated per day per equipment)
23	Failure to carry personal or vehicle identification by staff per day
24	Refusal or failing to provide information prescribed in the Agreement (per instance)
25	To refuse to accept the visits of the TPC inspectors to station, to hide information or to provide partial or erroneous information (per instance).
26	Disruption of, or negative impacts on, the BRT Vehicle Services due to any conduct of the Service Provider such as sitting in stairs, on floor, or obstructing passage way (per instance)
27	Accumulation of water in any Equipment pits or any other location where there is a likelihood of damage to any equipment, or likelihood of mosquito infestation. (per instance)
28	Misuse of Utility Connections or their wastage (In addition to cost recovery from Service Provider)
29	Emergency not reported to TPC within 15 (fifteen) minutes of its occurrence
30	Parts/equipment installed are of inferior quality/ noncompliant to technical specifications of those under specification per instance. The LD may be multiplied from factor 1 to 5 based on discretion of TPC and severity of violation.
31	Asset Register is not maintained, not up-to-date or incomplete or RFID tags missing (per instance)

Sr.No	Failure Event
32	Failure to disclose or inform the TPC about operational issues and/or safety incidents that have subsequent impact on operation and such information is not available through information systems, such as SCADA etc. (per instance)
33	Personnel do not adhere to code of conduct or misbehaves with TPC staff, other Service Provider Staff, its own staff or passengers (TPC can suggest the Service Provider to take punitive actions or terminate the employment of such responsible employees in addition to Liquidated Damages)
34	Execute works without precautionary measures for passengers/general public safety or without permission of TPC (per instance)
35	Non-compliance or discrimination in to vulnerable segment of society in jobs
36	Failure to remove breakdown vehicle from the BRT corridor before commencement of Operations or failure to arrange or failure to arrange backup delivery vehicle within one hour in case of breakdown
37	Use of Non-standard tools / stairs or wooden stair or equipment for maintenance by the staff
38	Leaking or sharing of information/ video of System with unauthorized people without permission or sharing of information which are not part of the scope of work (May lead to removal of staff from BRT System)

1.16.2 Escalators and Elevators KPI's

Sr.NO	KPI-1: Elevator and Escalator System Fault Rectification (FR)
	Fault shall be considered based on number of units effected: - **1. Critical Category Fault (CCF):** Complete shutdown of elevator/escalator during bus operations hours at station /building leading to service loss. OR There is a situation in which operations of elevator/escalator may lead to safety issues for passengers. Resolution time is 2 hours in case no parts are required; 4 hours in case parts are required and available, and damage/fault are arisen under normal use. In case of damage/fault out of normal use, timelines to rectify are to be justified, conveyed in writing in 90 minutes and shall be adhered to. **2. High Category Fault (HCF):** The elevator/escalator can operate but not as per designed and intended functional use or within acceptable limits specified and there is likelihood of service loss. Resolution time is 12 hours. **3. Low Category Fault (LCF):** The elevator/escalator can operate but not as per designed and intended functional use or within acceptable limits specified. There is no likelihood of service loss or safety issue and a possible workaround exists. Resolution time is 24 hours. TF = Total Faults Considered for KPI-1: = A + B x (C/ D) A = No of Faults Responded above the assigned resolution time but within 2 times the Assigned Resolution Time for a Particular Category; B = No of Faults Responded in more than 2 times the Assigned Resolution Time for a Particular Category

	C = Average Actual Resolution Time of 'B' expressed in units of Assigned Resolution Time of the Category under Consideration D = Assigned Resolution Time of the Category under Consideration		
	FR	**Threshold of FR**	**Performance Deduction Percentage (PDP)**
1	CCF= (Critical Fault solved within assigned resolution time) / (Critical Fault solved within assigned resolution time +TF Critical) x 100	More than 98 %	1 x $TF_{Critical}$
2	HCF= (High Fault solved within assigned resolution time) / (High Fault solved within assigned resolution time +TF High) x 100	More than 95 %	0.5 x TF_{High}
3	LCF= (Low Faults solved within assigned resolution time) / (Low faults solved within assigned resolution time +TF Low) x 100	More than 90 %	0.2 x TF_{Low}

FAULT CATEGORY IDENTIFICATION FOR KPI-1 AND OPERATIONAL PENALTY ON OCCURANCE		
Sr. No	**INCIDENT**	**FAULT CATEGORY**
1	Improper door operations of elevator or door sensors not working or dead door closing buttons.	Critical
2	Jerks in Elevator/escalators, service is interrupted.	Critical
3	Elevator/escalators generating Mechanical rubbing sound	High
4	Camera inside the Elevators/escalators are malfunctioned	High
5	i. Incorrect / delayed response of sensors disengaging power saving feature. ii. Escalator/elevator did not respond to emergency and safety handling features such as brakes etc.	Critical
6	Elevator/escalator is Operational but damaged / with missing parts / in dilapidated condition.	Critical
7	Others.	Category to be decided by the TPC under fault categories defined

The Service Provider shall get following incentive as reduction in Liquidated Damages in monthly payments for following activities:

a) @0.5% if the Service Provider engage female staff more than 15 % of total staff of project (for Stations and Control center staff only) in an invoice month.

b) @0.5% if the Service Provider engage special person (verifiable from CNIC as special person) more than 3 % of total staff of project (for Office, Stations and Control center staff only) in an invoice month.

c) @0.5% if the Service Provider i) gives/ arrange insurance to the deceased family within two months, ii) pursue and start EOBI pension within four months for the deceased family iii) Pursue and maintain disability allowance from ESSI during disability period. Each of the three will be treated as separate benefits for reduction of PDP.

Note: No credit will be carried over to next month. Furthermore, incentive will be provided up to 0 % PDP.

DETAILS OF ELEVATORS SHOWING LOCATION AND NUMBER						
S.No	Station	Station Names	Quantity	Location within the Station		
				Forward Direction	Middle	Backward Direction
1	KPUMA	KPUMA	2	0	2	0
2	BS-02	Sardar Ghari	0	0	0	0
3	BS-03	Chughal Pura	0	0	0	0
4	BS-04	Faisal Colony	0	0	0	0
5	BS-05	Old Haji Camp	0	0	0	0
6	BS-06	Lahore Adda	0	0	0	0
7	BS-07	Gulbahar	1	0	1	0
8	BS-08	Hashnagri	1	0	0	1
9	BS-09	Malak Saad Shaheed	3	1	1	1
10	BS-10	Khyber Bazar	2	0	2	0
11	BS-11	Shoba Bazar	2	0	2	0
12	BS-12	Dabgari Garden	2	0	2	0
13	BS-13	Railway Station	1	0	1	0
14	BS-14	FC Chowk	1	0	1	0
15	BS-15	Sadar Bazar	1	0	1	0
16	BS-16	Mall Road	1	0	1	0
17	BS-18	Tehkal Payyen	3	1	1	1
18	BS-19	Tehkal Bala	2	1	0	1
19	BS-20	Abdara Road	2	1	0	1
20	BS-21	University Town	2	1	0	1
21	BS-22	University of Peshawar	0	0	0	0
22	BS-23	Islamia College	0	0	0	0
23	BS-24	Board Bazar	2	1	0	1
24	BS-25	Mall of Hayatabad	0	0	0	0
25	BS-27	Hayatabad Phase 3	1	1	0	0
26	BS-30	Hospital Chowk	1	1	0	0
27	BS-31	Karkhano	0	0	0	0
Total			**30**	**8**	**15**	**7**

DETAILS OF ESCALATORS SHOWING LOCATION AND NUMBER						
S.No	Station	Station Names	Quantity	Location within the Station		
				Forward Direction	Middle	Backward Direction
1	KPUMA	KPUMA	0	0	0	0
2	BS-02	Sardar Ghari	1	0	1	0
3	BS-03	Chughal Pura	1	0	1	0
4	BS-04	Faisal Colony	1	0	1	0
5	BS-05	Old Haji Camp	1	0	1	0
6	BS-06	Lahore Adda	1	0	1	0
7	BS-07	Gulbahar	1	0	1	0
8	BS-08	Hashnagri	0	0	0	0
9	BS-09	Malak Saad Shaheed	1	0	1	0
10	BS-10	Khyber Bazar	2	0	2	0
11	BS-11	Shoba Bazar	2	0	2	0
12	BS-12	Dabgari Garden	2	0	2	0
13	BS-13	Railway Station	2	0	2	0
14	BS-14	FC Chowk	2	0	2	0
15	BS-15	Sadar Bazar	2	0	2	0
16	BS-16	Mall Road	2	0	2	0
17	BS-18	Tehkal Payyen	2	0	2	0
18	BS-19	Tehkal Bala	0	0	0	0
19	BS-20	Abdara Road	0	0	0	0
20	BS-21	University Town	1	0	1	0
21	BS-22	University of Peshawar	1	0	1	0
22	BS-23	Islamia College	1	0	1	0
23	BS-24	Board Bazar	1	0	1	0
24	BS-25	Mall of Hayatabad	2	0	2	0
25	BS-27	Hayatabad Phase 3	0	0	0	0
26	BS-31	Karkhano	2	0	2	0
Total			**31**	**0**	**31**	**0**

Elevator's Specifications & Compliance

Elevator Information	Specifications	Compliance	Deviation (If Any)	Remarks
Type of elevator	Passengers			
Rated Load	600 KG-650 KG			
Capacity	4-6 passengers			
SPEED	Range 0.75m/s to 1.5 m/s(Exact Requirement 1 m/s)			
ELECTRICAL SUPPLY/POWER SYSTEM	400 V 50Hz In 22A			
ELECTRICAL SUPPLY/LIGHTING	230V 50Hz In 6A			
Lights in Car Cabin	LEDs OR Flourescent lights			
Sufficient LEDs/ Flourescent lights in Car Cab	Appropriate Illumination			
TYPE OF CAR/ Cabin GUIDES	T89 / T75			
TYPE OF COUNTERWEIGHT GUIDES	T 70			
Car Cabin Inside	Hairline Stainless Steel			
Hand Rail Inside Car	Appropriate One			
Car Cabin doors	Centre Opening			
Car cabin doors opening size	As per drawing			
Landing doors opening	Centre opening			
Local Indication/ Hall Indication Panel	Display panel (LOP & HI in same Panel)			
Local Operating Panel(Call Panel with Aeros)	Push buttons with Blue LED/ White LEDs			
Car Cabin Height(Including Ceiling & Top Mounted Equipments/ Componants)	As per drawing			
Car Cabin W X D X H	As per drawing			
Lift Type	Simplex			
Number Of Floors	TWO(02)			
Floor& Direction Indication Inside Car	Floor& Direction Indicator Inside car with voice announcement			
Cabin Operating Panels (COP)	Push buttons with Blue LED / White LEDs & floor description embossed			
Installation of CCTV Camera inside car with complete cable & accessories for remote monitroing	Interface with SCADA			
Remote Monitoring System: All Cables terminations from Cabin to JB for remote monitoring system/SCADA (Control Work from incl gateway/converter & inter connecting cables, accessories from elevators to gateway and to network switch, monitoring software for PC(Complete from all respect)	Contractor's Scope			
Civil & Allied Works(Claddings +Sill Work+Door Jambs)) mandatory for finishing	Contractor's Scope			
All other allied works arrangements in the Hoistway	Contractor's Scope			
Machine Information	**Specifications**	**Compliance**	**Deviation (If Any)**	**Remarks**
MACHINE Type	Appropriate as per Requirement			
Machine speed control for smooth & sound landing & start by VVVFD	VVVF Drive			
TRACTION SHEAVE	240 mm			
ROPES NUMBER	7-10 Ropes			
Machine Room Less(MRL)	MRL			
ROPES DIAMETER	6mm to 8mm			
MAXIMUM MACHINE POWER/	8 kW-11 kW			
MAXIMUM APPARENT POWER ABSORBED	8KVA to 10 kVA OR per motor rated power			
Pit Acess Ladder	Must be provided with each elevator			
Speed Governer	Must be provided with each elevator			
Speed Governer Ropes	Must be provided with each elevator			
Travelling Cable with supports	Must be provided with each elevator			
Provision of GADs	Must be provided with each elevator			
Counter Weight Buffers with Pads	Contractor's Scope			
UNDER CAR BUFERS with stands	49kN			
under counter weight Buffers	77.42 KN			
Car Buffers with Pads	Contractor's Scope			
Set of Emergency Door Openeing Keys	Must provided 03keys set with each elevator			
EN Standards	EN 81 Standard			
Safety Functions	**Specifications**	**Compliance**	**Deviation (If Any)**	**Remarks**
Over Speed Protection	Through speed governer			
Over Travel (Down-Ward & Up-Ward) Protection	Final Limit Switches on both ends(Top & Bottom)			
Photocell Protection	With Infrared light activation (during door open & shut period) covering whole height of the door			
Over Travel Protection	With Audible Alarms at remote end			
Pit Stop Switches (Manual)	Stop Button During Maintenance			
Lift stop safty switches	It gives protection to maintenance team during maintenance activities			
Motor Over Temperature Protection	Temperature sensors required			
PCB Temperature Protection	Temperature sensors with indications & audible alarm			
Over Load Protection	Over load Holding Stop with Buzzer			
Control panel with built-in lock & set of key	At top floor+C21			
Inspection Running Protection	When lift is on inspection MUST run in slow(Inching Mode)			
Inter comm	(Rescue Call Device) inside the cabin connected with SCADA			
SCADA interface module built-in	For remote monitoring			
Automatic Rescue Device	ARD with UPS(along with the batteries) for Safe Landing			
Emergency Light	In case of power failure			
Door Interlock Protection	Provision of door interlock to prevent the door opening prior to land at floor			
UPS built-in	UPS built-in with batteries			
Alarm Button inside car cabin	In case of emergency, passenger will push this button to get help from outside			
Fireman Operation Panel	Must be provided at ground floor/main floor			
Energy Saving Mode	**Specifications**	**Compliance**	**Deviation (If Any)**	**Remarks**
Car Ventilation & Lights shut-off automatically	Car Ventilation & Lights shut-off automatically when not in used or no command in the stiplated time			
Remote Shut-off	Lift can be called to main landing after finishing the service			
Emergency Function	**Specifications**	**Compliance**	**Deviation (If Any)**	**Remarks**

Emergency Car Lighting	Emergency Car Lighting automatically activated once power failure			
Inching Running	When lift enters into emergency electric operation, the car travel at slow in inching running mode			
Emergency Bell	If button pressed continiously on COP, electric bell must ring on the car top			
Cabin Interior	**Specifications**	**Compliance**	**Deviation (If Any)**	**Remarks**
Cabin Walls	Fire proof wooden sheets covered with SS plates 3 mm thick			
Cabin Roof	SS frame with cantered glass			
Cabin floor	Tiles / Marble			
Cabin door	MS doors covered with SS sheets 3mm thick			
Cabin Operating Pannel	SS frame			
Signange Display	**Specifications**	**Compliance**	**Deviation (If Any)**	**Remarks**
Hazard Signage	All appropriate hazard signage MUST be displayed inside the car, on the floor & in the shaft			
Max Load Capacity	It should be display inside the car & out side at each floor			
Each Cable Tagged	All cables either of controls or power MUST be Tagged properly			
Operation & Maintenance	**Specifications**	**Compliance**	**Deviation (If Any)**	**Remarks**
18 Hours/Day, 7 Days/Week, 365 Days/Year Maintenance during defect liability period of TWO (02) years. Full time operation staff included. Extendable upto 5 Years	The detail of Operational Staff/Maintenance Staff & their duty roster would be shared by the contractor. Moreover the maintenencae schedule & maintenance activities (step-wise) would also be shared by the contractor (O&M TORs enclosed)			

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CRE-PSBRTC Project
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Inclined Unit (Escalator) Specifications & Compliance

Technical Data	Required Specifiactions	Compliance	Deviation (If Any)	Remarks
Step width	800 mm-1000 mm (As per drawign designed by manufacturer)			
Total width of escalator	1400 mm-1600 mm (Designed as per drawing)			
Total length of escalator	As per Drawings			
Inclination(Angle)	30-35 deg(As per Drawing)			
ASME Standards	ASME-17.1			
Speed	0.5 m/s Standard (Variable Speed Adjustable)			
Capacity	6000-7000 pers/hour			
Escalator Weight	Standard			
Control	Key Switch & micro processor based			
GADS	Provision of GADS to owner			
SCADA connections/Cables & accessories for remote monitoring	To observe unit operational condition remotely			
Breakdown display Board	On Outer Skirts on both ends(top & bottom sides)			
Floor Plate	Stainless Steel /Alloy Steel (Standard)			
Hand Rail Drive	HR Belt & Steps Synch			
Hand Rail	C Type in black color with illumination			
Steps	SS or Alluminum Alloy Die-cast (with Anti-skidding treatment) with demarcation Line			
Step Color	Black with yellow skirt lining			
Horizontal Steps	TWO steps flat combined			
Step Rollers	Polyurethane			
Step Chain	Roller inside Based			
Step Chain Hinge Pin Pressure	≤23N/mm square			
Skirt Safety Brushes	Incorporated			
Newel Skirting Type & Material	Stainless Steel (NWBT STD)			
Comb with lighting facility	Alluminum Alloy			
Blustrade	Stainless Steel Hairline Standard			
Truss (Main Structure)	Stringly Welded (Certified by EN1090) with deflection of 1/750			
Traffic Flow Light Display	In both direction automatically			
Movement in Both Directions with display signals	Upward & Downward both			
Pit Stop Switch	Stop switch in top machine room and bottom in pit			
Emergency Stop Button with fault display	Both Upper & Lower Ends			
Movement sensor/Radars	Both Upper & Lower Ends			
SS Cladding	With LED lights beneath			
Fault Finder Display	Incorporated			
Moving Control Box for Maintenance Activities	Incorporated			
Remote monitoring software interface with SCADA	Incorporated			
Handrail Antistatic brush	Incorporated			
Auto Lubrication System	Incorporated			
Oil Collection Tray	Incorporated			
Motor Specifications	**Required Specifiactions**	**Compliance**	**Deviation (If Any)**	**Remarks**
Motor Power Supply	230/400,50HZ			
Motor Power	7.5 KW-8 KW			
Motor Speed Control	VVVFD			
Motor break	Lather Type /disc type			
Motor Auxiliary break	Mechanical lever connected with drive wheel assembly			
Standard Safety Configuration/ Protections	**Required Specifiactions**	**Compliance**	**Deviation (If Any)**	**Remarks**
Handrail Entry Protection	Handrail Entry Protection for any foreign element			
Handrail Protection	Handrail Protection Sensor			
Comb Plate Protection	In case of any foreign element			
Reversal Protection	Un-intentional reversal safety device			
Comb Plate Protection	Comb plate protection			
Motor overload & overheat Protection	Motor overload & overheat protection device			
Step Chain Loosen/Broken Protection	Step Chain Loosen/Broken Protection Device			
Skirt Panel Protection	MUST incorporated			
Ground Protection	Ground protective device			
Step Antistatic Brush	MUST incorporated			
Step Collapse & Roller Broken Protection	Step Collapse & Roller Broken Protection Device/ Sensor			

Step Broken/Step Missing Protection	Incorporated			
Machine Room Protection	Machine Room Protective Device			
Auto Lubrication	Auto lubes system/device			
Emergency Stop Button on both device	Emergency Stop Button with fault display			
Skirt Panel Brush	MUST incorporated			
Main Drive Chain Tension/Broken	Main Drive Chain Tension & Broken Control Device			
Floor Plate Open Protection	Floor Plate Open Protection Device/Switch			
Lock UP/DOWN Protection	Lock UP/DOWN Protection when under maintenance			
Energy Saving Mode	Movement Sensor/ Radars on both ends			
Escalator Decorations	**Required Specifiactions**	**Compliance**	**Deviation (If Any)**	**Remarks**
Handrail Colour	Black			
Skirt Lights LED Strip Type	As per customer requirement			
Spot Lights beneath the escalator on cladding	As per customer requirement			
Clading on both sides and bottom	Hairline Stainless Steel			
Blustrade	Hairline Stainless Steel			
Operation & Maintenance	**Specifications**	**Compliance**	**Deviation (If Any)**	**Remarks**
18 Hours/Day, 7 Days/Week, 365 Days/Year Maintenance during defect liability period of TWO (02) years, Full time operation staff included, Extendable upto 5 Years	The detail of Operational Staff/Maintenance Staff & their duty roster would be shared by the contractor. Moreover the maintenencae schedule & maintenance activities (step-wise) would also be shared by the contractor (O&M TORs Enclosed)			

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06/01/2018
CRE-PSBRTC Project
Younas Salman Abedin.

Annex - A-1

DEMS PVT LIMITED
DESIGNING OF ELECTRICAL AND MECHANICAL SYSTEMS

TransPeshawar

SUPPLY, INSTALLATION, TESTING COMMISSIONING AND MAINTAINENCE OF BRAUN ELEVATAOR FOR BRT PESHAWAR

SITE ACCEPTANCE/TEST REPORT

10th JUNE,2019

BRAUN AUFZÜGE

DATE OF INSPECTION: _____

DATE OF CHECK REQUEST: __/__/____

Project NAME: BRT PESHAWAR

LOCATION:

SITE ACCEPTANCE REPORT

ELEVATOR TYPE: PASSENGER

Commission No:

ELECTRICAL CHECKS & TESTS

CHECKS	CHECK FUNCTION/VALUE	RESULT
RATING	VALUE (KW)	
Current	VALUE (A)	
Voltage	VALUE (V)	
LOP	FUNCTION	
COP	FUNCTION	
Floor & Direction Indicator	FUNCTION	

SAFETY CHECKS & TESTS

CHECKS	CHECK FUNCTION/VALUE	RESULT
Landing Door Contact Test	FUNCTION	
Emergency/Pit Stop Test	FUNCTION	
Door Photo Cell Test	FUNCTION	
Door Nudging Reversal	FUNCTION	
Emergency Alarm Test	FUNCTION	
Maintenance Mode Test	FUNCTION	
Over Travel Test	FUNCTION	
Power Breakdown Test	FUNCTION	
Car Buffer	INSTALLED	
CWT Buffer	INSTALLED	

Mech. Checks:

INSTALLATION CHECKS	RESULT
Landing Door	
DOOR LOCK	
Door Drive coupling	
Door Drive Belt	
Cabin Lights	
OVER SPEED GOVERNOR	
EMERGENGY BRAKE	
CAR OPERATING PANNEL	
GUIDE RAIL BRACKETS	
COUNTER WEIGHT ASSEMBLY	
TRACTION MACHINE ASSEMBLY	
Main controller Cabins	
GUIDE RAILS	
MOTOR	
Remote Monitoring System	

CONFIRMED BY:
COMMISSIONING ENGINEER
SIGNATURES:

WITNESSED BY:
CLIENT/CONSULTANT
REPRESENTATIVE
SIGNATURES:

DATE OF INSPECTION: _____

DATE OF CHECK REQUEST: __/__/____

Note: Any open points not related to the safe function of Elevator should be noted on the attached comment sheet, and will be rectified on intimation and will not hinder the handing over and the operations of Elevator and start of maintenance period.

Comments:

CONFIRMED BY:
COMMISSIONING ENGINEER
SIGNATURES:

WITNESSED BY:
CLIENT/CONSULTANT
REPRESENTATIVE
SIGNATURES:

BRAUN
AUFZÜGE

BRAUN ELEVATOR
Owner's Manual

DEMS PVT LIMITED
DESIGNING OF ELECTRICAL AND MECHANICAL SYSTEMS

1 About This Document

Safety Symbols and Definitions 1 - 1
Responsibilities of the Owner 1 - 2
Suggestions to the Owner 1 - 3

Safety Symbols and Definitions

Danger

This symbol indicates the information that must be obeyed for safety; otherwise, it may result into injury.

Warning

This symbol indicates the information that shall be paid attention to; otherwise, it may result into injury or extensive damage to property.

Caution

This symbol indicates the information that includees important hint instructions. Failure to observe the instructions can lead to errors or damages.

Installation
This installation consists of one or more elevators, including car, hoist way and machine room areas, and the entrances to them.

Notified body
An independent body with elevator experiences, professional integrity and technical competence, appointed by the government.

Owner of the Installation
The natural or legal person, who has the power of disposal of the installation, and in addition, is responsible for its intended operation, use and maintenance.

Competent Persons
Designated person, suitably trained, qualified by knowledge and practical experience, provided with the necessary instructions within their maintenance organization to enable the required maintenance operations to be safely carried out.

Malfunction
A state of operation, in which, the safe operation of the elevator for its intended purpose is restricted or impossible.

Trained Personnel
Persons authorized by the owner of the installation and trained by the maintenance company to perform specific tasks assigned to them.

Handover of the Installation

The installer makes the installed and operable elevator available to the user for the first time.

OEM
Original Equipment Manufacturer (of elevator and accessories)

Maintenance Operations
All work necessary for preventative maintenance, corrective maintenance and repairs.

Manufacturer
Common legal unit, which takes responsibility for design, manufacture, assembly and commissioning of the installation (including the safety components).

Emergency
A situation in which passengers are trapped in the car.

Repairs
The replacement or repair of defective and/or damaged components.

Safety Components
Components that are defined as safety components by the Bureau of Quality and Technical Supervision.

Maintenance Company
A company that is responsibility for carrying out maintenance work, and that has competent persons at its disposal.

Regular Maintenance
All measures necessary to ensure safe and correct operation of the elevator.

Responsibilities of the Owner

Intended use

The owner of the installation is responsible for ensuring the installation is used as intended (transport of passengers). He is also responsible for ensuring that the installation is maintained in a safe operating condition.

Availability of the Instruction Manual

It is the responsibility of the owner of the installation to ensure that this manual is available at all times and freely accessible to competent and trained persons.

Periodic Inspection

Periodic inspection must be carried out according to the national regulations. The owner of the installation must ask a competent person for periodic inspection.

Return to Normal Operation

If the elevator has been commissioned, but used as a building elevator, or if it has been taken out of service for an extended period of time, a certified professional must take the following steps before the elevator should be allowed to return to normal operation:

- Clean and lubricate the installation;
- Replace the damaged components;
- Check the safety elements.

Maintenance Duties

The installation described here conforms to Braun quality standards. It was built according to the recognized national safety regulations.

In order to ensure safe operation after handover, the installation must be maintained regularly by competent persons.

The weight of the elevator car is closely related to the safety of the installation. The weight of temporary protective measures within the car should be considered as the load of the elevator.

Braun prohibits the clients (e.g. buyers or owners of Braun elevators) from decorating the elevator car by themselves without assistance.

Notice to Maintenance Company

If abnormals (e.g. leveling inaccuracy, noises, vibrations, defective car lighting, etc.) in the installation are observed, the maintenance company must be notified immediately. The owner of the installation must notify the maintenance company of any changes that are imminent in the area of installation, and whenever an emergency has occured.

Elevator Emergency Exits

For emergencies and to carry out maintenance operations, the safe access to the building and to the installation must be guaranteed at all times. The access to the control and the drive must be locked. The keys may only be made available to persons authorized by the owner.

Maintenance Operations

The owner of the installation has to comply with, and is responsible for the fulfillment of the requirements as laid down in the chapter "Maintenance Operations - Prerequisites".

Notification to Manufacturer

According to product responsibility regulations, the manufacturer must keep track of its installation(s) after commissioning and handover. Therefore, the owner of the installation must report to the manufacturer any damage to the installation or possible dangerous conditions in the installation.

Handling of Emergencies

When the handling of alarms is the responsibility of the owner of the installation, the following has to be considered:

- In the case of an emergency where there is no response from the lift car, it must be assumed that the person in the car pressing the alarm button has impaired speech or hearing. This requires immediate intervention by a trained person.

Suggestions to the Owner

Reduce the owner's responsibilities by increasing usage safety and equipment reliability.

Scope of Responsibilities

The owner (of elevator or escalator) has a duty to care for the safety of users of the equipment (including riders and maintenance personnel) and the reliability of the equipment itself as well.These responsibilities are based upon guidelines set forth by national laws and local regulations.

Selection Criteria

The completion of all necessary maintenance tasks is required to guarantee the post-installation safety and function of the elevator and all elevator parts in their service life.

The safety and function of the elevator can only be guaranteed by certified maintenance teams conducting regular maintenance work in accordance with maintenance guidelines.

All assigned maintenance personnel should be certified and professionally trained, and have not only technical knowledge but also actual operational experiences. The professional organization that supports all maintenance personnel must supply instruction manuals and special tools (i.e. ISO 9000 certified) to guarantee the safe operation of maintenance tasks.

It is recommended to the equipment owners that they only cooperate with maintenance companies that are appropriately insured.

The elevator must be maintained exactly in accordance with the guidelines specified by the manufacturer in the user manual. The routine maintenance is required to guarantee the safety and reliability of the elevator.

Maintenance teams must conduct regular inspections when an elevator has either been put into operation recently, or before it is to be returned to operation after a long period of disuse.

If the elevator is changed in any way, the owner should supply the maintenance team with relevant maintenance instructions.

The maintenance company should deeply consider the followings when determining maintenance cycles:

- Times of use per year, operating/non-operating periods;
- The service life of the elevator;
- Installation place of the elevator, type of the elevator, demandes of user, and category of freight transported;
- Local and external environmental factors, such as; weather conditions (rainfall, high or low temperatures, etc.) or vandalism.

According to these standards, the maintenance team should prepare a maintenance plan to guarantee that all preventative maintenances are conducted in accordance with elevator requirements in an optimal amount of time, without compromising the passengers' safety or increasing non-working hours.

The maintenance company must supply all necessary spare parts.

Should an upgrade to an elevator become available, the maintenance company shall be responsible to notify the owner.

2 Basic User Information

User Manual Confirmation 2 - 1
Elevator Log 2 – 2
Basic characteristics of the installation 2.- 3
Notification to Installation Team 2 – 4
Declaraion of Conformity 2 - 5

BRAUN AUFZÜGE

User Manual Confirmation

Elevator Information

Contract Number:
Installation location:
Manufacturing Date:

Owner

Name:
Address:
City:
Zip:

Signature

Address/Date .....

Owner's Signature: .....

Manufacturer's Signature: .....

DEMS PVT LIMITED
DESIGNING OF ELECTRICAL AND MECHANICAL SYSTEMS

Elevator Log

Elevator Description

Gearless Electric Drive

Installation

Type:
Contract Number:
Installation Position:
Address: Owner:

Handover Date

Installation Date:
Handover Date:

Maintenance Company

Name:
Address:
City:

Start date for maintenance:

Major Repairs/ Important Modifications

Description	Responsible Person	Date	Signature

Basic characteristics of the installation

Identification of the lift	Traction lift with traction machine in well or in separate space overhead the well directly
Owner data	Owner: Address:
Installer	Name:
Installation	Installation no: Address: Layout drawing ref. no.:
Characteristics of the installation	Number of levels served: Car entrances: Rated load: Number of persons: Kind of users: Passengers Max. starts per hour: Travel: mm Rated speed: m/sec Voltage: V Power supply: Number of phases Power supply: Number of wires: Frequency: Hz Power: Kw Type of control: BIONIC microprocessor Suspension: Number of traction media: Car safety gear type:
Motor situation	Motor located inside the hoistway fixed on guide rail. Motor located in a separated space overhead the hoistway directly
Type of drive	Gearless machine driven in closed loop

Notification to the Installation Team

Purpose	In accordance with law, Braun as manufacturer must keep track of its installation(s) even after commissioning and handover. Therefore Braun has to be informed about all major damages to the installation as well as any change in building ownership.
Installation Team	: Address: Zip: City: ☎: 🖷:
Elevator Identification	Contract Number: Address: Installation Site: Installation Date:
Owner	Name: Address: Zip: City: ☎: 🖷:
Change of Ownership	Date
New Owner of the Installation	Name: Address: Zip: City: ☎: 🖷:
Description of Malfunctions or Damages	
Signature of the Owner	Date Signature

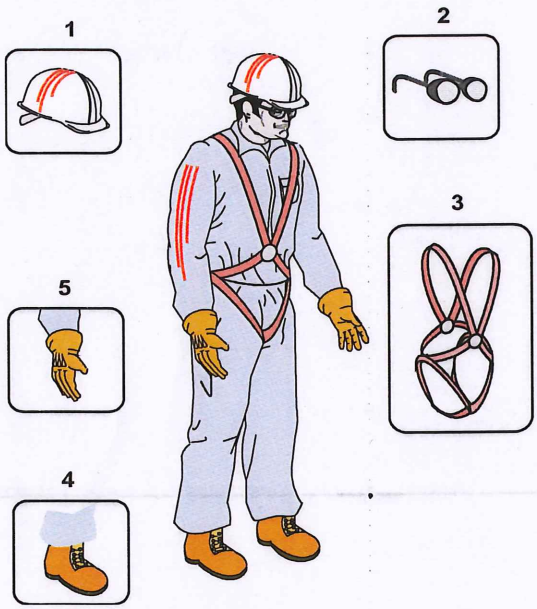
3 Installation Instructions

Safety and Environment	3 - 1
Installation Tools	3 - 1
Elevator Installation Methods	3 - 3
Elevator Installation Procedures	3 - 4
Storage and Transport of On-Site Materials	3 - 4
Elevator Installation and Relevant Requirements	3 - 5
Finished Product Protection	3 – 8
Handover of Equipment and Materials	3 – 8

Safety and Environment

Safety

Please obey the following safety rules:
Wear required personal protective equipment and clothing: safety helmet, safety shoes, protective gloves, full body safety harness, and safety goggles.



1. Safety helmet
2. Safety Goggles
3. Full body Safety Harness
4. Safety shoes
5. Protective Gloves

The area around the elevator installation must be kept clean, and proper protective measures must be in place for all floor level entrances;

All safety equipment and safety symbols in the work area must be maintained;

The work place should have sufficient illumination;

User instructions for all equipment and tools should be strictly obeyed; tools and equipment should be kept in good conditions from start to finish;

Dangerous situations can only be prevented by strictly obeying all safety rules;

The door to the machine room should remain locked at all time;

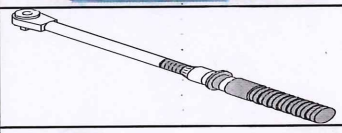
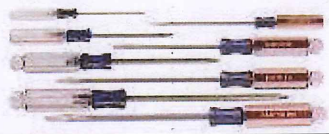
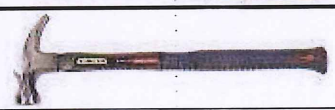
Users must obey all elevator operation instructions;

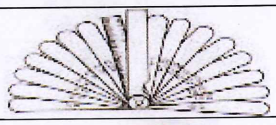
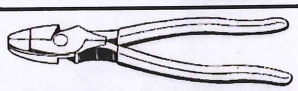
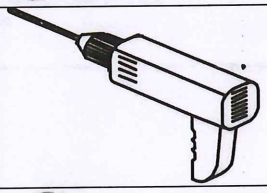
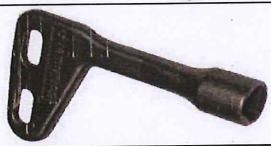
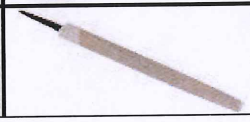
Only trained personnel should have access to the elevator's triangle key, and should only use it when authorized.

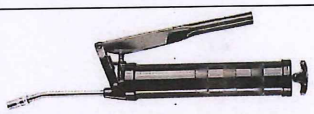
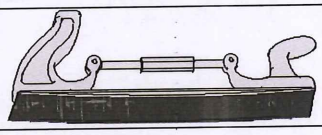
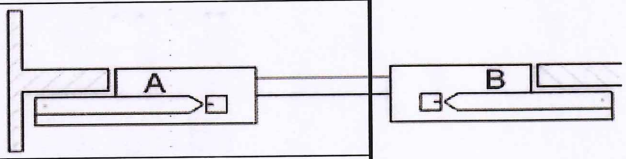
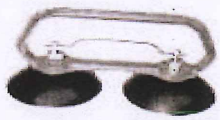
Environment

Attention should be paid to limiting environmental impacts; effective measures should be in place to protect against any waste gases, waste water, waste oil, waste materials, dust, noise, vibration, electromagnetic radiation, etc. generated during elevator installation, maintenance, or other activities. The local environment should be protected and improved so as to eliminate any pollutants that could cause public hazard or bodily injury.

Installation Tools

Tool	Description
8-24mm Open-Ended Wrenches	
8-24mm Socket Wrenches	
100-375mm Crescent Wrenches	
Allen Wrenches	
30-100N Torsion Wrenches	
Flathead Screw-drivers Phillips Screw-drivers	
Hammer	
5m Measuring Tape	
Level	
Square	

Tool	Description
Straight Ruler	
Feeler Gauge	
Handheld Grinder	
Needle-nosed Pliers	
Steel Pliers	
Wire Cutters	
Clamp Pliers	
5T Hoist	
Crowbar	
Electric Drill Impact Drill	
Braun Company Triangle Key	
File	

Tool	Description
Multimeter	
Grease Gun	
Guide Rail File	
Steel Saw	
Flashlight	
Tool Bag	
Plumb	
Guide Rail Installation Tool	
Suction Cups	

Elevator Installation Methods

Preparation and Civil Surveys

After being notified by the constructing party, the installation team will send personnel to the construction site before the elevator arrives to conduct civil engineering tests. The constructing party should make the following preparations, and notify the installation team in writing:

The construction site should meet all necessary construction requirements, and the hoist-line should be clear of obstructions;

The installation team should be supplied with clean elevator hoistways in certified dimensions and with operational electrical connections and sufficient illumination;

In accordance with agreement, the constructing party is responsible for scaffolding within the hoistway and its handover to the installation team;

All final hoistway axis and floor level measurements should be confirmed and supplied to the installation team in writing;

Relevant personnel will conduct site modification work in accordance with the results of the civil engineering tests;

In accordance with agreement, a temporary indoor on-site storage area will be provided to the installation team for the temporary storage of materials and tools; the dimensions of this area will depend on the agreement between both parties and the location shall facilitate convenient and safe construction.

Delivery, Inspection, and Lifting

The installation team will notify the constructing party once delivery has been made to the location designated by the constructing party; the constructing party will then send relevant personnel to confirm with members of the installation team and delivery personnel that everything has arrived in undamaged conditions.

Once the elevator installation kit has arrived, the constructing party will be responsible for protecting it. The constructing party will then work with the installation team in inventorying and confirming the shipped items.

Once the shipment has been inventoried, the responsible party will then lift all machinery, controller cabinets, and car platform into its appropriate position.

Construction Approval

Before the installation of the elevator begins, the installation team must assist the constructing party in applying for construction approval from the government.

Installation, Commissioning and Inspection

Once all engineering modifications of the installation site have been completed and the construction approvals have been granted, the elevator installation team will officially start installation.

The installation team will complete elevator installation, commissioning and internal inspection in strict accordance with national and company standards within the time period agreed in the contract.

Government Acceptance

Once the internal testing report has been received from the elevator installation team, the constructing party will report the results to the appropriate government department. The elevator installation team will then modify and correct any aspect of the installation that does not reach acceptable standards.

Equipment Handover

Once government inspection approval has been received, the elevator installation team will officially hand over the equipment to the constructing party.

4 Instructions for use

Instructions for use	4 - 1
Purpose and scope	4 - 2
Description of the installation	4 - 3
Operation of the installation	4 - 4
Guide to safe operation of the installation	4 - 8
Maintenance	4 - 9
Emergency	4 - 10
Emergency procedure	4 - 10
Rescue of trapped passengers	4 - 10
Instruction to release trapped passengers	4 - 11
Special rescue procedure	4 - 12
Additional remarks and procedures in case of traction media failure	4 - 12

Instructions for use

Intended readers

The instruction manual is intended for:

- The owner of the installation,
- Competent persons,
- Trained persons.

Safekeeping

The owner of the installation is responsible for ensuring that this manual is available at all times and freely accessible to competent persons and trained persons whenever the need arises.

Identification of the lift installation

Comm. No.:
Lift No.:
Address:
Installation location:
Country:
Year of installation:

Conformity

This lift conforms to all relevant local codes as well as EU directives and standards.

Installer

Name:
Address:
City / Country:
☎: 🖷:

Maintenance Company

Name:
Address:
City / Country:
☎: 🖷:

Your partner for Modernization

Braun Lift Ltd.
Name:
Address:
City / Country:
☎: 🖷:

Purpose and scope

Scope

The EU Lifts Directive (95/16/CE) and other related country specific codes describe the basic requirement relating to safety and health with which lifts and their safety components must comply without reservation. These include the requirement that the installer must deliver an instruction manual with every lift he installs.

Safety symbols and definitions

To ensure correct understanding of the instruction manual, the safety symbols and definitions described in the section "Safety Symbols and Definitions" must be observed.

Purpose of the instruction manual

The instruction manual gives the owner of the installation, the maintenance company and trained person's important instructions for normal safe operation of the lift, lift maintenance and for taking appropriate measures if emergencies occur.

Binding nature

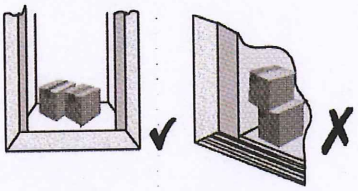
This instruction manual relates to the lift specified on the first page. At the handover of the installation the instruction manual becomes binding.

Intended use

The lift described here is intended for the transport of passengers. Signs displayed on the installation must be observed.

If the installation is used for the transport of goods, the following points must be taken into consideration.

- Load Distribution: The load must be evenly distributed over the car floor. A single heavy load being brought into the car all at once can cause damage to the car.



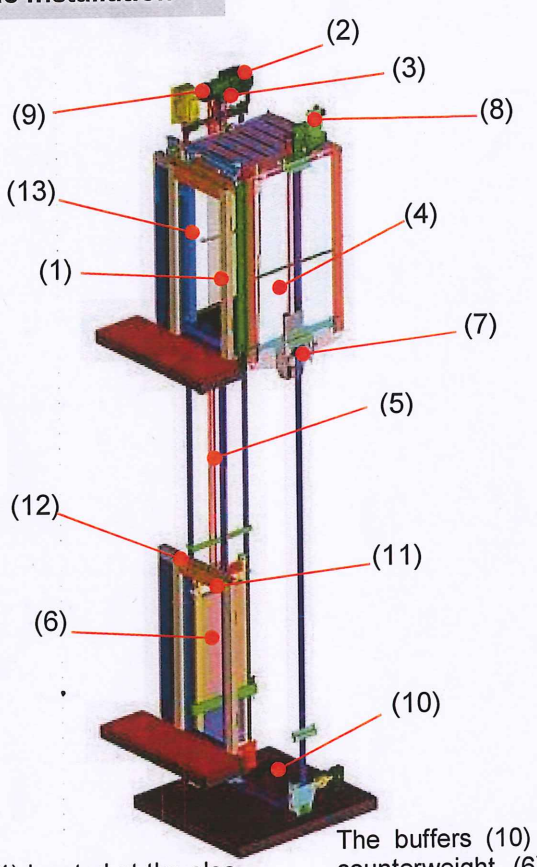
The installation has been designed according to the use of the building specified at the time of purchase. The corresponding number of trips per hour is shown in the sales specification of the installation. If the installation is used more than this, excessive heat can cause the lift to become blocked. If this happens frequently, the installation must be inspected and, if necessary, modified. In this case, the installer must be contacted.

If the lift is used outside the scope of the foregoing definitions, it is no longer being used for its intended purpose. Neither the manufacturer nor the installer accepts liability for damage resulting from such use. Use of the lift as intended includes complying with the conditions for maintenance specified by the manufacturer or the installer.

If the lift was ordered with naked car, the customer decoration weight (total decoration weight, floor decoration weight, car wall decoration weight) must not exceed the limitation in the purchasing order.

It is not allowed to change the car design without written approval by the supplier!

Description of the installation



Control cabinet

The control cabinet (1) located at the closing - side door jamb of the top floor contains the controller and the emergency device, as well as the rescue instructions.

Power transmission

Monitored by the controller, (1) the motor (2) drives the traction sheave (3), which transmits the force to the car (4) by the suspension media (5) and counterweight (6).

Safety components

The safety gear (7) on the car stops the car (4) if it travels downward at excessive speed. The safety gear (7) is tripped by the overspeed governor (8).

The brake (9) on the motor stops the car if it travels upwards at excessive speed. The brake (9) is triggered by the overspeed governor (8).

The overspeed governor (8) monitors the speed of the car (4) and it triggers the safety gear (7) at excessive speed.

The buffers (10) stop the car (4) or the counterweight (6) in the event of over travel into the hoistway pit.

The door interlock (11) prevents the landing doors (12) from opening during travel and when outside the interlock zone. The car door (13) protects the car entrance during travel and when outside the floors.

Safety chain

The safety chain monitors all electrical safety elements. Whenever an electrical safety element doesn't work correctly, the start of a trip will be prevented or the trip will be immediately stopped.

Operation of the installation

Mode of operation

Standard control functions

- **Down collective control**

  At any time the control registers calls from the landings and calls from the car. As the car travels down, it serves the calls in their natural sequence. The landing calls are only served in downward direction (upward for basement).

- **Collective selective control**

  At any time the control registers up and down calls from the landings, and calls from the car. As the car travels either downwards or upwards it serves car calls in their natural sequence and landing calls of same direction.

- **Group control duplex**

  Group control duplex combines two lifts into a single control system. This optimizes the distribution of the landing calls between the lifts.

- **Overload control**

  The overload control prevents travel with an overloaded car. The car remains at the landing with the door open. An acoustic and optical signal draws the passenger's attention.

- **Full load control** (only for collective)

  When the car is full, it will only serve car calls; landing calls are ignored or allocated to the other lift for duplex.

Control options

Depending on configuration of the specific installation, additional control options may be present. These are detailed in characteristics and sales specifications of the installation.

- **Fireman's control**
  (according to national regulations)

Fire emergency controls available are
BR1,BR CN, BR1 KOR, BR 2, BR 2 CN, BR 2 SGP, BR 3, BR3 TW and BR 3 KOR

The fire emergency control immediately brings the car (two cars if duplex) to the recall floor, where the car(s) remain(s) blocked with open door .

The fireman's control is turned-on or off either:

- by the fire emergency key switch, located on main floor
- by the fire emergency key switch, located on main floor or fire detection contact
- by the fire emergency key switch, located on main floor with alternative key on defined floor in case of fire in main floor

Fire emergency controls BR2 / BR3

BR2/BR3 control allows the lift (or one of the lifts if duplex) to be used by the fire brigade to make trips for fire fighting purposes. When the fire fighting switch is activated, the lift travels immediately to the fire recall floor, and opens its doors. Then use of the car is reserved for the firemen. In the case of a duplex and BR2 the other lift remains in normal service. In the case of duplex and BR3, the other lift remains at the fire recall floor. Fire fighting service can only be deactivated when car is at fire recall floor with doors fully open.

- Fire emergency key switch, located on main floor
- Fire emergency key switch, located in the car

- **Independent control** (car reservation)

  When the car reservation key is turned on, the car is reserved for exclusive use such as car interior cleaning. Landing calls are ignored (allocated to the other lift if duplex).

- **Out of service function**

  The out-of service switch is used to take one lift out of service. Currently registered car calls are served before the car returns to a specified recall floor, where it's blocked after the doors have opened and closed. Further travel indicator for collective controls and car position indicators on the landings are de-activated.

- **Pre-opening doors**)

  The door opens just before the car comes to a stop at landing in order to save time.

- **Pre-announcing arrows with / without acoustic signal** (Collective control)

  The indication to the passengers for the direction in which a car will travel next, using up or down arrows.

- **Automatic car light**

  When the car is not used for a longer time with door closed, the light of the car is switched off.

- **Automatic return to main floor from all floors**

  The car is automatically sent to the main floor after a time of inactivity (default 2 min.). There it remains with door closed.

- **Automatic return to main floor when car stands below the main floor**

  The car is automatically sent to the main floor after 5 s. of inactivity below the main floor. There it remains with door closed.

- **Voice announcement** (selected languages)

  The specific device located on the car generates audible synthetic messages.

- **Automatic evacuation to the nearest floor**
  In case of power failure, an evacuation travel is initiated in up or down direction, depending on the load in the car. When the car arrives at the nearest floor, the doors open and remain open

Guide to safe operation of the installation

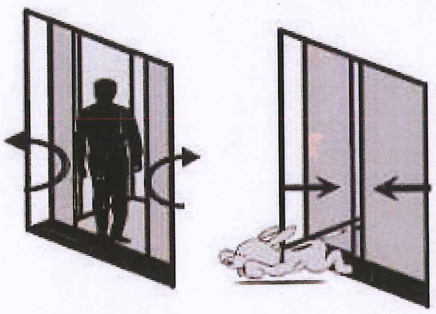
Work on the installation

Only competent persons may carry out work on the installation.

Safety in door area

Automatic doors have safety equipment such as closing-force limiters and light curtains, which ensure that passengers or objects do not become trapped. However, detection of small objects such as dog leashes and walking sticks cannot be guaranteed.

For this reason, the door area must be cleared immediately after entering or leaving the car.

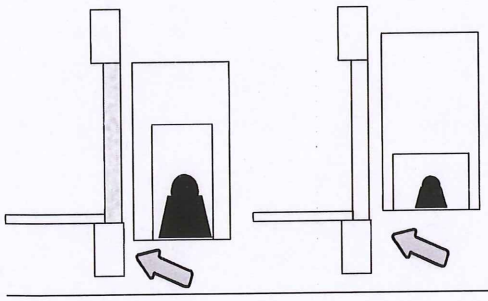


Door sill and car floor

The rollers of forklifts and similar equipment can damage the door sill and/or the car floor.

Differences in level

Depending on the load, the car can stop above or below the level of the landing floor. Care must be taken entering and leaving the car so passengers do not trip.



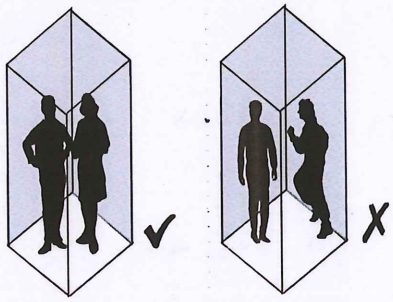
Attention must also be paid to the gap between the car and the landing door sill, when entering and leaving the car.

Assistance

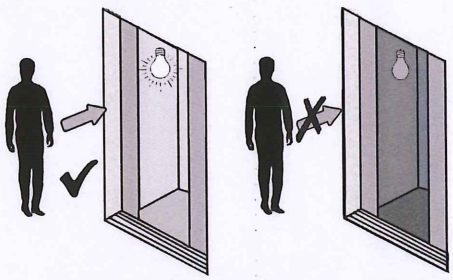
Persons who are unable to use the controls in the car may only use the lift if accompanied by a person able to assist.

Behavior of user

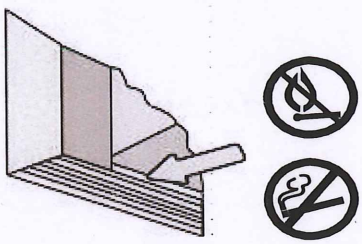
Passengers must stand still while the car is moving. Jumping or rocking is not allowed. Instructions in the car must be followed.



The lift may only be used if the car lighting is on.

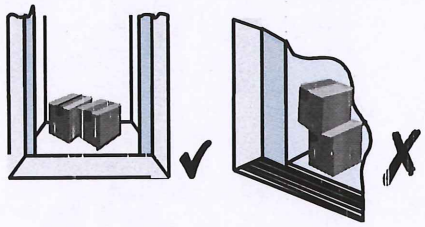


Do not throw any objects, especially burning matches or cigarettes, through the gap between the door and the landing sill into the hoistway pit.



Positioning of goods

Goods being transported in the car must be positioned in such a way that they cannot move about. Care must be taken to evenly distribute the load.



Exceptional situations

In case of fire, smoke, water etc. in the building, it is strictly forbidden to use the lift.

In case of fire the car could come to a stop, due to power failure or other fire damage, in a position where it becomes impossible for passengers to leave the car so that danger of burns and/or suffocation could occur.

Handover of emergency keys

The installer must hand over the emergency unlocking keys for landing doors and control cabinet to the owner of the installation. The handover must be accompanied by written instructions detailing the essential precautions to be taken in order to avoid possible accidents, resulting from unlocking, or access to cabinet.

Caring for the disabled

If disabled persons predominantly use an installation, the installer or the maintenance company must be contacted to provide adequate modifications to the installation.

The following measures must be taken to serve disabled persons:

- Door opening and closing times are to be adjusted.
- Special operating panels must be installed in the car on a landing side where applicable

Maintenance

See chapter Maintenance

Use of emergency keys

The use of emergency unlocking key for landing doors and control cabinet key is strictly limited to competent and trained persons.

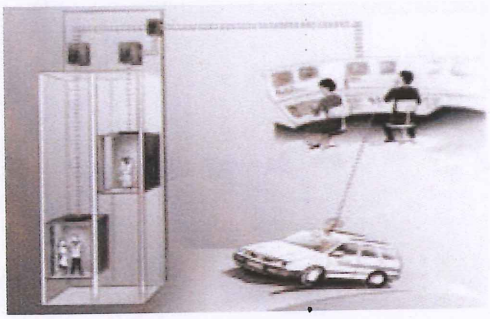
Emergency

Communication system

The car is equipped with a voice communication system, which can be used in an emergency to set up an immediate link to an emergency service.

Emergency service

The emergency service must be available as per requirements set in country specific codes. For contact at all times and its personnel have been appropriately trained so as to be able to take competent action. The functioning of the communication facility with the emergency service must be guaranteed during the entire lifetime of the installation. A trained person must always be within easy reach in case of emergencies with passengers trapped in the lift.



Emergency procedure

Emergency situation

If for any reason the car stops, and it is not possible to leave the car in the normal way, there is no danger to users in the car. The car is secured against uncontrolled movements. Ventilation slits allow air into the car. If the power supply fails, emergency lighting will immediately provide light inside the car.

Use of alarm

The alarm button in the car should only be pressed in an emergency. When the alarm button is pressed, the alarm is passed on automatically. After a short time, the person on duty at the responsible service center replies. The person gives instructions to the user, and organizes whatever action is necessary.

Rescue of trapped passengers

Responsibility

Only competent or trained persons are allowed to rescue trapped passengers.

Procedure

When rescuing trapped passengers, the procedure displayed in the control cabinet must be followed.

If, for any reason, the instruction notice in the control cabinet is missing, the maintenance company must be contacted immediately to allow rescuing the passengers. The maintenance notice must be replaced immediately.

Handover of emergency device

The use of the emergency device located in the control cabinet (see description of the installation) is strictly limited to competent or trained persons.

BRAUN AUFZÜGE

Instruction to release trapped passengers

VERY IMPORTANT!

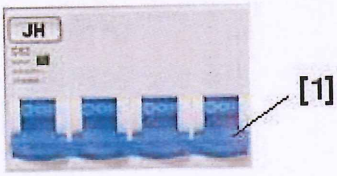
Only properly trained and authorized staff is allowed to use these instructions!

Except in EMERGENCY situations, do not attempt to move the elevator, call the maintenance and repair service.

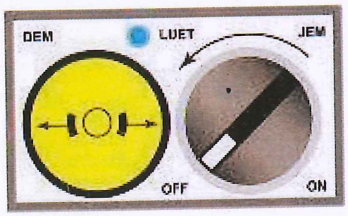
Before leaving the control cabinet area, make sure the elevator is turned off & the control cabinet door is closed and safely locked!

- Reassure the passengers. You should inform them that the elevator car will move and that they should hold on to hand rail or car wall before the evacuation starts. The car door must be closed to prevent any risk to the passengers.

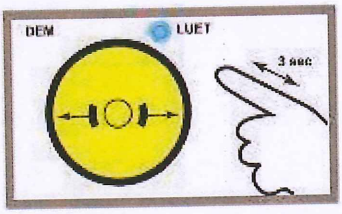
- Turn off the Main Power Switch, **JH**.



- Turn **ON** the Manual Evacuation Switch, **JEM**.

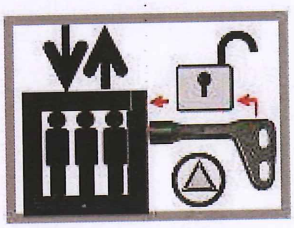


- Press with 3-second intervals the Manual Evacuation Button, **DEM**.

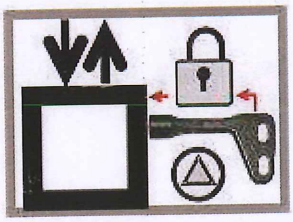


- When the blue floor indication LED, **LUET**, lights up, turn **OFF** the Manual Evacuation Switch, **JEM**.

- Lock the control cabinet door. Go to the landing entrance adjacent to the car level. Manually open the landing door with the special triangular key: the passengers can exit the car.



- Close the landing door and ensure it is locked.



Call the repair service!
Ensure the landing door is locked again!
Ensure the main power switch is turned off!

5 Maintenance Instructions

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Prerequisites

Basic Rules

The safe and effective operation and maintenance and rapid emergency responsiveness can only be guaranteed if the owner of the elevator is responsible and pays close attention to the followings:

Access Restrictions

Only technical support/trained personnel may access the elevator hoistway. The hoistway maintenance and/or cleaning work must only be carried out by the trained maintenance personnel according to the owner installation manual; otherwise, they must be done with the presence of the professionals. All safety preparation measures must be completed prior to this work.

Safety Measures

All doors that allow access to either the elevator control areas or hoistway must be locked at all times.

There must be a safe access to the hoistway pit.

All access to either the drive and control machinery or hoistway must be kept clear and safe at all times. The installation work must be suspended immediately should any blockage exist within the emergency access passage ways.

Illumination

The hoistway and all access passageways should be properly illuminated.

Temperature and Ventilation

The elevator owners must guarantee that the temperature of the hoistway will remain between $+5^0$C and $+40^0$C. The hoistway must also be properly ventilated. The hoistway cannot be used if it is not connected to the car ventilation area.

Cleaning

Scope

The inside of the elevator car, landing doors, the landing floor door frame, all buttons and indicator lights, and the door sills of both the landing floor and elevator car should be cleaned on a regular basis.

Responsibilities

Only trained and qualified personnel can conduct cleaning of the elevator.

A trained professional must be present on-site when the cleaning of the hoistway or glass fencing is being performed! This person must be trained and qualified for the operation of the elevator and all safety measures. In addition, this person is responsible for taking all pertinent safety measures prior to any such cleaning work.

Safety Measures

When the electrical cleaning equipment is used inside the car, it must be guaranteed that the car doors cannot be closed unexpectedly. It is recommended to shut off the elevator's master power source!

Cleaning (Cont.)

Instructions
The following rules must be obeyed during the cleaning operations:

- At no time should cleaning solutions containing strong solvents or abrasives be used.
- All materials can be cleaned with a solution of soap and clean water.
- When cleaning the surfaces composed of different materials, the cleaning solution should be safe for the most sensitive surface.

Water is allowed to flow into the elevator car, hoistway, or hoistway pit.

A vacuum cleaner should be used to clean out the landing door sill and grooved surfaces in the landing door area. A slow-evaporating solvent such as petroleum solvent or kerosene should be used to clean hard-to-remove dirt and stains. Once cleaned, the solvent itself should be wiped clean. If necessary, dirt may be gently scraped clean.

Clean the elevator car floor, car doors, and landing doors according to their relevant materials.

For the structural surfaces or polished surfaces (brushed light), the cleaning work should be conducted based on the surface characteristics of the polished materials. Cleaning in a direction different from that of polishing may damage the surfaces.

Stainless Steel
Recommended Cleaning Solution: Typical stainless steel cleaner (with or without solvent) available in the market, such as isopropanol, petroleum-based or hydrocarbon-based solvents, such as kerosene or benzene.

Polished stainless steel has a very sensitive surface. Therefore, it is important to obey the following instructions:

Only with the prepared stainless steel polishing agent, lightly spray on the stainless steel surface and clean with a clean white cloth. For the soft leather with cleanser, use white cloth for further polishing treatment.

Stainless steel surfaces with graphics or etchings should not be damaged by cleaning; therefore, the following instructions should be followed:
Use the warm cloth with soapy water (without any solvent) to gently clean the surface. Then, polish the surface with a clean damp cloth. Once it is dry, the surface should then be gently polished again with a clean white cloth.

Colored stainless steel requires extra care. It should be cleaned with the cleaning procedures for graphical or etched stainless steel.

Aluminum
Recommended Cleaning Agent: Liquid cleaning agent or degreaser. Use a soft cloth or sponge to polish and dry.

Copper, Brass, and Bronze
Recommended Cleaning Agent: Liquid aluminium or brass cleaning solution.
Use a soft cloth or sponge to polish and dry.

Wood and Plywood
Recommended Cleaning Agent: Liquid cleaning agent or degreaser.
Use a soft cloth or sponge to polish and dry.

Glass and Glass Products
Recommended Cleaning Agent: General glass cleaning agent available in the market. Watered petroleum-based solvents. Use a soft cloth or sponge to polish and dry.

Resin-Based Materials
Recommended Cleaning Agent: General resin cleaning agent (alcohol or hydrocarbon-based) available in the market. Clean with a soft cloth. Use cleaning solution sparingly. Clean, polish and dry.

Colored polished surfaces
Recommended Cleaning Agent: Gentle, liquid alcohol or hydrocarbon-based degreasers such as kerosene or benzene. It is recommended that a non-visible test surface be cleaned first so as to observe any potential reaction with the cleaning solution. Clean with a damp, soft cloth.

Plastic Fasteners
Recommended Cleaning Agent: General plastic cleaning agent available in the market. Alcohol or hydrocarbon-based cleaners

such as kerosene, benzene, etc. It is recommended that a non-visible test surface be cleaned first so as to observe any potential reaction with the cleaning solution. Clean with a damp, soft cloth.

Carpets
Recommended Cleaning Agent: General carpet cleaning products or chlorinated hydrocarbon or alcohol-based solvents available in the market. Clean with vacuum cleaner, apply carpet shampoo, and then scrub with sponge. Use a sponge containing chlorinated hydrocarbon or alcohol-based solvents to scrub away dirt and stains, and then allow the carpet to dry.

Synthetic/Glued Flooring Materials
Recommended Cleaning Agent: General liquid cleaning products or degreasers, or alcohol or hydrocarbon-based cleaners such as isopropyl alcohol and kerosene. Clean with a damp cloth.

Cleaning (Cont.)

Marble or Tile Flooring
Recommended Cleaning Agent: Soapy water. Household cleaning procedures will work well when cleaning this kind of material.

Landing Door Sill and Footplate
Recommended Cleaning Agent: Warm soapy water (not cleaning agent).
Use a cloth to brush away all dirt and dust from the landing door area. Use a vacuum cleaner to clean certain areas. Clean the surface using a sponge and hot soapy water. Rinse the area with clean water and a clean cloth, and dry the area by baking.

Lights
Recommended Cleaning Agent: Soapy water (not cleaning agent). After turning off electrical power, remove the light from its fixture and clean it. After drying, re-install the light in its original location!
Clean the surface area using a sponge and hot soapy water. Rinse the area with clean water and a clean cloth.

Buttons, Indicator Lights and Paneling
Clean according to the materials used.

Regular Inspection and Maintenance

Content

The regular inspection and maintenance includes the regular safety inspection of all of the elevator's electrical and mechanical components, the installation and adjustment of all elevator components, lubrication, and cleaning. The regular inspection and maintenance does not typically include replacements of parts or equipment.

Regular Inspection and Maintenance Plan

The regular inspection and maintenance plan should be conducted in accordance with the technical maintenance plan. The inspection and maintenance depends on many different factors concerning elevator and environment. All specified requirements must be met at all times. These standards indicate the absolute minimum requirements.

Responsibilities

As a general rule, only the qualified persons should be allowed to perform the inspection and maintenance tasks. The simple cleaning tasks are excluded, which is described in details in the "*Inspection and Maintenance – Cleaning*" section. The names of the maintenance company must be displayed on the side of the elevator.

Safety Measures

Prior to conducting inspection and maintenance, the safety measures must be put in place to reduce any risk of personnel injury or property damage. Details are as follows:

- In order to protect the safety of personnel performing inspection and maintenance operations, the rules explained in the chapter "*Maintenance – Prerequisites*" must be strictly obeyed.
- The signs must be placed in visible locations to indicate that the elevator is currently out of service.
- Should any type of safety issue appear during inspection and maintenance (such as hoistway illumination problems, ladder damage or missing, etc.), they must be reported to the owner of the elevator immediately.

Inspection and Maintenance Control Box

The inspection and maintenance control box allows personnel to conduct operations on top of the elevator car. The inspection and maintenance control box can be turned on and off by inspection procedure switch that is located on the inspection and maintenance control box on top of the roof of the elevator car. Once this switch has been activated, the car will no longer respond to floor call commands. The elevator car then can only be moved by the command buttons on the control panel of the inspection and maintenance control box.

Lubricants and Lubricating Oil

Only the lubricants and lubricating oils mentioned in the inspection and maintenance manual may be used. Other lubricants may impact safety and/or cause damage requiring very high expense to repair.

*Please see pages 5-6 for a list of appropriate lubricants.

Disposal

All used lubricants and lubricating oils must be recycled and disposed by the maintenance company in accordance with regulations. Engine lubricants and hydraulic oils can result into severe pollution to water sources!

Repairs

Content
The repairs typically include the repair or replacement of used or damaged safety devices or other devices.

Responsibilities
Only professionals can conduct maintenance work.

Safety Measures
Before conducting inspection and maintenance, the safety measures must be put in place to reduce any risk of personnel injury or property damage. Details are as follows:

- In order to protect the safety of personnel performing inspection and maintenance operations, the rules explained in the chapter "*Maintenance – Prerequisites*" must be strictly obeyed.
- The signs must be placed in visible locations to indicate that the elevator is currently out of service.
- Should any type of safety issue appear during inspection and maintenance (such as hoistway illumination problems, ladder damage or missing, etc.), they must be reported to the owner of the elevator immediately.

Replacing Safety Devices
Should a safety device require replacing, only the spare parts of OEM that meet the corresponding statement can be used. The copied, upgraded, or re-used parts may cause operational danger to the elevator, reduce elevator service life, or result into a dangerous situation.

Replacing Other Devices
All devices and accessories have been specially designed for usage with this particular elevator. Special attention should be paid to the devices or parts supplied by the third party, especially those not go through certified production processes. Installation or use of these parts (or installation of used parts) may negatively impact the designed features (for example, service life, operational safety, and comfort), or result into dangerous situations.

Spare Part Guarantee
BRAUN guarantees that the OEM spare parts have a service life of twenty years.

Lubricants and Lubricating Oils
Only the lubricants and lubricating oils mentioned in the inspection and maintenance manual may be used. Other lubricants may impact safety and/or result into damage requiring very high expense to repair.

*Please see pages 5-6 for the list of lubricants.

Disposal
All used lubricants and lubricating oils must be recycled and disposed by the maintenance company in accordance with regulations. Engine lubricants and hydraulic oils can result into severe pollution to water sources!

Elevator Log
All major maintenance must be recorded in the elevator log.

Unauthorized Adjustments

Unauthorized adjustment or operation of the elevator may cause damage or accident.

Responsibilities
The manufacturer and installation company are responsible for the possible damages due to utilization of altered, used, or uncertified parts in the elevator.

***List of Lubricants**

Part	Type of Lubricant	Instructions
Gearless Hoist Motor		No lubrication required
Car and Counterweight Guide Rails	HLP68, 68A	
Hoist Media (STM)	- - - -	No lubrication allowed!
Speed Governor Wire Rope	- - - -	No lubrication allowed!
Door System (Car Doors and Landing Doors)	- - - -	No lubrication required
Car and Counterweight Pulleys	- - - -	No lubrication required

Regular Inspections and Tests Following Major Repairs or Alterations

Content

The regular inspection includes elevator safety inspections. The objective of regular inspections after major repairs or malfunctions is to confirm that the elevator remains safe to use.

Responsibilities

The owner of the elevator must send the results of all safety inspections to the State Bureau of Technical Supervision for approval.

Safety Measures

Before conducting regular or special inspection, the safety measures must be put in place to reduce any risk of personnel injury or property damage. Details are as follows:

- In order to protect the safety of personnel performing regular inspections, the rules explained in the chapter "*Maintenance – Prerequisites*" must be strictly obeyed.
- The signs must be placed in visible locations to indicate that the elevator is currently out of service.
- Should any type of safety issue appear during inspection and maintenance (such as hoistway illumination problems, ladder damage or missing, etc.), they must be reported to the owner of the elevator immediately.

Daily Log

The results of any regular inspection or test conducted after any important modification or malfunctions must be recorded in the elevator logs and attached with an inspection report.

General Elevator Maintenance Instructions

Prerequisites
All maintenance and inspection work must be conducted only by professional members of the maintenance company.

Therefore, the maintenance work described here may limit some work operations.

Content
The purpose of the maintenance instructions is to provide the elevator owners, users, and maintenance personnel with standard information regarding maintenance procedures. This requires specified control and inspection. After these parts have been adjusted, they must be cleaned, lubricated, further adjusted, and replaced if necessary.

Responsibilities
The maintenance company is responsible to follow the operation instruction of this manual as well as the specific instructions for each part when conducting maintenance. National standards, regulations, and laws must also be considered.

Safety Measures
The maintenance company is responsible to conduct all maintenance work safely and accurately. It is the maintenance company's responsibility to conduct maintenance exactly as instructed so as to guarantee the safety of the elevator. In addition to this, the maintenance instruction instructions take into consideration of all maintenance instructions in use. For information on lubricants, please see the list of lubricants.

Landing Doors

- Inspect the car doors.
- Inspect the landing doors.
- Inspect all locking mechanisms.
- Inspect all landing door functions and status.
- Inspect the safety functions of the doors opened.

Car Doors

All necessary cleaning and adjustments

- Inspect the door lock, door position, panel arrangement and movement.

Car Onboard Control Panel

Necessary cleaning and replacement

- Inspect the functions and status of all buttons and indicators.
- Inspect the lighting.
- Inspect the functions of alarm system and emergency light.

Car Internals

- Check the indicator panels, accessories, fasteners, etc.

Car Internals/Machine Room Security System

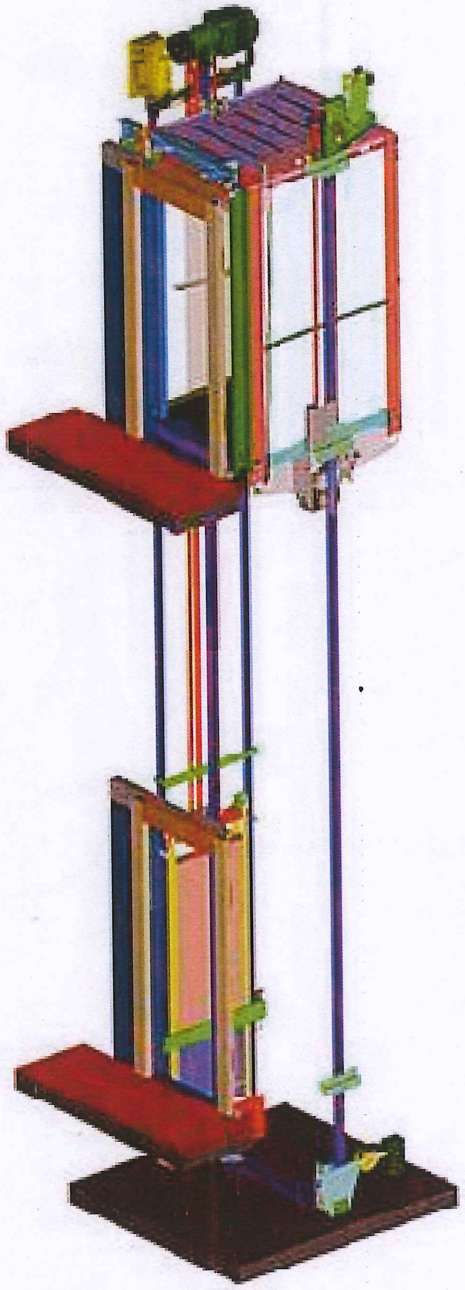
Necessary cleaning and replacement

- Inspect the emergency stop function.
- Inspect the connections on the top of the car and interlocking function.
- Inspect the controller function.

Hoistway Pit

- Inspect the car blocking equipment.
- Inspect the state and function of safety switch.
- Inspect the pit equipment (buffers, tensioners, etc.).

General Elevator Maintenance Instructions (Cont.)



Hoist Motor

Adjusting as per instructions: Dismantling/adjusting and cleaning

- Inspect the states and functions of mechanical brakes.
- Inspect the grooves and covers of traction axis.
- Inspect the states of all fixed elevators.
- Inspect the elevator speed controls.

Control Box and Power Switch Box

- Test RCD (Residual Current Device/Switch) functions at least once every six months.
- Inspect the states of all parts and connections.
- Inspect the emergency stop function.
- Confirm that the controller box is locked.
- Inspect the state of rescue indicator.
- Inspect the protections for all electrical and mechanical parts.

Hoistway

- Inspect the switch functions.
- Test the travel limit distance.
- Test the guide rail fixation.
- Inspect all safety circuits.
- Inspect the lighting.
- Inspect the travelling cables.

Car/Counterweight

Necessary cleaning and lubrication

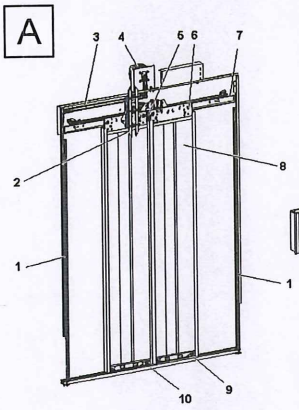
- Inspect the number of counterweight plates.
- Inspect the fastening bolts and nuts.
- Inspect the lubrication oil for guide rail and fill as needed.
- Inspect the guide shoes for wear.
- Inspect the status of CDD (if installed).
- Inspect the status of safety clamps.

Information System

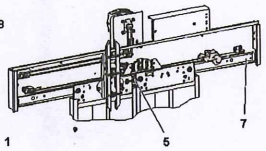
- Inspect the hoistway information.

Detailed Maintenance Instructions for car doors

A

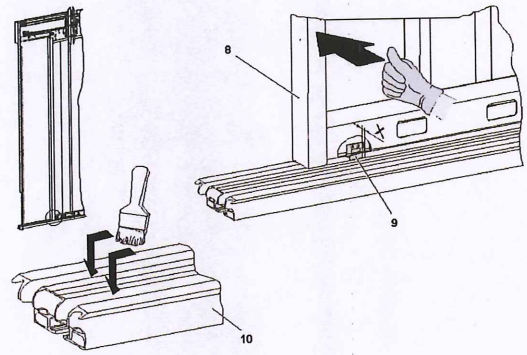


B



C

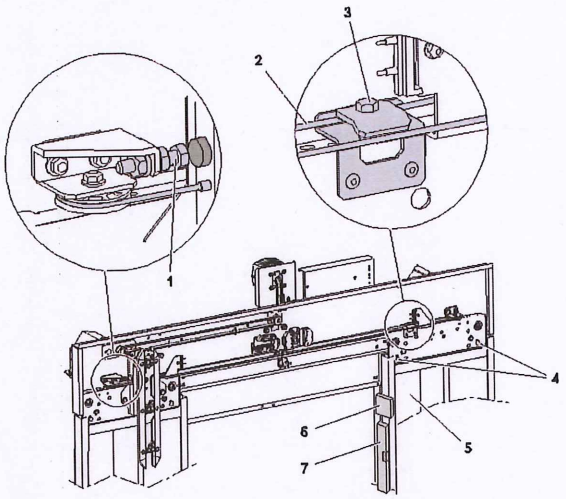
D



1	Light curtain	6	Door roller
2	Door clutch	7	Guide rail
3	Toothed drive belt	8	Door panel
4	Door drive	9	Door guide shoes
5	Central rubber stop	10	Car door sill

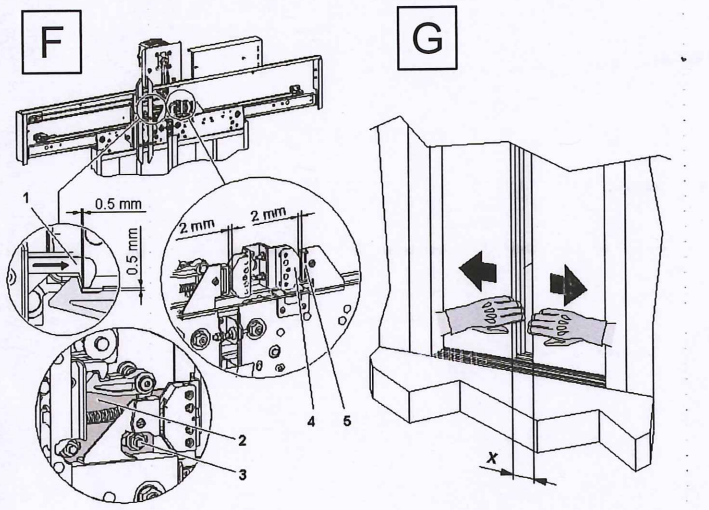
Pos.	Damage Checks and Cleaning
B	Clean the guide rail (7) with a dry cloth. Do not oil!
	Check the condition of the central rubber stop (5). If damaged, worn or cracked, replace.
	Clean the complete door system with a dry cloth.
	Check all parts for damage or corrosion.
C	Clean the car door sills (10) of debris. Make sure that the sill holes are not blocked by debris.
D	Check for wear on the door guide shoes (9) by pushing the door panel (8). If the distance **X** is > 1 mm, replace the door guide shoe (9).

E



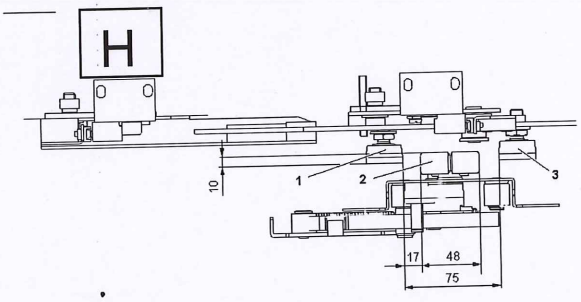
1	M6 set screw	5	Door panel
2	Synchronization cable	6	Straight edge
3	M6x16 bolt	7	Spirit level
4	M8x16 RIP bolt		

Pos.	Alignment Checks
E	With the door opened, check both door panels (5) for alignment with a straight edge (6).
	If the door panels (5) are not aligned, adjust them by M6 set screw (1) and by loosening M6x16 mm bolt (3) to slacken the synchronization cable (2).
	Use a spirit level (7) to check the vertical alignment of the door panels (5).
	If the door panels (5) are not aligned vertically, loosen the M8x16 RIP bolts (4) and adjust the door panels vertically to the door jamb.



1	Car door lock	4	KTC housing
2	Trigger support	5	KTC bridge
3	M8 nuts		

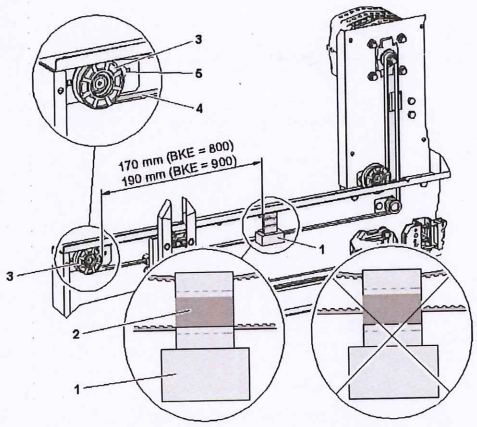
Pos.	Door Contacts and Door Locking Checks
F	Close the car doors fully by the VVVF-4 control. Clean the contacts and ensure that all electrical moving contacts are centrally aligned in the fixed contact block.
	Check if the KTC bridge (5) fits properly into the KTC housing (4). If not, loosen the two nuts and move the KTC housing (4) to the correct position (2 mm gap).
	Check that the horizontal and vertical gap on the car door lock (1) is approximately 0.5 mm. If necessary, adjust the gap by loosening the M8 nuts (3) and move the trigger support (2).
G	Push both panels in the opening direction at the bottom as far as possible. Measure the gap that has been created. The maximum allowed distance (x) is 45 mm for center doors.



1	Landing door unlocking roller	3	Landing door fixed roller
2	Car door clutch		

Pos.	Clutch Alignment Checks
H	Close the car doors completely. Check that the distance on the car door clutch (2) is 42 mm. If required, adjust the unlocking mechanism accordingly.
	Once the clutch measurement is correct, move the car to floor level from the car top. Ensure that the clutch is aligned with the landing door rollers (1, 3) with 10 mm of roller penetration on the clutch (see K 43401975 Maintenance Card).
	Check that the distance between the clutch and the unlocking roller is 17 mm. Check that the distance between both rollers (1, 3) is 75 mm. If necessary, adjust the lock assembly as described in the maintenance card of the landing door.

I



1	Belt tension tool	4	Belt
2	Correct setting area	5	Fastening screw
3	Pulley		

Pos.	Door Drive Belt Checks
I	Close the door and visually check the condition of the teeth on the belt. Replace the belt (4) if necessary.
	Place the belt tension tool (1) onto the belt (4). Measure the distance between the belt tension tool (1) and the pulley (3).
	Check the belt tension and adjust it if necessary by moving the pulley (3), using the fastening screw (5). The belt tension is correctly adjusted when the belt (4) is positioned in the correct setting area (2).

Safety Device Maintenance Instructions

As per Safety Device Maintenance Instructions

All work on safety device should only be conducted by professional staff of Maintenance Company in accordance with the maintenance instructions in the user manual supplied by the manufacturer (In accordance with GB7588-2003 16.3.2).

The instructions supply necessary information for the effective execution of safety device maintenance.

Read This First

Document Objective

This document supplies installation personnel, owners, and professionals with the following instructions:

- Installation (Assembly and Connections)
- Maintenance
- Safety Functions

Intentioned Usage

The safety devices described are only to be used for their designed purpose. Safety devices must be connected to an activation system.

Responsibilities

If safety devices are used for other than their designed purposes, they can no longer be used for that purpose. The maintenance company is not responsible for the damage due to use of these devices. The usage of all safety devices must satisfy all requirements, including those in this manual and maintenance instructions.

Professional Personnel

- Trained to execute all relevant operations listed within the user manual
- Possessing proper tools and capable of operating auxiliary equipment
- Understanding of the potential danger that may cause to themselves and others

Safety Device Installation Personnel

Typically responsible for the following:

- The correct installation of all of the elevator's associated safety devices
- Elevator components and/or subsystems
- Installing and/or replacing the elevator safety devices and operating them

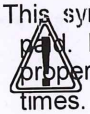
Elevator Owner

A legal entity responsible for the operation, usage, and maintenance of an elevator

Danger

This symbol is used to bring attention to potential s or dangers. It must be obeyed at all times.

Warning



This symbol means that attention should be paid. If ignored, it may cause damage to property or persons. It must be obeyed at all times.

ATTENTION:

This symbol means important information. If not obeyed, it may cause danger or malfunction.

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DESIGNING OF ELECTRICAL AND MECHANICAL SYSTEMS

Responsibilities

Only professional personnel are allowed to do the following work on the safety devices:

- Assemble
- Connect
- Adjust
- All cleaning and lubrication, inspections, maintenance, and post-activation planning.

Permitted Work

Only the operations specified in this document may be performed. Only professional personnel may conduct any kind of work on safety devices!

Regular Maintenance of Safety Devices

The objective of regular maintenance is to utilize a system of control nodes, adjustment, cleaning, and replacing of worn parts so as to maximally guarantee the safe operation of the elevator.

Hoist Motor Brake Maintenance Instructions

1-Maintenance

These brakes do not need to be maintained because:

- They do not need lubrication.
- They do not need to be adjusted.

2- Operation

Always use the rescue procedure to free trapped passengers (see 3.11).

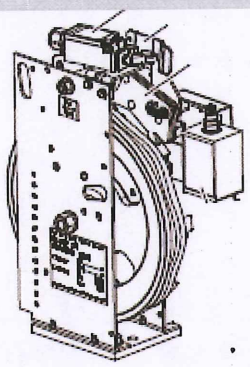
3- Repairs

Repairs are not allowed. If necessary, new OEM parts must be used for replacement.

4- Periodical check intervals (*task description, refer to maintenance documentation*)

Interval [months]	Description
12	Visual check
12	Air gap check
12	Dynamic full brake test
12	Dynamic single brake test
12	Check of the motor fans (in case of a motor temperature error only)

Governor Maintenance Instructions



Adjustment

Forbidden Action

STOP

Safety devices are adjusted by the OEM. Unless described in the guide manual, further adjustment is not allowed.

Pre-Handover Usage and Safety Inspection Testing

Testing

- Once installation and adjustment of safety devices have been completed in accordance with instructions, testing of the elevator should be carried out in accordance with GB7588-2003.

Safety Testing

Periodic testing is required according to federal laws and regulations; the testing and function tests outlined in the guide manual must be strictly obeyed.

Maintenance

Prevention

If needed, confirm the safety of all electrical and mechanical equipment before the elevator starts any kind of operation.

regulations and local conditions (such as actual usage, usage rates, local environmental factors, etc.)

- Normal visual inspections of elevator components and the governor:
  Time Period Once Annually
- Inspection of safety switches and their normal operation within safety circuits:
  Time Period Once Annually
- Visual inspection of governor cable:
  Time Period Once Annually
- Friction inspection
  Time Period Twice Annually

Cleaning and Lubrication

Cleaning

Subsystems should be cleaned at an appropriate time anywhere and anytime necessary for the safe operation of the elevator.

Lubrication

Only the lubricants and lubricating oils mentioned in the inspection and maintenance manual may be used. Other lubricants may cause malfunction of safety devices.

Usage of other kind of lubricants is strictly forbidden.

Instructions

Safety devices do not require any lubrication.

The governor cable does not require lubrication either.

Maintenance

Replacements

Old or worn safety devices must only be replaced by OEM parts.

Spare Parts

Use OEM Parts At All Times.

The manufacturer must pay close attention to whether all parts supplied by third-parties have been tested and approved. Installing used or worn devices may be dangerous.

Non-OEM parts may affect operational safety and service life, and may decrease comfort for those who use the elevator.

caused by the usage of non-OEM, altered, or used parts.

Usability of Parts

BRAUN guarantees that all OEM parts have a service life time of 20 years.

Elevator Logs

Each replacement of a safety device must be recorded in the elevator logs.

Materials Processing

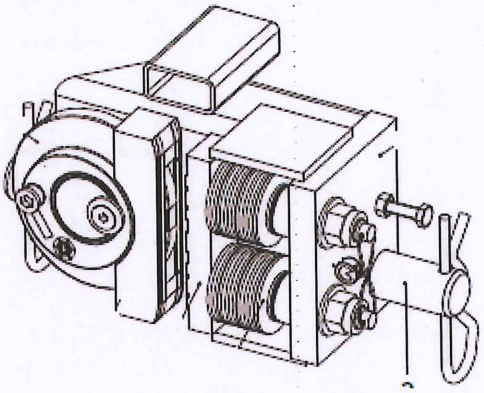
Lubricants, Lubricating Oils, and Other Materials

Lubricants, lubricating oils, and other dangerous materials which may cause damage to the environment must be processed in strict accordance with relevant regulations.

Parts, Components, and Subsystems

Repairing or replacing parts, components, or subsystems must be done in strict accordance with the contract signed between the elevator owner and the company conducting the work.

Safety Gear Maintenance Instructions



Connections

Confirmation

Confirm that the governor safety switch is correctly connected to the safety circuit.

Adjustment

Forbidden

Safety devices are adjusted by the OEM.
Only appropriate personnel may confirm or adjust these devices during the certification testing process.

Pre-Usage Testing and Security Inspections

Certification Testing

- "Downward" engagement of gearing
- "Upwards" braking
- Sealing
- Final Inspection

When required, confirm the safety of all electrical and mechanical components before any operation starts.

Cleaning

To maintain safe operation, all subsystems and components must be cleaned when needed.

Lubrication

Safety Clamps
This equipment does not need to be lubricated.
Only HLP68 (or 68A) lubricated guide rails may be used.

Maintenance Proposal

This manual illustrates the minimum requirements on safety devices. The maintenance recommendations are based on normal elevator operation. Maintenance schedule can be adjusted by each maintenance company based on individual situations (including actual usage conditions, usage rates, environmental factors, national laws, etc.)

Service Schedule

This manual does not include requirements of national standards or contractual specifications.

Maintenance/Testing/Inspection	Schedule (Weeks)
Normal Inspection	52
Cleaning	104
Function Inspection	104

Inspection

Normal Inspection

Procedures

1. Seals
2. Sturdiness
3. Smooth Operation
4. Safety Switches
5. Interfaces

Damaged Safety Clamps

Damaged or defective safety clamps must not be operated.

Cleaning

Procedures

1. Clean both safety clamps.
2. Confirm all moving components in smooth operation.

Only regulation components may be used for safety clamp replacement. Other types of maintenance are forbidden.

Replacements

Damaged or defective safety **devices must be replaced by original parts.**

Spare Parts

Use only OEM parts. The manufacturer must be sure that the components from the third party have been tested and certified. It is extremely dangerous to install used or altered components.

The use of **non-OEM parts** may negatively affect the operational safety and usage life due to possible differences in design.

Responsibilities

The equipment manufacturer and installation team are not responsible for any damage that occurs due to the installation of non-OEM, used, or altered components.

Usability of Parts

BRAUN guarantees that OEM parts will be available for the next twenty years.

Daily Logs

Each replacement of a safety device must be recorded in the elevator logs.

Post-Activation Setup

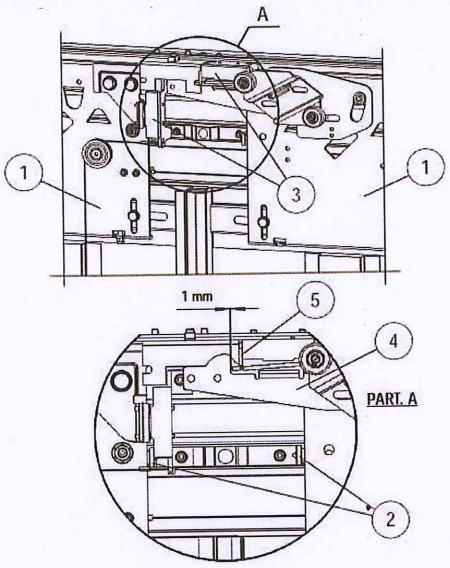
Safety clamps must be set to their closed positions.

Materials Processing

Lubricants, Oils, and Other Materials

Lubricants, lubricating oils, and other dangerous materials which may cause damage to the environment must be processed in strict accordance with relevant regulations.

Landing Door Lock Installation Manual



Confirm that the locking element engages at least 7mm before contacts are engaged.
(GB7588 §7.7.3.1.1)

STOP

Do not disconnect the door safety circuit under all circumstances: This may lead to an extremely

		door roller for signs of over-usage. • Inspect adjustment of door lock system: Locking hooks should engage at least 7mm, while lock and hook should be separated by 1 to 2mm; inspect wire loop adjustment and door roller position.
Replacements	**12 years**	• **Replace the door lock contacts**
	15 years	• **Replace the rubber buffer padding if needed.**

Cleaning

Use a soft cloth or brush to clean if necessary to ensure safe operation.

The safety contacts cannot be filed with a filing tool, as this will accelerate the creation of waste particles and decrease dependability. When it is no longer possible to clean the contact with a soft cotton cloth, it should be replaced with OEM parts.

Lubrication

Lubrication is not required.

Maintenance

The damaged or defective safety **devices must be replaced by OEM parts**

Responsibilities

The equipment manufacturer and installation team are not responsible for any damage that results from the installation of non-OEM, used, or altered components.

Setup for Halting Elevator Service

Basic Rules

When maintaining or inspecting the elevator (See chapters: "*Malfunction Maintenance-Regular Inspection and Repairs*" and "*Regular Inspections and Tests Following Major Malfunctions*"), the maintenance company may discover some elevator operation safety issues. Should any issue not be corrected in a timely manner (during maintenance operations), the elevator must be compensated.

Compensation Responsibilities

The maintenance company must halt the service of the elevator should any of the situations below occurs:

- Safety devices are not capable of full operation or cannot be activated at all (See "*Elevator Description*")
- If the safe operation of the elevator can no longer be guaranteed.

Daily Log

All major maintenance must be recorded in the elevator log.

Troubleshooting

Content

Troubleshooting includes identifying and clearing malfunctions and releasing trapped passengers. Malfunctions do not typically require that components be replaced.

Simple Malfunction Clearing Operations for Trained Personnel

Clearing "Simple Malfunctions" includes the following operations:

- Inspect elevator car landing floor door sill and conduct necessary cleaning.
- Inspect elevator car landing floor door light curtain and conduct necessary cleaning.
- Inspect, clean, and adjust all car and landing floor control components.
- Confirm that all landing doors are closed and locked. Should a landing floor door be unlocked, the doors must be closed; **the elevator must be taken out of service and the maintenance team must be contacted.**
- Emergencies: Releasing trapped passengers (please see the "Rescuing Trapped Passengers" chapter and the "Rescuing/Evacuating Passengers" notice inside the controller cabinet).

If a malfunction cannot be cleared by following these instructions, contact the maintenance company. If required, follow the safety measures below.

Safety and Prevention

Before clearing a malfunction, certify that there is no possible threat of property damage or danger.

Details:

- It must be clear that the elevator has been removed from service.

Lubrication

Please see the warnings in the chapter, "Maintenance – Regular Inspection and Repairs"

6 Technical Documents

Safety Component List	6 - 1
Elevator Certification	Appendix 1
Hoistway Layout Diagram	Appendix 2
Electrical Schematic Diagrams	Appendix 3
Safety Component Type Test Report	Appendix 4
Packing List	Appendix 5

7 Miscellaneous

Disposal of material 7 - 1

Modernization 7 - 5

Disposal of material

Legislation and regulations

The legislation and regulations concerning the disposal of elevators, components and agents have to be observed. The disposal instructions describe an ideal situation, which can not be fulfilled in every case because of the special national situations.

Responsibilities

The owner of the installation is also owner of the material (substances, parts, components, subsystems and agent) which is released by the maintenance, modernization and replacement of the installation and therefore the owner is responsible for an environmentally and legally compatible disposal.

Maintenance and Modernization

The disposal of replaced parts, components and subsystems should be settled between the owner and the maintenance or modernization company. In those cases where BRAUN performs maintenance and modernization, BRAUN looks for an appropriate solution for the disposal together with the operator of the installation.

Hazardous substances

Hazardous substances and material should be taken back and properly disposed by the maintenance company. If the owner of the installation takes responsibility for the disposal, he must carry it out in accordance with the legal requirements, and he must also follow the instructions of the maintenance company.

Dismantling of the installation

When an installation is completely replaced, the disposal of the old installation must be arranged between the owner of the installation and the installer. In those cases where the new installation is delivered by BRAUN, the company will arrange the disposal of the old installation by consulting the owner of the installation.

General disposal instructions

Hazardous waste

Hazardous waste e.g. oils, batteries, accumulators or luminescent tubes and other hazardous substances has to be removed before the dismantling of the installation and properly disposed.

Separation of material

An optimal separation of materials allows high-quality recycling into different raw materials. A practical allocation of tasks between dismantling companies (separation on the building site) and the recycling company (scrap dealers) is to be anticipated. A rough separation of the removed material into hazardous substances, and into valuable and other secondary raw material should be performed during the dismantling according the following categories:

- Hazardous waste
- Electrical and electronic equipment waste
- Aluminum scrap
- Non-magnetic steel scrap (Chrome-nickel and chrome steel)
- Magnetic steel and iron scrap (non-alloy, low-alloy, and galvanized steel, cast iron)
- Scrap containing copper (wires, electric motors, brass scrap)
- Lead scrap (counterweight fillings)
- Mineral waste
- Waste for incineration

Counterweights

Counterweights filled with lead, gussolith or concrete must be delivered separately to the scrap dealer. If not, there is high risk that they cannot be longer distinguished from other scrap metal (large quantities of lead damage the oven).

Metal scrap

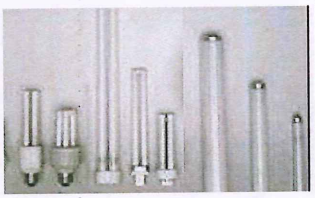
Metal scrap should be released as far as possible from impurities (rubber, oils and greases, wood, glass, rubbish, cleaning rags), which cause an increase of slag, dust and energy consumption and finally an increase of costs and environmental impact during re-smelt.

Hollow bodies in metal scrap

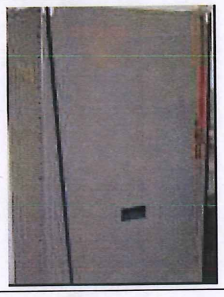
Hollow bodies in metal scrap should be cut (resp. the scrap dealer should be advised) and should be discharged form liquid i.e water and oil, which can cause explosions during melting down and injure personnel and installations.

Specific Disposal Instructions

Category: REU = reuse, RC = recyclable, NRC = non-recyclable, HZ = hazardous waste

Subsystem; Components; parts; Material; substances	*Category:*	*Disposal instructions*	*Type of disposal*	*Reasons (others than resource conservation) / impacts*	*Picture*
Batteries and accumulators containing heavy metals, e.g. from: • emergency power device (NSG) • Printed circuit boards (Prints)	HZ	• Collect separately • Return to collecting station, manufacturer or specialized disposer • Do not dispose off with garbage. • Do not dispose on landfill.	Recycling by authorized specialist firm	Danger of health and environment because of heavy metal and caustic liquid e.g. cadmium, lead, mercury, acid and alkali if improperly disposed.	
Oils and greases	HZ	• Collect separately • Return to collecting station, manufacturer or specialized disposer • Not allowed to get into water and soil	Regeneration Incineration by industrial firing or HWIP[1]	Ecologically harmful 1 barrel oil (200 l) contaminates 30 m^3 soil. Elder hydraulic oils (before 1980) may contain toxic polychlorinated biphenyl's	
Luminescent tubes and energy saving lamps	HZ	• Collect separately • may not be damaged during collection and transport • Return to collecting station, manufacturer or specialist disposer • Do not dispose with garbage. • Do not dispose on landfill.	Recycling by authorized specialist firm	Danger of health and environment because of heavy metal e.g. cadmium, mercury, if lamps are broken or improperly disposed.	

Subsystem; Components; parts; Material; substances	*Category:*	*Disposal instructions*	*Type of disposal*	*Reasons (others than resource conservation) / impacts*	*Picture*
Copper and its alloys (bronze, brass, nickelsilver) e.g. in • Electro-motors (winding) • Wires and cables) • Travelling cable • Switch • Ring snail wheel (worm gear)	RC	• Collect and recycle separated scrap iron.	Recycling in separating melting plant, bronze and copper foundries	Copper is harmful to the mechanical properties of steel and thus absolutely not desired in scrap iron. Valuable secondary raw material	
Aluminum • Door sills • Various parts	RC	• Collect and recycle separated from scrap iron.	Recycling in aluminum foundries	Valuable secondary raw material	
Electrical and electronic scrap, like switches, transformers, relays, electromagnetic switches, capacitors to be found in: • Control • Frequency converter • Landing operating panels • Car operating panels	RC	• Collect separately • Return to collecting station, manufacturer or specialized disposer • Do not dispose with garbage. • Do not dispose on landfill.	Recycling and disposal by authorized specialist firm	Complex mixture of parts containing harmful material, e.g. plastics stabilized by heavy metals, halogenated flame retardants in boxes and printed circuit boards. Elder capacitors (before 1980) may contain toxic polychlorinated biphenyl's	
Printed circuit boards (prints, PCB's), to be found in: • Control • Frequency converter • Landing operating panels • Car operating panels	RC	• Collect separately • Return to collecting station, manufacturer or specialized disposer • Do not dispose with garbage. • Do not dispose on landfill.	Recycling and disposal by authorized specialist firm Recycling by LOC free of charge Send back to BRAUN Electronics Ltd.6600 Locarno Switzerland Please indicate on the box "Disposal Material"	Complex mixture of parts containing harmful material, e.g. plastics stabilized by heavy metals, halogenated flame retardants in boxes and printed circuit boards. Elder capacitors (before 1980) may contain toxic polychlorinated biphenyl's	  

Subsystem; Components; parts; Material; substances	*Category:*	*Disposal instructions*	*Type of disposal*	*Reasons (others than resource conservation) / impacts*	*Picture*
High-alloy steel (stainless steel): • Interior trim and accessories of cars made of chrome steel • Car and hoistway doors	RC	• Collect and recycle separated from non-or low-alloy scrap iron.	Recycling in steel plant for high alloyed steels	If non-alloy steel scrap is used for the production of non-alloy steel, the non-alloy steel scrap should be free of chrome, nickel an molybdenum. Valuable secondary raw material	
Non-alloy and low-alloy steel, e.g.: • Guide rails • Ropes • Profile steel (e.g. machine frame) • Car and door panels • Permanent magnets (Caution magnetism!) • Panels, boxes, frames Cast iron, e.g.: • Speed governor • Hub snail wheel • Traction sheave • Deflection pulley • Brake drum	RC	• Collect and recycle separated from high alloy scrap iron.	Recycling in steel plant with filter	If non-alloy steel scrap is used for the production of non-alloy steel, the non-alloy steel scrap should be free of chrome, nickel an molybdenum. During incineration of old plastics, containing chlorine or painted coats, dioxins and furans are produced when gases cool down. Zinc from galvanized steel scrap gets together with discharge gas in the filter of the steel plant.	 
Guide rails Counterweight filling	REU	• If possible recuperate or reuse • Check the possibility for taking back by BRAUN.			
	RC	• Counterweight filling made of lead and concrete to be separated and collected sort by sort (never mix with scrap iron).	Recycling in lead melting plant and concrete recycling plant	Lead is harmful to scrap iron recycling and therefore definitely not desired in scrap iron. In the same way for concrete.	
	RC	• Counterweight filling made of Gussolith to be separated and collected sort by sort (do not mix it with steel-or cast iron scrap). • Inform the scrap dealer.	Recycling in steel plant	Heavy smoke gas emissions and toxic air emissions (e.g. PAH[3]) due to binding agent tar.	

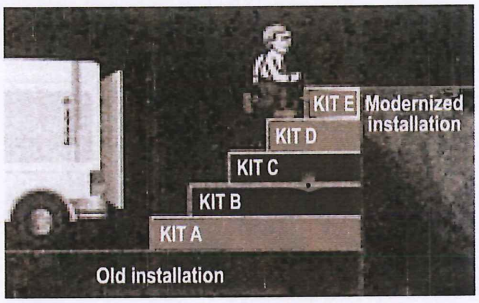
[1]HWIP: Hazardous waste incineration plant
[2]EFGT: Enhanced flue gas treatment
[3]PAH: Polycyclic aromatic hydrocarbons. Some of theses substances e.g. Benzopyren are cancerogenic.

Modernization

Modernization

Even if your lift is new today, the time will come when it needs to be modernized. By modernizing your lift, you protect your investment and preserve the value of your installation.

The intensity and type of use of the lift affect the expected life of the components and systems used in it.



Conformity with legal requirements

Changes to regulations can make it necessary to replace or modify specific components of the installation.

Step-by-step modernization

The modular concept of the lift installation makes step-by-step modernization possible. Step-by-step modernization will preserve the value of the installation or even increase it. At the same time, the installation will be continuously adapted to the most recent safety regulations and technology. Timely replacement of worn parts will avoid faults and the availability level is kept high and the installation retains its new appearance.

Cooperation with the installer

Modernization of any type always makes heavy demands on all concerned, and requires a high degree of cooperation. To keep lift downtime to a minimum, and to fulfill customers´expectations, it is strongly recommended that the modernization be prepared and carried out by the original manufacturing company or installer with whom the contract was first placed.

Updating the installation documentation

When a modernization has been carried out that changes the way the installation functions, the installation documentation must be brought up-to-date for example, if the control system is modified, the schematic wiring diagrams must be brought up-to-date.

Your partner for modernization

Based on many years of experience, BRAUN the original manufacturer of this installation, can guarantee speedy, professional modernization at an attractive price.
attractive price..

Annex-A-2

ANNEX – L

DEMS PVT LIMITED
DESIGNING OF ELECTRICAL AND MECHANICAL SYSTEMS

TransPeshawar

SUPPLY, INSTALLATION, TESTING COMMISSIONING AND MAINTAINENCE OF BRAUN ESCALATOR FOR BRT PESHAWAR

SITE ACCEPTANCE/TEST REPORT

10th JUNE,2019

BRAUN AUFZÜGE

DATE OF INSPECTION: _____

DATE OF CHECK REQUEST: __/__/____

Project NAME: BRT PESHAWAR

LOCATION:

SITE ACCEPTANCE REPORT

ESCALATOR TYPE: BR800

Commission No:

ELECTRICAL CHECKS & TESTS

CHECKS	CHECK FUNCTION/VALUE	RESULT
RATING	VALUE (KW)	
Current	VALUE (A)	
Voltage	VALUE (V)	
KEY FUNCTION	FUNCTION	
DOWN Direction Indicator	FUNCTION	
UP Direction Indicator	FUNCTION	

SAFETY CHECKS & TESTS:

CHECKS	CHECK FUNCTION/VALUE	RESULT
Up Emergency Stop Button Test	FUNCTION	
Emergency Alarm Test	FUNCTION	
Floor Plate Safety Test	FUNCTION	
Stop & Go Sensor	FUNCTION	
HAND RAIL SAFTEY	FUNCTION	
Maintenance Mode Test	FUNCTION	
Down Emergency Stop Button Test	FUNCTION	
Remote Monitoring	FUNCTION	
Skirt Brushes	INSTALLED	
Comb Plates	INSTALLED	

Mech. Checks:

INSTALLATION CHECKS	RESULT
HAND RAIL	
BALUSTRADE	
DIRECTION INDICATOR	
MAINTENANCE STEPS HAND	
RAIL ENTRY BRUSHES	
MAIN CONTROLLER	
EMERGENGY BRAKE	
MDKE REMOTE PANNEL	
COMB PLATES	
SAFETY MONITORING DEVICE	
TRACTION MACHINE ASSEMBLY	
OUTER DECKING	
INNER DECKING	
MOTOR	
Skirt Brushes	

CONFIRMED BY:
COMMISSIONING ENGINEER
SIGNATURES:

WITNESSED BY:
CLIENT/CONSULTANT
REPRESENTATIVE
SIGNATURES:

DATE OF INSPECTION: _____
DATE OF CHECK REQUEST: __/__/____

Note: Any open points not related to the safe function of Escalator should be noted on the attached comment sheet, and will be rectified on intimation and will not hinder the handing over and the operations of Escalator and start of maintenance period.

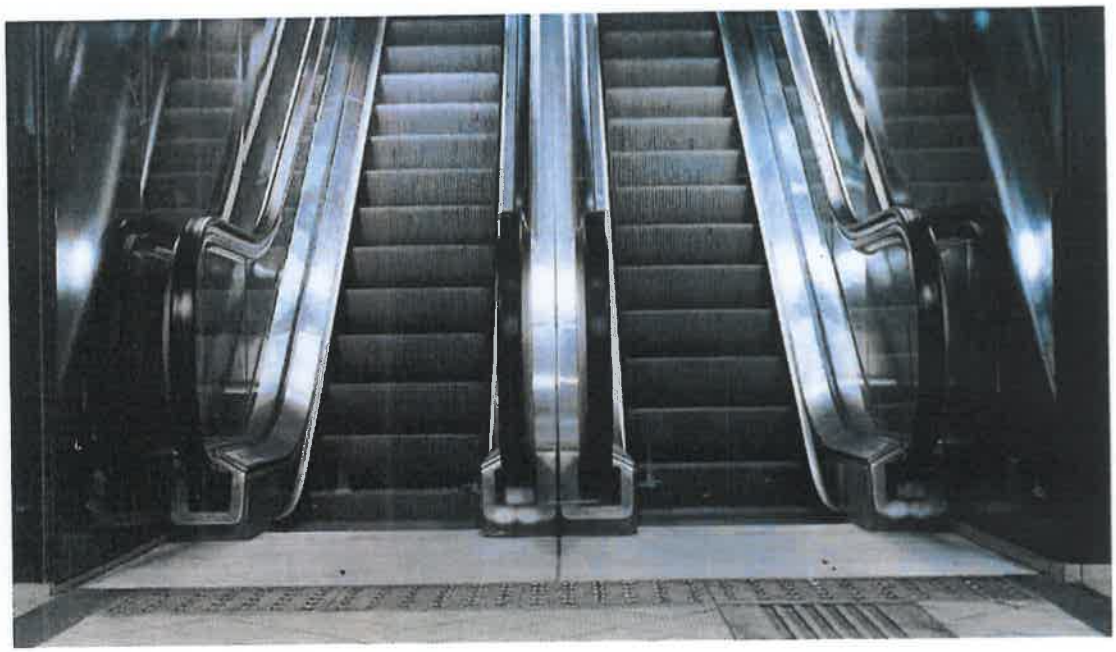
Comments:

CONFIRMED BY:
COMMISSIONING ENGINEER
SIGNATURES:

WITNESSED BY:
CLIENT/CONSULTANT
REPRESENTATIVE
SIGNATURES:

BRAUN
AUFZÜGE

Operation & Maintenance Manual Of
BRAUN Escalators



BRAUN Elevator Co. Ltd

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1. Escalator safety use

1.1 Normal operation

The escalator described in this manual is only applicable for the personal transportation, not for the goods or other purposes. It is prohibited to put the inappropriate goods on the static or movable step or handrail in order to prevent the accident during operation.

1.2 Safety

This manual can assist you to operate the escalator safely. Please operate the escalator as per safety requirements listed herewith; please restrain to use the escalator for other purpose.

The trained professional staffs shall operate the escalator only, and the owner shall be responsible for the follow up of the operation rules.

During the maintenance, inspection and testing, the escalators should be provided with suitable protection devices to avoid the accident. Without the permission of staff in charge, the escalator should not be started.

- If any mechanical or electrical defects were found in the escalator, it should not be used, specially when there is a failure in the traffic light (if any), warning and safety protection devices.

- Before the connection with the power supply, carefully checks should be made to the covering plate, comb plate, comb block, step, skirt, handrail and the balustrade against any defects, and to make sure the warning and protection devices is in good condition.

- If the owner intend to operate this escalator combined with other equipments, parts together, prior consulting should be made towards manufacturer or specialist, to make sure that such combination has no impact on the safety of the passengers or surrounding environment.

- If maintenance or modification are needed, BRAUN ELEVATOR CO., LTD will be responsible for the safety of the products if relevant action are taken by the staffs from BRAUN ELEVATOR CO., LTD or the staffs authorized by BRAUN ELEVATOR CO., LTD. Periodical and proper maintenance are the guidance for the long term and good operation of the escalator only.

- The escalator should be operated properly and maintained periodically as per requirements.

- BRAUN ELEVATOR CO., LTD will not take the responsibility of the failure, damage or people hurting from the incorrect use of escalator, or the incorrect manner of maintenance by the user.

- Safety electric circuit or safety switch should not be dismantled or modified without right guidance.

- No dismantle of any parts or step and keep them in open to operate escalator.

1.3 Electric Safety

Only qualified maintenance staff is allowed to dismantle or maintain the electric components; any modification and/or maintaining to the signal or control circuit should be approved by the manufacturer or by the qualified people.

1.4 Mechanical Safety

Before and during the escalator powered, all goods should be moved from the moving area of the escalator.

1.5 Safety Devices

Various advanced escalators made by BRAUN ELEVATOR CO., LTD meet the updated safety specification for safety and environment protection. There is safety circuit in the escalator, once it is initiated, the power of the escalator will be cut off. Only the failure has been recovered or the function returns to normal, the escalator can be put into operation again.

If the user cannot recover the failure or abnormal function, BRAUN ELEVATOR CO., LTD maintenance station should be informed to make the maintenance or recover. If necessary, the power of escalator should be cut off to prevent any mis-operation.

2. General Introduction of Escalator

Escalator is power-driven, inclined, continuous moving stairway used for transportation of passengers in different floor of the buildings.

The main characteristics are as follows:

1) Evenly and continually transportation equipment for passenger with big capacity.

2) Can be operated upwards or downwards.

3) Can be used as stairs when it stops due to power off (if local regulation allowed).

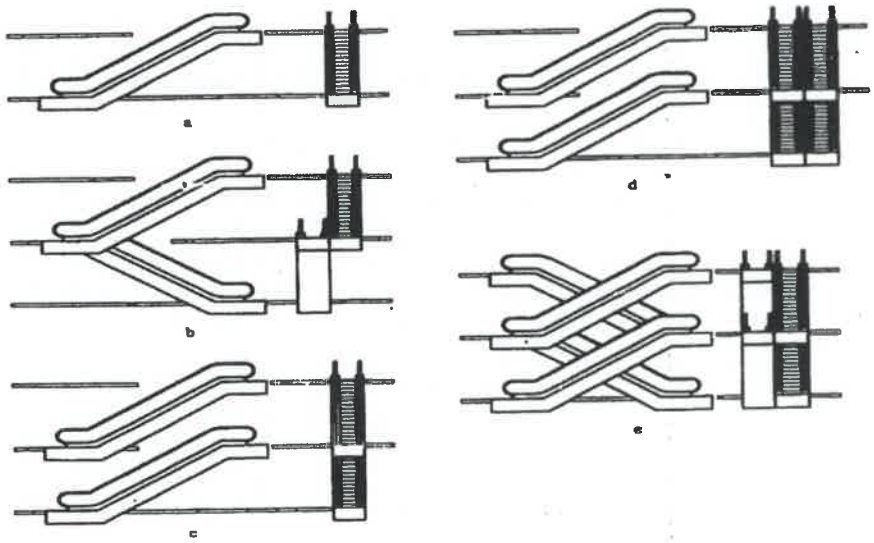
4) Beautiful in shape with decoration function.

5) Compact structure, less occupied area, easy for use and maintenance. Widely used in public area such as department store, supermarket, port, airport, shopping center etc.

2.1 Basic layout of Escalator (5 types) are as follows figure 1:

a. Single unit layout,
b. Single unit in continuity
c. Single unit in overlap,
d. Parallel layout
e. Cross layout

Figure I Escalator Layout

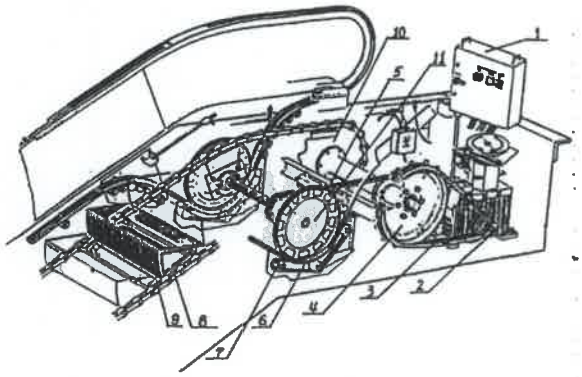


2.1.1 Single unit arrangement (a):
To be used as the transportation tool between two floors.

2.1.2 Single unit in continuity (b):
This kind of layout is only used for one-way transport as the connection of 3 floors.
People can directly enter the second escalator from the first one.

2.1.3 Single unit in overlap(c):
People cannot directly enter the second escalator from the first one.

2.1.4 Parallel layout (d):
Can be arranged in either same direction or opposite direction for the two units,



1. Controller 2. Drive unit 3. Driving chain 4. Main shaft
5. Handrail drive chain 6. Handrail drive system 7. Handrail
8. Step chain 9. Step 10. Step roller 11 Handrail drive wheel

Figure 2

Upper part is the main structure of the escalator, the controller is installed in the upper pit of the escalator connected with flexible cable, and it can be lift out of the pit during maintenance.
The main shaft is driven by main drive system via driving chain. The main shaft equipped with step chain wheels, which drive the step chain, then makes the step moves along the step guide rail system.
The handrail drive chain wheel is located on the main shaft too. This chain wheel drives the handrail drive shaft via drive chain. The handrail drive shaft is equipped with handrail drive wheel with rubber rim, which drive the handrail move when rotate.

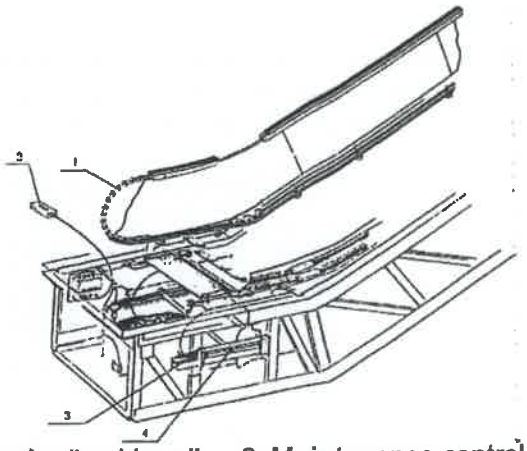
3.2 Lower parts of Escalator refer to figure 3

3.2.1 The lower part of the escalator including the tension station which forms the reversal and tensioning of the step and step chain. The handrail guide rail return curve (position no 1) equipped with anti-friction chain in order to reduce the handrail friction in the position. Position no.2 is maintenance control box, which is used during the maintenance. This box has the function of interlock with main operation key device, the other operation device will be function off whenever this control box connected to the socket in order to avoid operation accident and then guarantee the safety during the maintenance. Position no.4 is the tension station, and can be adjusted via tension spring to ensure the tension state.

3.3 Driving device see fig.4

3.3.1 Driving device is consisted of motor, speed reducer and brake etc. When it is on power, the brake motor (position no. 1) start first, then drive the braking gear, pushing the braking spring, loose the brake belt. Main driving motor starts and drives the small chain via speed reducer. The small chain transfers the power to

the main shaft.

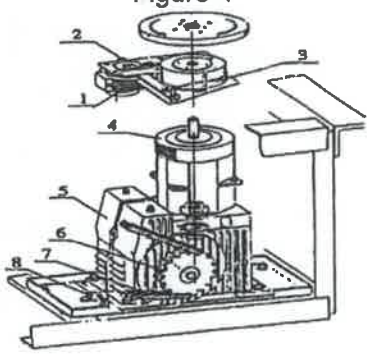


1. Handrail guide rail 2. Maintenance control box
3. Spring 4. Tension station
Figure 3 Lower configuration

As the whole device is highly compact designed, so it can be installed in the up machine room and occupied less space and convenient for maintenance.

3.3.2 The main motor is squirrel cage type with 6 poles, which has the property of smooth running, durable and lower running noise. The speed reducer is the precision worm gear type manufactured by advanced processing technology; the main drive has much advantage such as compact structure, big load bearing capacity, smoothly in working and low noise. The speed reducer and motor are independent structure and connected with each other with elastic coupling. This structure is convenient for the assembling and maintenance.

Figure 4



1.brake motor 2. breaking gear 3.brake belt 4.motor
5.speed reducer 6.chain wheel 7.driving chain 8.adjust block

3.3.3. Escalator, which usually installed indoor, has high requirement to noise. The maximum value should be lower than 65dB-A. The driving device is the main source of noise, which should be controlled strictly to ensure the accurate of operation and eliminate all of the factors, which may cause noise, in order to

step should be meshed with comb block properly, and without contact and friction.

3.6.4 In order to prevent step to be destroyed during the running while objects to be caught in between step and comb plate, also ensure passenger's safety, the comb safety device is equipped. Whenever some objects such as the heel of the shoes, the tip of the umbrella and etc is caught in between, the comb plate will be pushed backward, and safety switch will be actuated to stop the escalator.

3.6.5 Steps are the key part for carrying passengers. It would be very dangerous if the step break or deform too much. Hence, there installed a protection device at the two ends of the Escalator. If the step deforms in downward severely or breaks, the vertical lever of the safety device can contact the such happening then safety switch will be actuated the stop the escalator.

3.7 Balustrade

3.7.1 Balustrade is installed on both sides of the escalator for the passenger safety and also has the decoration purpose. The balustrade board is normally made by safety glass or metal.

3.7.2 The handrail is consisted of rubber, nylon sliding layer and steel rope core. The nylon-sliding layer, which touches the handrail guide rail, makes the function of guiding. The steel rope inside the handrail bears the load. There is different color to be chosen, but standard configuration is black.

3.7.3 The handrail guide rail and decking are made of stainless steel normally.

3.7.4 The skirt made of stainless steel. The safety devices are also installed inside the skirt system to prevent objects to be caught in between the skirt and step.

3.7.5 The handrails are driven by the fraction pulley. Pressure roller group via tension spring adjusts the tensioning state of the handrail.

3.7.6 There are handrail inlet which installed at both two balustrade end for protection children's hand or other things been clipped.

3.7.7 Usually, the handrail should run as the same speed as the step during the running, the synchronization deviation should be less than 0 - +2%. At the bottom of the balustrade, there also installed handrail break protection safety switch. If the handrail is broken; it will touch switch and the effectively stop the escalator.

4. Safety use and operation of the escalator

4.1 Switch on of the escalator power

Note: before switch on the escalator, please make sure there are no passenger or goods on the escalator.

Before put the escalator in operation, please ensure each part of the escalator is

in right order.

On the upside and downside of escalator, there is one marked upwards and downwards key button and one emergency red stop button with red stamped word "STOP" respectively. When the key inserted, turn the key along up or down direction as per the operation direction. The key will rebound to its original position.

When the escalator start operation,

- Take the key out and put it in a safety place
- Observe the step running for one circle
- No damage should be found on he step and the handrail.

The handrail should be operated synchronal with step, no jumpiness should be occurred.

If the traffic light and lighting device is provided, then

- The indication signs of the moving direction of the traffic light should be consistence with the operation direction of escalator (if equipped).
- The light in the gap of comb plate should be on.
- The light for the comb plate should be on (if equipped).

4.2 Shut down of escalator power

The power of escalator can only be shut down when it is sure that no body is on the escalator.

4.3 Changing moving direction

When it is necessary to change the direction of movement of escalator, it can be switched off from previous direction to another one only when the escalator completely stopped without passenger. Before the switching off, the power supply of escalator should be cut off to make the escalator at rest.

* Insert the key; turn the key along up or down direction as per the operation direction.
*The key will rebound to its original position.

When the escalator start operation,

- Take the key out and put it in a safety place
- Observe the step running for one circle

4.4 The escalator must be operated by the driver who has been trained. When the escalator is starting, it must be in empty load state.

4.5 While standing on the running escalator, the passengers should be faced with the running direction and standing inside the yellow edge of the tread, with hands on the handrail.

4.6 When children are taking in the escalator, they must hold on by adults.

4.7 If passengers carrying a pet when taking the escalator, pets should be hold on。

4.8 Passengers should not take the escalator with bare feet. Escalator also cannot use for heavy cargo.

4.9 After starting the escalator with the key and escalator can't run, the operation staff should inform the maintenance staff in duty to inspect whether the general power switch is on and main switch in the controller cabinet is on, maintenance control switch is on.

4.10 If it still couldn't start at this time, we should inspect whether the four switches of handrail inlet or other safety equipment is open.

4.11 If there is a need to change the running direction of the escalator, please make sure that there are passengers on the escalator and escalator stop completely, then use key to change the running direction.

4.12 If in the urgent situation, push down the emergency switch to stop the Escalator running.

5. Use and manage of the escalator

5.1 Both of the up and down machine rooms of the escalator could only be managed by the qualified maintenance people, other persons don't allow to enter.

5.2 The machine room should be ensured that water is impossible to invade (Indoor).

5.3 The machine room should be kept clean, dry, no mist or corroded gas and not allowed for the storage use.

5.4 When the escalator has been out of use for a long time, the general switch in the machine room should be taken off.

5.5 After being checked and accepted by the related local authorities and has been certified, then there is also a qualified company in charge of the maintenance, so escalator could operated safely.

6. Urgent situations

6.1 In the case that heavy quality problems occurred and effect normal running,

6.2 If earthquake happened, even the escalator won't be destroyed much by the slight shake or tremor or moved horizontally or inclined, or some electric wire will be broken off, at this time, if you start the escalator, the unexpected accidents

may happen. So the escalator should be checked and maintenance before using.

6.3 When the conflagration is happened, the electric power should be cut down at once to stop the escalator running. Meanwhile, the passengers on board should be guided to the safe place.

6.4 When flood happened or driving room is soaked,

If one of the above four cases are happened, the escalator could be in work only after the strict inspection and maintenance has been made by the related staff.

7. Standard maintenance of escalator

Table 2

No.	Items	Maintenance Time	Remarks
1	Running quality	once a fortnight	Execute by the professional maintenance staff Report to owner
2	Noise or vibration abnormal	once a fortnight	Execute by the professional maintenance staff Report to owner
3	The inspection of each fuse and air switch	once a fortnight	Execute by the professional maintenance staff Report to owner
4	The inspection of controller components	once a fortnight	Execute by the professional maintenance staff Report to owner
5	The inspection of the handrail inlet switch	once a fortnight	Execute by the professional maintenance staff Report to owner
6	The inspection of the comb of the comb plate up and down.	once a fortnight	Execute by the professional maintenance staff Report to owner
7	The inspection of step meshing.	once a fortnight	Execute by the professional maintenance staff Report to owner
8	Clean groove of the step.	once a fortnight	Execute by the professional maintenance staff Report to owner
9	The handrail and the step running synchronal	once a fortnight	Execute by the professional maintenance staff Report to owner
10	Working brake inspection	once a fortnight	Execute by the professional maintenance staff Report to owner
11	The inspection of the lubricating of the drive chain and the step chain	once a fortnight	Execute by the professional maintenance staff Report to owner
12	The clean controller and the driving machine	once a fortnight	Execute by the professional maintenance staff Report to owner
13	The inspection of the gap between the step and the skirt	once a fortnight	Execute by the professional maintenance staff Report to owner
14	The clean of the surrounding of the escalator	once a fortnight	Execute by the professional maintenance staff Report to owner

15	The inspect of each electric power and the voltage	once every two months	Execute by the professional maintenance staff Report to owner
16	The inspection of the brake distance.	once every two months	Execute by the professional maintenance staff Report to owner
17	The inspection of speed governer.	once every two months	Execute by the professional maintenance staff Report to owner
18	The inspection of the action of each switch.	once every two months	Execute by the professional maintenance staff Report to owner
19	The inspection of the brake of the driving machine	once every two months	Execute by the professional maintenance staff Report to owner
20	The inspection of the motor and gearbox	once every two months	Execute by the professional maintenance staff Report to owner
21	The inspection of the output shaft chain sprocket of the driving machine	once every two months	Execute by the professional maintenance staff Report to owner
22	The inspection of the tension station tensioning state.	once every two months	Execute by the professional maintenance staff Report to owner
23	The inspection of the fixing state of the step fixing	once every two months	Execute by the professional maintenance staff Report to owner
24	The inspection of handrail	once a month	Execute by the professional maintenance staff Report to owner

Notes:
If the ASAP maintenance work is executed by the user appointed person, this person should be the qualified person with special work certification.

8. Essential requirements of maintenance

8.1 Notes of maintenance

Those who are not professional maintenance staff are not allowed to do the maintenance task without permission. As the escalator use PLC controlling system, it must be carefully while maintaining.

8.1.1 While maintain the escalator, following rules should be obeyed:

8.1.1.1 It is not allowed to take passengers or goods, there are should be a warning sign " Maintenance, stop use" and so on.

8.1.1.2 Break off the operating switch. The operation is only be allowed by inspecting box.

8.1.1.3 The general power switch should be put off while working in the machine room up and down.

8.1.l.4 The maintenance lamp used must be with protection cover and use the

safety voltage under 36V. (The socket of low voltage is installed in the machine room up and down)

8.1.1.5 During the period of maintenance operation, the main member must work together with the assistant. Maintenance by only one person is prohibited.

8.1.1.6 If the person is asked to operate the escalator during maintenance, the person must be with full attention and obey the instruction of the maintenance staff.

8.1.1.7 while dismantle some of the steps, if the general power switch isn't cut off; the maintenance staff is not allowed to enter the region.

8.1.1.8 When finish the maintenance in the machine room up and down, the covering plate should be put back in time.

8.1.2 During the maintenance, there are some notes while using the instruments:

8.1.2.1 The internal resistance of multiple meters is over 200 KΩ:

8.1.2.2 The AC current meter is bigger than Ac 100 A

8.1.2.3 The AC voltage meter should have working range of Ac460V. If finger type used, the impedance is below 30OK Ω

8.1.2.4 High voltage meter should use the 600V with battery type, the internal resistance of which is over 20OKΩ.

8.1.2.5 The rotation tachometer is 0 - 6000r/min

8.2 Noted points of maintenance

Table 3.

No.	Item	Content
1	Running state	Stand on the escalator, feel the stability of steps.
2	Noise or vibration abnormal	Check if there are friction between step and skirt, step and comb block. Step turning is smooth, step and step chain roller broken or not.
3	The inspection of each fuse of the air switch	Check the fuse and air switch in controller to see if they are fit the standard demand.
4	The inspection of controller	Check the connection if there is loose, action of the components is correct.
5	The inspection of the handrail inlet safety switch	Check the reliability of four switches and the reset action is normal.
6	The inspection of the comb of the comb plate up and down.	Check the perfection of comb plate. See if comb teeth are in the center of the tooth space, also check if the comb block broken or not.
7	The inspection of meshing states of the step and comb.	See if step can successfully get though the comb plate. The meshing depth no less than 6mm. The gap between step and comb plate no higher than 4mm.
8	Clean step groove.	Check the groove if there exist any garbage or impurity.
9	The synchronous status between the handrail and the step.	See if the sync rate between handrail and the step is in 0~2%.
10	The inspection of working brake	Check the reliability of brake. The gap between the liners and brake wheel no higher than 0.7to 1.2 mm while declutching.
11	The inspection of the lubricating of the drive chain and the step chain	Lubricant state.
12	The clean work of the controller and the driving machine	Cleaning the surface of controller and the driving machine.
13	The inspection of the gap between the step and the skirt	Check the gap of the step and the skirt. The gap should not bigger than 4mm(one side). And the sum of the gaps in both side should not bigger than 7mm.
14	The clean of the out surface of the escalator	Cleaning the surface of covering plate, comb plate, interior and exterior skirt decking profile, handrail, safety glasses etc.
15	The inspect of each electric power and the voltage	Confirm the voltage of each power supply fits the electric schematic diagram.
16	The inspection of the bake distance	Check the braking distance (0.2~0.6m) while the escalator descending no-load. Check the friction between the brake strap and the brake wheel. Check the reliability of operation and abnormal noise.
17	The inspection of the speed governer	Check the speed of driving machine and the step running speed.
18	The inspection of the driving chain and the step chain	Check the operation status of the driving chain and the step chain.
19	The inspection of the action of each safety switch.	Check the action and reliability of each switch of the escalator.
20	The inspection of the main drive and gear box	Check the lubricating oil state in the gearbox and change the lubricant oil if necessary. Check the wearing status of the tooth and working situation of bearing.
21	The inspection of the motor	Check the temperature rising of motor during work, operation state, any abnormal vibration and noise. Check if the electric connection and insulation state.
22	The inspection of the output shaft of the driving machine	Check the wearing status of output shaft chain wheel. See if there exists loose status of the chain wheel.
23	The inspection of the tension device of the step chain	Adjust the tension force of the step chains via spring. Check if the tension state is proper and haven't impact about step running.
24	The inspection of the fixing device for the step axle	Check the center position of the step; check the axle bush and clamp fixing state of each step. No loose in the clamp ring.

25	The inspection of the handrail wearing state	Check the operation status and wearing status of two handrails. See if there exist any worn on the surface, or any worn-out part of the handrail. Change the handrail if it cannot adjust to synchronized with the step.

8.3 Noted points for maintenance

8.3.1 Abnormal running and the vibration

8.3.1.1 During the normal operation, the working brake can't be released completely or even released but the brake belt or liner deviate from the right position then still contact the brake wheel and may cause the friction, so may generate the strike while start and run.

8.3.1.2 Step chain extended or deform too much, may generate deviation of the chain pitch, and cause the step running deviation, may generate friction with skirt.

8.3.1.3 Over wear of the step roller or chain roller or roller bearing damaged.

8.3.1.4 Step cannot pass the returning position or the gap between the rollers and return curve guide rail is too big,

All these points should be checked and adjust or repair carefully in case there are abnormal running or vibration.

8.3.2 Driving machine inspection

8.3.2.1 Gearbox

8.3.2.1.1 After a long period of operation, the teeth of worm gear may wearing too much and enlarge the gap in between, or the bearing wear too much, then may cause the box generate strike or big noise or temperature of the gear box rise too much, so the suitable adjustment or replacement should be executed accordingly.

8.3.2.1.2 Keep clear and the good performance of the lubrication in the gear box. The lubricating oil should be changed in case necessary. The oil level should be checked carefully keep in level range in order to keep good lubricating property. Recommended lubrication oil please refers to the lubricating table.

8.3.2.1.3 The bearing cover and the box should link tightly and no oil leakage.

8.3.2.1.4 The lubrication oil in the gearbox should be changed according to the lubricating table recommended on normal condition. For the new installed escalator, lubricant should be checked frequently. The oil changing should be taken in case the oil finds impurity.

8.3.2.1.5 The machine and the bearing temperature should be no higher than 80K under normal working condition.

8.3.2.1.6 Changing the bearing when non-uniform noise or collision noise generated.

8.3.2.1.7 The anti-vibration rubber pad inside the coupling should be checked every half year, changing should be taken in case broken.

8.3.2.2 Brake

8.3.2.2.1 The brake belt should contact surface of braked wheel tightly while braking. And it should be leave the braked wheel surface after braking. The gap between them should be between 0.7-1.2mm and evenly contact while working.

8.3.2.2.2 The brake action should be flexible and reliable. The temperature rise of braking electric motor coil should be no higher than 60K.

8.3.2.2.3 No loose in the wire connection of braking electric motor and in good insulation.

8.3.2.2.4 Connection pin should be flexible and can be lubricated.

8.3.2.2.5 Keep the working surface of the brake belt clean and out of oil and paint. The screw for fixing brake belt should be submerged to the brake belt and not allow to contact with the braked wheel surface. The brake belt should be changed in time when it was worn too much to make the screw emerged or the wearing capacity reach one quarter of the total thickness of brake belt.

8.3.2.2.6 At the premise of safety and reliability, adjust the force of brake spring to meet the need of braking distance of escalator.

8.3.2.3 Motor

8.3.2.3.1 The motor is connected to gearbox via flange. The connection should be tight and the coaxial of worm shaft and the motor should be guaranteed.

8.3.2.3.2 The temperature rise of motor bearing should no higher than 80K.

8.3.2.3.3 The bearing should be changed while the noise is generated because that wearing makes the air gap interval non-uniform between the stator and the rotor.

8.3.3 Driving system Inspection (structure of escalator upper and lower part)

8.3.3.1 Drive shaft is driven by main drive via duplex chain, if chain extended too much then generates running noise; cam in the drive machine bottom can be adjusted for the china tensioning. The tensioning should be proper, not complete tight and sag length should be smaller than 16 mm.

8.3.3.2 The lithium-based grease should be add to the bearing of main shaft by every two-month.

8.3.3.3 There should be enough lubrication between the step chain plate and the big chain wheel.

8.3.3.4 The step chain pitch may extended too much after long time operation and will generate deviation then affect the step move smoothly and may also makes the step contact the skirt while running. So please check the pitch length, and change the step chain in case the extension is over required dimension.

8.3.3.5 The lithium-based grease should be added to the rolling bearing of the tensioning sprocket by every two-month (in case sprocket type used).

8.3.4 Step guide rail

8.3.4.1 The middle step guide rail is cold rolled hollow type, upper and lower, return curve rail is welded on the vertical supporting plate. The step roller and chain roller are run on the guide rail. So the working surface of the guide rail should be checked carefully to ensure the roller could contact the rail surface properly.

8.3.5 Step

8.3.5.1 Step is the circular running parts along the guide rail system and meshing with comb plate before turning. It may easily damaged in case objects are caught between the step and comb, if step deform or broken, then should be changed in time.

8.3.5.2 The nylon guide block in each side of step is may contact with skirt while guide the step running, The guide block should be changed while the wearing capacity reach 1.2mm.

8.3.5.3 When the step is running on the guide rail, the four rollers on the step should to contact the surface of the guide tightly. After a long period of operation, when the step is deformed and one of the four wheels cannot contact the surface and step permanent deformation reaches 4mm, then the step should be changed.

8.3.6 Handrail

8.3.6.1 Handrail is drive by the friction wheel. And there are many supporting rollers in the link that can easily worn and the residual rubber chip will impact the normal working of other parts, so cleaning should be taken during the maintenance.

8.3.6.2 If the handrail is overextended and cannot adjust to 0~2% sync speed with the step, and then it should be changed.

8.3.7 Every safety device switch should be safe and effective. All the switches

should be checked thoroughly yearly to make sure that all the switches are in the normal effective status.

8.3.8 Auto-lubrication system

8.3.8.1The lubricant auto-lubrication device can be installed according to customer's order.

8.3.8.2 Auto-lubrication device is a spring piston pump type driven by a micro motor, and distribute the oil via quantifier. Its filling capacity can be adjusted in the 0.2~5 ml range.

8.3.8.3 The filling capacity can be adjust as demand. The method can be found in the instruction book of the device.

8.3.8.4 The auto-lubrication device should use the suitable lubricant oil (refer to the lubrication table)

8.3.8.5 The oil tank should be cleaned every half a year, and the oil filter should be cleaned or changed. If any containment was found in oil, then the oil pump should be cleaned and the oil should be recharged.

8.3.8.6 Checking the lubrication system periodically to make sure it is running well. If any accessory is damaged, it should be changed in time.

8.3.8.7 Keep the oil pump outlet pipes fluently. Keep the oil brush clean and use kerosene to wash the oil brush if it was dry.

9. Lubrication of Escalator

9.1 The lubricating location refers to the escalator lubricating drawing attached.

9.2 The lubricating cycle and the oil (grease) of each location refer to the list in below:

List of lubrication oil (grease)

No.	Components Name	Lubricating Location	Time	Oil (Grease) Code	Oil Name	Oil (Grease) standard	Oil capacity
1	Drive machine	Worm gear,box I	12 month	VG460	Mineral oil (≤11kw) Synthetic oil (>11kw)		1st filling of oil at 1500 hours, normally at 10000 hours.
2	Drive machine	Brake pin	1 month	No.30	Mechanical lubricating oil	SY1608	Little add once
3	Auto-lubricating device	Chains	1 month	No.30	Mechanical lubricating oil	SY1608	Refer to instruction manual
4	Main shaft bearing	Bearing	2 month	No. 3	lithium-based grease	SH/T0380-1992	Add every two-month.
5	Tension shaft	Bearing	2	No. 3	Lithium-based	SH/T0380-1992	Add every two

	bearing		month		lubricant		month
6	Handrail drive shaft bearing	Bearing	2 month	No. 3	Lithium-based lubricant	SH/T0380-1992	Add every two month

10. Spare parts

10.1 The spare parts listed below are normal easy break parts. Alternative parts can be ordered according to customers ' requirement:

Spare part list

No.	Part name	Location	Replacement cycle (month)	Remark
1	Comb block	Comb plate	According to the status of wearing and broken	Polysaccharide or aluminum alloy
2	Step yellow stripe	Step	According to the status of wearing and broken	Polysaccharide
3	Left & right yellow stripe	Step	According to the status of wearing and broken	Polysaccharide
4	Pressing roller group for handrail	Driving device of handrail	According to the status of wearing and broken	Assembly
5	Handrail	The handrail system device	According to the status of wearing and broken	
6	Steps	Step	According to the status of wearing and broken	In according to width of step and type
7	Step chain roller	Steps chain	According to the status of wearing and broken	Changed with chain Polyethylene
8	Step roller	Steps	According to the status of wearing and broken	Polyethylene
9	Step guide block	Step	Wearing about 1.2mm	
10	Braking belt	Brake	According to the status of wearing	
11	LXW5-IIQ1	Safety switch	broken	
12	ZR231	Safety switch	broken	
13	TR231	Safety switch	broken	

11. Frequent Failure Analysing & Eliminating

Table 6

No.	Failure phenomenon	Analyzing main reason	Excluded failure
1	The Escalator can't start when use key switch to start	1. Whether the power is on 2. Voltage of power supply is too low. 3. The phase of power supply is connected incorrectly 4. The key switch is break off because of loosen wires	1. Inspecting whether the power supply is on 2. Stop and out of use when the voltage is too low. 3. Check the phase relay 4. Adjusting and connect
2	Stop suddenly when in operating.	1. Lost power supply 2. One of safety switch is off 3. The emergency button is pressed	1. Resume the power supply 2. Check the safety switch 3. Restart the key switch.
3	Impulsion phenomenon is found when it's started	1.The brake is not released completely, or the brake belt is on the deflective position, there is friction between brake belt and brake wheel. 2. The brake time delay	1. Check and adjust 2. Adjust the open time of the brake
4	Obvious shake and jumpiness are found while running	1. The pitch deviate too much 2. Step chain roller defective 3. Step roller defective	1. Inspect the step chain. 2. Replace 3. Replace
5	Faction noise found between skirts and steps while running.	1.Step deviate from the center line 2. Step guide block over wearing 3.Gap between the step and skirt need to be adjusted.	1.Check and calibrate to the centerline. 2. Adjust the gap between steps and skirts 3. Change guide block
6	Bad synchronization between the handrail and the steps	1.The pressing roller group need tightening 2. Handrail need tensioned properly 3. Handrail is too long to be adjusted.	1.Adjust the driving device of handrail. 2.Adjust the handrail tension. 3.Replace the handrail
7	Brake wheel in high temperature, and there is abnormal smell and nick on the brake wheel.	1. The gap between brake belt and brake wheel is too small. 2. The brake spring is too tight; the force for loosing brake is not enough. 3. The working voltage of brake is too low to loose the brake in time. 4. The brake mechanism is blocked. 5. Burning of brake motor 6. There is wear on the brake belt seriously, or the rivet pin is found on the surface of brake belt.	1. Adjust the gap to 0.5~0.7mm 2. Adjust the spring force 3. Measure and adjust voltage 4. Adjust and add the lubrication oil. 5. Replace the brake motor. 6. Replace brake belt.
8	There is abnormal noise or vibration or the bearing in high temperature during the driving motor in operation	1. The worm teeth gap is too large 2. The bearing is worn. 3. There is loosening between fasteners. 4. The lubricating failure.	1.Adjust worm and gear 2. Replace the bearing. 3. Inspect the fastener 4. Replace the lubrication oil.
9	Abnormal smell and heat found in the main driving unit.	1.Working environment is in high temperature. 2.Long time over load 3.Failure of thermal protective relay	1.Keep normal room temperature 2.Check if there are any mechanical fault 3.Replack the thermal protective relay
10	Action of Phase relay in the controller	1.Wrong connection of power supply phase 2.Miss power supply phase	Adjust the power supply phase 2.Check and replace.

12. Maintenance notice

12.1. Maintenance should follow the requirement in the shipment documents of escalator as per type & control manner.

12.2. Refer to the electric circuit diagram attached, working principle and elements symbol figure, cabling.

12.3. Eliminate the fault and resume the escalator according to the relevant instruction.

12.4. Contact the technical department of our company in emergency cases.

13. Cleaning

In order to ensure the good operation of escalator, the periodical cleaning should be done.

In selection of detergent, please notice that the surface of plastic & rubber, only the neutral liquid such as soap can be applied. If other cleaning detergent (such as high concentration of alcohol) to be used, the plastic will lose its polish and become fragile.

No corrosive, solvent type or abrasive detergent or polishing liquid to be used, and following requirements to be followed during cleaning:

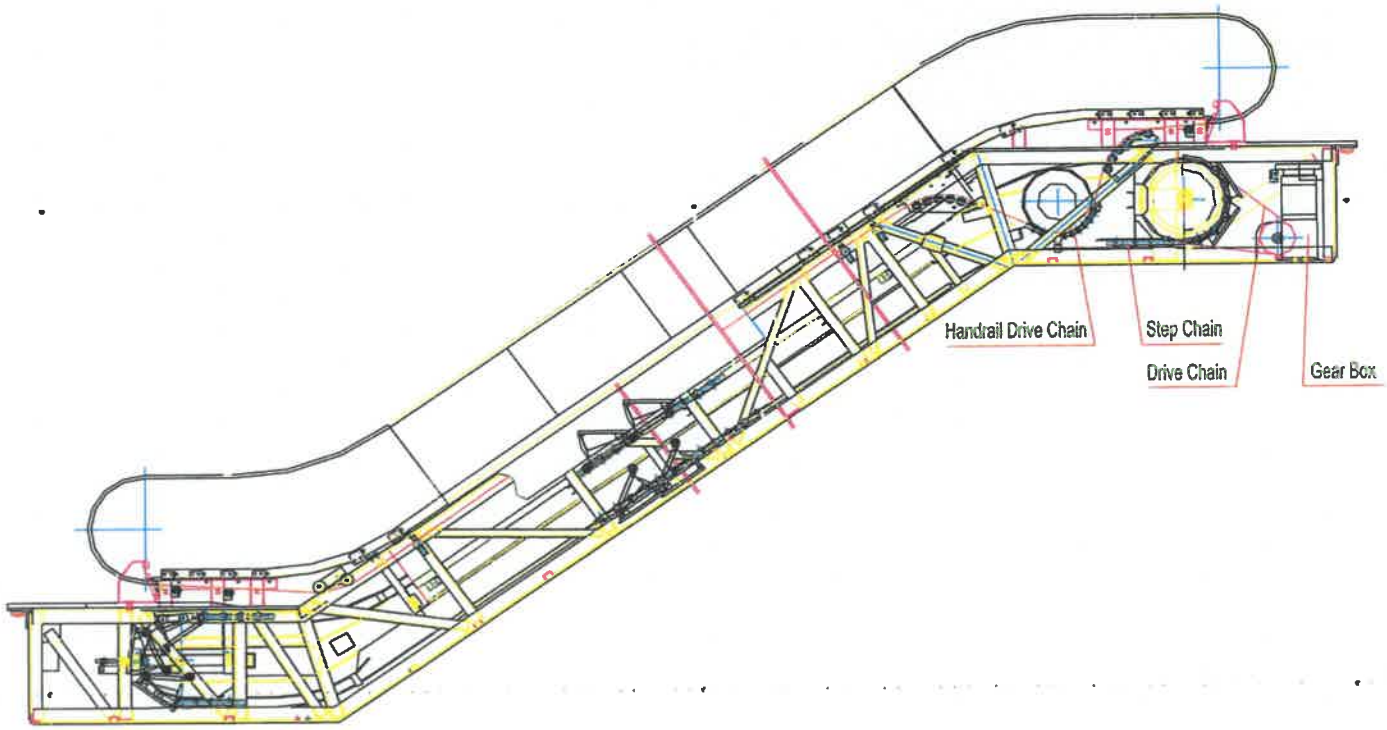
- Shut down the power of escalator before make any cleaning.

- To make sure that no water or other liquid flow into escalator to prevent the corrosion of parts inside the escalator.

-For the surface of painting surface of aluminum surface, the wet cotton cloth can be used for cleaning.

14. Suggestion:

To sign a Maintenance Contract with BRAUN ELEVATOR CO, LTD, you will be ensured all your value and safety of your escalator, such service includes all maintenance operation as well as preventive safety inspection and the necessary technical service in time. BRAUN ELEVATOR CO, LTD will strictly follow the China national standards and related codes, specifications for the maintenance with our professional staffs and experiences.



Escalator Lubricating Drawing

Annex - A-1

ANNEX - M

DEMS PVT LIMITED
DESIGNING OF ELECTRICAL AND MECHANICAL SYSTEMS

TransPeshawar

SUPPLY, INSTALLATION, TESTING COMMISSIONING AND MAINTAINENCE OF BRAUN ELEVATAOR FOR BRT PESHAWAR

SITE ACCEPTANCE/TEST REPORT

10th JUNE,2019

BRAUN AUFZÜGE

DATE OF INSPECTION: _____

DATE OF CHECK REQUEST: __/__/____

Project NAME: BRT PESHAWAR

LOCATION:

SITE ACCEPTANCE REPORT

ELEVATOR TYPE: PASSENGER

Commission No:

ELECTRICAL CHECKS & TESTS

CHECKS	CHECK FUNCTION/VALUE	RESULT
RATING	VALUE (KW)	
Current	VALUE (A)	
Voltage	VALUE (V)	
LOP	FUNCTION	
COP	FUNCTION	
Floor & Direction Indicator	FUNCTION	

SAFETY CHECKS & TESTS

CHECKS	CHECK FUNCTION/VALUE	RESULT
Landing Door Contact Test	FUNCTION	
Emergency/Pit Stop Test	FUNCTION	
Door Photo Cell Test	FUNCTION	
Door Nudging Reversal	FUNCTION	
Emergency Alarm Test	FUNCTION	
Maintenance Mode Test	FUNCTION	
Over Travel Test	FUNCTION	
Power Breakdown Test	FUNCTION	
Car Buffer	INSTALLED	
CWT Buffer	INSTALLED	

Mech. Checks:

INSTALLATION CHECKS	RESULT
Landing Door	
DOOR LOCK	
Door Drive coupling	
Door Drive Belt	
Cabin Lights	
OVER SPEED GOVERNOR	
EMERGENGY BRAKE	
CAR OPERATING PANNEL	
GUIDE RAIL BRACKETS	
COUNTER WEIGHT ASSEMBLY	
TRACTION MACHINE ASSEMBLY	
Main controller Cabins	
GUIDE RAILS	
MOTOR	
Remote Monitoring System	

CONFIRMED BY:
COMMISSIONING ENGINEER
SIGNATURES:

WITNESSED BY:
CLIENT/CONSULTANT
REPRESENTATIVE
SIGNATURES:

DATE OF INSPECTION: _____

DATE OF CHECK REQUEST: __/__/____

Note: Any open points not related to the safe function of Elevator should be noted on the attached comment sheet, and will be rectified on intimation and will not hinder the handing over and the operations of Elevator and start of maintenance period.

Comments:

CONFIRMED BY:
COMMISSIONING ENGINEER
SIGNATURES:

WITNESSED BY:
CLIENT/CONSULTANT
REPRESENTATIVE
SIGNATURES:

BRAUN
AUFZÜGE

BRAUN ELEVATOR
Owner's Manual

DEMS PVT LIMITED
DESIGNING OF ELECTRICAL AND MECHANICAL SYSTEMS

1 About This Document

Safety Symbols and Definitions 1 - 1
Responsibilities of the Owner 1 - 2
Suggestions to the Owner 1 - 3

Safety Symbols and Definitions

Danger

This symbol indicates the information that must be obeyed for safety; otherwise, it may result into injury.

Warning

This symbol indicates the information that shall be paid attention to; otherwise, it may result into injury or extensive damage to property.

Caution

This symbol indicates the information that includees important hint instructions. Failure to observe the instructions can lead to errors or damages.

Installation
This installation consists of one or more elevators, including car, hoist way and machine room areas, and the entrances to them.

Notified body
An independent body with elevator experiences, professional integrity and technical competence, appointed by the government.

Owner of the Installation
The natural or legal person, who has the power of disposal of the installation, and in addition, is responsible for its intended operation, use and maintenance.

Competent Persons
Designated person, suitably trained, qualified by knowledge and practical experience, provided with the necessary instructions within their maintenance organization to enable the required maintenance operations to be safely carried out.

Malfunction
A state of operation, in which, the safe operation of the elevator for its intended purpose is restricted or impossible.

Trained Personnel
Persons authorized by the owner of the installation and trained by the maintenance company to perform specific tasks assigned to them.

Handover of the Installation
The installer makes the installed and operable elevator available to the user for the first time.

OEM
Original Equipment Manufacturer (of elevator and accessories)

Maintenance Operations
All work necessary for preventative maintenance, corrective maintenance and repairs.

Manufacturer
Common legal unit, which takes responsibility for design, manufacture, assembly and commissioning of the installation (including the safety components).

Emergency
A situation in which passengers are trapped in the car.

Repairs
The replacement or repair of defective and/or damaged components.

Safety Components
Components that are defined as safety components by the Bureau of Quality and Technical Supervision.

Maintenance Company
A company that is responsibility for carrying out maintenance work, and that has competent persons at its disposal.

Regular Maintenance
All measures necessary to ensure safe and correct operation of the elevator.

Responsibilities of the Owner

Intended use

The owner of the installation is responsible for ensuring the installation is used as intended (transport of passengers). He is also responsible for ensuring that the installation is maintained in a safe operating condition.

Availability of the Instruction Manual

It is the responsibility of the owner of the installation to ensure that this manual is available at all times and freely accessible to competent and trained persons.

Periodic Inspection

Periodic inspection must be carried out according to the national regulations. The owner of the installation must ask a competent person for periodic inspection.

Return to Normal Operation

If the elevator has been commissioned, but used as a building elevator, or if it has been taken out of service for an extended period of time, a certified professional must take the following steps before the elevator should be allowed to return to normal operation:

- Clean and lubricate the installation;
- Replace the damaged components;
- Check the safety elements.

Maintenance Duties

The installation described here conforms to Braun quality standards. It was built according to the recognized national safety regulations.

In order to ensure safe operation after handover, the installation must be maintained regularly by competent persons.

The weight of the elevator car is closely related to the safety of the installation. The weight of temporary protective measures within the car should be considered as the load of the elevator.

Braun prohibits the clients (e.g. buyers or owners of Braun elevators) from decorating the elevator car by themselves without assistance.

Notice to Maintenance Company

If abnormals (e.g. leveling inaccuracy, noises, vibrations, defective car lighting, etc.) in the installation are observed, the maintenance company must be notified immediately. The owner of the installation must notify the maintenance company of any changes that are imminent in the area of installation, and whenever an emergency has occured.

Elevator Emergency Exits

For emergencies and to carry out maintenance operations, the safe access to the building and to the installation must be guaranteed at all times. The access to the control and the drive must be locked. The keys may only be made available to persons authorized by the owner.

Maintenance Operations

The owner of the installation has to comply with, and is responsible for the fulfillment of the requirements as laid down in the chapter "Maintenance Operations - Prerequisites".

Notification to Manufacturer

According to product responsibility regulations, the manufacturer must keep track of its installation(s) after commissioning and handover. Therefore, the owner of the installation must report to the manufacturer any damage to the installation or possible dangerous conditions in the installation.

Handling of Emergencies

When the handling of alarms is the responsibility of the owner of the installation, the following has to be considered:

- In the case of an emergency where there is no response from the lift car, it must be assumed that the person in the car pressing the alarm button has impaired speech or hearing. This requires immediate intervention by a trained person.

Suggestions to the Owner

Reduce the owner's responsibilities by increasing usage safety and equipment reliability.

Scope of Responsibilities

The owner (of elevator or escalator) has a duty to care for the safety of users of the equipment (including riders and maintenance personnel) and the reliability of the equipment itself as well.These responsibilities are based upon guidelines set forth by national laws and local regulations.

Selection Criteria

The completion of all necessary maintenance tasks is required to guarantee the post-installation safety and function of the elevator and all elevator parts in their service life.

The safety and function of the elevator can only be guaranteed by certified maintenance teams conducting regular maintenance work in accordance with maintenance guidelines.

All assigned maintenance personnel should be certified and professionally trained, and have not only technical knowledge but also actual operational experiences. The professional organization that supports all maintenance personnel must supply instruction manuals and special tools (i.e. ISO 9000 certified) to guarantee the safe operation of maintenance tasks.

It is recommended to the equipment owners that they only cooperate with maintenance companies that are appropriately insured.

The elevator must be maintained exactly in accordance with the guidelines specified by the manufacturer in the user manual. The routine maintenance is required to guarantee the safety and reliability of the elevator.

Maintenance teams must conduct regular inspections when an elevator has either been put into operation recently, or before it is to be returned to operation after a long period of disuse.

If the elevator is changed in any way, the owner should supply the maintenance team with relevant maintenance instructions.

The maintenance company should deeply consider the followings when determining maintenance cycles:

- Times of use per year, operating/non-operating periods;
- The service life of the elevator;
- Installation place of the elevator, type of the elevator, demandes of user, and category of freight transported;
- Local and external environmental factors, such as; weather conditions (rainfall, high or low temperatures, etc.) or vandalism.

According to these standards, the maintenance team should prepare a maintenance plan to guarantee that all preventative maintenances are conducted in accordance with elevator requirements in an optimal amount of time, without compromising the passengers' safety or increasing non-working hours.

The maintenance company must supply all necessary spare parts.

Should an upgrade to an elevator become available, the maintenance company shall be responsible to notify the owner.

2 Basic User Information

User Manual Confirmation 2 - 1
Elevator Log 2 – 2
Basic characteristics of the installation 2.- 3
Notification to Installation Team 2 – 4
Declaraion of Conformity 2 - 5

BRAUN AUFZÜGE

User Manual Confirmation

Elevator Information

Contract Number:
Installation location:
Manufacturing Date:

Owner

Name:
Address:
City:
Zip:

Signature

Address/Date .....

Owner's Signature: .....

Manufacturer's Signature: .....

DEMS PVT LIMITED
DESIGNING OF ELECTRICAL AND MECHANICAL SYSTEMS

Elevator Log

Elevator Description

Gearless Electric Drive

Installation

Type:
Contract Number:
Installation Position:
Address: Owner:

Handover Date

Installation Date:
Handover Date:

Maintenance Company

Name:
Address:
City:

Start date for maintenance:

Major Repairs/ Important Modifications

Description	Responsible Person	Date	Signature

Basic characteristics of the installation

Identification of the lift	Traction lift with traction machine in well or in separate space overhead the well directly
Owner data	Owner: Address:
Installer	Name:
Installation	Installation no: Address: Layout drawing ref. no.:
Characteristics of the installation	Number of levels served: Car entrances: Rated load: Number of persons: Kind of users: Passengers Max. starts per hour: Travel: mm Rated speed: m/sec Voltage: V Power supply: Number of phases Power supply: Number of wires: Frequency: Hz Power: Kw Type of control: BIONIC microprocessor Suspension: Number of traction media: Car safety gear type:
Motor situation	Motor located inside the hoistway fixed on guide rail. Motor located in a separated space overhead the hoistway directly
Type of drive	Gearless machine driven in closed loop

Notification to the Installation Team

Purpose	In accordance with law, Braun as manufacturer must keep track of its installation(s) even after commissioning and handover. Therefore Braun has to be informed about all major damages to the installation as well as any change in building ownership.
Installation Team	: Address: Zip: City: ☎: 🖷:
Elevator Identification	Contract Number: Address: Installation Site: Installation Date:
Owner	Name: Address: Zip: City: ☎: 🖷:
Change of Ownership	Date
New Owner of the Installation	Name: Address: Zip: City: ☎: 🖷:
Description of Malfunctions or Damages	
Signature of the Owner	Date Signature

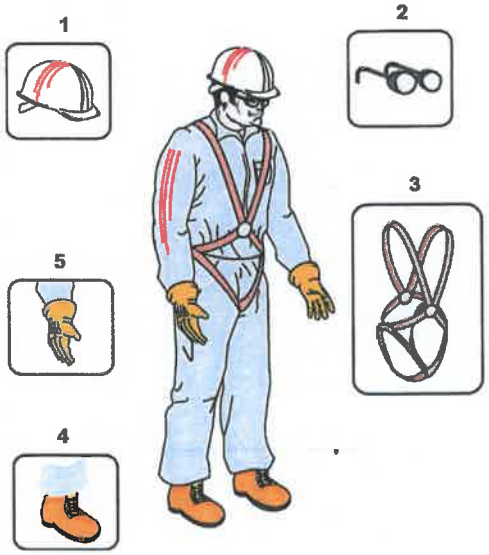
3 Installation Instructions

Safety and Environment	3 - 1
Installation Tools	3 - 1
Elevator Installation Methods	3 - 3
Elevator Installation Procedures	3 - 4
Storage and Transport of On-Site Materials	3 - 4
Elevator Installation and Relevant Requirements	3 - 5
Finished Product Protection	3 – 8
Handover of Equipment and Materials	3 – 8

Safety and Environment

Safety

Please obey the following safety rules:
Wear required personal protective equipment and clothing: safety helmet, safety shoes, protective gloves, full body safety harness, and safety goggles.



1. Safety helmet
2. Safety Goggles
3. Full body Safety Harness
4. Safety shoes
5. Protective Gloves

The area around the elevator installation must be kept clean, and proper protective measures must be in place for all floor level entrances;

All safety equipment and safety symbols in the work area must be maintained;

The work place should have sufficient illumination;

User instructions for all equipment and tools should be strictly obeyed; tools and equipment should be kept in good conditions from start to finish;

Dangerous situations can only be prevented by strictly obeying all safety rules;

The door to the machine room should remain locked at all time;

Users must obey all elevator operation instructions;

Only trained personnel should have access to the elevator's triangle key, and should only use it when authorized.

Environment

Attention should be paid to limiting environmental impacts; effective measures should be in place to protect against any waste gases, waste water, waste oil, waste materials, dust, noise, vibration, electromagnetic radiation, etc. generated during elevator installation, maintenance, or other activities. The local environment should be protected and improved so as to eliminate any pollutants that could cause public hazard or bodily injury.

Installation Tools

Tool	Description
8-24mm Open-Ended Wrenches	
8-24mm Socket Wrenches	
100-375mm Crescent Wrenches	
Allen Wrenches	
30-100N Torsion Wrenches	
Flathead Screw-drivers Phillips Screw-drivers	
Hammer	
5m Measuring Tape	
Level	
Square	

Tool	Description
Straight Ruler	
Feeler Gauge	
Handheld Grinder	
Needle-nosed Pliers	
Steel Pliers	
Wire Cutters	
Clamp Pliers	
5T Hoist	
Crowbar	
Electric Drill Impact Drill	
Braun Company Triangle Key	
File	

Tool	Description
Multimeter	
Grease Gun	
Guide Rail File	
Steel Saw	
Flashlight	
Tool Bag	
Plumb	
Guide Rail Installation Tool	
Suction Cups	

Elevator Installation Methods

Preparation and Civil Surveys

After being notified by the constructing party, the installation team will send personnel to the construction site before the elevator arrives to conduct civil engineering tests. The constructing party should make the following preparations, and notify the installation team in writing:

The construction site should meet all necessary construction requirements, and the hoist-line should be clear of obstructions;

The installation team should be supplied with clean elevator hoistways in certified dimensions and with operational electrical connections and sufficient illumination;

In accordance with agreement, the constructing party is responsible for scaffolding within the hoistway and its handover to the installation team;

All final hoistway axis and floor level measurements should be confirmed and supplied to the installation team in writing;

Relevant personnel will conduct site modification work in accordance with the results of the civil engineering tests;

In accordance with agreement, a temporary indoor on-site storage area will be provided to the installation team for the temporary storage of materials and tools; the dimensions of this area will depend on the agreement between both parties and the location shall facilitate convenient and safe construction.

Delivery, Inspection, and Lifting

The installation team will notify the constructing party once delivery has been made to the location designated by the constructing party; the constructing party will then send relevant personnel to confirm with members of the installation team and delivery personnel that everything has arrived in undamaged conditions.

Once the elevator installation kit has arrived, the constructing party will be responsible for protecting it. The constructing party will then work with the installation team in inventorying and confirming the shipped items.

Once the shipment has been inventoried, the responsible party will then lift all machinery, controller cabinets, and car platform into its appropriate position.

Construction Approval

Before the installation of the elevator begins, the installation team must assist the constructing party in applying for construction approval from the government.

Installation, Commissioning and Inspection

Once all engineering modifications of the installation site have been completed and the construction approvals have been granted, the elevator installation team will officially start installation.

The installation team will complete elevator installation, commissioning and internal inspection in strict accordance with national and company standards within the time period agreed in the contract.

Government Acceptance

Once the internal testing report has been received from the elevator installation team, the constructing party will report the results to the appropriate government department. The elevator installation team will then modify and correct any aspect of the installation that does not reach acceptable standards.

Equipment Handover

Once government inspection approval has been received, the elevator installation team will officially hand over the equipment to the constructing party.

4 Instructions for use

Instructions for use	4 - 1
Purpose and scope	4 - 2
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Instructions for use

Intended readers

The instruction manual is intended for:
- The owner of the installation,
- Competent persons,
- Trained persons.

Safekeeping

The owner of the installation is responsible for ensuring that this manual is available at all times and freely accessible to competent persons and trained persons whenever the need arises.

Identification of the lift installation

Comm. No.:
Lift No.:
Address:
Installation location:
Country:
Year of installation:

Conformity

This lift conforms to all relevant local codes as well as EU directives and standards.

Installer

Name:
Address:
City / Country:
☎: 🖷:

Maintenance Company

Name:
Address:
City / Country:
☎: 🖷:

Your partner for Modernization

Braun Lift Ltd.
Name:
Address:
City / Country:
☎: 🖷:

Purpose and scope

Scope

The EU Lifts Directive (95/16/CE) and other related country specific codes describe the basic requirement relating to safety and health with which lifts and their safety components must comply without reservation. These include the requirement that the installer must deliver an instruction manual with every lift he installs.

Safety symbols and definitions

To ensure correct understanding of the instruction manual, the safety symbols and definitions described in the section "Safety Symbols and Definitions" must be observed.

Purpose of the instruction manual

The instruction manual gives the owner of the installation, the maintenance company and trained person's important instructions for normal safe operation of the lift, lift maintenance and for taking appropriate measures if emergencies occur.

Binding nature

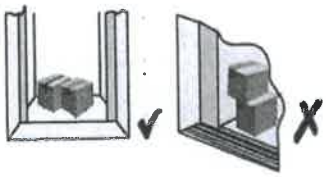
This instruction manual relates to the lift specified on the first page. At the handover of the installation the instruction manual becomes binding.

Intended use

The lift described here is intended for the transport of passengers. Signs displayed on the installation must be observed.

If the installation is used for the transport of goods, the following points must be taken into consideration.

- Load Distribution: The load must be evenly distributed over the car floor. A single heavy load being brought into the car all at once can cause damage to the car.



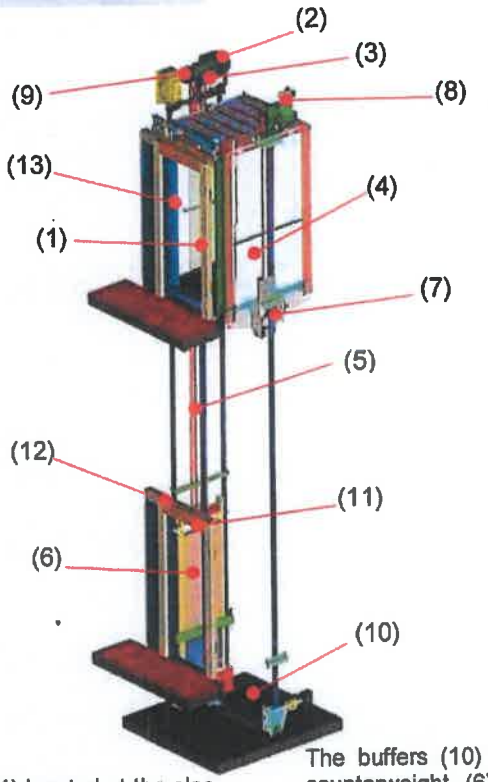
The installation has been designed according to the use of the building specified at the time of purchase. The corresponding number of trips per hour is shown in the sales specification of the installation. If the installation is used more than this, excessive heat can cause the lift to become blocked. If this happens frequently, the installation must be inspected and, if necessary, modified. In this case, the installer must be contacted.

If the lift is used outside the scope of the foregoing definitions, it is no longer being used for its intended purpose. Neither the manufacturer nor the installer accepts liability for damage resulting from such use. Use of the lift as intended includes complying with the conditions for maintenance specified by the manufacturer or the installer.

If the lift was ordered with naked car, the customer decoration weight (total decoration weight, floor decoration weight, car wall decoration weight) must not exceed the limitation in the purchasing order.

It is not allowed to change the car design without written approval by the supplier!

Description of the installation



Control cabinet

The control cabinet (1) located at the closing - side door jamb of the top floor contains the controller and the emergency device, as well as the rescue instructions.

Power transmission

Monitored by the controller, (1) the motor (2) drives the traction sheave (3), which transmits the force to the car (4) by the suspension media (5) and counterweight (6).

Safety components

The safety gear (7) on the car stops the car (4) if it travels downward at excessive speed. The safety gear (7) is tripped by the overspeed governor (8).

The brake (9) on the motor stops the car if it travels upwards at excessive speed. The brake (9) is triggered by the overspeed governor (8).

The overspeed governor (8) monitors the speed of the car (4) and it triggers the safety gear (7) at excessive speed.

The buffers (10) stop the car (4) or the counterweight (6) in the event of over travel into the hoistway pit.

The door interlock (11) prevents the landing doors (12) from opening during travel and when outside the interlock zone. The car door (13) protects the car entrance during travel and when outside the floors.

Safety chain

The safety chain monitors all electrical safety elements. Whenever an electrical safety element doesn't work correctly, the start of a trip will be prevented or the trip will be immediately stopped.

Operation of the installation

Mode of operation

Standard control functions

- **Down collective control**

  At any time the control registers calls from the landings and calls from the car. As the car travels down, it serves the calls in their natural sequence. The landing calls are only served in downward direction (upward for basement).

- **Collective selective control**

  At any time the control registers up and down calls from the landings, and calls from the car. As the car travels either downwards or upwards it serves car calls in their natural sequence and landing calls of same direction.

- **Group control duplex**

  Group control duplex combines two lifts into a single control system. This optimizes the distribution of the landing calls between the lifts.

- **Overload control**

  The overload control prevents travel with an overloaded car. The car remains at the landing with the door open. An acoustic and optical signal draws the passenger's attention.

- **Full load control** (only for collective)

  When the car is full, it will only serve car calls; landing calls are ignored or allocated to the other lift for duplex.

Control options

Depending on configuration of the specific installation, additional control options may be present. These are detailed in characteristics and sales specifications of the installation.

- **Fireman's control**
  (according to national regulations)

Fire emergency controls available are
BR1,BR CN, BR1 KOR, BR 2, BR 2 CN, BR 2 SGP, BR 3, BR3 TW and BR 3 KOR

The fire emergency control immediately brings the car (two cars if duplex) to the recall floor, where the car(s) remain(s) blocked with open door .

The fireman's control is turned-on or off either:

- by the fire emergency key switch, located on main floor
- by the fire emergency key switch, located on main floor or fire detection contact
- by the fire emergency key switch, located on main floor with alternative key on defined floor in case of fire in main floor

Fire emergency controls BR2 / BR3

BR2/BR3 control allows the lift (or one of the lifts if duplex) to be used by the fire brigade to make trips for fire fighting purposes. When the fire fighting switch is activated, the lift travels immediately to the fire recall floor, and opens its doors. Then use of the car is reserved for the firemen. In the case of a duplex and BR2 the other lift remains in normal service. In the case of duplex and BR3, the other lift remains at the fire recall floor. Fire fighting service can only be deactivated when car is at fire recall floor with doors fully open.

- Fire emergency key switch, located on main floor .
- Fire emergency key switch, located in the car

- **Independent control** (car reservation)

  When the car reservation key is turned on, the car is reserved for exclusive use such as car interior cleaning. Landing calls are ignored (allocated to the other lift if duplex).

- **Out of service function**

  The out-of service switch is used to take one lift out of service. Currently registered car calls are served before the car returns to a specified recall floor, where it's blocked after the doors have opened and closed. Further travel indicator for collective controls and car position indicators on the landings are de-activated.

- **Pre-opening doors)**

  The door opens just before the car comes to a stop at landing in order to save time.

- **Pre-announcing arrows with / without acoustic signal** (Collective control)

  The indication to the passengers for the direction in which a car will travel next, using up or down arrows.

- **Automatic car light**

  When the car is not used for a longer time with door closed, the light of the car is switched off.

- **Automatic return to main floor from all floors**

  The car is automatically sent to the main floor after a time of inactivity (default 2 min.). There it remains with door closed.

- **Automatic return to main floor when car stands below the main floor**

  The car is automatically sent to the main floor after 5 s. of inactivity below the main floor. There it remains with door closed.

- **Voice announcement** (selected languages)

  The specific device located on the car generates audible synthetic messages.

- **Automatic evacuation to the nearest floor**
  In case of power failure, an evacuation travel is initiated in up or down direction, depending on the load in the car. When the car arrives at the nearest floor, the doors open and remain open

Guide to safe operation of the installation

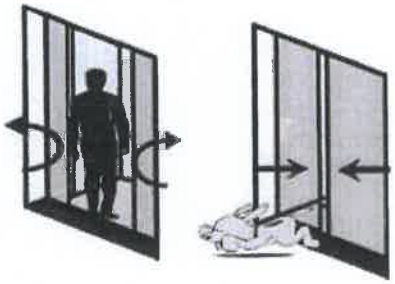
Work on the installation

Only competent persons may carry out work on the installation.

Safety in door area

Automatic doors have safety equipment such as closing-force limiters and light curtains, which ensure that passengers or objects do not become trapped. However, detection of small objects such as dog leashes and walking sticks cannot be guaranteed.

For this reason, the door area must be cleared immediately after entering or leaving the car.

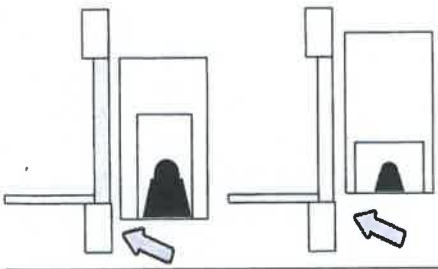


Door sill and car floor

The rollers of forklifts and similar equipment can damage the door sill and/or the car floor.

Differences in level

Depending on the load, the car can stop above or below the level of the landing floor. Care must be taken entering and leaving the car so passengers do not trip.



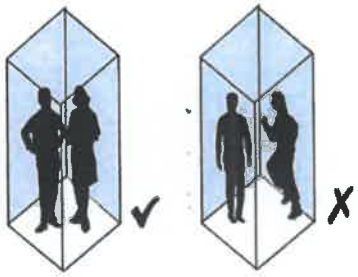
Attention must also be paid to the gap between the car and the landing door sill, when entering and leaving the car.

Assistance

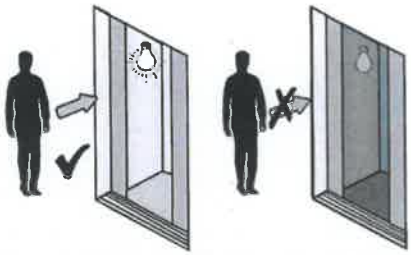
Persons who are unable to use the controls in the car may only use the lift if accompanied by a person able to assist.

Behavior of user

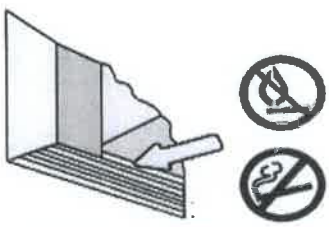
Passengers must stand still while the car is moving. Jumping or rocking is not allowed. Instructions in the car must be followed.



The lift may only be used if the car lighting is on.

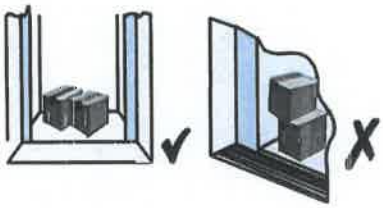


Do not throw any objects, especially burning matches or cigarettes, through the gap between the door and the landing sill into the hoistway pit.



Positioning of goods

Goods being transported in the car must be positioned in such a way that they cannot move about. Care must be taken to evenly distribute the load.



Exceptional situations

In case of fire, smoke, water etc. in the building, it is strictly forbidden to use the lift.

In case of fire the car could come to a stop, due to power failure or other fire damage, in a position where it becomes impossible for passengers to leave the car so that danger of burns and/or suffocation could occur.

Handover of emergency keys

The installer must hand over the emergency unlocking keys for landing doors and control cabinet to the owner of the installation. The handover must be accompanied by written instructions detailing the essential precautions to be taken in order to avoid possible accidents, resulting from unlocking, or access to cabinet.

Caring for the disabled

If disabled persons predominantly use an installation, the installer or the maintenance company must be contacted to provide adequate modifications to the installation.

The following measures must be taken to serve disabled persons:

- Door opening and closing times are to be adjusted.
- Special operating panels must be installed in the car on a landing side where applicable

Maintenance

See chapter Maintenance

Use of emergency keys

The use of emergency unlocking key for landing doors and control cabinet key is strictly limited to competent and trained persons.

Emergency

Communication system

The car is equipped with a voice communication system, which can be used in an emergency to set up an immediate link to an emergency service.

Emergency service

The emergency service must be available as per requirements set in country specific codes. For contact at all times and its personnel have been appropriately trained so as to be able to take competent action. The functioning of the communication facility with the emergency service must be guaranteed during the entire lifetime of the installation. A trained person must always be within easy reach in case of emergencies with passengers trapped in the lift.

Emergency procedure

Emergency situation

If for any reason the car stops, and it is not possible to leave the car in the normal way, there is no danger to users in the car. The car is secured against uncontrolled movements. Ventilation slits allow air into the car. If the power supply fails, emergency lighting will immediately provide light inside the car.

Use of alarm

The alarm button in the car should only be pressed in an emergency. When the alarm button is pressed, the alarm is passed on automatically. After a short time, the person on duty at the responsible service center replies. The person gives instructions to the user, and organizes whatever action is necessary.

Rescue of trapped passengers

Responsibility

Only competent or trained persons are allowed to rescue trapped passengers.

Procedure

When rescuing trapped passengers, the procedure displayed in the control cabinet must be followed.

If, for any reason, the instruction notice in the control cabinet is missing, the maintenance company must be contacted immediately to allow rescuing the passengers. The maintenance notice must be replaced immediately.

Handover of emergency device

The use of the emergency device located in the control cabinet (see description of the installation) is strictly limited to competent or trained persons.

Instruction to release trapped passengers

VERY IMPORTANT!

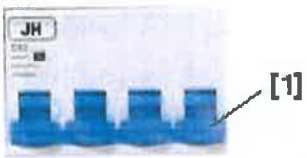
Only properly trained and authorized staff is allowed to use these instructions!

Except in EMERGENCY situations, do not attempt to move the elevator, call the maintenance and repair service.

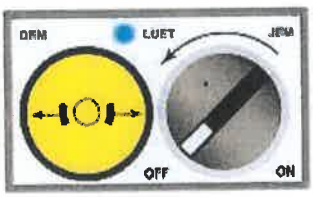
Before leaving the control cabinet area, make sure the elevator is turned off & the control cabinet door is closed and safely locked!

- Reassure the passengers. You should inform them that the elevator car will move and that they should hold on to hand rail or car wall before the evacuation starts. The car door must be closed to prevent any risk to the passengers.

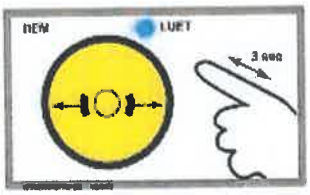
- Turn off the Main Power Switch, **JH**.



- Turn **ON** the Manual Evacuation Switch, **JEM**.

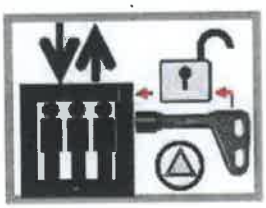


- Press with 3-second intervals the Manual Evacuation Button, **DEM**.



- When the blue floor indication LED, **LUET**, lights up, turn **OFF** the Manual Evacuation Switch, **JEM**.

- Lock the control cabinet door. Go to the landing entrance adjacent to the car level. Manually open the landing door with the special triangular key: the passengers can exit the car.



- Close the landing door and ensure it is locked.

Call the repair service!
Ensure the landing door is locked again!
Ensure the main power switch is turned off!

5 Maintenance Instructions

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Prerequisites

Basic Rules

The safe and effective operation and maintenance and rapid emergency responsiveness can only be guaranteed if the owner of the elevator is responsible and pays close attention to the followings:

Access Restrictions

Only technical support/trained personnel may access the elevator hoistway. The hoistway maintenance and/or cleaning work must only be carried out by the trained maintenance personnel according to the owner installation manual; otherwise, they must be done with the presence of the professionals. All safety preparation measures must be completed prior to this work.

Safety Measures

All doors that allow access to either the elevator control areas or hoistway must be locked at all times.

There must be a safe access to the hoistway pit.

All access to either the drive and control machinery or hoistway must be kept clear and safe at all times. The installation work must be suspended immediately should any blockage exist within the emergency access passage ways.

Illumination

The hoistway and all access passageways should be properly illuminated.

Temperature and Ventilation

The elevator owners must guarantee that the temperature of the hoistway will remain between +5°C and +40°C. The hoistway must also be properly ventilated. The hoistway cannot be used if it is not connected to the car ventilation area.

Cleaning

Scope

The inside of the elevator car, landing doors, the landing floor door frame, all buttons and indicator lights, and the door sills of both the landing floor and elevator car should be cleaned on a regular basis.

Responsibilities

Only trained and qualified personnel can conduct cleaning of the elevator.

A trained professional must be present on-site when the cleaning of the hoistway or glass fencing is being performed! This person must be trained and qualified for the operation of the elevator and all safety measures. In addition, this person is responsible for taking all pertinent safety measures prior to any such cleaning work.

Safety Measures

When the electrical cleaning equipment is used inside the car, it must be guaranteed that the car doors cannot be closed unexpectedly. It is recommended to shut off the elevator's master power source!

Cleaning (Cont.)

Instructions
The following rules must be obeyed during the cleaning operations:

- At no time should cleaning solutions containing strong solvents or abrasives be used.
- All materials can be cleaned with a solution of soap and clean water.
- When cleaning the surfaces composed of different materials, the cleaning solution should be safe for the most sensitive surface.

Water is allowed to flow into the elevator car, hoistway, or hoistway pit.

A vacuum cleaner should be used to clean out the landing door sill and grooved surfaces in the landing door area. A slow-evaporating solvent such as petroleum solvent or kerosene should be used to clean hard-to-remove dirt and stains. Once cleaned, the solvent itself should be wiped clean. If necessary, dirt may be gently scraped clean.

Clean the elevator car floor, car doors, and landing doors according to their relevant materials.

For the structural surfaces or polished surfaces (brushed light), the cleaning work should be conducted based on the surface characteristics of the polished materials. Cleaning in a direction different from that of polishing may damage the surfaces.

Stainless Steel
Recommended Cleaning Solution: Typical stainless steel cleaner (with or without solvent) available in the market, such as isopropanol, petroleum-based or hydrocarbon-based solvents, such as kerosene or benzene.

Polished stainless steel has a very sensitive surface. Therefore, it is important to obey the following instructions:

Only with the prepared stainless steel polishing agent, lightly spray on the stainless steel surface and clean with a clean white cloth. For the soft leather with cleanser, use white cloth for further polishing treatment.

Stainless steel surfaces with graphics or etchings should not be damaged by cleaning; therefore, the following instructions should be followed:
Use the warm cloth with soapy water (without any solvent) to gently clean the surface. Then, polish the surface with a clean damp cloth. Once it is dry, the surface should then be gently polished again with a clean white cloth.

Colored stainless steel requires extra care. It should be cleaned with the cleaning procedures for graphical or etched stainless steel.

Aluminum
Recommended Cleaning Agent: Liquid cleaning agent or degreaser. Use a soft cloth or sponge to polish and dry.

Copper, Brass, and Bronze
Recommended Cleaning Agent: Liquid aluminium or brass cleaning solution.
Use a soft cloth or sponge to polish and dry.

Wood and Plywood
Recommended Cleaning Agent: Liquid cleaning agent or degreaser.
Use a soft cloth or sponge to polish and dry.

Glass and Glass Products
Recommended Cleaning Agent: General glass cleaning agent available in the market. Watered petroleum-based solvents. Use a soft cloth or sponge to polish and dry.

Resin-Based Materials
Recommended Cleaning Agent: General resin cleaning agent (alcohol or hydrocarbon-based) available in the market. Clean with a soft cloth. Use cleaning solution sparingly. Clean, polish and dry.

Colored polished surfaces
Recommended Cleaning Agent: Gentle, liquid alcohol or hydrocarbon-based degreasers such as kerosene or benzene. It is recommended that a non-visible test surface be cleaned first so as to observe any potential reaction with the cleaning solution. Clean with a damp, soft cloth.

Plastic Fasteners
Recommended Cleaning Agent: General plastic cleaning agent available in the market. Alcohol or hydrocarbon-based cleaners

such as kerosene, benzene, etc. It is recommended that a non-visible test surface be cleaned first so as to observe any potential reaction with the cleaning solution. Clean with a damp, soft cloth.

Carpets
Recommended Cleaning Agent: General carpet cleaning products or chlorinated hydrocarbon or alcohol-based solvents available in the market. Clean with vacuum cleaner, apply carpet shampoo, and then scrub with sponge. Use a sponge containing chlorinated hydrocarbon or alcohol-based solvents to scrub away dirt and stains, and then allow the carpet to dry.

Synthetic/Glued Flooring Materials
Recommended Cleaning Agent: General liquid cleaning products or degreasers, or alcohol or hydrocarbon-based cleaners such as isopropyl alcohol and kerosene. Clean with a damp cloth.

Cleaning (Cont.)

Marble or Tile Flooring
Recommended Cleaning Agent: Soapy water. Household cleaning procedures will work well when cleaning this kind of material.

Landing Door Sill and Footplate
Recommended Cleaning Agent: Warm soapy water (not cleaning agent).
Use a cloth to brush away all dirt and dust from the landing door area. Use a vacuum cleaner to clean certain areas. Clean the surface using a sponge and hot soapy water. Rinse the area with clean water and a clean cloth, and dry the area by baking.

Lights
Recommended Cleaning Agent: Soapy water (not cleaning agent). After turning off electrical power, remove the light from its fixture and clean it. After drying, re-install the light in its original location!
Clean the surface area using a sponge and hot soapy water. Rinse the area with clean water and a clean cloth.

Buttons, Indicator Lights and Paneling
Clean according to the materials used.

Regular Inspection and Maintenance

Content

The regular inspection and maintenance includes the regular safety inspection of all of the elevator's electrical and mechanical components, the installation and adjustment of all elevator components, lubrication, and cleaning. The regular inspection and maintenance does not typically include replacements of parts or equipment.

Regular Inspection and Maintenance Plan

The regular inspection and maintenance plan should be conducted in accordance with the technical maintenance plan. The inspection and maintenance depends on many different factors concerning elevator and environment. All specified requirements must be met at all times. These standards indicate the absolute minimum requirements.

Responsibilities

As a general rule, only the qualified persons should be allowed to perform the inspection and maintenance tasks. The simple cleaning tasks are excluded, which is described in details in the "*Inspection and Maintenance – Cleaning*" section. The names of the maintenance company must be displayed on the side of the elevator.

Safety Measures

Prior to conducting inspection and maintenance, the safety measures must be put in place to reduce any risk of personnel injury or property damage. Details are as follows:

- In order to protect the safety of personnel performing inspection and maintenance operations, the rules explained in the chapter "*Maintenance – Prerequisites*" must be strictly obeyed.
- The signs must be placed in visible locations to indicate that the elevator is currently out of service.
- Should any type of safety issue appear during inspection and maintenance (such as hoistway illumination problems, ladder damage or missing, etc.), they must be reported to the owner of the elevator immediately.

Inspection and Maintenance Control Box

The inspection and maintenance control box allows personnel to conduct operations on top of the elevator car. The inspection and maintenance control box can be turned on and off by inspection procedure switch that is located on the inspection and maintenance control box on top of the roof of the elevator car. Once this switch has been activated, the car will no longer respond to floor call commands. The elevator car then can only be moved by the command buttons on the control panel of the inspection and maintenance control box.

Lubricants and Lubricating Oil

Only the lubricants and lubricating oils mentioned in the inspection and maintenance manual may be used. Other lubricants may impact safety and/or cause damage requiring very high expense to repair.

*Please see pages 5-6 for a list of appropriate lubricants.

Disposal

All used lubricants and lubricating oils must be recycled and disposed by the maintenance company in accordance with regulations. Engine lubricants and hydraulic oils can result into severe pollution to water sources!

Repairs

Content
The repairs typically include the repair or replacement of used or damaged safety devices or other devices.

Responsibilities

Only professionals can conduct maintenance work.

Safety Measures

Before conducting inspection and maintenance, the safety measures must be put in place to reduce any risk of personnel injury or property damage. Details are as follows:

- In order to protect the safety of personnel performing inspection and maintenance operations, the rules explained in the chapter "*Maintenance – Prerequisites*" must be strictly obeyed.
- The signs must be placed in visible locations to indicate that the elevator is currently out of service.
- Should any type of safety issue appear during inspection and maintenance (such as hoistway illumination problems, ladder damage or missing, etc.), they must be reported to the owner of the elevator immediately.

Replacing Safety Devices

Should a safety device require replacing, only the spare parts of OEM that meet the corresponding statement can be used. The copied, upgraded, or re-used parts may cause operational danger to the elevator, reduce elevator service life, or result into a dangerous situation.

Replacing Other Devices
All devices and accessories have been specially designed for usage with this particular elevator. Special attention should be paid to the devices or parts supplied by the third party, especially those not go through certified production processes. Installation or use of these parts (or installation of used parts) may negatively impact the designed features (for example, service life, operational safety, and comfort), or result into dangerous situations.

Spare Part Guarantee
BRAUN guarantees that the OEM spare parts have a service life of twenty years.

Lubricants and Lubricating Oils
Only the lubricants and lubricating oils mentioned in the inspection and maintenance manual may be used. Other lubricants may impact safety and/or result into damage requiring very high expense to repair.

*Please see pages 5-6 for the list of lubricants.

Disposal

All used lubricants and lubricating oils must be recycled and disposed by the maintenance company in accordance with regulations. Engine lubricants and hydraulic oils can result into severe pollution to water sources!

Elevator Log
All major maintenance must be recorded in the elevator log.

Unauthorized Adjustments

Unauthorized adjustment or operation of the elevator may cause damage or accident.

Responsibilities
The manufacturer and installation company are responsible for the possible damages due to utilization of altered, used, or uncertified parts in the elevator.

***List of Lubricants**

Part	Type of Lubricant	Instructions
Gearless Hoist Motor	-	No lubrication required
Car and Counterweight Guide Rails	HLP68, 68A	
Hoist Media (STM)	----	No lubrication allowed!
Speed Governor Wire Rope	----	No lubrication allowed!
Door System (Car Doors and Landing Doors)	----	No lubrication required
Car and Counterweight Pulleys	----	No lubrication required

Regular Inspections and Tests Following Major Repairs or Alterations

Content

The regular inspection includes elevator safety inspections. The objective of regular inspections after major repairs or malfunctions is to confirm that the elevator remains safe to use.

Responsibilities

The owner of the elevator must send the results of all safety inspections to the State Bureau of Technical Supervision for approval.

Safety Measures

Before conducting regular or special inspection, the safety measures must be put in place to reduce any risk of personnel injury or property damage. Details are as follows:

- In order to protect the safety of personnel performing regular inspections, the rules explained in the chapter "*Maintenance – Prerequisites*" must be strictly obeyed.
- The signs must be placed in visible locations to indicate that the elevator is currently out of service.
- Should any type of safety issue appear during inspection and maintenance (such as hoistway illumination problems, ladder damage or missing, etc.), they must be reported to the owner of the elevator immediately.

Daily Log

The results of any regular inspection or test conducted after any important modification or malfunctions must be recorded in the elevator logs and attached with an inspection report.

General Elevator Maintenance Instructions

Prerequisites
All maintenance and inspection work must be conducted only by professional members of the maintenance company.

Therefore, the maintenance work described here may limit some work operations.

Content
The purpose of the maintenance instructions is to provide the elevator owners, users, and maintenance personnel with standard information regarding maintenance procedures. This requires specified control and inspection. After these parts have been adjusted, they must be cleaned, lubricated, further adjusted, and replaced if necessary.

Responsibilities
The maintenance company is responsible to follow the operation instruction of this manual as well as the specific instructions for each part when conducting maintenance. National standards, regulations, and laws must also be considered.

Safety Measures
The maintenance company is responsible to conduct all maintenance work safely and accurately. It is the maintenance company's responsibility to conduct maintenance exactly as instructed so as to guarantee the safety of the elevator. In addition to this, the maintenance instruction instructions take into consideration of all maintenance instructions in use. For information on lubricants, please see the list of lubricants.

Landing Doors

- Inspect the car doors.
- Inspect the landing doors.
- Inspect all locking mechanisms.
- Inspect all landing door functions and status.
- Inspect the safety functions of the doors opened.

Car Doors

All necessary cleaning and adjustments

- Inspect the door lock, door position, panel arrangement and movement.

Car Onboard Control Panel

Necessary cleaning and replacement

- Inspect the functions and status of all buttons and indicators.
- Inspect the lighting.
- Inspect the functions of alarm system and emergency light.

Car Internals

- Check the indicator panels, accessories, fasteners, etc.

Car Internals/Machine Room Security System

Necessary cleaning and replacement

- Inspect the emergency stop function.
- Inspect the connections on the top of the car and interlocking function.
- Inspect the controller function.

Hoistway Pit

- Inspect the car blocking equipment.
- Inspect the state and function of safety switch.
- Inspect the pit equipment (buffers, tensioners, etc.).

General Elevator Maintenance Instructions (Cont.)

Hoist Motor

Adjusting as per instructions: Dismantling/adjusting and cleaning

- Inspect the states and functions of mechanical brakes.
- Inspect the grooves and covers of traction axis.
- Inspect the states of all fixed elevators.
- Inspect the elevator speed controls.

Control Box and Power Switch Box

- Test RCD (Residual Current Device/Switch) functions at least once every six months.
- Inspect the states of all parts and connections.
- Inspect the emergency stop function.
- Confirm that the controller box is locked.
- Inspect the state of rescue indicator.
- Inspect the protections for all electrical and mechanical parts.

Hoistway

- Inspect the switch functions.
- Test the travel limit distance.
- Test the guide rail fixation.
- Inspect all safety circuits.
- Inspect the lighting.
- Inspect the travelling cables.

Car/Counterweight

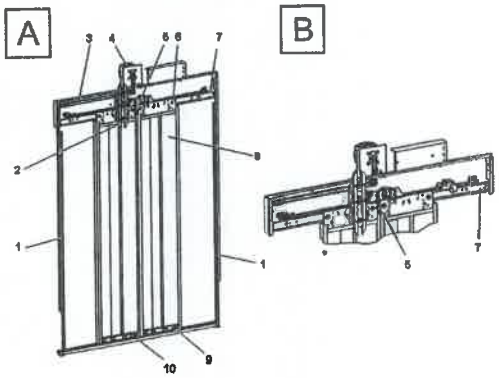
Necessary cleaning and lubrication

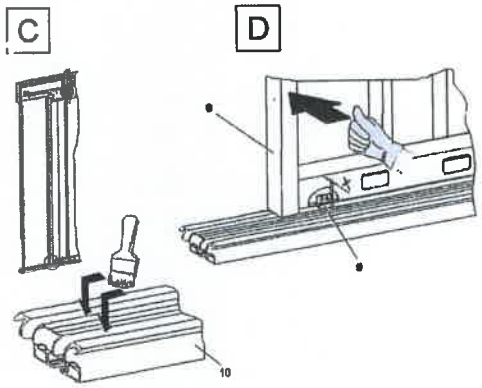
- Inspect the number of counterweight plates.
- Inspect the fastening bolts and nuts.
- Inspect the lubrication oil for guide rail and fill as needed.
- Inspect the guide shoes for wear.
- Inspect the status of CDD (if installed).
- Inspect the status of safety clamps.

Information System

- Inspect the hoistway information.

Detailed Maintenance Instructions for car doors

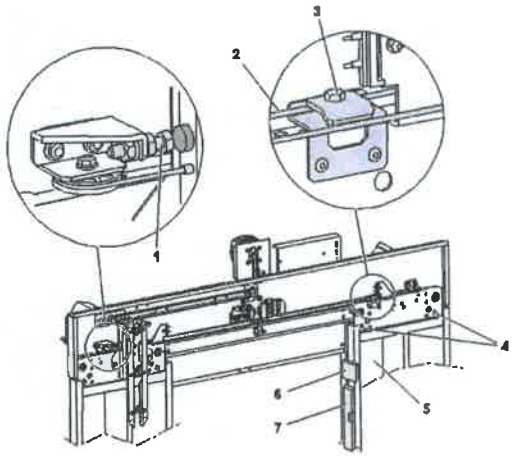




1	Light curtain	6	Door roller
2	Door clutch	7	Guide rail
3	Toothed drive belt	8	Door panel
4	Door drive	9	Door guide shoes
5	Central rubber stop	10	Car door sill

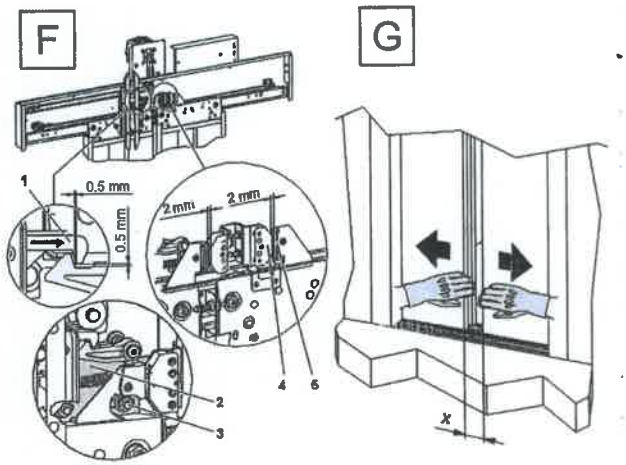
Pos.	Damage Checks and Cleaning
B	Clean the guide rail (7) with a dry cloth. Do not oil!
	Check the condition of the central rubber stop (5). If damaged, worn or cracked, replace.
	Clean the complete door system with a dry cloth.
	Check all parts for damage or corrosion.
C	Clean the car door sills (10) of debris. Make sure that the sill holes are not blocked by debris.
D	Check for wear on the door guide shoes (9) by pushing the door panel (8). If the distance **X** is > 1 mm, replace the door guide shoe (9).

E



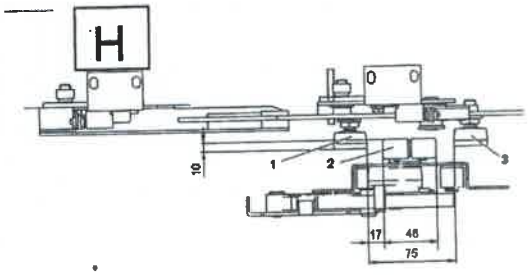
1	M6 set screw	5	Door panel
2	Synchronization cable	6	Straight edge
3	M6x16 bolt	7	Spirit level
4	M8x16 RIP bolt		

Pos.	Alignment Checks
E	With the door opened, check both door panels (5) for alignment with a straight edge (6).
	If the door panels (5) are not aligned, adjust them by M6 set screw (1) and by loosening M6x16 mm bolt (3) to slacken the synchronization cable (2).
	Use a spirit level (7) to check the vertical alignment of the door panels (5).
	If the door panels (5) are not aligned vertically, loosen the M8x16 RIP bolts (4) and adjust the door panels vertically to the door jamb.



1	Car door lock	4	KTC housing
2	Trigger support	5	KTC bridge
3	M8 nuts		

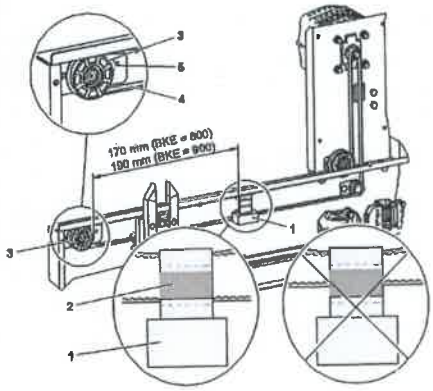
Pos.	Door Contacts and Door Locking Checks
F	Close the car doors fully by the VVVF-4 control. Clean the contacts and ensure that all electrical moving contacts are centrally aligned in the fixed contact block.
	Check if the KTC bridge (5) fits properly into the KTC housing (4). If not, loosen the two nuts and move the KTC housing (4) to the correct position (2 mm gap).
	Check that the horizontal and vertical gap on the car door lock (1) is approximately 0.5 mm. If necessary, adjust the gap by loosening the M8 nuts (3) and move the trigger support (2).
G	Push both panels in the opening direction at the bottom as far as possible. Measure the gap that has been created. The maximum allowed distance (x) is 45 mm for center doors.



1	Landing door unlocking roller	3	Landing door fixed roller
2	Car door clutch		

Pos.	Clutch Alignment Checks
H	Close the car doors completely. Check that the distance on the car door clutch (2) is 42 mm. If required, adjust the unlocking mechanism accordingly.
	Once the clutch measurement is correct, move the car to floor level from the car top. Ensure that the clutch is aligned with the landing door rollers (1, 3) with 10 mm of roller penetration on the clutch (see K 43401975 Maintenance Card).
	Check that the distance between the clutch and the unlocking roller is 17 mm. Check that the distance between both rollers (1, 3) is 75 mm. If necessary, adjust the lock assembly as described in the maintenance card of the landing door.

I



1	Belt tension tool	4	Belt
2	Correct setting area	5	Fastening screw
3	Pulley		

Pos.	Door Drive Belt Checks
I	Close the door and visually check the condition of the teeth on the belt. Replace the belt (4) if necessary.
	Place the belt tension tool (1) onto the belt (4). Measure the distance between the belt tension tool (1) and the pulley (3).
	Check the belt tension and adjust it if necessary by moving the pulley (3), using the fastening screw (5). The belt tension is correctly adjusted when the belt (4) is positioned in the correct setting area (2).

Safety Device Maintenance Instructions

As per Safety Device Maintenance Instructions

All work on safety device should only be conducted by professional staff of Maintenance Company in accordance with the maintenance instructions in the user manual supplied by the manufacturer (In accordance with GB7588-2003 16.3.2).

The instructions supply necessary information for the effective execution of safety device maintenance.

Read This First

Document Objective

This document supplies installation personnel, owners, and professionals with the following instructions:

- Installation (Assembly and Connections)
- Maintenance
- Safety Functions

Intentioned Usage

The safety devices described are only to be used for their designed purpose. Safety devices must be connected to an activation system.

Responsibilities

If safety devices are used for other than their designed purposes, they can no longer be used for that purpose. The maintenance company is not responsible for the damage due to use of these devices. The usage of all safety devices must satisfy all requirements, including those in this manual and maintenance instructions.

Professional Personnel

- Trained to execute all relevant operations listed within the user manual
- Possessing proper tools and capable of operating auxiliary equipment
- Understanding of the potential danger that may cause to themselves and others

Safety Device Installation Personnel

Typically responsible for the following:

- The correct installation of all of the elevator's associated safety devices
- Elevator components and/or subsystems
- Installing and/or replacing the elevator safety devices and operating them

Elevator Owner

A legal entity responsible for the operation, usage, and maintenance of an elevator

Danger

This symbol is used to bring attention to potential [illegible] or dangers. It must be obeyed at all times.

Warning

This symbol means that attention should be paid. If ignored, it may cause damage to property or persons. It must be obeyed at all times.

ATTENTION:

This symbol means important information. If not obeyed, it may cause danger or malfunction

Responsibilities

Only professional personnel are allowed to do the following work on the safety devices:

- Assemble
- Connect
- Adjust
- All cleaning and lubrication, inspections, maintenance, and post-activation planning.

Permitted Work

Only the operations specified in this document may be performed. Only professional personnel may conduct any kind of work on safety devices!

Regular Maintenance of Safety Devices

The objective of regular maintenance is to utilize a system of control nodes, adjustment, cleaning, and replacing of worn parts so as to maximally guarantee the safe operation of the elevator.

Hoist Motor Brake Maintenance Instructions

1-Maintenance

These brakes do not need to be maintained because:

- They do not need lubrication.
- They do not need to be adjusted.

2- Operation

Always use the rescue procedure to free trapped passengers (see 3.11).

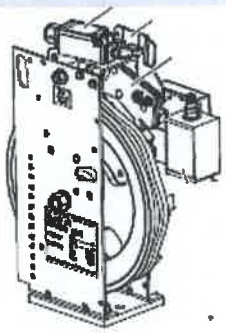
3- Repairs

Repairs are not allowed. If necessary, new OEM parts must be used for replacement.

4- Periodical check intervals (*task description, refer to maintenance documentation*)

Interval [months]	Description
12	Visual check
12	Air gap check
12	Dynamic full brake test
12	Dynamic single brake test
12	Check of the motor fans (in case of a motor temperature error only)

Governor Maintenance Instructions



Adjustment

Forbidden Action

STOP

Safety devices are adjusted by the OEM. Unless described in the guide manual, further adjustment is not allowed.

Pre-Handover Usage and Safety Inspection Testing

Testing

- Once installation and adjustment of safety devices have been completed in accordance with instructions, testing of the elevator should be carried out in accordance with GB7588-2003.

Safety Testing

Periodic testing is required according to federal laws and regulations; the testing and function tests outlined in the guide manual must be strictly obeyed.

Maintenance

Prevention

If needed, confirm the safety of all electrical and mechanical equipment before the elevator starts any kind of operation.

regulations and local conditions (such as actual usage, usage rates, local environmental factors, etc.)

- Normal visual inspections of elevator components and the governor:
  Time Period Once Annually
- Inspection of safety switches and their normal operation within safety circuits:
  Time Period Once Annually
- Visual inspection of governor cable:
  Time Period Once Annually
- Friction inspection
  Time Period Twice Annually

Cleaning and Lubrication

Cleaning

Subsystems should be cleaned at an appropriate time anywhere and anytime necessary for the safe operation of the elevator.

Lubrication

Only the lubricants and lubricating oils mentioned in the inspection and maintenance manual may be used. Other lubricants may cause malfunction of safety devices.

Usage of other kind of lubricants is strictly forbidden.

Instructions

Safety devices do not require any lubrication.

The governor cable does not require lubrication either.

Maintenance

Replacements

Old or worn safety devices must only be replaced by OEM parts.

Spare Parts

Use OEM Parts At All Times.

The manufacturer must pay close attention to whether all parts supplied by third-parties have been tested and approved. Installing used or worn devices may be dangerous.

Non-OEM parts may affect operational safety and service life, and may decrease comfort for those who use the elevator.

caused by the usage of non-OEM, altered, or used parts.

Usability of Parts

BRAUN guarantees that all OEM parts have a service life time of 20 years.

Elevator Logs

Each replacement of a safety device must be recorded in the elevator logs.

Materials Processing

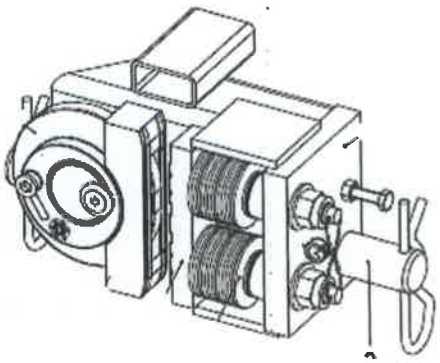
Lubricants, Lubricating Oils, and Other Materials

Lubricants, lubricating oils, and other dangerous materials which may cause damage to the environment must be processed in strict accordance with relevant regulations.

Parts, Components, and Subsystems

Repairing or replacing parts, components, or subsystems must be done in strict accordance with the contract signed between the elevator owner and the company conducting the work.

Safety Gear Maintenance Instructions



Connections

Confirmation

Confirm that the governor safety switch is correctly connected to the safety circuit.

Adjustment

Forbidden

Safety devices are adjusted by the OEM.
Only appropriate personnel may confirm or adjust these devices during the certification testing process.

Pre-Usage Testing and Security Inspections

Certification Testing

- "Downward" engagement of gearing
- "Upwards" braking
- Sealing
- Final Inspection

When required, confirm the safety of all electrical and mechanical components before any operation starts.

Cleaning

To maintain safe operation, all subsystems and components must be cleaned when needed.

Lubrication

Safety Clamps
This equipment does not need to be lubricated.
Only HLP68 (or 68A) lubricated guide rails may be used.

Maintenance Proposal

This manual illustrates the minimum requirements on safety devices. The maintenance recommendations are based on normal elevator operation. Maintenance schedule can be adjusted by each maintenance company based on individual situations (including actual usage conditions, usage rates, environmental factors, national laws, etc.)

Service Schedule

This manual does not include requirements of national standards or contractual specifications.

Maintenance/Testing/Inspection	Schedule (Weeks)
Normal Inspection	52
Cleaning	104
Function Inspection	104

Inspection

Normal Inspection

Procedures

1. Seals
2. Sturdiness
3. Smooth Operation
4. Safety Switches
5. Interfaces

Damaged Safety Clamps

Damaged or defective safety clamps must not be operated.

Cleaning

Procedures

1. Clean both safety clamps.
2. Confirm all moving components in smooth operation.

Only regulation components may be used for safety clamp replacement. Other types of maintenance are forbidden.

Replacements

Damaged or defective safety **devices must be replaced by original parts.**

Spare Parts

Use only OEM parts. The manufacturer must be sure that the components from the third party have been tested and certified. It is extremely dangerous to install used or altered components.

The use of **non-OEM parts** may negatively affect the operational safety and usage life due to possible differences in design.

Responsibilities

The equipment manufacturer and installation team are not responsible for any damage that occurs due to the installation of non-OEM, used, or altered components.

Usability of Parts

BRAUN guarantees that OEM parts will be available for the next twenty years.

Daily Logs

Each replacement of a safety device must be recorded in the elevator logs.

Post-Activation Setup

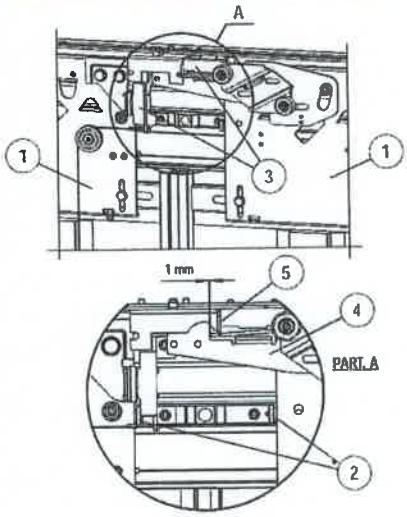
Safety clamps must be set to their closed positions.

Materials Processing

Lubricants, Oils, and Other Materials

Lubricants, lubricating oils, and other dangerous materials which may cause damage to the environment must be processed in strict accordance with relevant regulations.

Landing Door Lock Installation Manual



Confirm that the locking element engages at least 7mm before contacts are engaged.
(GB7588 §7.7.3.1.1)

STOP

Do not disconnect the door safety circuit under all circumstances: This may lead to an extremely

		door roller for signs of over-usage. • Inspect adjustment of door lock system: Locking hooks should engage at least 7mm, while lock and hook should be separated by 1 to 2mm; inspect wire loop adjustment and door roller position.
Replacements	12 years	• Replace the door lock contacts
	15 years	• Replace the rubber buffer padding if needed.

Cleaning

Use a soft cloth or brush to clean if necessary to ensure safe operation.

The safety contacts cannot be filed with a filing tool, as this will accelerate the creation of waste particles and decrease dependability. When it is no longer possible to clean the contact with a soft cotton cloth, it should be replaced with OEM parts.

Lubrication

Lubrication is not required.

Maintenance

The damaged or defective safety **devices must be replaced by OEM parts**

Responsibilities

The equipment manufacturer and installation team are not responsible for any damage that results from the installation of non-OEM, used, or altered components.

Setup for Halting Elevator Service

Basic Rules

When maintaining or inspecting the elevator (See chapters: "*Malfunction Maintenance-Regular Inspection and Repairs*" and "*Regular Inspections and Tests Following Major Malfunctions*"), the maintenance company may discover some elevator operation safety issues. Should any issue not be corrected in a timely manner (during maintenance operations), the elevator must be compensated.

Compensation Responsibilities

The maintenance company must halt the service of the elevator should any of the situations below occurs:

- Safety devices are not capable of full operation or cannot be activated at all (See "*Elevator Description*")
- If the safe operation of the elevator can no longer be guaranteed.

Daily Log

All major maintenance must be recorded in the elevator log.

Troubleshooting

Content

Troubleshooting includes identifying and clearing malfunctions and releasing trapped passengers. Malfunctions do not typically require that components be replaced.

Simple Malfunction Clearing Operations for Trained Personnel

Clearing "Simple Malfunctions" includes the following operations:

- Inspect elevator car landing floor door sill and conduct necessary cleaning.
- Inspect elevator car landing floor door light curtain and conduct necessary cleaning.
- Inspect, clean, and adjust all car and landing floor control components.
- Confirm that all landing doors are closed and locked. Should a landing floor door be unlocked, the doors must be closed; **the elevator must be taken out of service and the maintenance team must be contacted.**
- Emergencies: Releasing trapped passengers (please see the "Rescuing Trapped Passengers" chapter and the "Rescuing/Evacuating Passengers" notice inside the controller cabinet).

If a malfunction cannot be cleared by following these instructions, contact the maintenance company. If required, follow the safety measures below.

Safety and Prevention

Before clearing a malfunction, certify that there is no possible threat of property damage or danger.

Details:

- It must be clear that the elevator has been removed from service.

Lubrication

Please see the warnings in the chapter, "Maintenance – Regular Inspection and Repairs"

6 Technical Documents

Safety Component List	6 - 1
Elevator Certification	Appendix 1
Hoistway Layout Diagram	Appendix 2
Electrical Schematic Diagrams	Appendix 3
Safety Component Type Test Report	Appendix 4
Packing List	Appendix 5

7 Miscellaneous

Disposal of material 7 - 1

Modernization 7 - 5

Disposal of material

Legislation and regulations

The legislation and regulations concerning the disposal of elevators, components and agents have to be observed. The disposal instructions describe an ideal situation, which can not be fulfilled in every case because of the special national situations.

Responsibilities

The owner of the installation is also owner of the material (substances, parts, components, subsystems and agent) which is released by the maintenance, modernization and replacement of the installation and therefore the owner is responsible for an environmentally and legally compatible disposal.

Maintenance and Modernization

The disposal of replaced parts, components and subsystems should be settled between the owner and the maintenance or modernization company. In those cases where BRAUN performs maintenance and modernization, BRAUN looks for an appropriate solution for the disposal together with the operator of the installation.

Hazardous substances

Hazardous substances and material should be taken back and properly disposed by the maintenance company. If the owner of the installation takes responsibility for the disposal, he must carry it out in accordance with the legal requirements, and he must also follow the instructions of the maintenance company.

Dismantling of the installation

When an installation is completely replaced, the disposal of the old installation must be arranged between the owner of the installation and the installer. In those cases where the new installation is delivered by BRAUN, the company will arrange the disposal of the old installation by consulting the owner of the installation.

General disposal instructions

Hazardous waste

Hazardous waste e.g. oils, batteries, accumulators or luminescent tubes and other hazardous substances has to be removed before the dismantling of the installation and properly disposed.

Separation of material

An optimal separation of materials allows high-quality recycling into different raw materials. A practical allocation of tasks between dismantling companies (separation on the building site) and the recycling company (scrap dealers) is to be anticipated. A rough separation of the removed material into hazardous substances, and into valuable and other secondary raw material should be performed during the dismantling according the following categories:

- Hazardous waste
- Electrical and electronic equipment waste
- Aluminum scrap
- Non-magnetic steel scrap (Chrome-nickel and chrome steel)
- Magnetic steel and iron scrap (non-alloy, low-alloy, and galvanized steel, cast iron)
- Scrap containing copper (wires, electric motors, brass scrap)
- Lead scrap (counterweight fillings)
- Mineral waste
- Waste for incineration

Counterweights

Counterweights filled with lead, gussolith or concrete must be delivered separately to the scrap dealer. If not, there is high risk that they cannot be longer distinguished from other scrap metal (large quantities of lead damage the oven).

Metal scrap

Metal scrap should be released as far as possible from impurities (rubber, oils and greases, wood, glass, rubbish, cleaning rags), which cause an increase of slag, dust and energy consumption and finally an increase of costs and environmental impact during re-smelt.

Hollow bodies in metal scrap

Hollow bodies in metal scrap should be cut (resp. the scrap dealer should be advised) and should be discharged form liquid i.e water and oil, which can cause explosions during melting down and injure personnel and installations.

Specific Disposal Instructions

*Category: REU = reuse, RC = recyclable, NRC = non-recyclable, HZ = hazardous waste

Subsystem; Components; parts; Material; substances	*Category:*	*Disposal instructions*	*Type of disposal*	*Reasons (others than resource conservation) / Impacts*	*Picture*
Batteries and accumulators containing heavy metals, e.g. from: • emergency power device (NSG) • Printed circuit boards (Prints)	HZ	• Collect separately • Return to collecting station, manufacturer or specialized disposer • Do not dispose off with garbage. • Do not dispose on landfill.	Recycling by authorized specialist firm	Danger of health and environment because of heavy metal and caustic liquid e.g. cadmium, lead, mercury, acid and alkali if improperly disposed.	
Oils and greases	HZ	• Collect separately • Return to collecting station, manufacturer or specialized disposer • Not allowed to get into water and soil	Regeneration Incineration by industrial firing or HWIP[1]	Ecologically harmful 1 barrel oil (200 l) contaminates 30 m^3 soil. Elder hydraulic oils (before 1980) may contain toxic polychlorinated biphenyl's	
Luminescent tubes and energy saving lamps	HZ	• Collect separately • may not be damaged during collection and transport • Return to collecting station, manufacturer or specialist disposer • Do not dispose with garbage. • Do not dispose on landfill.	Recycling by authorized specialist firm	Danger of health and environment because of heavy metal e.g. cadmium, mercury, if lamps are broken or improperly disposed.	

Subsystem; Components; parts; Material; substances	*Category:*	*Disposal instructions*	*Type of disposal*	*Reasons (others than resource conservation) / impacts*	*Picture*
Copper and its alloys (bronze, brass, nickelsilver) e.g. in • Electro-motors (winding) • Wires and cables) • Travelling cable • Switch • Ring snail wheel (worm gear)	RC	• Collect and recycle separated scrap iron.	Recycling in separating melting plant, bronze and copper foundries	Copper is harmful to the mechanical properties of steel and thus absolutely not desired in scrap iron. Valuable secondary raw material	
Aluminum • Door sills • Various parts	RC	• Collect and recycle separated from scrap iron.	Recycling in aluminum foundries	Valuable secondary raw material	
Electrical and electronic scrap, like switches, transformers, relays, electromagnetic switches, capacitors to be found in: • Control • Frequency converter • Landing operating panels • Car operating panels	RC	• Collect separately • Return to collecting station, manufacturer or specialized disposer • Do not dispose with garbage. • Do not dispose on landfill.	Recycling and disposal by authorized specialist firm	Complex mixture of parts containing harmful material, e.g. plastics stabilized by heavy metals, halogenated flame retardants in boxes and printed circuit boards. Elder capacitors (before 1980) may contain toxic polychlorinated biphenyl's	
Printed circuit boards (prints, PCB's), to be found in: • Control • Frequency converter • Landing operating panels • Car operating panels	RC	• Collect separately • Return to collecting station, manufacturer or specialized disposer • Do not dispose with garbage. • Do not dispose on landfill.	Recycling and disposal by authorized specialist firm Recycling by LOC free of charge Send back to BRAUN Electronics Ltd.6600 Locarno Switzerland Please indicate on the box "Disposal Material"	Complex mixture of parts containing harmful material, e.g. plastics stabilized by heavy metals, halogenated flame retardants in boxes and printed circuit boards. Elder capacitors (before 1980) may contain toxic polychlorinated biphenyl's	  

Subsystem; Components; parts; Material; substances	*Category:*	*Disposal instructions*	*Type of disposal*	*Reasons (others than resource conservation) / Impacts*	*Picture*
High-alloy steel (stainless steel): • Interior trim and accessories of cars made of chrome steel • Car and hoistway doors	RC	• Collect and recycle separated from non-or low-alloy scrap iron.	Recycling in steel plant for high alloyed steels	If non-alloy steel scrap is used for the production of non-alloy steel, the non-alloy steel scrap should be free of chrome, nickel an molybdenum. Valuable secondary raw material	
Non-alloy and low-alloy steel, e.g.: • Guide rails • Ropes • Profile steel (e.g. machine frame) • Car and door panels • Permanent magnets (Caution magnetism!) • Panels, boxes, frames Cast iron, e.g.: • Speed governor • Hub snail wheel • Traction sheave • Deflection pulley • Brake drum	RC	• Collect and recycle separated from high alloy scrap iron.	Recycling in steel plant with filter	If non-alloy steel scrap is used for the production of non-alloy steel, the non-alloy steel scrap should be free of chrome, nickel an molybdenum. During incineration of old plastics, containing chlorine or painted coats, dioxins and furans are produced when gases cool down. Zinc from galvanized steel scrap gets together with discharge gas in the filter of the steel plant.	 
Guide rails Counterweight filling	REU	• If possible recuperate or reuse • Check the possibility for taking back by BRAUN.			
	RC	• Counterweight filling made of lead and concrete to be separated and collected sort by sort (never mix with scrap iron).	Recycling in lead melting plant and concrete recycling plant	Lead is harmful to scrap iron recycling and therefore definitely not desired in scrap iron. In the same way for concrete.	
	RC	• Counterweight filling made of Gussolith to be separated and collected sort by sort (do not mix it with steel-or cast iron scrap). • Inform the scrap dealer.	Recycling in steel plant	Heavy smoke gas emissions and toxic air emissions (e.g. PAH[3]) due to binding agent tar.	

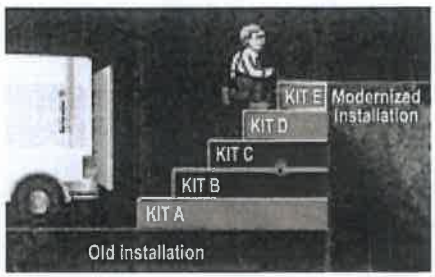
[1]HWIP: Hazardous waste incineration plant
[2]EFGT: Enhanced flue gas treatment
[3]PAH: Polycyclic aromatic hydrocarbons. Some of theses substances e.g. Benzopyren are cancerogenic.

Modernization

Modernization

Even if your lift is new today, the time will come when it needs to be modernized. By modernizing your lift, you protect your investment and preserve the value of your installation.

The intensity and type of use of the lift affect the expected life of the components and systems used in it.



Conformity with legal requirements

Changes to regulations can make it necessary to replace or modify specific components of the installation.

Step-by-step modernization

The modular concept of the lift installation makes step-by-step modernization possible. Step-by-step modernization will preserve the value of the installation or even increase it. At the same time, the installation will be continuously adapted to the most recent safety regulations and technology. Timely replacement of worn parts will avoid faults and the availability level is kept high and the installation retains its new appearance.

Cooperation with the installer

Modernization of any type always makes heavy demands on all concerned, and requires a high degree of cooperation. To keep lift downtime to a minimum, and to fulfill customers´expectations, it is strongly recommended that the modernization be prepared and carried out by the original manufacturing company or installer with whom the contract was first placed.

Updating the installation documentation

When a modernization has been carried out that changes the way the installation functions, the installation documentation must be brought up-to-date for example, if the control system is modified, the schematic wiring diagrams must be brought up-to-date.

Your partner for modernization

Based on many years of experience, BRAUN the original manufacturer of this installation, can guarantee speedy, professional modernization at an attractive price.
attractive price..

Annex-F

PARENT COMPANY GUARANTEE

<*Insert name of Parent Company*>
(*To be printed on Judicial Stamp Paper of Prescribed Fee)*

(GUARANTOR)

IN FAVOUR OF

TRANSPESHAWAR (THE URBAN MOBILITY COMPANY)

(TPC)

PARENT COMPANY GUARANTEE

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THIS PARENT COMPANY GUARANTEE (the "**Guarantee**") is made on <*Insert date*> 2025

BETWEEN:

(1) **TRANSPESHAWAR (THE URBAN MOBILITY COMPANY)**, a company incorporated in February 09, 2017 with Security Exchange Commission of Pakistan, with company registration no.010569 and whose registered address is at KPUMA Building, Chamkani, GT Road, Peshawar, KPK, Pakistan ("**TPC**"); and

(2) <***Insert name of the Parent Company***>, a company incorporated in [•], with company registration no. [•] and whose registered address is at [•] (the "**Guarantor**").

The TPC and the Guarantor are individually referred to herein as a "**Party**" and collectively as the "**Parties**".

WHEREAS:

A. <*Insert name of the BRT Company*> (the "**Service Provider**") has been awarded by TPC an agreement relating to operation and maintenance services of Elevators and Escalators in Peshawar BRT System (the "**Agreement**").

B. The Service Provider is a <*State relationship with the Guarantor (branch, subsidiary, affiliate or other relationship*)> of the Guarantor] / [The Service Provider is an Association of Persons and <*Insert name of member of Service Provider* > (the "**Member**") is a <*State relationship with the Guarantor (branch, subsidiary, affiliate or other relationship*)> of the Guarantor.]

C. Under the Agreement, the Service Provider is required to procure a parent company guarantee from its parent company to guarantee the Service Providers' performance of its duties and obligations arising under, out of or in connection with the Agreement.

D. The Guarantee is being delivered by the Service Provider to TPC in fulfilment of the Service Provider's obligation to deliver a parent company guarantee to TPC under the Agreement.

E. The Agreement is entered into by TPC in reliance upon the undertakings of the Guarantor to TPC contained in the Guarantee.

NOW THE GUARANTEE PROVIDES:

1. PRELIMINARY MATTERS

1.1 Definitions and Interpretation

1.1.1 The defined words and expressions set out in Clause 1 of Appendix 1 [*Definitions and Interpretation*] and the provisions relating to the construction and interpretation of the Guarantee set out in Clause 2 of Appendix 1 [*Definitions and Interpretation*] shall apply to the Guarantee.

2. GUARANTEES AND INDEMNITIES

2.1 Guaranteed Obligations

2.1.1 The Guarantor irrevocably and unconditionally guarantees the performance and discharge by the Service Provider of the Guaranteed Obligations at the times and in the manner provided or contemplated in the Agreement.

2.1.2 Except as otherwise expressly provided in the Guarantee, the Guarantee shall not impose on the Guarantor any duties, obligations or liabilities greater than those assumed by the Service Provider under the Agreement.

2.1.3 The Guarantee shall be binding upon the successors and assignees of the Guarantor and shall extend to and ensure for the benefit of the successors or assignees of TPC.

2.2 Indemnity by Guarantor

2.2.1 If the Guaranteed Obligations are, or become, unenforceable, invalid or illegal (in whole or

in part), the Guarantor indemnifies and holds harmless TPC, its personnel and agents, in full against and from any and all liabilities, claims, damages, loss, expenses and costs (including legal fees and expenses) which arise out of, under or in relation to any failure of the Service Provider to perform or discharge any or all of the Guaranteed Obligations.

2.2.2 The Guarantor, as separate and independent obligation from its duties, obligations and liabilities under Sub-clause 2.2.1, indemnifies and holds harmless TPC, its personnel and agents, in full against and from any and all liabilities, claims, damages, loss, expenses and costs (including legal fees and expenses) which arise out of, under or in relation to, any failure of the Service Provider to perform or discharge any or all of the Guaranteed Obligations.

2.3 **Additional Security**

2.3.1 The Guarantee shall be in addition to, and independent of, any other security which TPC may hold from time to time in respect of the discharge and performance by the Service Provider of its duties, obligations and liabilities (including the Guaranteed Obligations) arising out of, under or in relation to with the Agreement.

2.4 **Payment**

2.4.1 The Guarantor agrees to make any payment due hereunder upon first written demand without set-off, deduction or counterclaim and without any legal formality such as protest or notice being necessary and waives all privileges or rights which it may have as a guarantor, including any right to require TPC to claim payment or to exhaust remedies against the Service Provider or any other person.

2.4.2 Any payment made under the Guarantee shall be made free and clear of, and without deduction for or on account of, any present or future taxes, levies, imposts, duties, charges, fees, deductions or withholdings of any nature whatsoever and by whomsoever imposed.

3. RIGHTS AND OBLIGATIONS

3.1 **Waiver of Defences**

3.1.1 The duties, obligations and liabilities of the Guarantor under the Guarantee shall not be reduced, discharged or otherwise adversely affected by:

(a) any act, omission, matter or thing which would have discharged or affected the liability of the Guarantor had it been a principal debtor and obligor instead of a Guarantor or indemnifier; or

(b) anything done or omitted to be done by any person which, but for this provision, might operate to exonerate or discharge the Guarantor or otherwise reduce or extinguish its liability under the Guarantee.

3.2 **Rights and Obligations of the Guarantor**

3.2.1 The Guarantor agrees that TPC shall not be obliged and the Guarantor waives any right it may have to require TPC (or any agent on its behalf)) to:

(a) take court, arbitral or other dispute resolution proceedings or to enforce any judgment or award against the Service Provider; or

(b) pursue any other right or claim (including the enforcement of any other security held by TPC) against any person,

before claiming from the Guarantor under the Guarantee.

3.2.2 Subject to the limits of liability set out in the Agreement, if any, the Guarantor indemnifies and holds harmless TPC, its personnel and agents, in full against and from any and all liabilities, claims, damages, loss, expenses and costs (including legal fees and expenses) which TPC incurs in connection with:

(a) the preservation, exercise and/or enforcement of any rights arising out of, under

or in relation to the Guarantee or any attempt so to do; and

(b) any discharge or release of the Guarantee.

3.2.3 Until all amounts which are or may become due from the Service Provider under the Agreement have been irrevocably paid in full, or unless TPC directs otherwise in writing, the Guarantor shall not exercise any security or other rights which it may have against the Service Provider by reason of performance by it of its obligations under the Guarantee, whether such rights arise by way of set-off, counterclaim, subrogation, indemnity or otherwise.

3.3 **No Reduction of Obligation**

3.3.1 The duties, obligations and liabilities of the Guarantor under the Guarantee shall not be reduced or discharged by any:

(a) alteration in the relationship between the Guarantor and the Service Provider; or

(b) arrangements between the Service Provider and TPC; or

(c) amendments to the provisions of the Agreement; or

(d) alteration, with or without the knowledge or consent of the Guarantor:

(i) in the extent or nature of the services to be performed under the Agreement; and/or

(ii) to the time for performance of the Service Provider's duties and obligations; and/or

(iii) to any other duties, obligations or liabilities of the Service Provider arising under, out of or in connection with the Agreement; or

(e) forbearance or indulgence by TPC towards the Service Provider or the Guarantor, whether as to payment, time, performance or otherwise; or

(f) other act or omission which, but for this provision, might exonerate or discharge the Guarantor from liability under the Guarantee; or

(g) invalidity or unenforceability of the Agreement or the insolvency, bankruptcy, winding up or reorganisation of the Service Provider or any other person.

3.3.2 The Guarantor agrees that the Service Provider and TPC may do or agree to any of the matters referred to in Sub-clause 3.3.1(b), Sub-clause 3.3.1(c), Sub-clause 3.3.1(d) or Sub-clause 3.3.1(e), all of which shall be likewise guaranteed by the Guarantor in accordance with the provisions of the Guarantee.

4. COMMENCEMENT AND EXPIRY

4.1 **Commencement and Operation of the Guarantee**

4.1.1 The Guarantee shall come into effect when the Agreement comes into effect.

4.1.2 Without prejudice to Sub-clause 4.1.1, the Guarantee shall come into effect in favour of TPC as soon as it has been executed by the Guarantor, notwithstanding that TPC may not have executed the Guarantee and in such case the Guarantee shall take effect as a unilateral declaration by the Guarantor in favour of TPC and shall be deemed accepted by TPC.

4.2 **Expiry**

4.2.1 The Guarantee shall continue in full force and effect until all duties, obligations and liabilities of the Service Provider arising under, out of or in connection with the Agreement have been fully performed and discharged in accordance with the provisions thereof, at which time the Guarantee shall expire and be returned to the Guarantor.

5. NOTICES, DEMANDS OR OTHER COMMUNICATIONS

5.1 **Form of Notice**

5.1.1 Any notice, demand or other communication under or pursuant to the Guarantee shall be:

(a) in English; and

(b) in writing; and

(c) state the Clause or Sub-clause under or pursuant to which the notice, demand or other communication is given, issued or made.

5.1.2 Subject to Sub-clause 5.2.4, and except as otherwise expressly provided in the Guarantee, all notices, demands or other communications shall be delivered or transmitted by hand, registered courier or electronic transmission (being either facsimile or email) to the Contact Details of the addressee.

5.2 **Delivery and Receipt**

5.2.1 Where a notice, demand or other communication is delivered by electronic transmission, the sender shall, within seven (7) Days after the electronic transmission is delivered, deliver a copy of the electronic transmission by hand or registered courier to the Contact Details of the addressee.

5.2.2 Subject to Sub-clause 5.2.3, a notice, demand or other communication shall be deemed to be duly given to the addressee:

(a) in the case of facsimile transmission, on the date and at the time shown on the transmission report by the machine from which the facsimile was sent, subject to the machine producing a report that the facsimile was sent in its entirety to the Contact Details of the addressee; and

(b) in the case of email:

(i) at the time of receipt by the sender of an email acknowledgement from the intended addressee's information system showing that the email has been delivered to the email address of that addressee; or

(ii) if no email acknowledgement is received, then at the time the email enters an information system which is under the control of the intended addressee (and the addressee shall make available at the request of the sender, evidence of such time); and

(c) in the case of delivery by hand or registered courier, at the time of and on the date of delivery.

5.2.3 In the event that a notice, demand or other communication is received after 3:00 pm at the physical address of the addressee stated in its Contact Details, it shall be taken to have been received by the addressee at 8:00 am on the next Day.

5.2.4 The Parties may each change their respective Contact Details for the purposes of Sub-clause 5.1 [*Form of Notice*] by giving notice to each other in accordance with the procedures for the giving, issuing or making of communications set forth in Sub-clause 5.1 [*Form of Notice*] not less than fourteen (14) Days before such change is to take effect. Any notice of such new Contact Details shall only be effective for the purposes of Sub-clause 5.1 [*Form of Notice*] after it is deemed received pursuant to Sub-clause 5.2.2 and Sub-clause 5.2.3.

6. DISPUTE RESOLUTION

6.1 **Disputes under the Agreement**

6.1.1 The settlement or resolution of any dispute arising under, out of or in connection with the Agreement shall be final and binding on the Parties and the Parties shall not reopen, revisit or otherwise dispute that settlement or resolution and the subject matter of that settlement or resolution.

6.2 **Dispute Resolution**

6.2.1 A Party may refer any dispute arising out of, under or in connection with the Guarantee to the Pakistani court of competent jurisdiction.

6.2.2 Without prejudice to Sub-clause 6.2.1, nothing in the Guarantee shall prevent the Parties from referring a dispute to arbitration by mutual written agreement.

7. GENERAL PROVISIONS

7.1 **Governing Law and Language**

7.1.1 The Guarantee shall be governed by, interpreted and construed in accordance with the Laws of the Islamic Republic of Pakistan.

7.1.2 Unless expressly notified in advance by TPC, the primary language of the Guarantee shall be English. All communications issued between the Parties shall be in English. Unless expressly notified in advance by TPC, all meetings shall be conducted in English, and minutes of meetings shall be issued in English.

7.2 **Entire Agreement**

7.2.1 The Guarantee constitutes the entire agreement between the Parties in relation to all matters contained herein, including all understandings, rights, responsibilities, duties and obligations and supersedes all prior arrangements, representations, communications, negotiations, agreements and contracts (whether written or oral) made between or entered into by the Parties with respect thereto prior to the date hereof.

7.3 **Severability**

7.3.1 In the event that any provision of the Guarantee is held by any judicial or other competent authority to be illegal, invalid or unenforceable that provision shall be severed to the extent necessary to make the Guarantee enforceable, and it shall not affect or impair the validity, legality or enforceability of any of the other provisions of the Guarantee.

7.4 **Amendment**

7.4.1 No modification, amendment, addendum or variation to the provisions of the Guarantee shall be effective or binding, unless it:

(a) is made in writing; and

(b) expressly sets out the modification, amendment, addendum or variation to the provisions of the Guarantee; and

(c) refers to the Guarantee; and

(d) is signed and dated by a representative of each Party.

7.5 **Waiver**

7.5.1 Subject to Sub-clause 7.5.2, no relaxation, forbearance or delay by a Party in enforcing the Guarantee will prejudice, affect or restrict the rights, responsibilities, obligations, powers or remedies of that Party nor shall any waiver by either Party of any such rights, responsibilities, obligations, powers or remedies, or of any breach of the Guarantee, be deemed to be a waiver of any other right, responsibility, obligation, power or remedy, or of any later or continuing breach of, the Guarantee.

7.5.2 Any waiver of a Party's rights, responsibilities, obligations, power or remedies arising out of, under or in connection with the Guarantee shall be in writing, dated and signed by the Representative of the Party granting such waiver, and shall specify the right, responsibility, obligation, power or remedy and the extent to which it is being waived. No waiver of a breach of a term of the Guarantee operates as a waiver of any other breach of that term, or of a breach of any other term, of the Guarantee.

7.6 **Assignment**

7.6.1 The Guarantor shall not assign or transfer any of its rights or obligations under the Guarantee or any part of it.

7.6.2 Subject to giving the Guarantor seven (7) Days' prior written notice, TPC may assign or transfer the Guarantee or any part of it or any benefit or interest in or under the Guarantee.

7.7 **General Representations and Warranties**

7.7.1 The Guarantor represents and warrants to TPC that:

(a) it has full power and authority to enter into and perform its obligations under the Guarantee;

(b) it has taken all necessary action to authorise the signing, delivery and performance of the Guarantee in accordance with its provisions; and

(c) the Guarantee constitutes the Guarantor's legal, valid and binding obligations and is enforceable in accordance with its provisions.

7.8 **Limit on Reliance**

7.8.1 No Party has entered into the Guarantee relying on any representation, warranty, promise or statement made by another Party, or any other person acting on behalf of a Party, other than the representations, warranties, promises and statements set out in the Guarantee.

7.9 **Counterparts**

The Guarantee may be executed in any number of counterparts, each of which, when executed, shall constitute a duplicate original, but all the counterparts shall together constitute one Guarantee.

SIGNED for and on behalf
of TPC

_____ Witness: _____

<*Insert name and position of signatory*> <*Insert name and position of witness*>

SIGNED for and on behalf
of the Guarantor

_____ Witness: _____

<*Insert name and position of signatory*> <*Insert name and position of witness*>

APPENDIX 1

DEFINITIONS AND INTERPRETATION

1. Definitions

1.1 In this Guarantee the following words and expressions shall have the meanings set out below:

1.1.1 "**Agreement**" has the meaning given to it in recital A.

1.1.2 "**Association of Persons**" means an unincorporated joint venture, partnership, consortium or other association of two (2) or more persons.

1.1.3 "**Clause**" or "**Sub-clause**" means a clause or sub-clause of this Guarantee.

1.1.4 "**Contact Details**" means the contact details of a Party stated in Appendix 2 [*Agreement Particulars*] or such other contact details as may be notified pursuant to Sub-clause 5.2.4.

1.1.5 "**Guarantee**" means this parent company guarantee, including the recitals and Appendix 1 [*Definitions and Interpretation*] and Appendix 2 [*Agreement Particulars*].

1.1.6 "**Guaranteed Obligations**" means the duties and obligations of the Service Provider arising under, out of or in connection with the Agreement, including the discharge of any indebtedness, monies and/or liabilities due, owing or incurred by the Service Provider to TPC arising under, out of or in connection with the Agreement.

1.1.7 "**Law**" means all national or public legislation, decrees, ordinances, rules and regulations relevant to this Guarantee as issued and in force within the Islamic Republic of Pakistan.

1.1.8 "**Member**" has the meaning given to it in recital B.[1]

1.1.9 "**Service Provider**" has the meaning given to it in recital A.

2. Interpretation

2.1 In this Guarantee:

2.1.1 Clause and Sub-clause headings are for convenience only and shall not be taken into consideration in the interpretation of this Guarantee.

2.1.2 The following rules shall apply to the interpretation of this Guarantee:

(a) the singular shall include the plural and vice versa;

(b) a reference to a gender shall include the other genders;

(c) a reference to a law shall include that law as amended, consolidated, re enacted or replaced from time to time;

(d) a reference to "**Days**" means calendar days;

(e) the word "**person**" shall include a natural person and any body or entity whether incorporated or not;

(f) the words "**written**" or "**in writing**" shall include any communication sent by letter, facsimile transmission or email;

(g) wherever "**include**" or any form of that word is used, it shall be construed as if it were followed by "**without being limited to**"; and

(h) a reference to an "**agent**" shall mean any person with a contractual relationship with a Party and carrying out activities or obligations on behalf of that Party;

(i) a reference to "**time**" shall be a reference to time in Peshawar, Islamic Republic of Pakistan.

[1] Delete if the Service Provider is a single entity.

APPENDIX 2

CONTRACT PARTICULARS

Contact Details
For the TPC: CEO TransPeshawar (The Urban Mobility Company), First Floor KPUMA Building Near Main BRT Depot, Chamkani, GT Road, Peshawar, KPK, Pakistan Tel: *0092-91-2621393-5* Email: ceo@*transpeshawar.pk* For the Attention of Chief Executive Officer, TransPeshawar (The Urban Mobility Company)
For the Guarantor: <*Insert Guarantor's Name*> <*Address line1*> <*Address line2*> <*Address line3*> Tel: <*Insert Guarantor's telephone number*> Fax:<*Insert Guarantor's fax number*> Email:<*Insert Guarantor's email address*> For the Attention of <_____>

PARTICULAR CONDITION OF THE CONTRACT

Definitions	"**Equipment**" means as defined in Schedule of Requirements;
2.2.2	The Term of initial Agreement is five (05) years. Further extension for three years or any other term subject to mutual agreement.
3.1	Rs. 30,000,000.00 (Thirty Million Pakistan Rupees) issued by the Scheduled Bank of Pakistan having minimum Credit Rating of AA in long run.
3.2	Rs. 30,000,000.00 (Thirty Million Pakistan Rupees) issued by the Scheduled Bank of Pakistan having minimum Credit Rating of AA in long run.
3.3	Format as attached in Bidding documents
4	Parent Company Guarantee attached as **Annex-F** to the Agreement
5.1	Payment Calculation Schedule attached as **Appendix-I** to Particular Condition of the Contract
6.1	The Sales Tax on Services shall be paid by TPC and added to invoice in monthly service payments/ performance payments.
7.2	The handover of Equipment is within 7 days from the Date of Commencement.
8.1	Same as Clause 7.2
21.1	The Reserve Fund shall be deducted.
21.2	The maximum amount of Reserve Fund is PKR. 15 million (Fifteen Million Rupees).
21.6	TPC, if decided to execute the Works/ Services at the cost and risk of Service Provider, shall get three quotation/ bid through email from potential bidders with seven (07) days response time and award to the lowest bidder.
29.2.17	Five months in one year. The year for the purpose of this clause shall be counted from date of commencement and end at subsequent anniversary.

Appendix-I to Particular Condition of the Contract
PAYMENT CALCULATION SCHEDULE

1. Monthly Payment

1.1 For each Month (m), the Service Provider shall be entitled to a payment (**Monthly Payment**) calculated in accordance with the following formula:

$$\textbf{Monthly Payment}_{\textbf{m}}\ (\textbf{MP}\boldsymbol{m})$$

$$= \textbf{Monthly Service Payment} \times (\mathbf{1} - \textbf{PP}\%) - \textbf{RF}$$

where:

Monthly Service Payment means Monthly Service Payments in Pakistani Rupees (PKR [•]) offered in Financial Offer and updated as result of adjustments in accordance with Article 1.3 of Payment Calculation Schedule.

PP% means the Performance Payout Percentage, which shall be ten percent (10%).

RF means any amount to be retained in relation to the provisioning of the Reserve Fund.

1.2 The Service Provider shall raise an invoice to TPC for an amount equivalent to the Monthly Payment for Month (m) (plus any applicable Sales Tax on Services) after completion of the month. The Monthly Payment for Month (m) shall be made by the TPC within ten (10) days after receipt of invoice by TPC.

1.3 Adjustment to Monthly Service Payment

The relative weighting within the cost structure of the Monthly Service Payment is described in the table and shall be used to calculate the variation of cost for Monthly Service Payment. Calculation of adjustments is subjected to variation in base values, which for various categories shall be taken as follows: -

- For adjustments in Operation and Maintenance costs, base price shall be taken as of July, 2026. Monthly Payment will change with increase or decrease in base price.
- For adjustments in Salaries, base price considered shall be the minimum wage of PKR.40,000/month.

The adjustments in the Monthly Service Payment will be subject to subsequent variations in the base values and procedures laid down in the coming sections.

a) The parameters established for calculating the cost basket are estimates and therefore, failure to actually meet the same will not entitle any party to request adjustments in the calculation procedure of Monthly Service Payment nor in the economic compensation of any kind.

b) The Adjusted Monthly Service Payment for monthly payment shall govern irrespective of whether it is higher or lower than the original Financial Offer.

Categories	Factor in Monthly Charge
Operation and Maintenance Costs = OM	55
Salaries = S	45

Percent increase or decrease applicable to all categories = PI

Where,

PI = [(New Value – Previous Value) / Previous Value] x 100

ΔOM	ΔOM = (PI $_{CPI}$ x OM x Original Monthly Service Payment) / 10,000 The Operation and Maintenance Cost will be adjusted Annually (year-on-year) on the basis of General Consumer Price Index (CPI) variation mentioned in Price Statistics published by Pakistan Bureau of Statistics, Government of Pakistan.
ΔCS	The Salaries will be adjusted from the date as and when change is notified by Government of Khyber Pakhtunkhwa in Minimum Wage. ΔCS = (PI$_S$ x S x Original Monthly Service Payment) / 10,000

Adjusted Monthly Service Payment = Previously Adjusted Monthly Service Payment + C_{TN}

Where,

C_{TN} =ΔOM +ΔCS

ΔOM = Increase / Decrease in Operation and Maintenance Cost in Monthly Service Payment

ΔCS = Increase / Decrease in Salaries cost in Monthly Service Payments

2. Monthly Performance Payment

2.1 For each Month (m), the Service Provider shall be entitled to a payment (**Monthly Performance Payment**) calculated in accordance with the following formula:

$$\mathbf{Monthly\ Performance\ Payment_m} = (\mathbf{1} - \mathbf{PD\%_m}) \times \mathbf{MP_m} \times \frac{\mathbf{PP\%}}{(\mathbf{1} - \mathbf{PP\%})} - \mathbf{RF}$$

where:

MP_m means the Monthly Payment which the Service Provider is entitled to for Month (m) excluding Reserve Fund.

$PD\%_m$ means the Performance Deduction Percentage applicable to the Service Provider for Month (m).

PP% means the Performance Payout Percentage, which shall be ten percent (10%).

RF means any amount to be retained in relation to the provisioning of the Reserve Fund.

2.2 Within fifteen (15) days from start of the month, TPC shall notify the amount of the Monthly Performance Payment. The Service Provider shall raise an invoice to TPC for an amount equivalent to the Monthly Performance Payment for Month (m) (plus any applicable Sales Tax on Services). The Monthly Performance Payment for Month (m) shall be made by the TPC within ten (10) Business Days of TPC receiving such invoice.

Section 8 - Contract Forms

This section contains forms which, once completed, will form part of the Contract. The forms for Performance Security, when required, shall only be completed by the successful Service Provider after contract award.

Table of Forms

Notification of Award..... **8-**Error! Bookmark not defined.

Performance Security **8-3**

Notification of Award

[*on letterhead paper of the Procuring Entity*]

[*date*]

To: [*Name and address of the Service Provider*]

Subject: [*Notification of Award for the name of the Contract.*]

This is to notify you that your proposal dated ---------- for [*name of the contract and identification number, as given in the Data Sheet*] for a contract price of [*amount in words and figures and name of currency*] is hereby accepted by TransPeshawar (The Urban Mobility Company) as per breakup provided in the proposal on terms and conditions mentioned in the Agreement.

2. Under Clause ITB 34.3 of RFP and 27.1.3 (h) of the Agreement, you are required to establish a special purpose company in connection with the Project and ensure that it has not carried out any activity since the date of its incorporation as a company, other than in connection with or for the purposes of the Project.

3. Further, as per Clause 36 of the RFP and Clause 3 of the Agreement, the Service Provider/ Special Purpose Company shall maintain with TransPeshawar a valid and enforceable Performance Security to the amount of PKR…… (in words) in shape of Bank Guarantee issued by a Schedule Bank of Pakistan having minimum Credit Rating of AA in long run on a prescribed format **(attached as Annex-A)** or submit a Demand Draft or Call Deposit Receipt in favor of Chief Executive Officer TransPeshawar as per terms and conditions of the Service Agreement.

4. In accordance with Clause 34.5 of RFP and Clause 4 of the Agreement, you are also required to submit Parent Company Guarantees as per the format provided in the RFP.

5. You are therefore, required to deliver to TransPeshawar, within twenty-eight (28) working days of issuance of this Notification of Award, the duly executed Performance Security to the amount of PKR ------- , duly signed Parent Company Guarantee in favor of newly established special purpose company.

Authorized Signature: .....

Name and Title of Signatory: .....

Name of Procuring Entity: .....

Performance Security

1 Performance Security

[TO BE ISSUED ON JUDICIAL PAPER OF PRESCRIBED FEE BY SCHEDULE BANK OF THE ISLAMIC REPUBLIC OF PAKISTAN]

This **Performance Guarantee No.** <*Insert No.*> is made on <*Insert date*> (the "**Guarantee**")

Ref: RFP for Operation and Maintenance Services of Generators and Allied Services in Peshawar BRT System advertised on dated <*Insert date*> and Notification of Award No. ……..dated <*Insert date*>

Beneficiary: TRANSPESHAWAR (THE URBAN MOBILITY COMPANY), a Public Limited Company incorporated with Security Exchange Commission of Pakistan in February 09, 2017, with company registration No.0105691 and whose registered address is at TransPeshawar Building, Chamkani, GT Road, Peshawar, KPK. ("the **TPC**")

1. GUARANTEE

1.1 We <*Insert name of Bank*> Bank (the "Guarantor") have been informed that <*Insert name of the Successful Bidder*> has been declared Successful Bidder relating to reference tender of Operation and Maintenance Services of Elevators and Escalators in Peshawar BRT System (the "Services").

1.2 The <*Insert name of the Successful Bidder*> has established a special purpose vehicle <*Insert new BRT company name.*> hereinafter called (the "Service Provider") relating to the Operation and Maintenance Services of Elevators and Escalators in Peshawar BRT System. The <*Insert new BRT company name.*> is obligated to sign agreement (the "Agreement") with TPC relating to the operation and maintenance services.

1.3 The Guarantor hereby irrevocably and unconditionally undertakes to pay to the TPC on its first demand for payment, without regard to any objections or defences to TPC's demand from the Service Provider or any other person, an amount or amounts not exceeding in total PKR ----- (in words).

2 TIME FOR PAYMENT

2.1 Any amount demanded by the TPC shall be paid by Guarantor to the TPC within seven (07) days of receipt of the TPC's demand for payment stating that the Service Provider is in breach of its obligations arising under, out of or in connection with the Agreement and the Guarantor shall have neither the right nor the duty or obligation to challenge the accuracy or sufficiency of such statement or the amount specified in the demand.

3 VALIDITY OF GUARANTEE

3.1 This Guarantee shall come into force on the date hereof and shall remain valid until <*insert date*> whereupon this Guarantee shall expire and be returned to the Guarantor.

4 PAYMENT FREE OF DEDUCTIONS AND WITHHOLDINGS

4.1 Any payment under this Guarantee shall be made free and clear of, and without deduction for or on account of, any present or future taxes, levies, imposts, duties, charges, fees, deductions or withholdings of any nature whatsoever and by whomsoever imposed.

5 Notices and Demands for Payment

5.1 Any demand for payment made under this Guarantee shall be delivered by hand or registered courier and be deemed to be duly made at the time of, and on the date of, delivery.

5.2 Any notice given under this Guarantee shall be deemed to be duly given:

A. in the case of facsimile transmission, on the date and at the time shown on the transmission report by the machine from which the facsimile was sent, subject to the machine producing a report that the facsimile was sent in its entirety to the contact details of the addressee stated in Schedule 1 (the "**Contact Details**"); and

B. in the case of email:

(A) at the time of receipt by the sender of an email acknowledgement from the intended addressee's information system showing that the email has been delivered to the email address of that addressee; or

(B) if no email acknowledgement is received, then at the time the email enters an information system which is under the control of the intended addressee (and the addressee shall make available at the request of the sender, evidence of such time); and

C. in the case of delivery by hand or registered courier, at the time of and on the date of delivery.

5.3 Any notice or demand given or made by TPC or the Guarantor relating to this Guarantee shall be in English.

6 DISPUTE RESOLUTION

6.1 This Guarantee shall be governed by, interpreted and construed in accordance with the laws of the Islamic Republic of Pakistan. Each Party consents to the jurisdiction of the courts in the Islamic Republic of Pakistan.

EXECUTED for and on behalf of
[*GUARANTOR***]**

……

(signed)

……

Name

SCHEDULE TO THE PERFORMANCE GUARANTEE

For the TPC: CEO TransPeshawar (The Urban Mobility Company), First Floor KPUMA Building Near Main BRT Depot, Chamkani, GT Road, Peshawar, KPK, Pakistan Tel: *0092-91-2621393-5* Email: ceo*@transpeshawar.pk* For the Attention of Chief Executive Officer, TransPeshawar (The Urban Mobility Company)
For the Guarantor: <*Insert Guarantor's Name*> <*Address line1*> <*Address line2*> <*Address line3*> Tel: <*Insert Guarantor's telephone number*> Fax:<*Insert Guarantor's fax number*> Email:<*Insert Guarantor's email address*> For the Attention of <_____>