

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
অর্থ বিভাগ, অর্থ মন্ত্রণালয়
ব্যয় ব্যবস্থাপনা শাখা-৫
www.mof.gov.bd

স্মারক নং-০৭.০০.০০০০.১৫৫.১৪.০০১.২০ (অংশ-১) - ২১১

তারিখঃ ২৭ মার্চ ২০২৪ খ্রিস্টাব্দ
১৩ চৈত্র ১৪৩০ বঙ্গাব্দ

বিষয়ঃ গণপূর্ত অধিদপ্তর দর তফসিল-২০২২ (ইলেক্ট্রো-মেকানিক্যাল) এর আমদানি নির্ভর আইটেম Lift & Escalator এর দর পুনঃনির্ধারণ সংক্রান্ত।

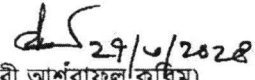
সূত্রঃ গৃহায়ন ও গণপূর্ত মন্ত্রণালয় এর পত্র নং- ২৫.০০.০০০০.০৩১.১৪.০০৩.২০২২-৪০৫, তারিখঃ ২৮/১১/২০২৩

উপর্যুক্ত বিষয় ও সূত্রোক্ত পত্রের পরিপ্রেক্ষিতে বিভিন্ন মন্ত্রণালয়/বিভাগের অধীন দপ্তরসমূহের পূর্ত কাজের দর তফসিল (Schedule of Rates) প্রণয়ন সংক্রান্ত আন্তঃমন্ত্রণালয় কারিগরি কমিটি কর্তৃক সুপারিশকৃত গণপূর্ত অধিদপ্তরের দর তফসিল-২০২২ এর ইলেক্ট্রো-মেকানিক্যাল (E/M) আইটেমসমূহের মধ্যে শুধুমাত্র আমদানি নির্ভর Lift & Escalator এর দর ৪৮% (আটচল্লিশ শতাংশ) বৃদ্ধিতে নিম্নবর্ণিত শর্তে অর্থ বিভাগের সম্মতি নির্দেশক্রমে জ্ঞাপন করা হলোঃ

শর্তাবলীঃ

- গণপূর্ত অধিদপ্তরের দর তফসিলের ইলেক্ট্রো-মেকানিক্যাল (E/M) আইটেমসমূহের মধ্যে শুধুমাত্র আমদানি নির্ভর Lift & Escalator এর ক্ষেত্রে এ দরবৃদ্ধি প্রযোজ্য হবে;
- পুনঃনির্ধারিত এ দর সকল দপ্তরের দর তফসিলের ক্ষেত্রে প্রযোজ্য হবে;
- পুনঃনির্ধারিত এ দরের ভিত্তিতে সকল দপ্তরের ইতঃপূর্বে অনুমোদিত কার্য বাস্তবায়ন আইটেমসমূহের দর (Work Execution Item rate) সংশোধনপূর্বক অনতিবিলম্বে সংশ্লিষ্ট সকল দপ্তরের ওয়েব সাইটে আপলোড করতে হবে;
- ইতঃপূর্বে বিভিন্ন দপ্তরের জন্য অনুমোদিত দর তফসিলে উল্লিখিত সকল শর্ত অপরিবর্তিত থাকবে।
- এ পুনঃনির্ধারিত দরের ক্ষেত্রে সময়ে সময়ে জাতীয় রাজস্ব বোর্ড কর্তৃক নির্ধারিত মূল্য সংযোজন কর (ভ্যাট), আয়কর, শুল্ক ও অন্যান্য ডিউটি প্রযোজ্য হবে;

২। পরবর্তী নির্দেশ না দেয়া পর্যন্ত এ পুনঃনির্ধারিত দর বহাল থাকবে এবং তা অবিলম্বে কার্যকর হবে।


(চৌধুরী আশরাফুল করিম)
উপসচিব

ফোন: ০২-২২৩৩৫৬০৩৭

ই-মেইল: chashrafur@finance.gov.bd

সচিব
গৃহায়ন ও গণপূর্ত মন্ত্রণালয়
বাংলাদেশ সচিবালয়, ঢাকা

স্মারক নং-০৭.০০.০০০০.১৫৫.১৪.০০১.২০ (অংশ-১) - ২১১


তারিখঃ ২৭ মার্চ ২০২৪ খ্রিস্টাব্দ
১৩ চৈত্র ১৪৩০ বঙ্গাব্দ

সদয় অবগতি ও প্রয়োজনীয় কার্যার্থে অনুলিপি প্রেরণ করা হলো (জ্যেষ্ঠতার ক্রমানুসারে নয়) :

১. মন্ত্রিপরিষদ সচিব, মন্ত্রিপরিষদ বিভাগ/প্রধানমন্ত্রীর মুখ্য সচিব, প্রধানমন্ত্রীর কার্যালয়।
২. সিনিয়র সচিব, প্রতিরক্ষা মন্ত্রণালয়, ঢাকা।
৩. সিনিয়র সচিব, বিদ্যুৎ বিভাগ, বাংলাদেশ সচিবালয়, ঢাকা।

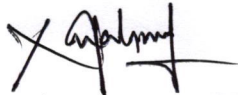
চলমান পাতা-০২

৪. সিনিয়র সচিব, পরিকল্পনা বিভাগ, পরিকল্পনা মন্ত্রণালয়, আগারগাঁও, ঢাকা।
৫. সচিব, স্থানীয় সরকার বিভাগ, স্থানীয় সরকার, পল্লী উন্নয়ন ও সমবায় মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
৬. সচিব, সড়ক পরিবহন ও মহাসড়ক বিভাগ, সড়ক পরিবহন ও সেতু মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
৭. সচিব, পানি সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
৮. সচিব, রেলপথ মন্ত্রণালয়, রেল ভবন, ঢাকা।
৯. ইঞ্জিনিয়ার-ইন-চীফ, ইএনসি ব্রাঞ্চ, সেনা সদর দপ্তর, ঢাকা সেনানিবাস, ঢাকা।
১০. প্রধান প্রকৌশলী, গণপূর্ত অধিদপ্তর, সেগুনবাগিচা, ঢাকা।
১১. মহাপরিচালক, বাংলাদেশ রেলওয়ে, রেল ভবন, ঢাকা।
১২. প্রধান প্রকৌশলী, সড়ক ও জনপথ অধিদপ্তর, তেজগাঁও, ঢাকা।
১৩. প্রধান প্রকৌশলী, স্থানীয় সরকার প্রকৌশল অধিদপ্তর, আগারগাঁও, ঢাকা।
১৪. মহাপরিচালক, বাংলাদেশ পানি উন্নয়ন বোর্ড, ঢাকা।
১৫. অর্থ সচিব মহোদয়ের একান্ত সচিব, অর্থ বিভাগ, অর্থ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
১৬. সিনিয়র সিস্টেম এনালিস্ট, অর্থ বিভাগ, অর্থ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা (ওয়েবসাইটে প্রকাশের অনুরোধসহ)।

 24/6/2028
(চৌধুরী আশরাফুল করিম)
উপসচিব

SAE-2

website এ upload করা হয় ২৪/৬/২৪।


৮/০৭/২০২৪
(মোঃ নফিজ মাহমুদ)
নির্বাহী প্রকৌশলী (ই/এম)
গণপূর্ত ই/এম এমআইএস বিভাগ-২, ঢাকা।

PWD SCHEDULE OF RATES 2022

**PART B: ELECTRO-MECHANICAL WORKS
(REVISED AS PER MOF MEMO NO. 07.00.0000.
155.14.001.20 (part 1) 211, DATED, 27/03/2024)**

SUBHEAD-8 LIFT & ESCALATOR

Subhead-8 Lift & Escalator

Item No.	Description of Items
8.1	Supply of following lift complete with car, BMS compatible control panel, traction machine(permanent magnet synchronous motor type), gearless, oil free, steel suspension ropes, safety devices, guide rails, push buttons, with other necessary accessories etc. complete including counter weight as required, suitable for installation & use in tropical country like Bangladesh (considering ambient temperature from 0°C to 46°C and relative humidity from 40% to 98%) & as per detailed specifications and standards as mentioned below herewith :

8.1.1 Brand & Country of origin (Type A) :

KONE (Finland), MITSUBISHI (Japan), OTIS (USA / Japan / France), Schindler (Switzerland), TKE (Germany), FUJITEC (Japan), HITACHI (Japan) or equivalent product; provided the lift manufacturing company shall have multi-continental manufacturing plant and shall have lift manufacturing capability for speed 10 m / sec (minimum), regular production with Polyurethane coated steel belt / ultra rope & Regenerative drive technology. Besides, it shall have lift manufacturing experience for a period of not less than 65 years in it's particular manufacturing plant where proposed brand of lift will be manufactured .The proposed brand of lift shall be manufactured and tested in **FINLAND / FRANCE / GERMANY / JAPAN / SWITZERLAND / UK / USA**, complying all other detailed specifications and standards stated in the item.

The proposed lift manufacturing company shall have it's own testing tower at factory premises and R&D(Research and development) wing/centre . Besides, it manufactures major components like PMS (Permanent Magnet System) type gearless motor, Polyurethane coated steel belt & Regenerative drive , controller , inverter , motherboard , Door Inverter & all PCBs (Printed Circuit Boards) in its own factory .

8.1.1.1 Passenger Lift

8.1.1.1 Passenger Lift					
Capacity (Kg) (Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Passenger Lift		
			Upto 3-stop Price		Next per stop
8.1.1.1.1	630 kg	1	Tk.	7,230,556.00	Tk. 278,532.00
8.1.1.1.2		1.5	Tk.	7,611,111.00	Tk. 293,191.00
8.1.1.1.3		2	Tk.	8,143,887.00	Tk. 313,715.00
8.1.1.1.4		2.5	Tk.	8,258,054.00	Tk. 318,113.00
8.1.1.1.5		3	Tk.	8,372,221.00	Tk. 322,511.00
8.1.1.1.6		3.5	Tk.	8,448,332.00	Tk. 325,443.00
8.1.1.1.7		4	Tk.	8,524,444.00	Tk. 328,374.00
8.1.1.1.8	800kg	1	Tk.	8,780,296.00	Tk. 278,532.00
8.1.1.1.9		1.5	Tk.	9,242,416.00	Tk. 293,191.00
8.1.1.1.10		2	Tk.	9,889,384.00	Tk. 313,715.00
8.1.1.1.11		2.5	Tk.	10,028,022.00	Tk. 318,113.00
8.1.1.1.12		3	Tk.	10,166,658.00	Tk. 322,511.00
8.1.1.1.13		3.5	Tk.	10,259,083.00	Tk. 325,443.00
8.1.1.1.14		4	Tk.	10,351,508.00	Tk. 328,374.00
8.1.1.1.15	1000kg	1	Tk.	10,149,440.00	Tk. 278,532.00
8.1.1.1.16		1.5	Tk.	10,356,571.00	Tk. 293,191.00
8.1.1.1.17		2	Tk.	11,081,529.00	Tk. 313,715.00
8.1.1.1.18		2.5	Tk.	11,236,880.00	Tk. 318,113.00
8.1.1.1.19		3	Tk.	11,392,229.00	Tk. 322,511.00
8.1.1.1.20		3.5	Tk.	12,090,829.00	Tk. 325,443.00
8.1.1.1.21		4	Tk.	12,789,429.00	Tk. 328,374.00

AS 8 m/s A P 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100

8.1.1.1 Passenger Lift					
Capacity (Kg) (Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Passenger Lift		
			Upto 3-stop Price		Next per stop
8.1.1.1.22	1250kg	1	Tk.	11,599,360.00	Tk. 284,484.00
8.1.1.1.23		1.5	Tk.	11,836,082.00	Tk. 299,457.00
8.1.1.1.24		2	Tk.	12,664,606.00	Tk. 319,980.00
8.1.1.1.25		2.5	Tk.	12,842,149.00	Tk. 324,378.00
8.1.1.1.26		3	Tk.	13,019,689.00	Tk. 328,776.00
8.1.1.1.27		3.5	Tk.	13,818,090.00	Tk. 331,708.00
8.1.1.1.28		4	Tk.	14,616,490.00	Tk. 334,640.00
8.1.1.1.29	1600kg	1	Tk.	13,049,280.00	Tk. 284,484.00
8.1.1.1.30		1.5	Tk.	13,315,592.00	Tk. 299,457.00
8.1.1.1.31		2	Tk.	14,247,683.00	Tk. 319,980.00
8.1.1.1.32		2.5	Tk.	14,447,417.00	Tk. 324,378.00
8.1.1.1.33		3	Tk.	14,647,152.00	Tk. 328,776.00
8.1.1.1.34		3.5	Tk.	15,545,352.00	Tk. 331,708.00
8.1.1.1.35		4	Tk.	16,443,554.00	Tk. 334,640.00
8.1.1.1.36	1800kg	1	Tk.	13,774,240.00	Tk. 284,484.00
8.1.1.1.37		1.5	Tk.	14,055,347.00	Tk. 299,457.00
8.1.1.1.38		2	Tk.	15,039,220.00	Tk. 319,980.00
8.1.1.1.39		2.5	Tk.	15,250,051.00	Tk. 324,378.00
8.1.1.1.40		3	Tk.	15,460,881.00	Tk. 328,776.00
8.1.1.1.41		3.5	Tk.	16,408,982.00	Tk. 331,708.00
8.1.1.1.42		4	Tk.	17,357,085.00	Tk. 334,640.00
8.1.1.1.43	2000kg	1	Tk.	14,499,200.00	Tk. 284,484.00
8.1.1.1.44		1.5	Tk.	14,795,102.00	Tk. 299,457.00
8.1.1.1.45		2	Tk.	15,830,758.00	Tk. 319,980.00
8.1.1.1.46		2.5	Tk.	16,052,684.00	Tk. 324,378.00
8.1.1.1.47		3	Tk.	16,274,610.00	Tk. 328,776.00
8.1.1.1.48		3.5	Tk.	17,272,612.00	Tk. 331,708.00
8.1.1.1.49		4	Tk.	18,270,614.00	Tk. 334,640.00
8.1.1.1.50	2500kg	1	Tk.	16,674,079.00	Tk. 327,156.00
8.1.1.1.51		1.5	Tk.	17,014,367.00	Tk. 344,375.00
8.1.1.1.52		2	Tk.	18,205,372.00	Tk. 367,977.00
8.1.1.1.53		2.5	Tk.	18,460,588.00	Tk. 373,035.00
8.1.1.1.54		3	Tk.	18,715,802.00	Tk. 378,092.00
8.1.1.1.55		3.5	Tk.	19,863,505.00	Tk. 381,464.00
8.1.1.1.56		4	Tk.	21,011,206.00	Tk. 384,836.00

২৮ মার্চ ২০২২

8.1.1.2 Bed / Stretcher Lift

8.1.1.2 Bed / Stretcher Lift

Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones	
			Bed / Stretcher Lift	
			Upto 3-stop Price	Next per stop
8.1.1.2.1	1000kg	1	Tk. 10,149,440.00	Tk. 278,532.00
8.1.1.2.2		1.5	Tk. 10,356,571.00	Tk. 293,191.00
8.1.1.2.3		2	Tk. 11,081,529.00	Tk. 313,715.00
8.1.1.2.4		2.5	Tk. 11,236,880.00	Tk. 322,511.00
8.1.1.2.5		3	Tk. 11,392,229.00	Tk. 323,977.00
8.1.1.2.6		3.5	Tk. 12,090,829.00	Tk. 325,443.00
8.1.1.2.7		4	Tk. 12,789,429.00	Tk. 328,374.00
8.1.1.2.8	1250kg	1	Tk. 11,599,360.00	Tk. 284,484.00
8.1.1.2.9		1.5	Tk. 11,836,082.00	Tk. 299,457.00
8.1.1.2.10		2	Tk. 12,664,606.00	Tk. 319,980.00
8.1.1.2.11		2.5	Tk. 12,842,149.00	Tk. 324,378.00
8.1.1.2.12		3	Tk. 13,019,689.00	Tk. 328,776.00
8.1.1.2.13		3.5	Tk. 13,818,090.00	Tk. 331,708.00
8.1.1.2.14		4	Tk. 14,616,490.00	Tk. 334,640.00
8.1.1.2.15	1600kg	1	Tk. 13,049,280.00	Tk. 284,484.00
8.1.1.2.16		1.5	Tk. 13,315,592.00	Tk. 299,457.00
8.1.1.2.17		2	Tk. 14,247,683.00	Tk. 319,980.00
8.1.1.2.18		2.5	Tk. 14,447,417.00	Tk. 324,378.00
8.1.1.2.19		3	Tk. 14,647,152.00	Tk. 328,776.00
8.1.1.2.20		3.5	Tk. 15,545,352.00	Tk. 331,708.00
8.1.1.2.21		4	Tk. 16,443,554.00	Tk. 334,640.00
8.1.1.2.22	1800kg	1	Tk. 13,774,240.00	Tk. 284,484.00
8.1.1.2.23		1.5	Tk. 14,055,347.00	Tk. 299,457.00
8.1.1.2.24		2	Tk. 15,039,220.00	Tk. 319,980.00
8.1.1.2.25		2.5	Tk. 15,250,051.00	Tk. 324,378.00
8.1.1.2.26		3	Tk. 15,460,881.00	Tk. 328,776.00
8.1.1.2.27		3.5	Tk. 16,408,982.00	Tk. 331,708.00
8.1.1.2.28		4	Tk. 17,357,085.00	Tk. 334,640.00
8.1.1.2.29	2000kg	1	Tk. 14,499,200.00	Tk. 284,484.00
8.1.1.2.30		1.5	Tk. 14,795,102.00	Tk. 299,457.00
8.1.1.2.31		2	Tk. 15,830,758.00	Tk. 319,980.00
8.1.1.2.32		2.5	Tk. 16,052,684.00	Tk. 324,378.00
8.1.1.2.33		3	Tk. 16,274,610.00	Tk. 328,776.00
8.1.1.2.34		3.5	Tk. 17,272,612.00	Tk. 331,708.00
8.1.1.2.35		4	Tk. 18,270,614.00	Tk. 334,640.00
8.1.1.2.36	2500kg	1	Tk. 16,674,079.00	Tk. 327,156.00
8.1.1.2.37		1.5	Tk. 17,014,367.00	Tk. 344,375.00
8.1.1.2.38		2	Tk. 18,205,372.00	Tk. 367,977.00
8.1.1.2.39		2.5	Tk. 18,460,586.00	Tk. 373,035.00
8.1.1.2.40		3	Tk. 18,715,802.00	Tk. 378,092.00
8.1.1.2.41		3.5	Tk. 19,863,505.00	Tk. 381,464.00
8.1.1.2.42		4	Tk. 21,011,206.00	Tk. 384,836.00














The panorama/capsule lift shall have the following features -

- (i) Lift car shall have tempered and fire proof glass in three sides (including cabin & landing door).
- (ii) The car shape may be customized as per direction of the Engineer.

8.1.1.3 Panorama/Capsule Lift						
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones			
			Panorama/Capsule Lift			
			Upto 3-stop Price		Next per stop	
8.1.1.3.1	630 kg	1	Tk.	7,592,082.00	Tk.	287,498.00
8.1.1.3.2		1.5	Tk.	7,991,666.00	Tk.	302,630.00
8.1.1.3.3		2	Tk.	8,551,082.00	Tk.	324,179.00
8.1.1.3.4		2.5	Tk.	8,670,958.00	Tk.	328,796.00
8.1.1.3.5		3	Tk.	8,790,832.00	Tk.	333,414.00
8.1.1.3.6		3.5	Tk.	8,870,749.00	Tk.	336,492.00
8.1.1.3.7		4	Tk.	8,950,665.00	Tk.	339,571.00
8.1.1.3.8	800kg	1	Tk.	9,219,311.00	Tk.	287,498.00
8.1.1.3.9		1.5	Tk.	9,704,538.00	Tk.	302,630.00
8.1.1.3.10		2	Tk.	10,383,854.00	Tk.	324,179.00
8.1.1.3.11		2.5	Tk.	10,529,423.00	Tk.	328,796.00
8.1.1.3.12		3	Tk.	10,674,991.00	Tk.	333,414.00
8.1.1.3.13		3.5	Tk.	10,772,038.00	Tk.	336,492.00
8.1.1.3.14		4	Tk.	10,869,083.00	Tk.	339,571.00
8.1.1.3.15	1000kg	1	Tk.	10,606,165.00	Tk.	304,296.00
8.1.1.3.16		1.5	Tk.	10,822,616.00	Tk.	320,312.00
8.1.1.3.17		2	Tk.	11,580,201.00	Tk.	342,733.00
8.1.1.3.18		2.5	Tk.	11,742,541.00	Tk.	347,538.00
8.1.1.3.19		3	Tk.	11,904,880.00	Tk.	352,343.00
8.1.1.3.20		3.5	Tk.	12,634,918.00	Tk.	355,546.00
8.1.1.3.21		4	Tk.	13,364,955.00	Tk.	358,749.00
8.1.1.3.22	1250kg	1	Tk.	12,121,331.00	Tk.	310,799.00
8.1.1.3.23		1.5	Tk.	12,368,706.00	Tk.	327,156.00
8.1.1.3.24		2	Tk.	13,234,515.00	Tk.	349,578.00
8.1.1.3.25		2.5	Tk.	13,420,046.00	Tk.	354,383.00
8.1.1.3.26		3	Tk.	13,605,576.00	Tk.	359,188.00
8.1.1.3.27		3.5	Tk.	14,439,904.00	Tk.	362,391.00
8.1.1.3.28		4	Tk.	15,274,235.00	Tk.	365,594.00
8.1.1.3.29	1600kg	1	Tk.	13,636,497.00	Tk.	310,799.00
8.1.1.3.30		1.5-	Tk.	13,914,793.00	Tk.	327,156.00
8.1.1.3.31		2	Tk.	14,888,831.00	Tk.	349,578.00
8.1.1.3.32		2.5	Tk.	15,097,553.00	Tk.	354,383.00
8.1.1.3.33		3	Tk.	15,306,275.00	Tk.	359,188.00
8.1.1.3.34		3.5	Tk.	16,244,895.00	Tk.	362,391.00
8.1.1.3.35		4	Tk.	17,183,514.00	Tk.	365,594.00
8.1.1.3.36	1800kg	1	Tk.	14,394,080.00	Tk.	310,799.00
8.1.1.3.37		1.5	Tk.	14,687,836.00	Tk.	327,156.00
8.1.1.3.38		2	Tk.	15,715,986.00	Tk.	349,578.00
8.1.1.3.39		2.5	Tk.	15,936,304.00	Tk.	354,383.00
8.1.1.3.40		3	Tk.	16,156,621.00	Tk.	359,188.00
8.1.1.3.41		3.5	Tk.	17,147,386.00	Tk.	362,391.00
8.1.1.3.42		4	Tk.	18,138,151.00	Tk.	365,594.00
8.1.1.3.43	2000kg	1	Tk.	15,151,662.00	Tk.	310,799.00
8.1.1.3.44		1.5	Tk.	15,460,879.00	Tk.	327,156.00
8.1.1.3.45		2	Tk.	16,543,141.00	Tk.	349,578.00
8.1.1.3.46		2.5	Tk.	16,775,054.00	Tk.	354,383.00
8.1.1.3.47		3	Tk.	17,006,969.00	Tk.	359,188.00
8.1.1.3.48		3.5	Tk.	18,049,880.00	Tk.	362,391.00
8.1.1.3.49		4	Tk.	19,092,790.00	Tk.	365,594.00

8.1.13.49	4	Tk.	19,092,790.00	Tk.	365,594.00
<p>        </p>					

8.1.1.3 Panorama/Capsule Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Panorama/Capsule Lift		
			Upto 3-stop Price		Next per stop
8.1.1.3.50	2500kg	1	Tk.	17,424,411.00	Tk. 357,418.00
8.1.1.3.51		1.5	Tk.	17,780,010.00	Tk. 376,230.00
8.1.1.3.52		2	Tk.	19,024,613.00	Tk. 402,015.00
8.1.1.3.53		2.5	Tk.	19,291,313.00	Tk. 407,540.00
8.1.1.3.54		3	Tk.	19,558,014.00	Tk. 413,066.00
8.1.1.3.55		3.5	Tk.	20,757,361.00	Tk. 416,749.00
8.1.1.3.56		4	Tk.	21,956,709.00	Tk. 420,433.00

8.1.1.4 Fire Fighters Lift

The Firefighters Lift shall be designed in conformity with EN 81-20 and EN 81-72:2015 and provided with additional protection, controls and signals.

Basic requirement must be considered:

The lift shall be designed to operate correctly during firefighting operations for a period equal to that required for the structure, e.g. 2 hours according to the following conditions:

i) Electrical/electronic devices on landings, other than at the fire service access level, shall be designed to function correctly in an ambient temperature range of 0 °C to 65 °C or be made non-operational. A malfunction of devices (landing indicators and push buttons) shall not prevent operation of the lift under fire fighting conditions;

ii) The car roof shall be designed to prevent accumulating water and facilitate controlled draining from the roof. Electrical equipment within the car roof and outer walls shall be classified to at least IPX3 according to EN 60529.

iii) An emergency trap door shall be fitted to the car roof with minimum clear opening dimensions of 0.5 m x 0.7 m. Clear opening dimensions shall be measured with the ladder in the rescue position.

iv) The emergency trap door shall conform to EN 81-20:2014

v) A firefighter lift switch shall be located in the safe area intended to be used at the fire service access level. The switch shall be located within 2 m horizontally from the firefighters' lift, at a height between 1.4 m and 2.0 m above floor level. The switch shall be marked with a firefighters' lift pictogram and it shall be clearly indicated to which lift it is associated.

vi) Operation of the firefighters lift switch shall be by means of the unlocking key, which fits the unlocking triangle as defined in EN 81-20:2014,

Lift Operation procedure :

i) A lift parked at a landing, shall close the doors and travel nonstop to the fire service access level. An audible signal shall sound in the car until the doors are closed. At the latest when the actual door dwell time exceeds 15 s, all heat and smoke sensitive door protection devices shall be made inactive and the doors shall attempt to close under reduced power;

ii) A lift travelling away from the fire service access level shall make a normal stop and reverse its direction at the nearest possible landing without opening the doors and return to the fire service access level;

iii) A lift travelling towards the fire service access level shall continue its travel non-stop to the fire service access level. If the lift has already started stopping at a level, it is acceptable to make a normal stop and without opening doors to continue to fire service access level;

iv) On arriving at the fire service access level, the firefighters lift shall be retained there with the car and landing doors kept in the open position.

Car and landing controls

i) The car and landing controls and associated control system shall not register false signals from the effects of heat, smoke, water or moisture. The fire service access level shall have a car position indicator.

ii) The car controls, position indicator inside the car, position indicator at the fire service access level and the firefighters lift switch shall be protected to at least IPX3 according to EN 60529.

iii) The landing control panels and landing indicators on other levels than fire service access level shall be

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protected to at least IPX3 according to EN 60529 unless they are electrically disconnected on initiation of the firefighters lift switch.

iv) In case of fire hazard, the control panel shall have the capability to receive signal from fire alarm control panel (FACP) / detectors and accordingly, the car shall not stop at the particular floor where fire incident occurred.

8.1.1.4 Fire Fighters Lift

Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones	
			Fire Fighters Lift	
			Upto 3-stop Price	Next per stop
8.1.1.4.1	1000kg	1	Tk. 11,164,384.00	Tk. 320,312.00
8.1.1.4.2		1.5	Tk. 11,392,229.00	Tk. 337,170.00
8.1.1.4.3		2	Tk. 12,189,687.00	Tk. 360,772.00
8.1.1.4.4		2.5	Tk. 12,360,570.00	Tk. 365,830.00
8.1.1.4.5		3	Tk. 12,531,453.00	Tk. 370,887.00
8.1.1.4.6		3.5	Tk. 13,299,912.00	Tk. 374,259.00
8.1.1.4.7		4	Tk. 14,068,373.00	Tk. 377,631.00
8.1.1.4.8	1250kg	1	Tk. 12,759,296.00	Tk. 327,156.00
8.1.1.4.9		1.5	Tk. 13,019,689.00	Tk. 344,375.00
8.1.1.4.10		2	Tk. 13,931,069.00	Tk. 367,977.00
8.1.1.4.11		2.5	Tk. 14,126,365.00	Tk. 373,035.00
8.1.1.4.12		3	Tk. 14,321,659.00	Tk. 378,092.00
8.1.1.4.13		3.5	Tk. 15,199,899.00	Tk. 381,464.00
8.1.1.4.14		4	Tk. 16,078,141.00	Tk. 384,836.00
8.1.1.4.15	1600kg	1	Tk. 14,354,208.00	Tk. 327,156.00
8.1.1.4.16		1.5	Tk. 14,647,152.00	Tk. 344,375.00
8.1.1.4.17		2	Tk. 15,672,452.00	Tk. 367,977.00
8.1.1.4.18		2.5	Tk. 15,892,160.00	Tk. 373,035.00
8.1.1.4.19		3	Tk. 16,111,868.00	Tk. 378,092.00
8.1.1.4.20		3.5	Tk. 17,099,888.00	Tk. 381,464.00
8.1.1.4.21		4	Tk. 18,087,909.00	Tk. 384,836.00
8.1.1.4.22	1800kg	1	Tk. 15,151,663.00	Tk. 327,156.00
8.1.1.4.23		1.5	Tk. 15,460,881.00	Tk. 344,375.00
8.1.1.4.24		2	Tk. 16,543,143.00	Tk. 367,977.00
8.1.1.4.25		2.5	Tk. 16,775,056.00	Tk. 373,035.00
8.1.1.4.26		3	Tk. 17,006,970.00	Tk. 378,092.00
8.1.1.4.27		3.5	Tk. 18,049,881.00	Tk. 381,464.00
8.1.1.4.28		4	Tk. 19,092,792.00	Tk. 384,836.00
8.1.1.4.29	2000kg	1	Tk. 15,949,118.00	Tk. 327,156.00
8.1.1.4.30		1.5	Tk. 16,274,609.00	Tk. 344,375.00
8.1.1.4.31		2	Tk. 17,413,833.00	Tk. 367,977.00
8.1.1.4.32		2.5	Tk. 17,657,953.00	Tk. 373,035.00
8.1.1.4.33		3	Tk. 17,902,073.00	Tk. 378,092.00
8.1.1.4.34		3.5	Tk. 18,999,873.00	Tk. 381,464.00
8.1.1.4.35		4	Tk. 20,097,673.00	Tk. 384,836.00
8.1.1.4.36	2500kg	1	Tk. 18,341,485.00	Tk. 376,230.00
8.1.1.4.37		1.5	Tk. 18,715,800.00	Tk. 396,031.00
8.1.1.4.38		2	Tk. 20,025,907.00	Tk. 423,174.00
8.1.1.4.39		2.5	Tk. 20,306,646.00	Tk. 428,990.00
8.1.1.4.40		3	Tk. 20,587,383.00	Tk. 434,806.00
8.1.1.4.41		3.5	Tk. 21,849,853.00	Tk. 438,684.00
8.1.1.4.42		4	Tk. 23,112,324.00	Tk. 442,561.00

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8.1.1.5 Cargo/Goods/Service Lift:

The Cargo/Goods/Service Lift shall have the following features -

i) Designed and manufactured in accordance with requirements of Lifts Directive 95/16/CE, throughout the accomplishment of Harmonized Norm EN 81-2 and the Directive of Electromagnetic Compatibility 89/336/CEE.

ii) Test Certificate CE Type ATI/LD-VB/M012/99 (institution registered 0053), as MODEL LIFT

8.1.1.5 Cargo Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Cargo Lift		
			Upto 3-stop Price		Next per stop
8.1.1.5.1	1600 kg	1.0	Tk.	15,177,553.00	Tk. 407,184.00
8.1.1.5.2	2000 kg	1.0	Tk.	16,863,947.00	Tk. 407,184.00
8.1.1.5.3	2500 kg	1.0	Tk.	19,842,479.00	Tk. 407,184.00
8.1.1.5.4	3000 kg	1.0	Tk.	23,341,102.00	Tk. 407,184.00
8.1.1.5.5	3500 kg	1.0	Tk.	27,460,119.00	Tk. 407,184.00
8.1.1.5.6	4000 kg	1.0	Tk.	32,306,023.00	Tk. 407,184.00
8.1.1.5.7	5000 kg	1.0	Tk.	38,007,086.00	Tk. 407,184.00

8.1.1.6 Car Lift

The Car Lift lift shall have the following features -

i) Designed and manufactured in accordance with requirements of Lifts Directive 95/16/CE, throughout the accomplishment of Harmonized Norm EN 81-2 and the Directive of Electromagnetic Compatibility 89/336/CEE.

ii) Test Certificate CE Type ATI/LD-VB/M012/99 (institution registered 0053), as MODEL LIFT

8.1.1.6 Car Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Car Lift		
			Upto 3-stop Price		Next per stop
8.1.1.6.1	3500 kg	0.5	Tk.	30,469,926.00	Tk. 635,611.00
8.1.1.6.2	5000 kg	0.5	Tk.	33,012,371.00	Tk. 635,611.00

8.1.2 Brand & Country of Origin (Type B) :

Wittur (Germany), Orona (Spain), MacPursas (Spain), Movi (Italy) or equivalent product manufactured and tested in **JAPAN / EU countries / UK / USA**; provided the lift manufacturing company shall have lift manufacturing capability for speed 4 m / sec (minimum) and utilize energy saving technology and shall have lift manufacturing experience in their own factory for a period of not less than 40 years, complying all other detailed specification and standards stated in the item.

The proposed lift manufacturing company shall have its own testing tower at factory premises and R&D (Research and development) wing/centre. Besides, it manufactures PMS (Permanent Magnet System) type gearless motor, inverter, motherboard, Door Inverter & all PCBs (Printed Circuit Boards) in their own factory.

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8.1.2.1 Passenger Lift

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8.1.2.2 Bed / Stretcher Lift

		8.1.2.2 Bed / Stretcher Lift			
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Bed / Stretcher Lift		
			Upto 3-stop Price		Next per stop
8.1.2.2.1	1000kg	1	Tk.	7,424,276.00	Tk. 197,350.00
8.1.2.2.2		1.5	Tk.	7,815,028.00	Tk. 207,736.00
8.1.2.2.3		2	Tk.	8,362,080.00	Tk. 222,277.00
8.1.2.2.4		2.5	Tk.	8,479,307.00	Tk. 225,393.00
8.1.2.2.5		3	Tk.	8,596,531.00	Tk. 228,509.00
8.1.2.2.6		3.5	Tk.	8,674,683.00	Tk. 230,587.00
8.1.2.2.7		4	Tk.	8,752,832.00	Tk. 232,665.00
8.1.2.2.8	1250kg	1	Tk.	8,185,420.00	Tk. 200,110.00
8.1.2.2.9		1.5	Tk.	8,616,232.00	Tk. 210,642.00
8.1.2.2.10		2	Tk.	9,219,367.00	Tk. 224,689.00
8.1.2.2.11		2.5	Tk.	9,348,612.00	Tk. 227,698.00
8.1.2.2.12		3	Tk.	9,477,855.00	Tk. 230,707.00
8.1.2.2.13		3.5	Tk.	9,564,017.00	Tk. 232,714.00
8.1.2.2.14		4	Tk.	9,650,179.00	Tk. 234,720.00
8.1.2.2.15	1600kg	1	Tk.	9,208,600.00	Tk. 200,110.00
8.1.2.2.16		1.5	Tk.	9,693,262.00	Tk. 210,642.00
8.1.2.2.17		2	Tk.	10,371,790.00	Tk. 224,689.00
8.1.2.2.18		2.5	Tk.	10,517,188.00	Tk. 227,698.00
8.1.2.2.19		3	Tk.	10,662,587.00	Tk. 230,707.00
8.1.2.2.20		3.5	Tk.	10,759,520.00	Tk. 232,714.00
8.1.2.2.21		4	Tk.	10,856,452.00	Tk. 234,720.00
8.1.2.2.22	1800kg	1	Tk.	9,720,187.00	Tk. 200,110.00
8.1.2.2.23		1.5	Tk.	10,231,775.00	Tk. 210,642.00
8.1.2.2.24		2	Tk.	10,948,000.00	Tk. 224,689.00
8.1.2.2.25		2.5	Tk.	11,101,477.00	Tk. 227,698.00
8.1.2.2.26		3	Tk.	11,254,953.00	Tk. 230,707.00
8.1.2.2.27		3.5	Tk.	11,357,272.00	Tk. 232,714.00
8.1.2.2.28		4	Tk.	11,459,589.00	Tk. 234,720.00
8.1.2.2.29	2000kg	1	Tk.	10,231,774.00	Tk. 200,110.00
8.1.2.2.30		1.5	Tk.	10,770,289.00	Tk. 210,642.00
8.1.2.2.31		2	Tk.	11,524,209.00	Tk. 224,689.00
8.1.2.2.32		2.5	Tk.	11,685,765.00	Tk. 227,698.00
8.1.2.2.33		3	Tk.	11,847,319.00	Tk. 230,707.00
8.1.2.2.34		3.5	Tk.	11,955,023.00	Tk. 232,714.00
8.1.2.2.35		4	Tk.	12,062,724.00	Tk. 234,720.00

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The panorama/capsule lift shall have the following features -

- (i) Lift car shall have tempered and fire proof glass in three sides (including cabin & landing door).
- (ii) The car shape may be customized as per direction of the Engineer.

Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Passenger/Capsule Lift		
			Upto 3-stop Price		Next per stop
8.1.2.3.1	630 kg	1	Tk. 5,195,869.00	Tk. 207,216.00	
8.1.2.3.2		1.5	Tk. 5,469,336.00	Tk. 218,124.00	
8.1.2.3.3		2	Tk. 5,852,190.00	Tk. 233,393.00	
8.1.2.3.4		2.5	Tk. 5,934,231.00	Tk. 236,663.00	
8.1.2.3.5		3	Tk. 6,016,270.00	Tk. 239,936.00	
8.1.2.3.6		3.5	Tk. 6,070,963.00	Tk. 242,117.00	
8.1.2.3.7		4	Tk. 6,125,657.00	Tk. 244,298.00	
8.1.2.3.8	800kg	1	Tk. 6,309,512.00	Tk. 207,216.00	
8.1.2.3.9		1.5	Tk. 6,641,591.00	Tk. 218,124.00	
8.1.2.3.10		2	Tk. 7,106,503.00	Tk. 233,393.00	
8.1.2.3.11		2.5	Tk. 7,206,127.00	Tk. 236,663.00	
8.1.2.3.12		3	Tk. 7,305,751.00	Tk. 239,936.00	
8.1.2.3.13		3.5	Tk. 7,372,166.00	Tk. 242,117.00	
8.1.2.3.14		4	Tk. 7,438,582.00	Tk. 244,298.00	
8.1.2.3.15	1000kg	1	Tk. 8,111,021.00	Tk. 215,605.00	
8.1.2.3.16		1.5	Tk. 8,537,917.00	Tk. 226,953.00	
8.1.2.3.17		2	Tk. 9,135,571.00	Tk. 242,838.00	
8.1.2.3.18		2.5	Tk. 9,263,642.00	Tk. 246,243.00	
8.1.2.3.19		3	Tk. 9,391,712.00	Tk. 249,646.00	
8.1.2.3.20		3.5	Tk. 9,477,091.00	Tk. 251,916.00	
8.1.2.3.21		4	Tk. 9,562,470.00	Tk. 254,185.00	
8.1.2.3.22	1250kg	1	Tk. 8,942,573.00	Tk. 218,621.00	
8.1.2.3.23		1.5	Tk. 9,413,234.00	Tk. 230,128.00	
8.1.2.3.24		2	Tk. 10,072,157.00	Tk. 245,471.00	
8.1.2.3.25		2.5	Tk. 10,213,357.00	Tk. 248,760.00	
8.1.2.3.26		3	Tk. 10,354,557.00	Tk. 252,047.00	
8.1.2.3.27		3.5	Tk. 10,448,688.00	Tk. 254,241.00	
8.1.2.3.28		4	Tk. 10,542,820.00	Tk. 256,433.00	
8.1.2.3.29	1600kg	1	Tk. 10,060,395.00	Tk. 218,621.00	
8.1.2.3.30		1.5	Tk. 10,589,890.00	Tk. 230,128.00	
8.1.2.3.31		2	Tk. 11,331,181.00	Tk. 245,471.00	
8.1.2.3.32		2.5	Tk. 11,490,029.00	Tk. 248,760.00	
8.1.2.3.33		3	Tk. 11,648,876.00	Tk. 252,047.00	
8.1.2.3.34		3.5	Tk. 11,754,776.00	Tk. 254,241.00	
8.1.2.3.35		4	Tk. 11,860,674.00	Tk. 256,433.00	
8.1.2.3.36	2000kg	1	Tk. 12,284,954.00	Tk. 218,621.00	
8.1.2.3.37		1.5	Tk. 12,931,530.00	Tk. 230,128.00	
8.1.2.3.38		2	Tk. 13,836,738.00	Tk. 245,471.00	
8.1.2.3.39		2.5	Tk. 14,030,711.00	Tk. 248,760.00	
8.1.2.3.40		3	Tk. 14,224,683.00	Tk. 252,047.00	
8.1.2.3.41		3.5	Tk. 14,418,655.00	Tk. 254,241.00	
8.1.2.3.42		4	Tk. 14,612,627.00	Tk. 256,433.00	

8.1.2.3.42	4	TR.	14,012,027,000	14,012,027,000
✓ K of ✓	✓	✓	✓	✓

8.1.2.4 Fire Fighters Lift

The Firefighters Lift shall be designed in conformity with EN 81-20 and EN 81-72:2015 and provided with additional protection, controls and signals.

Basic requirement must be considered:

The lift shall be designed to operate correctly during firefighting operations for a period equal to that required for the structure, e.g. 2 hours according to the following conditions:

- i) Electrical/electronic devices on landings, other than at the fire service access level, shall be designed to function correctly in an ambient temperature range of 0 °C to 65 °C or be made non-operational. A malfunction of devices (landing indicators and push buttons) shall not prevent operation of the lift under fire fighting conditions;
- ii) The car roof shall be designed to prevent accumulating water and facilitate controlled draining from the roof. Electrical equipment within the car roof and outer walls shall be classified to at least IPX3 according to EN 60529.
- iii) An emergency trap door shall be fitted to the car roof with minimum clear opening dimensions of 0.5 m x 0.7 m. Clear opening dimensions shall be measured with the ladder in the rescue position.
- iv) The emergency trap door shall conform to EN 81-20:2014
- v) A firefighter lift switch shall be located in the safe area intended to be used at the fire service access level. The switch shall be located within 2 m horizontally from the firefighters' lift, at a height between 1.4 m and 2.0 m above floor level. The switch shall be marked with a firefighters' lift pictogram and it shall be clearly indicated to which lift it is associated.
- vi) Operation of the firefighters lift switch shall be by means of the unlocking key, which fits the unlocking triangle as defined in EN 81-20:2014.

Lift Operation procedure :

- i) A lift parked at a landing, shall close the doors and travel nonstop to the fire service access level. An audible signal shall sound in the car until the doors are closed. At the latest when the actual door dwell time exceeds 15 s, all heat and smoke sensitive door protection devices shall be made inactive and the doors shall attempt to close under reduced power;
- ii) A lift travelling away from the fire service access level shall make a normal stop and reverse its direction at the nearest possible landing without opening the doors and return to the fire service access level;
- iii) A lift travelling towards the fire service access level shall continue its travel non-stop to the fire service access level. If the lift has already started stopping at a level, it is acceptable to make a normal stop and without opening doors to continue to fire service access level;
- iv) On arriving at the fire service access level, the firefighters lift shall be retained there with the car and landing doors kept in the open position.

Car and landing controls

- i) The car and landing controls and associated control system shall not register false signals from the effects of heat, smoke, water or moisture. The fire service access level shall have a car position indicator.
- ii) The car controls, position indicator inside the car, position indicator at the fire service access level and the firefighters lift switch shall be protected to at least IPX3 according to EN 60529.
- iii) The landing control panels and landing indicators on other levels than fire service access level shall be protected to at least IPX3 according to EN 60529 unless they are electrically disconnected on initiation of the firefighters lift switch.
- iv) In case of fire hazard, the control panel shall have the capability to receive signal from fire alarm control panel (FACP) / detectors and accordingly, the car shall not stop at the particular floor where fire incident occurred.

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8.1.2.4 Fire Fighters Lift

Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones	
			Fire Fighters Lift	
			Upto 3-stop Price	Next per stop
8.1.2.4.1	1000kg	1	Tk. 8,537,917.00	Tk. 226,953.00
8.1.2.4.2		1.5	Tk. 8,987,282.00	Tk. 238,897.00
8.1.2.4.3		2	Tk. 9,616,391.00	Tk. 255,619.00
8.1.2.4.4		2.5	Tk. 9,751,201.00	Tk. 259,202.00
8.1.2.4.5		3	Tk. 9,886,012.00	Tk. 262,787.00
8.1.2.4.6		3.5	Tk. 9,975,886.00	Tk. 265,175.00
8.1.2.4.7		4	Tk. 10,065,757.00	Tk. 267,563.00
8.1.2.4.8	1250kg	1	Tk. 9,413,234.00	Tk. 230,128.00
8.1.2.4.9		1.5	Tk. 9,908,667.00	Tk. 242,239.00
8.1.2.4.10		2	Tk. 10,602,271.00	Tk. 258,392.00
8.1.2.4.11		2.5	Tk. 10,750,903.00	Tk. 261,852.00
8.1.2.4.12		3	Tk. 10,899,534.00	Tk. 265,313.00
8.1.2.4.13		3.5	Tk. 10,998,620.00	Tk. 267,621.00
8.1.2.4.14	1600kg	4	Tk. 11,097,705.00	Tk. 269,930.00
8.1.2.4.15		1	Tk. 10,589,890.00	Tk. 230,128.00
8.1.2.4.16		1.5	Tk. 11,147,252.00	Tk. 242,239.00
8.1.2.4.17		2	Tk. 11,927,559.00	Tk. 258,392.00
8.1.2.4.18		2.5	Tk. 12,094,768.00	Tk. 261,852.00
8.1.2.4.19		3	Tk. 12,261,976.00	Tk. 265,313.00
8.1.2.4.20		3.5	Tk. 12,373,449.00	Tk. 267,621.00
8.1.2.4.21	1800kg	4	Tk. 12,484,921.00	Tk. 269,930.00
8.1.2.4.22		1	Tk. 11,178,215.00	Tk. 230,128.00
8.1.2.4.23		1.5	Tk. 11,766,542.00	Tk. 242,239.00
8.1.2.4.24		2	Tk. 12,590,200.00	Tk. 258,392.00
8.1.2.4.25		2.5	Tk. 12,766,698.00	Tk. 261,852.00
8.1.2.4.26		3	Tk. 12,943,196.00	Tk. 265,313.00
8.1.2.4.27		3.5	Tk. 13,060,862.00	Tk. 267,621.00
8.1.2.4.28	2000kg	4	Tk. 13,178,527.00	Tk. 269,930.00
8.1.2.4.29		1	Tk. 11,766,540.00	Tk. 230,128.00
8.1.2.4.30		1.5	Tk. 12,385,832.00	Tk. 242,239.00
8.1.2.4.31		2	Tk. 13,252,841.00	Tk. 258,392.00
8.1.2.4.32		2.5	Tk. 13,438,630.00	Tk. 261,852.00
8.1.2.4.33		3	Tk. 13,624,417.00	Tk. 265,313.00
8.1.2.4.34		3.5	Tk. 13,748,276.00	Tk. 267,621.00
8.1.2.4.35		4	Tk. 13,872,133.00	Tk. 269,930.00

8.1.3 Brand & country of origin (Type C) :

KONE (China), MITSUBISHI (Thailand/China), OTIS (China/ South Korea), Schindler (China), TKE (China/ South Korea), HITACHI (China), or equivalent product; provided the lift manufacturing company shall have :

i) multi-continental manufacturing plants .

ii) lift manufacturing capability for speed 3 m /sec (minimum), regular production with Polyurethane coated steel belt /ultra rope & Regenerative drive technology and lift manufacturing experience for a period of not less than 25 years in it's particular manufacturing plant where proposed brand of lift will be manufactured.

iii) lift manufacturing capability for speed 10 m / sec (minimum) and lift manufacturing experience for a period of not less than 65 years in USA/ EUROPE/JAPAN .

The proposed brand of lift, shall be manufactured and tested in CHINA / SOUTH KOREA/ THAILAND, complying all other detailed specification & standard stated in the item.

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The proposed lift manufacturing company shall have its own testing tower at factory premises and R&D (Research and development) wing/centre. Besides, it manufactures PMS (Permanent Magnet System) type gearless motor, Polyurethane coated steel belt & Regenerative drive, controller, inverter, motherboard, Door Inverter & all PCBs (Printed Circuit Boards) in their own factory.

8.1.3.1 Passenger Lift

8.1.3.1 Passenger Lift						
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones			
			Passenger Lift			
			Upto 3-stop Price		Next per stop	
8.1.3.1.1	630 kg	1	Tk.	3,690,729.00	Tk.	130,249.00
8.1.3.1.2		1.5	Tk.	3,884,979.00	Tk.	137,105.00
8.1.3.1.3		2	Tk.	4,156,926.00	Tk.	146,704.00
8.1.3.1.4		2.5	Tk.	4,215,200.00	Tk.	148,760.00
8.1.3.1.5		3	Tk.	4,273,475.00	Tk.	150,818.00
8.1.3.1.6		3.5	Tk.	4,312,324.00	Tk.	152,187.00
8.1.3.1.7		4	Tk.	4,351,174.00	Tk.	153,558.00
8.1.3.1.8		800kg	1	Tk.	4,481,601.00	Tk.
8.1.3.1.9	1.5		Tk.	4,717,475.00	Tk.	137,105.00
8.1.3.1.10	2		Tk.	5,047,698.00	Tk.	146,704.00
8.1.3.1.11	2.5		Tk.	5,118,460.00	Tk.	148,760.00
8.1.3.1.12	3		Tk.	5,189,224.00	Tk.	150,818.00
8.1.3.1.13	3.5		Tk.	5,236,397.00	Tk.	152,187.00
8.1.3.1.14	4		Tk.	5,283,572.00	Tk.	153,558.00
8.1.3.1.15	1000kg		1	Tk.	5,022,398.00	Tk.
8.1.3.1.16		1.5	Tk.	5,286,735.00	Tk.	137,105.00
8.1.3.1.17		2	Tk.	5,656,806.00	Tk.	146,704.00
8.1.3.1.18		2.5	Tk.	5,736,109.00	Tk.	148,760.00
8.1.3.1.19		3	Tk.	5,815,410.00	Tk.	150,818.00
8.1.3.1.20		3.5	Tk.	5,868,276.00	Tk.	152,187.00
8.1.3.1.21		4	Tk.	5,921,144.00	Tk.	153,558.00
8.1.3.1.22		1250kg	1	Tk.	5,544,281.00	Tk.
8.1.3.1.23	1.5		Tk.	5,836,085.00	Tk.	145,170.00
8.1.3.1.24	2		Tk.	6,244,611.00	Tk.	155,332.00
8.1.3.1.25	2.5		Tk.	6,332,152.00	Tk.	157,508.00
8.1.3.1.26	3		Tk.	6,419,694.00	Tk.	159,685.00
8.1.3.1.27	3.5		Tk.	6,478,054.00	Tk.	161,138.00
8.1.3.1.28	4		Tk.	6,536,414.00	Tk.	162,589.00
8.1.3.1.29	1600kg		1	Tk.	6,237,277.00	Tk.
8.1.3.1.30		1.5	Tk.	6,565,554.00	Tk.	145,170.00
8.1.3.1.31		2	Tk.	7,025,143.00	Tk.	155,332.00
8.1.3.1.32		2.5	Tk.	7,123,626.00	Tk.	157,508.00
8.1.3.1.33		3	Tk.	7,222,110.00	Tk.	159,685.00
8.1.3.1.34		3.5	Tk.	7,287,765.00	Tk.	161,138.00
8.1.3.1.35		4	Tk.	7,353,420.00	Tk.	162,589.00
8.1.3.1.36		1800kg	1	Tk.	6,583,791.00	Tk.
8.1.3.1.37	1.5		Tk.	6,930,306.00	Tk.	145,170.00
8.1.3.1.38	2		Tk.	7,415,428.00	Tk.	155,332.00
8.1.3.1.39	2.5		Tk.	7,519,381.00	Tk.	157,508.00
8.1.3.1.40	3		Tk.	7,623,336.00	Tk.	159,685.00
8.1.3.1.41	3.5		Tk.	7,692,640.00	Tk.	161,138.00
8.1.3.1.42	4		Tk.	7,761,943.00	Tk.	162,589.00
8.1.3.1.43	2000kg		1	Tk.	6,930,306.00	Tk.
8.1.3.1.44		1.5	Tk.	7,295,058.00	Tk.	145,170.00
8.1.3.1.45		2	Tk.	7,805,711.00	Tk.	155,332.00
8.1.3.1.46		2.5	Tk.	7,915,138.00	Tk.	157,508.00
8.1.3.1.47		3	Tk.	8,024,565.00	Tk.	159,685.00
8.1.3.1.48		3.5	Tk.	8,097,515.00	Tk.	161,138.00
8.1.3.1.49		4	Tk.	8,170,465.00	Tk.	162,589.00

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8.1.3.2 Bed / Stretcher Lift

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8.1.3.2 Bed / Stretcher Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Bed / Stretcher Lift		
			Upto 3stop Price		Next per stop
8.1.3.2.36	2500kg	1	Tk.	7,969,852.00	Tk. 158,598.00
8.1.3.2.37		1.5	Tk.	8,389,317.00	Tk. 166,946.00
8.1.3.2.38		2	Tk.	8,976,569.00	Tk. 178,632.00
8.1.3.2.39		2.5	Tk.	9,102,409.00	Tk. 181,135.00
8.1.3.2.40		3	Tk.	9,228,249.00	Tk. 183,639.00
8.1.3.2.41		3.5	Tk.	9,312,142.00	Tk. 185,308.00
8.1.3.2.42		4	Tk.	9,396,034.00	Tk. 186,979.00

8.1.3.3 Panorama / Capsule Lift

The panorama/capsule lift shall have the following features -

- (i) Lift car shall have tempered and fire proof glass in three sides (including cabin & landing door).
- (ii) The car shape may be customized as per direction of the Engineer.

8.1.3.3 Panorama/Capsule Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Passenger/Capsule Lift		
			Upto 3-stop Price		Next per stop
8.1.3.3.1	630 kg	1	Tk.	3,875,265.00	Tk. 136,764.00
8.1.3.3.2		1.5	Tk.	4,079,227.00	Tk. 143,962.00
8.1.3.3.3		2	Tk.	4,364,771.00	Tk. 154,039.00
8.1.3.3.4		2.5	Tk.	4,425,960.00	Tk. 156,199.00
8.1.3.3.5		3	Tk.	4,487,149.00	Tk. 158,358.00
8.1.3.3.6		3.5	Tk.	4,527,941.00	Tk. 159,798.00
8.1.3.3.7		4	Tk.	4,568,733.00	Tk. 161,236.00
8.1.3.3.8	800kg	1	Tk.	4,705,682.00	Tk. 136,764.00
8.1.3.3.9		1.5	Tk.	4,953,348.00	Tk. 143,962.00
8.1.3.3.10		2	Tk.	5,300,083.00	Tk. 154,039.00
8.1.3.3.11		2.5	Tk.	5,374,383.00	Tk. 156,199.00
8.1.3.3.12		3	Tk.	5,448,682.00	Tk. 158,358.00
8.1.3.3.13		3.5	Tk.	5,498,216.00	Tk. 159,798.00
8.1.3.3.14		4	Tk.	5,547,750.00	Tk. 161,236.00
8.1.3.3.15	1000kg	1	Tk.	5,273,518.00	Tk. 136,764.00
8.1.3.3.16		1.5	Tk.	5,551,072.00	Tk. 143,962.00
8.1.3.3.17		2	Tk.	5,939,646.00	Tk. 154,039.00
8.1.3.3.18		2.5	Tk.	6,022,913.00	Tk. 156,199.00
8.1.3.3.19		3	Tk.	6,106,180.00	Tk. 158,358.00
8.1.3.3.20		3.5	Tk.	6,161,690.00	Tk. 159,798.00
8.1.3.3.21		4	Tk.	6,217,201.00	Tk. 161,236.00
8.1.3.3.22	1250kg	1	Tk.	5,821,495.00	Tk. 144,807.00
8.1.3.3.23		1.5	Tk.	6,127,889.00	Tk. 152,429.00
8.1.3.3.24		2	Tk.	6,556,841.00	Tk. 163,100.00
8.1.3.3.25		2.5	Tk.	6,710,039.00	Tk. 165,386.00
8.1.3.3.26		3	Tk.	6,863,236.00	Tk. 167,672.00
8.1.3.3.27		3.5	Tk.	6,931,870.00	Tk. 169,196.00
8.1.3.3.28		4	Tk.	7,001,188.00	Tk. 170,722.00
8.1.3.3.29	1600kg	1	Tk.	7,007,580.00	Tk. 144,807.00
8.1.3.3.30		1.5	Tk.	7,376,401.00	Tk. 152,429.00
8.1.3.3.31		2	Tk.	7,403,976.00	Tk. 163,100.00
8.1.3.3.32		2.5	Tk.	7,431,551.00	Tk. 165,386.00
8.1.3.3.33		3	Tk.	7,583,215.00	Tk. 167,672.00
8.1.3.3.34		3.5	Tk.	7,652,153.00	Tk. 169,196.00
8.1.3.3.35		4	Tk.	7,721,092.00	Tk. 170,722.00

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8.1.3.3 Panorama/Capsule Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Passenger/Capsule Lift		
			Upto 3-stop Price	Next per stop	
8.1.3.3.36	1800kg	1	Tk. 7,142,201.00	Tk.	144,807.00
8.1.3.3.37		1.5	Tk. 7,518,106.00	Tk.	152,429.00
8.1.3.3.38		2	Tk. 7,889,603.00	Tk.	163,100.00
8.1.3.3.39		2.5	Tk. 7,947,053.00	Tk.	165,386.00
8.1.3.3.40		3	Tk. 8,004,503.00	Tk.	167,672.00
8.1.3.3.41		3.5	Tk. 8,077,272.00	Tk.	169,196.00
8.1.3.3.42		4	Tk. 8,150,040.00	Tk.	170,722.00
8.1.3.3.43	2000kg	1	Tk. 7,276,821.00	Tk.	144,807.00
8.1.3.3.44		1.5	Tk. 7,659,811.00	Tk.	152,429.00
8.1.3.3.45		2	Tk. 8,195,998.00	Tk.	163,100.00
8.1.3.3.46		2.5	Tk. 8,310,895.00	Tk.	165,386.00
8.1.3.3.47		3	Tk. 8,425,794.00	Tk.	167,672.00
8.1.3.3.48		3.5	Tk. 8,502,390.00	Tk.	169,196.00
8.1.3.3.49		4	Tk. 8,578,989.00	Tk.	170,722.00
8.1.3.3.50	2500kg	1	Tk. 8,368,343.00	Tk.	166,528.00
8.1.3.3.51		1.5	Tk. 8,808,784.00	Tk.	175,292.00
8.1.3.3.52		2	Tk. 9,425,399.00	Tk.	187,565.00
8.1.3.3.53		2.5	Tk. 9,557,530.00	Tk.	190,195.00
8.1.3.3.54		3	Tk. 9,689,663.00	Tk.	192,823.00
8.1.3.3.55		3.5	Tk. 9,777,749.00	Tk.	194,577.00
8.1.3.3.56		4	Tk. 9,865,836.00	Tk.	196,329.00

8.1.3.4 Fire Fighters Lift

The Firefighters Lift shall be designed in conformity with EN 81-20 and EN 81-72:2015 and provided with additional protection, controls and signals.

Basic requirement must be considered:

The lift shall be designed to operate correctly during firefighting operations for a period equal to that required for the structure, e.g. 2 hours according to the following conditions:

i) Electrical/electronic devices on landings, other than at the fire service access level, shall be designed to function correctly in an ambient temperature range of 0 °C to 65 °C or be made non-operational. A malfunction of devices (landing indicators and push buttons) shall not prevent operation of the lift under fire fighting conditions;

ii) The car roof shall be designed to prevent accumulating water and facilitate controlled draining from the roof. Electrical equipment within the car roof and outer walls shall be classified to at least IPX3 according to EN 60529.

iii) An emergency trap door shall be fitted to the car roof with minimum clear opening dimensions of 0,5 m x 0,7 m. Clear opening dimensions shall be measured with the ladder in the rescue position.

iv) The emergency trap door shall conform to EN 81-20:2014.

v) A firefighter lift switch shall be located in the safe area intended to be used at the fire service access level. The switch shall be located within 2 m horizontally from the firefighters' lift, at a height between 1.4 m and 2.0 m above floor level. The switch shall be marked with a firefighters' lift pictogram and it shall be clearly indicated to which lift it is associated.

vi) Operation of the firefighters lift switch shall be by means of the unlocking key, which fits the unlocking triangle as defined in EN 81-20:2014,

Lift Operation procedure :

i) A lift parked at a landing, shall close the doors and travel nonstop to the fire service access level. An audible signal shall sound in the car until the doors are closed. At the latest when the actual door dwell time exceeds 15 s, all heat and smoke sensitive door protection devices shall be made inactive and the doors shall attempt to close under reduced power;

ii) A lift travelling away from the fire service access level shall make a normal stop and reverse its direction at the nearest possible landing without opening the doors and return to the fire service access level;

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iii) A lift travelling towards the fire service access level shall continue its travel non-stop to the fire service access level. If the lift has already started stopping at a level, it is acceptable to make a normal stop and without opening doors to continue to fire service access level;

iv) On arriving at the fire service access level, the firefighters lift shall be retained there with the car and landing doors kept in the open position.

Car and landing controls

i) The car and landing controls and associated control system shall not register false signals from the effects of heat, smoke, water or moisture. The fire service access level shall have a car position indicator.

ii) The car controls, position indicator inside the car, position indicator at the fire service access level and the firefighters lift switch shall be protected to at least IPX3 according to EN 60529.

iii) The landing control panels and landing indicators on other levels than fire service access level shall be protected to at least IPX3 according to EN 60529 unless they are electrically disconnected on initiation of the firefighters lift switch.

iv) In case of fire hazard, the control panel shall have the capability to receive signal from fire alarm control panel (FACP) / detectors and accordingly, the car shall not stop at the particular floor where fire incident occurred.

8.1.3.4 Fire Fighters Lift

Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones	
			Fire Fighters Lift	
			Upto 3-stop Price	Next per stop
8.1.3.4.1	1000kg	1	Tk. 5,524,639.00	Tk. 143,276.00
8.1.3.4.2		1.5	Tk. 5,815,410.00	Tk. 150,818.00
8.1.3.4.3		2	Tk. 6,222,486.00	Tk. 161,374.00
8.1.3.4.4		2.5	Tk. 6,309,719.00	Tk. 163,635.00
8.1.3.4.5		3	Tk. 6,396,950.00	Tk. 165,898.00
8.1.3.4.6		3.5	Tk. 6,455,103.00	Tk. 167,407.00
8.1.3.4.7		4	Tk. 6,513,256.00	Tk. 168,916.00
8.1.3.4.8	1250kg	1	Tk. 6,098,711.00	Tk. 151,702.00
8.1.3.4.9		1.5	Tk. 6,419,694.00	Tk. 159,685.00
8.1.3.4.10		2	Tk. 6,869,071.00	Tk. 170,863.00
8.1.3.4.11		2.5	Tk. 6,965,366.00	Tk. 173,259.00
8.1.3.4.12		3	Tk. 7,061,661.00	Tk. 175,654.00
8.1.3.4.13		3.5	Tk. 7,125,860.00	Tk. 177,252.00
8.1.3.4.14		4	Tk. 7,190,057.00	Tk. 178,848.00
8.1.3.4.15	1600kg	1	Tk. 6,861,004.00	Tk. 151,702.00
8.1.3.4.16		1.5	Tk. 7,222,110.00	Tk. 159,685.00
8.1.3.4.17		2	Tk. 7,727,658.00	Tk. 170,863.00
8.1.3.4.18		2.5	Tk. 7,835,990.00	Tk. 173,259.00
8.1.3.4.19		3	Tk. 7,944,320.00	Tk. 175,654.00
8.1.3.4.20		3.5	Tk. 8,016,542.00	Tk. 177,252.00
8.1.3.4.21		4	Tk. 8,088,764.00	Tk. 178,848.00
8.1.3.4.22	1800kg	1	Tk. 7,242,476.00	Tk. 151,702.00
8.1.3.4.23		1.5	Tk. 7,623,660.00	Tk. 159,685.00
8.1.3.4.24		2	Tk. 8,157,317.00	Tk. 170,863.00
8.1.3.4.25		2.5	Tk. 8,271,671.00	Tk. 173,259.00
8.1.3.4.26		3	Tk. 8,386,024.00	Tk. 175,654.00
8.1.3.4.27		3.5	Tk. 8,462,261.00	Tk. 177,252.00
8.1.3.4.28		4	Tk. 8,538,498.00	Tk. 178,848.00
8.1.3.4.29	2000kg	1	Tk. 7,623,336.00	Tk. 151,702.00
8.1.3.4.30		1.5	Tk. 8,024,565.00	Tk. 159,685.00
8.1.3.4.31		2	Tk. 8,586,284.00	Tk. 170,863.00
8.1.3.4.32		2.5	Tk. 8,706,652.00	Tk. 173,259.00
8.1.3.4.33		3	Tk. 8,827,022.00	Tk. 175,654.00
8.1.3.4.34		3.5	Tk. 8,907,267.00	Tk. 177,252.00
8.1.3.4.35		4	Tk. 8,987,512.00	Tk. 178,848.00

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Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones	
			Fire Fighters Lift	
			Upto 3-stop Price	Next per stop
8.1.3.4.36	2500kg	1	Tk. 8,766,837.00	Tk. 174,458.00
8.1.3.4.37		1.5	Tk. 9,228,249.00	Tk. 183,638.00
8.1.3.4.38		2	Tk. 9,874,226.00	Tk. 196,493.00
8.1.3.4.39		2.5	Tk. 10,012,651.00	Tk. 199,247.00
8.1.3.4.40		3	Tk. 10,151,075.00	Tk. 202,002.00
8.1.3.4.41		3.5	Tk. 10,243,356.00	Tk. 203,840.00
8.1.3.4.42		4	Tk. 10,335,638.00	Tk. 205,676.00

8.1.3.5 Cargo//Goods/Service Lift:

The cargo lift shall have the following features -

i) designed and manufactured in accordance with requirements of Lifts Directive 95/16/CE, throughout the accomplishment of Harmonized Norm EN 81-2 and the Directive of Electromagnetic Compatibility 89/336/CEE.

ii) Test Certificate CE Type ATI/LD-VB/M012/99 (institution registered 0053), as MODEL LIFT

8.1.3.5 Cargo Lift				
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones	
			Cargo Lift	
			Upto 3-stop Price	Next per stop
8.1.3.5.1	1600 kg	1.0	Tk. 10,476,089.00	Tk. 343,061.00
8.1.3.5.2	2000kg	1.0	Tk. 11,640,098.00	Tk. 343,061.00
8.1.3.5.3	2500 kg	1.0	Tk. 12,238,320.00	Tk. 343,061.00

8.1.4 Brand & country of origin (Type D) :

SRH(China) / XIZI Unite (China)/ Fuji HD (China) / Mashiba (Malaysia)/ Toshiba (Thailand)/ Nidec (China)/ Sigma (China)/ Schneider (China)/ Auxo (China)/ Japan Sanyo (China)/ Bester (China)/ Schindler (India)/ KONE (India) / Mitsubishi(India)/ OTIS (India) / Hitachi (India) / Fujitec (India)/ TKE (India) or equivalent product; provided the lift manufacturing company shall have lift manufacturing experience in their own factory; for a period of not less than 15 years and shall have capability of manufacturing lift for speed 3 m / sec (minimum); where the lift shall be manufactured and tested in CHINA / MALAYSIA / THAILAND/India/Bangladesh, complying all other detailed specification/ standard stated in the item.

The proposed lift manufacturing company shall have it's own testing tower at factory premises and R&D(Research and development) wing/centre . Besides, it manufactures PMS (Permanent Magnet System) type gearless motor , controller , inverter , motherboard , Door Inverter & all PCBs (Printed Circuit Boards) in its own factory .

8.1.4.1 Passenger Lift

8.1.4.1 Passenger Lift				
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones	
			Passenger Lift	
			Upto 3-stop Price	Next per stop
8.1.4.1.1	630 kg	1	Tk. 2,952,583.00	Tk. 104,200.00
8.1.4.1.2		1.5	Tk. 3,107,982.00	Tk. 109,684.00
8.1.4.1.3		2	Tk. 3,325,541.00	Tk. 117,364.00
8.1.4.1.4		2.5	Tk. 3,372,160.00	Tk. 119,009.00
8.1.4.1.5		3	Tk. 3,418,780.00	Tk. 120,654.00
8.1.4.1.6		3.5	Tk. 3,449,859.00	Tk. 121,750.00
8.1.4.1.7		4	Tk. 3,480,939.00	Tk. 122,847.00

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8.1.4.1 Passenger Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Passenger Lift		
			Upto 3-stop Price		Next per stop
8.1.4.1.8	800kg	1	Tk.	3,585,281.00	Tk. 104,200.00
8.1.4.1.9		1.5	Tk.	3,773,979.00	Tk. 109,684.00
8.1.4.1.10		2	Tk.	4,038,159.00	Tk. 117,364.00
8.1.4.1.11		2.5	Tk.	4,094,768.00	Tk. 119,009.00
8.1.4.1.12		3	Tk.	4,151,378.00	Tk. 120,654.00
8.1.4.1.13		3.5	Tk.	4,189,119.00	Tk. 121,750.00
8.1.4.1.14		4	Tk.	4,226,858.00	Tk. 122,847.00
8.1.4.1.15	1000kg	1	Tk.	4,017,919.00	Tk. 104,200.00
8.1.4.1.16		1.5	Tk.	4,229,387.00	Tk. 109,684.00
8.1.4.1.17		2	Tk.	4,525,446.00	Tk. 117,364.00
8.1.4.1.18		2.5	Tk.	4,588,887.00	Tk. 119,009.00
8.1.4.1.19		3	Tk.	4,652,328.00	Tk. 120,654.00
8.1.4.1.20		3.5	Tk.	4,694,622.00	Tk. 121,750.00
8.1.4.1.21	1250kg	4	Tk.	4,736,916.00	Tk. 122,847.00
8.1.4.1.22		1	Tk.	4,435,425.00	Tk. 110,329.00
8.1.4.1.23		1.5	Tk.	4,668,869.00	Tk. 116,136.00
8.1.4.1.24		2	Tk.	4,995,689.00	Tk. 124,265.00
8.1.4.1.25		2.5	Tk.	5,065,723.00	Tk. 126,007.00
8.1.4.1.26		3	Tk.	5,135,756.00	Tk. 127,749.00
8.1.4.1.27		3.5	Tk.	5,182,444.00	Tk. 128,910.00
8.1.4.1.28	1600kg	4	Tk.	5,229,131.00	Tk. 130,072.00
8.1.4.1.29		1	Tk.	4,989,822.00	Tk. 110,329.00
8.1.4.1.30		1.5	Tk.	5,252,443.00	Tk. 116,136.00
8.1.4.1.31		2	Tk.	5,620,115.00	Tk. 124,265.00
8.1.4.1.32		2.5	Tk.	5,698,900.00	Tk. 126,007.00
8.1.4.1.33		3	Tk.	5,777,687.00	Tk. 127,749.00
8.1.4.1.34		3.5	Tk.	5,830,212.00	Tk. 128,910.00
8.1.4.1.35	2000kg	4	Tk.	5,882,737.00	Tk. 130,072.00
8.1.4.1.36		1	Tk.	5,544,245.00	Tk. 110,329.00
8.1.4.1.37		1.5	Tk.	5,836,047.00	Tk. 116,136.00
8.1.4.1.38		2	Tk.	6,244,571.00	Tk. 124,265.00
8.1.4.1.39		2.5	Tk.	6,332,111.00	Tk. 126,007.00
8.1.4.1.40		3	Tk.	6,419,652.00	Tk. 127,749.00
8.1.4.1.41		3.5	Tk.	6,478,012.00	Tk. 128,910.00
8.1.4.1.42		4	Tk.	6,536,372.00	Tk. 130,072.00

8.1.4.2 Bed / Stretcher Lift :

8.1.4.2 Bed / Stretcher Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Bed / Stretcher Lift		
			Upto 3stop Price		Next per stop
8.1.4.2.1	1000kg	1	Tk.	4,017,919.00	Tk. 104,200.00
8.1.4.2.2		1.5	Tk.	4,229,387.00	Tk. 109,684.00
8.1.4.2.3		2	Tk.	4,525,446.00	Tk. 117,364.00
8.1.4.2.4		2.5	Tk.	4,588,887.00	Tk. 119,009.00
8.1.4.2.5		3	Tk.	4,652,328.00	Tk. 120,654.00
8.1.4.2.6		3.5	Tk.	4,694,622.00	Tk. 121,750.00
8.1.4.2.7		4	Tk.	4,736,916.00	Tk. 122,847.00

8.1.4.3 Panorama / Capsule Lift

(i) Lift car shall have tempered and fire proof glass in three sides (including cabin & landing door).

(ii) The car shape may be customized as per site requirement & direction of the Engineer in charge.

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8.1.4.3 Panorama/Capsule Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Passenger/Capsule Lift		
			Upto 3-stop Price		Next per stop
8.1.4.3.15	1000kg	1	Tk.	4,218,814.00	Tk. 109,411.00
8.1.4.3.16		1.5	Tk.	4,440,859.00	Tk. 115,169.00
8.1.4.3.17		2	Tk.	4,751,718.00	Tk. 123,231.00
8.1.4.3.18		2.5	Tk.	4,818,330.00	Tk. 124,959.00
8.1.4.3.19		3	Tk.	4,884,944.00	Tk. 126,687.00
8.1.4.3.20		3.5	Tk.	4,929,351.00	Tk. 127,838.00
8.1.4.3.21		4	Tk.	4,973,761.00	Tk. 128,989.00
8.1.4.3.22	1250kg	1	Tk.	4,657,195.00	Tk. 115,845.00
8.1.4.3.23		1.5	Tk.	4,902,311.00	Tk. 121,942.00
8.1.4.3.24		2	Tk.	5,245,473.00	Tk. 130,480.00
8.1.4.3.25		2.5	Tk.	5,368,032.00	Tk. 132,309.00
8.1.4.3.26		3	Tk.	5,490,589.00	Tk. 134,138.00
8.1.4.3.27		3.5	Tk.	5,545,495.00	Tk. 135,357.00
8.1.4.3.28		4	Tk.	5,600,951.00	Tk. 136,577.00
8.1.4.3.29	1600kg	1	Tk.	5,606,065.00	Tk. 115,845.00
8.1.4.3.30		1.5	Tk.	5,901,121.00	Tk. 121,942.00
8.1.4.3.31		2	Tk.	5,923,180.00	Tk. 130,480.00
8.1.4.3.32		2.5	Tk.	5,945,239.00	Tk. 132,309.00
8.1.4.3.33		3	Tk.	6,066,572.00	Tk. 134,138.00
8.1.4.3.34		3.5	Tk.	6,121,723.00	Tk. 135,357.00
8.1.4.3.35		4	Tk.	6,176,874.00	Tk. 136,577.00
8.1.4.3.36	2000kg	1	Tk.	5,821,457.00	Tk. 115,845.00
8.1.4.3.37		1.5	Tk.	6,127,849.00	Tk. 121,942.00
8.1.4.3.38		2	Tk.	6,556,799.00	Tk. 130,480.00
8.1.4.3.39		2.5	Tk.	6,648,718.00	Tk. 132,309.00
8.1.4.3.40		3	Tk.	6,740,634.00	Tk. 134,138.00
8.1.4.3.41		3.5	Tk.	6,801,913.00	Tk. 135,357.00
8.1.4.3.42		4	Tk.	6,863,191.00	Tk. 136,577.00

8.1.4.4 Fire Fighters Lift

The Firefighters Lift shall be designed in conformity with EN 81-20 and EN 81-72:2015 and provided with additional protection, controls and signals.

Basic requirement must be considered:

The lift shall be designed to operate correctly during firefighting operations for a period equal to that required for the structure e.g. 2 hours according to the following conditions:

i) Electrical/electronic devices on landings, other than at the fire service access level, shall be designed to function correctly in an ambient temperature range of 0 °C to 65 °C or be made non-operational. A malfunction of devices (landing indicators and push buttons) shall not prevent operation of the lift under fire fighting conditions;

ii) The car roof shall be designed to prevent accumulating water and facilitate controlled draining from the roof. Electrical equipment within the car roof and outer walls shall be classified to at least IPX3 according to EN 60529.

iii) An emergency trap door shall be fitted to the car roof with minimum clear opening dimensions of 0.5 m x 0.7 m. Clear opening dimensions shall be measured with the ladder in the rescue position.

iv) The emergency trap door shall conform to EN 81-20:2014

v) A firefighter lift switch shall be located in the safe area intended to be used at the fire service access level. The switch shall be located within 2 m horizontally from the firefighters' lift, at a height between 1.4 m and 2.0 m above floor level. The switch shall be marked with a firefighters' lift pictogram and it shall be clearly indicated to which lift it is associated.

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vi) Operation of the firefighters lift switch shall be by means of the unlocking key, which fits the unlocking triangle as defined in EN 81-20:2014,

Lift Operation procedure :

i) A lift parked at a landing, shall close the doors and travel nonstop to the fire service access level. An audible signal shall sound in the car until the doors are closed. At the latest when the actual door dwell time exceeds 15 s, all heat and smoke sensitive door protection devices shall be made inactive and the doors shall attempt to close under reduced power;

ii) A lift travelling away from the fire service access level shall make a normal stop and reverse its direction at the nearest possible landing without opening the doors and return to the fire service access level;

iii) A lift travelling towards the fire service access level shall continue its travel non-stop to the fire service access level. If the lift has already started stopping at a level, it is acceptable to make a normal stop and without opening doors to continue to fire service access level;

iv) On arriving at the fire service access level, the firefighters lift shall be retained there with the car and landing doors kept in the open position.

Car and landing controls

i) The car and landing controls and associated control system shall not register false signals from the effects of heat, smoke, water or moisture. The fire service access level shall have a car position indicator.

ii) The car controls, position indicator inside the car, position indicator at the fire service access level and the firefighters lift switch shall be protected to at least IPX3 according to EN 60529.

iii) The landing control panels and landing indicators on other levels than fire service access level shall be protected to at least IPX3 according to EN 60529 unless they are electrically disconnected on initiation of the firefighters lift switch.

iv) In case of fire hazard, the control panel shall have the capability to receive signal from fire alarm control panel (FACP) / detectors and accordingly, the car shall not stop at the particular floor where fire incident occurred.

8.1.4.4 Fire Fighters Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Fire Fighters Lift		
			Upto 3-stop Price		Next per stop
8.1.4.4.1	1000kg	1	Tk.	4,419,711.00	Tk. 114,621.00
8.1.4.4.2		1.5	Tk.	4,652,328.00	Tk. 120,654.00
8.1.4.4.3		2	Tk.	4,977,990.00	Tk. 129,100.00
8.1.4.4.4		2.5	Tk.	5,047,775.00	Tk. 130,909.00
8.1.4.4.5		3	Tk.	5,117,559.00	Tk. 132,718.00
8.1.4.4.6		3.5	Tk.	5,164,082.00	Tk. 133,925.00
8.1.4.4.7		4	Tk.	5,210,606.00	Tk. 135,133.00
8.1.4.4.8	1250kg	1	Tk.	4,878,967.00	Tk. 121,361.00
8.1.4.4.9		1.5	Tk.	5,135,756.00	Tk. 127,749.00
8.1.4.4.10		2	Tk.	5,495,258.00	Tk. 136,691.00
8.1.4.4.11		2.5	Tk.	5,572,294.00	Tk. 138,607.00
8.1.4.4.12		3	Tk.	5,649,330.00	Tk. 140,524.00
8.1.4.4.13		3.5	Tk.	5,700,687.00	Tk. 141,801.00
8.1.4.4.14		4	Tk.	5,752,045.00	Tk. 143,078.00
8.1.4.4.15	1600kg	1	Tk.	5,488,804.00	Tk. 121,361.00
8.1.4.4.16		1.5	Tk.	5,777,687.00	Tk. 127,749.00
8.1.4.4.17		2	Tk.	6,182,126.00	Tk. 136,691.00
8.1.4.4.18		2.5	Tk.	6,268,791.00	Tk. 138,607.00
8.1.4.4.19		3	Tk.	6,355,456.00	Tk. 140,524.00
8.1.4.4.20		3.5	Tk.	6,413,235.00	Tk. 141,801.00
8.1.4.4.21		4	Tk.	6,471,012.00	Tk. 143,078.00

8.1.4.4 Fire Fighters Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Fire Fighters Lift		
			Upto 3-stop Price		Next per stop
8.1.4.4.22	2000kg	1	Tk.	6,098,669.00	Tk. 121,361.00
8.1.4.4.23		1.5	Tk.	6,419,652.00	Tk. 127,749.00
8.1.4.4.24		2	Tk.	6,869,026.00	Tk. 136,691.00
8.1.4.4.25		2.5	Tk.	6,965,323.00	Tk. 138,607.00
8.1.4.4.26		3	Tk.	7,061,618.00	Tk. 140,524.00
8.1.4.4.27		3.5	Tk.	7,125,813.00	Tk. 141,801.00
8.1.4.4.28		4	Tk.	7,190,009.00	Tk. 143,078.00

8.1.4.5 Car Lift

The Car Lift lift shall have the following features -

- i) Designed and manufactured in accordance with requirements of Lifts Directive 95/16/CE, throughout the accomplishment of Harmonized Norm EN 81-2 and the Directive of Electromagnetic Compatibility 89/336/CEE.
- ii) Test Certificate CE Type ATI/LD-VB/M012/99 (institution registered 0053), as MODEL LIFT

8.1.4.6 Car Lift					
Capacity (Kg)(Minimum)		Speed (m/sec)	Unit Price (Tk) for All Zones		
			Car Lift		
			Upto 3-stop Price		Next per stop
8.1.4.5.1	3000 kg	0.5	Tk.	12,167,413.00	Tk. 544,810.00
8.1.4.5.2	4000 kg	0.5	Tk.	13,983,445.00	Tk. 544,810.00
8.1.4.5.3	5000 kg	0.5	Tk.	15,708,675.00	Tk. 635,611.00

Estimation guideline for glass door Lift

For the Lift consists of 10 mm thick tempered glass doors, price per stop will be increased according to the table below :

Door Width (mm)	Lift Type	Price Increment per stop (Tk)
800-1000	A & B	Tk. 37,000
	C & D	Tk. 22,000
1100-1300	A & B	Tk. 95,000
	C & D	Tk. 45,000

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Detailed Specification of Lift (Passenger/ Bed/ Capsule/ Fire Fighters) :

- I. **Type** : Gearless, oil free, permanent magnet synchronous motor driven type passenger/ bed/Panorama/Fire fighter's Lift.
- II. **Capacity** : ----- kg. (----- Passenger) (To be inserted)
- III. **No of stops** : ----- Stops. (To be inserted)
- IV. **Travelling speed** : ----- m / sec (To be selected)
- V. **Car Travel height** : ----- Meters (approximate) (To be inserted)
- VI. **Floor Designation** : (G, 1, 2, 3, -----) (to be mentioned)
- VII. **Power rating** : Compatible with the capacity of the lift as mentioned above with 240 starts per hour minimum. (180 starts per hour in case of speed up to 1.0 m/sec)
- VIII. **Number of entrances** : 1 / 2 nos. arranged in the same line
- IX. (a) **Shaft size** : ----- mm (Width) x ----- mm (Depth), [the Dimensions to be inserted as per requirement mentioned in the standard chart given below or as per built-in shaft size].
(b) **Overhead Height** : ----- mm [to be selected from Chart]
- X. **Pit Depth** : ----- mm [to be selected from Chart]
- XI. **Machine Room Location** : Directly above hoist way ; MR (Machine room) / MRL (Machine Room Less) type
- XII. **Power Source** : 400 Volt. (+10%), 3-Phase, 50Hz.
- XIII. **Light mains** : 230 Volt. (+10%), single-phase 50Hz.
- XIV. **Signal Source** : 24 volt. D.C or as designed.
- XV. **Operation System** : Simplex / Duplex / Triplex / Quad duplex / DDS (Destination Dispatch System)
- XVI. **Control System** : Collective selective with fully programmable microprocessor control, BMS compatible, designed for optimum, efficient & energy saving elevator operation. All controls shall always be equipped with an alarm device in machine room, control room and other suitable places as per direction of the Engineer-in-charge. Variation in speed of the lift between no load & full load conditions shall not be more than +/- 10%. The control system shall be capable of correcting any tendency to over speed or under speed, shall have safety devices to stop the car if it's running speed exceeds it's rated speed by 20%. The car stopping & leveling system shall be unaffected by external influence like variation in load, temperature and rope elongation etc. There shall be enhanced protection mechanism to address the risk of the car moving away from the landing and the requirement for protection against ascending car overspeed. The drive control system with Thyristor/ IGBTs (Integrated Gate Bipolar Transistors) controls acceleration & deceleration getting feedback from encoder and shows information & data in LED display. The controller must be manufactured as per drawing & design by the proposed Brand of Lift manufacturing company. Test certificate of the control system shall be furnished during execution of work.
- XVII. **Additional controls & accessories :**
 * Over load control with indication lamp & buzzer/indication & buzzer.
 * Full load control with indication.
 * Attendant control.
 * Fire man's control switch at ground floor.
 * 3 station, (2-way) inter-communication system between the car, machine room & other suitable place.
 * Door close / open button in the car.
 * Sensor switch in the car for light & fan.
 * Line flow Fan fitted on drop ceiling for sufficient air flow.
 * Water detection system in Lift Shaft pit
- XVIII. **Maintenance control** : Car stop station with :
 * An initiation switch.
 * One up & down button.
 * One stop button
- XIX. **Traction Machine** : Gearless, oil free, permanent magnet synchronous motor (Class of insulation : F) which must be manufactured as per drawing & design of the lift manufacturing company.

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- XX. Drive system** : Inverter operated A.C. Variable Voltage, Variable frequency (AC-VVVF) drive system with the following features:
- * Microprocessor based steepless controlled, electronically regulated during acceleration & deceleration with floor approach.
 - * Electromagnet operated holding brake to be applied only after the car comes to a stand still.
 - * The capacity of the VVVF drive shall be minimum 20% higher than the optimum full load capacity of the driven motor of the lift.
 - * The microprocessor shall be of adequate bit data processing industrial class controller for commercial /residential/hospital/ observation lifts, with CAN bus serial Communication mode, suitable for 0.63-4.0 m/s elevator speed for synchronous /asynchronous traction motor, having analog/digital and multi speed action, load weighing compensation function, strong electromagnetic/ electrostatic anti-Interference ability.
 - * The entire control system of the lift shall be designed and manufactured in such a way that appropriately synchronizes the whole system.
 - * Test certificate of the drive system shall be furnished by Contractor during execution of work.
- XXI. Smooth leveling** : The lift shall be provided with automatic self leveling feature to ensure automatic aligning the car with the floor landing within maximum tolerance of (+/-) 5mm under normal loading & unloading conditions. Self-leveling will be entirely automatic & independent of the operating device & shall correct the over travel, under travel & rope stretch.
- XXII. CAR** : Car sizemm (width) x.....mm (depth), the dimensions to be inserted from the standard chart given below or as per customised condition of the built-in shaft. Car height shall be 2400 mm.
- (a) **Cabin floor** : Securedly fastened sheet steel sound isolated platform made of fire resistant and weather resistant sound absorbing synthetic materials that should be of as standard french classification M3, i.e. fire classification requirement cfl, s2 according to EN13501-1
- (b) **Car frame & safety** : Car body Passenger type made of entirely structural sheet steel (304/441 grade) assembly to safely support the rated load of the cabin & accessories with elastic isolators between metal parts to ensure low vibration & low noise during car travel with natural ventilation arrangement in ceiling & floor.
- For Passenger & Goods Lift / Stretcher / bed Lift :**
- (c) **Car type** : Entirely Stainless steel 304 / 441 grade made.
- (d) **Car body and roof** : The car body shall be of sufficient mechanical strength to resist accidental impact. The roof shall be capable of supporting two persons or minimum load of 150 kg. The platform shall be made of sheet steel. The enclosure height shall be 2400mm minimum below suspended ceiling.
- (e) **Cabin wall** : The material shall be of standard as French Classification M2 i.e. fire classification Cs2,d1 as per requirement according to EN13501-1 & it shall be 1.5 mm thick sheet steel with 0.7mm (minimum) stainless steel sheet walls with stainless steel etching hairline / mirror / hairline / digital print / synthetic wood / laminated wood finish in sections having in front, rear & side walls as per manufacturer's standard design to be to be such that the door shall withstand under an applied load of 300N without permanent deformation > 1mm and without elastic deformation > 15mm. Under an applied force of 1000N, all types of doors shall withstand without permanent deformation > 10mm. The devices providing mechanical linkage between panels shall withstand to the force of 1000N. A mechanical device shall prevent the door panels from disengaging from their guides.
- (f) **Cabin door** : Fully automatic heavy duty centre/side opening horizontal sliding door panel of stainless steel etching hairline/hairline/digital print finish to be such that the door (both landing and Car doors) shall withstand under an applied load of 300N without permanent deformation > 1mm and without elastic deformation > 15mm. Under an applied force of 1000N, all types of doors shall withstand without permanent deformation > 10mm. The devices providing mechanical linkage between panels shall withstand to the force of 1000N. A mechanical device shall prevent the door panels from disengaging from their guides.
- (g) **Car ceiling** : Anodized metal framed with decorative stainless steel luminous ceiling by LED light of 100 Lux in normal mode at 1m above the floor and 5 Lux in emergency mode for 1 hour at 1m at the center of the car and near the emergency push buttons Synthetic glass with diffused motion sensor LED lighting / any other options selected by the Engineer in charge.
- (h) **LOP & COP**: Metallic structures call button LED panel with indication system on each landing, digital car position indicators, arrival gong & direction indicators/arrows to be installed above or at the side of the landing doors at all landing & inside the car. Car Operating panel board to be installed inside the car. Manual call cancellation system should be incorporated inside lift car OPB. The center line of the hall call buttons shall be at a nominal height of 01 meter above the floor.

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- (i) **Other cabin features :** * 3 (Three) hand rails of smooth stainless steel of minimum 100 mm. width & 12 mm thickness or 30 mm dia round shape.
- * Mirror on full rear wall of car from top to hand rail.
 - * Re-tractable both safety shoes for the full height of the door which reopens the door when it is obstructed by any object while closing.
 - * Emergency exit with safety contact in car roof, the trap door can be opened from inside and outside the car.
 - * A door reversal feature in case of obstruction of door
 - * Concealed fan(s) fitted on ceiling for adequate forced ventilation of 20 air change per hour for Pandemic or non pandemic situation with better ventilation (Suitable for tropicalised Country like Bangladesh) to create comfortable environment for the passenger.

XXIII. **a) Door :** Door Height : 2100 mm, Door width & opening type : ----- (to be selected from Chart)

b) Doorsills : Doorsills shall be extruded aluminum with anti-slip grooving with guiding slots. For cargo & stretcher lift : Doorsills shall be extruded galvanized.

c) Door operation :

High-speed heavy-duty ACVVVF inverter operated door operator with adjustable speed for opening and closing. Door will be driven by quiet A.C. motor connected to an inverter operated door operation system. Car and landing doors will be open and close in full synchronization being connected to each other. The landing doors will have Electro-mechanical locks. Each landing door will be provided with positive interlock operated by a coupling on the car door and shall prevent the movement of the car away from the landing unless both doors are closed and locked. The interlocks will be designed to prevent opening of the door except at the landing, at which the car is stopping or has stopped. The door closing speed shall be reduced and an audible signal notifies users of a fault or the elevator will be stopped. A mechanical device prevents the door panels from disengaging from their guides. Also shall have :

- * Door detection system with Curtain of Light Mechanism
- * Enhanced control for Lift Car Door locking system that aims to prevent the doors from being opened from inside when the car is outside the unlocking zone.
- * The door closing speed shall be reduced and an audible signal notifies users of a fault or the elevator will be stopped. There shall be door pressure limit sensor.
- * A mechanical device prevents the door panels from disengaging from their guides.
- * Name of the door manufacturer to be mentioned in the door.

XXIV: **Safety features :** Non contact electronic full height door safety sensor, power supply, auto phase reversal correction, friction clutch to avoid passengers to be trapped between doors.

- a) Emergency unlocking of door from landing for evacuation as well as for maintenance with a special key.
- b) Facilities for opening of door from inside the car within the landing during power failure
- c) During power failure, Manual opening of doors from inside the car is possible within landing zone.
- d) A friction clutch to avoid passengers to be trapped between door.
- e) A door reversible feature in case of obstruction of door.
- f) In cases where installation of a safety hatch on the car roof is required, its dimension shall be of minimum clear opening 0.4mx0.5m, where the toe guard shall withstand applied force of 300N without permanent deformation >1mm and without elastic deformation >35mm.
- g) The brakes shall have self checking arrangement.

h) Under an applied force of 1000N, the shaft walls shall withstand without permanent deformation >1mm and without elastic deformation >15mm, without permanent deformation in the case of laminated glass type walls.

i) For safety of technicians, the safety refuge at top of the shaft shall be 2.0mx 0.4mx 0.5m(HxPxL) for standing, and 1.0mx0.5mx0.7m(hxPxL) for Crouching. Additional authorised position in the pit shall be 0.5mx0.7mx1.0m (HxPxL) considering laying condition. Car roof itself should also have an anti slip working surface.

j) Shaft lighting should provide a minimum of 50 Lux one meter above the car roof vertically, 1 meter above the pit floor everywhere a person can stand, work or move between work areas and 20 lux elsewhere excluding any

k) The lift machine room should have a lighting of a minimum 200 Lux.

l) Emergency lighting on the car roof must be sustained at 5 lux for one hour.

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- XXV: Guide Rails** :Guide rails shall be continuous throughout the entire length right from the bottom of the pit floor to the top most floor served, plus additional length as may be required for smooth operation or equivalent fixing devices shall be provided which are of such design & spacing that rails shall not deflect more than 4mm under normal condition. The relevant fixing devices such as brackets, clamps etc shall be of such design & spacing that rails shall not deflect more than 4mm under normal working condition. The dimension of the guide rails (both main and counter weight guide rails) shall be as per latest version of EN-81 standards.
- XXVI: Suspension Rope** :Main rope shall be of bright steel wires minimum 8mm dia or as per manufacturer's design with fiber/ham core having a safety factor at least 14 (for Lift type B & D) / Polyurethane coated steel belt (for Lift type A & C).
 * The rope suspension is to be constructed to shut the lift down if one or more suspension ropes become slack.
 * The over Speed Governor rope shall be of bright steel wires minimum 6mm dia or as per manufacturer's design having a safety factor at least 8.
- XXVII: Speed governor & safety gear** :Gradual type safety gear actuated by the speed governor to be installed in the machine room above the hoist way/inside the head room in order to stop the car quickly & safely in case of exceeding 20% of designed speed during down/up both wards travel for any reasons (i.e. breakage of all suspension elements).
 -Suitable means will be supplied to cut off power from the motor and apply brake on application of the safety
- XXVIII: Counter weight condition** :Car and counter weight guide rails shall be made as per International Standard and shall have working surface machined & smooth. There shall be counterweight safety gear in case of floating.
 i. **Buffer** :Energy absorbing oil buffer for speed more than 1m/sec, oil/spring buffer for speed less than 1m/sec shall be mounted in pit beneath the car & counter weight with suitable concrete foundation.
 ii. **Pre & final limit switch** :To disconnect the controller from electric power supply if the car over travels higher at the top or lower at the bottom terminal landing.
- XXIX: Traveling cable, wiring** :Traveling cables having conductors adequate in size & number.
 - All electrical cables shall be fire retardant and shall go through PVC conduits in machine room & shaft. The circuit, wiring cable of the motor shall not run through any pipe used in connection with the wiring for the control and safety devices.
- XXX: Automatic Rescue Device (ARD)** : Built-in Automatic Rescue Device set (ARD) set as per capacity of lift set with following specification travel height : 3.5 m to 7.0 m. Drive system : min 3 times/h and starting time after min 20 sec & max 180 sec that can be set manually. Direction : up or down which side is heavier
 Battery: Maintenance free Sealed Gelled / AGM battery or equivalent suitable for minimum three rescue operations without recharging and complete as per direction of the Engineer-in-Charge
- XXXI. Painting** : All exposed ferrous metal parts of machine, car, doors and other materials in the hoistway including guide rail fixation brackets (except guide rails) will have one coat of factory rust protecting paint.
- XXII. Operation and Maintenance** : 4 (Four) sets of detail operation & maintenance manuals, catalogues, spare parts catalogues with part number, control wiring diagrams and soft copy etc. shall be included to the supply of lift & the language shall be in English.
- XXXIII. Standard / conformity** : The entire lift shall be designed & manufactured as per latest version of EN-81 standards, EN-81-20, EN 81-50. The safety components, such as, progressive safety gear, door locking devices, buffers, over speed governor, car over travel protection system, door inter-locking device, pre and final limit switches of the proposed lift shall be in conformity with latest version of BNBC, BS EN-81/EN-81(Lift Directive 95/16/EC) / DIN / VDE / ANSI/ASME A17.1 / JIS standards & safety codes. Installation, testing and Commissioning of the lift shall also be in conformity with the above standards & codes.
 Certificates issued by internationally recognized authorities like TUV / DNV for the product(s) (At least the safety components such as, progressive safety gear, door locking devices, buffers, over speed governor, car over travel protection system, door inter-locking device, pre and final limit switches) of the manufacturer(s) as per above mentioned relevant valid regulations, codes and standards shall have to be submitted by the bidder.
 The above certificates shall have to be authenticated by the Chamber of Commerce / Ministry of Commerce / Foreign Ministry of the manufacturing Country. Relevant ISO certificate(s) of the manufacturer including lift ride quality measurement ISO 18738/5 shall also have to be submitted by the bidder.

End of Lift specification

Detailed Specification of Cargo/Goods/Service Lift :**Capacity:** _____ Kg**Travel Speed:** _____ m/sec**Rise:** _____ meters**Stops & openings:** _____ Stops and _____ openings (Both sides/ Single side)**Signals:** Up - Down direction indicators, position indicators in car and at all floors, battery operated emergency alarm bell**Operating voltage:** 3phase, 415 volts, AC, 50 Hz**Controlling:** Microprocessor Controlled, down collective control**Car size:** Dimension _____ mm X _____ mm, stainless steel cabin with fan LED Panel light, Aluminum checkered flooring, voice announcing System**Shaft Size:** _____ mm X _____ mm.**Clear entrance:** 1000mm**Car Door:** M.S. Collapsible manual door.**Landing Doors:** M.S. Collapsible manual door**Overhead height:** 4800mm .**Pit depth:** 1600mm**Cabin, Car frame, Safety and Governor:**

Structural Steel Car Frame to support the Car platform and enclosure shall be provided with suitable gear fixed underneath the frame. The safety, which is actuated by a speed governor, automatically and compulsorily, bring the car to an immediate stop by clutching the car mechanically between the guide rails in case the car speed exceeds a predetermined limit. A safety switch shall be provided to cut off the control circuit and apply the brakes as soon as safety is activated. The safety will be operated by a centrifugal over speed governor which is located either in machine room or in the hoist way depending on site conditions. Linkage to safeties connected through a continuous steel rope with car frame.

Safety switches: :

shall be provided on top of the cage as well as governor base as required to cut off power to the motor before application of the safeties.

Machine:

Single worm traction type located directly above the lift duct. Worm gear with worm wheel of centrifugally cast bronze and worm of specially forged steel both running in bearing to ensure vibration free travel with specially designed high duty lift motor with low starting current and high starting torque.

Limit switches:

Limit switches shall be provided ensuring to act independently of operating device for cutting all the energizing current in case of car travelling beyond the top most or bottom limit landing to bring the car to stop. A final limit switch shall be incorporated such that the switch automatically cause the power to be

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removed from the lift driving motor and brake and independent of functioning of normal terminal stopping device, operating device or any emergency terminal stopping device after the car pass a terminal landing.

Guide rails:

Guide rails for car and counter weights shall consist of machined/grounded mild steel T- section with required fixing arrangement. Counter weights shall consist of structural steel frame loaded with appropriated counter weight.

Control Panel:

Control panel shall be designed for trouble free & noiseless operation with maximum efficiency and longer life. It should come with single phase preventer, overload protection and phase reversal protection etc. with suitable VFD drive.

Door locks:

Every landing door shall be fitted with an electric interlock, which prevents the movement of car from landing by cutting off the supply to the control circuit, unless the gate or door is properly closed. The lock shall be fitted near top of the door track in such position that retiring cam collapses releasing the lever arm to remake electric contact and car can then only move from landing to any other floor.

Ropes:

High quality steel ropes suitable for elevator application shall be provided with adjustable self-aligning hitches.

Manual doors for car and landing doors:

Each landing entrance shall be provided with top hung steel collapsible doors fitted with ball bearing roller and shall arranged with a special bottom track made of aluminum or steel.

Detailed Specification of Car**Lift :**

Capacity: _____ Kg

Travel Speed: _____ m/sec

Rise: _____ meters

Stops & openings: _____ Stops and _____ openings (Both sides)

Signals: Up - Down direction indicators, position indicators in car and at all floors, battery operated emergency

Operating voltage: 3phase, 440 volts, AC, 50 Hz

Controlling: Microprocessor Controlled, down collective control.

Car size: _____ mm X _____ mm, stainless steel cabin with fan LED Panel light, Aluminum checkered flooring.

Shaft Size: _____ mm X _____ mm

Clear entrance: 1000mm

Car Door: M.S. Collapsible manual door.

Landing Doors: M.S. Collapsible manual door

Overhead height: 4800mm .

Pit depth: 1600mm

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Cabin, Car frame, Safety and Governor:

Structural Steel Car Frame to support the Car platform and enclosure shall be provided with suitable gear fixed underneath the frame. The safety, which is actuated by a speed governor, automatically and compulsorily, bring the car to an immediate stop by clutching the car mechanically between the guide rails in case the car speed exceeds a predetermined limit. A safety switch shall be provided to cut off the control circuit and apply the brakes as soon as safety is activated. The safety will be operated by a centrifugal over speed governor which is located either in machine room or in the hoist way depending on site conditions. Linkage to safeties connected through a continuous steel rope with car frame.

Safety switches:

shall be provided on top of the cage as well as governor base as required to cut off power to the motor before application of the safeties.

Machine:

Single worm traction type located directly above the lift duct. Worm gear with worm wheel of centrifugally cast bronze and worm of specially forged steel both running in bearing to ensure vibration free travel with specially designed high duty lift motor with low starting current and high starting torque.

Limit switches:

Limit switches shall be provided ensuring to act independently of operating device for cutting all the energizing current in case of car travelling beyond the top most or bottom limit landing to bring the car to stop. A final limit switch shall be incorporated such that the switch automatically cause the power to be removed from the lift driving motor and brake and independent of functioning of normal terminal stopping device, operating device or any emergency terminal stopping device after the car pass a terminal landing.

Guide rails:

Guide rails for car and counter weights shall consist of machined/grounded mild steel T- section with required fixing arrangement. Counter weights shall consist of structural steel frame loaded with appropriated counter

Control Panel:

Control panel shall be designed for trouble free & noiseless operation with maximum efficiency and longer life. It should come with single phase preventer, overload protection and phase reversal protection etc. with suitable VFD drive.

Door locks:

Every landing door shall be fitted with an electric interlock, which prevents the movement of car from landing by cutting off the supply to the control circuit, unless the gate or door is properly closed. The lock shall be fitted near top of the door track in such position that retiring cam collapses releasing the lever arm to remake electric contact and car can then only move from landing to any other floor.

Ropes:

High quality steel ropes suitable for elevator application shall be provided with adjustable self-aligning hitches.

Manual doors for car and landing doors:

Each landing entrance shall be provided with top hung steel collapsible doors fitted with ball bearing roller and shall arranged with a special bottom track made of aluminum or steel.

End of Car/Service/Goods Lift Specification

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8.2 Detailed Specification of Escalator

Supply of escalator including motor, control panel, drive unit, drive chain, steps, driving & trailing rollers/ wheels, step chain, hand rail, balustrade, floor plate, comb plate, cladding made of stainless steel (Steel grade : SUS 304/441) & accessories.

Escalator should be manufactured as per following technical specification and in conformity with EN 115 & ASME A 17.1 code and as per design selection by Engineer in Charge.

a) Environment:	Indoor
b) Control System:	AC VVVF Inverter, Automatic Operation with posts (stationary in stand by), energy saving operation such that escalator slows down when no passenger on it, escalator will be in motion when passenger approaches it.
c) Safety Features:	Stop Buzzer-Key switch, Anti slip floor plate, step with Anti slip groove, Demarcation line, Tiered demar cation line, comb light, Three Horizontal Steps, Warning System on Moving Handrail Inlet (Inlet Sensor), Directional Indication on handrail inlet cap (Handrail Inlet Cap LED Indicator)
d) Additional Safety Devices:	i) Inverter controlled Automatic & Variable speed operations. ii) Emergency stop button(E-Stop) - A button to stop the escalator in emergency situations. iii) Door Opening Switch (DOS) -A safety switch that stops the escalator when the manhole cover is opened. iv) Overload Detection Device (ODD) - A safety device that stops the escalator if overload has been detected by abnormal current or temperature of the drive motor. v) Drive chain safety device (DCS)- A safety device that stops the escalator if the drive chain breaks or stretches beyond an allowable limit. vi) Speed Governor (GOV) - A safety device that stops the escalator if the speed significantly decreases or increases to 120% of rated speed. vii) Electromagnetic Brake - A safety device that stops the escalator in the case of power failure or if any safety device or the emergency stop button has been activated. viii) Step Level Device (SRS) - A safety device that stops the escalator if the horizontal level of a step has dropped. ix) Comb step safety switch (CSS) - A safety device that stops the escalator if a foreign object becomes trapped in the gap between the stop & comb. x) Handrail Guard Safety Device (HSS) - Inlet Guard - A guard made of soft rublos, which fits over the outside of the moving hand rail where it enters the balustrade to keep fingers, hands or foreign objects away from the moving Hand rail opening. xi) Step Motion Safety Device (CRS) - A safety device to stop the escalator when a Step has been dislocated on its riser side due to an object caught between the Steps, or between the Skirt Guard and the Step, or if an abnormality has been observed in the Step motion. xii) Auxiliary brake-A safety device that stops the escalator if the speed exceeds the rated speed or before the Steps, traveling direction changes due to an abnormality such as breakage of the Drive Chain. Operation of emergency brakes every time service brake operates (including operation of power cuts) after a short delay and releases it before starting of escalator xiii) Skirt Guard Safety Device (SSS) - A safety device to stop the escalator if a shoe or other item becomes trapped in the gap between the Step and Skirt Guard. Skirt shall be with anti friction coating & Skirt brush. xiv) Inlet guard switch - a safety device that stops. xv) Handrail drive – Friction wheel type which creates a large contact surface and therefore minimum surface pressure in the handrail. xvi) Roller Track : Prevents wear and tear to the sides of the rollers. xvii) Floor cover contacts should switch off the unit when floor cover is opened xviii) Radar Sensor: when not in use escalator comes to halt to reduce power consumption. Escalators start automatically after recognising person. xix) Band Brake- to minimize braking torque for upward and downward travel for smooth and safe braking

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e) Finish and decorative components	Balustrade
	Under-Handrail Lighting
	Transparent tempered glass panel
	Stainless steel hairline panel
	Skirt Guard
	Fluoropolymer Coating
	Skirt Guard Lighting
	Deck Board
	Stainless steel hairline
	Steps
	Aluminum alloy Step Tread
	Aluminum alloy Cleat Riser
	Steps shall be of preferably of single piece aerospace die cast & light weight, weight of each step shall be maximum 10-12 Kg, which will sustain break load of minimum 17 KN
	Yellow Demarcation Line
	Depth:300 mm; Height:300 mm,
	Floor Plate
	Decorative Panel (Embossed stainless steel)
	Comb; comb plate should have 2 direction movement – Lateral & Vertical movement
	Extension of Floor Plate
	Connection of adjacent Floor Plates, all floor plates should be interlocked with each other
	Moving Handrail
	Handrail shall be made of Rubber (Black or other suitable color), it should have handrail brush. LED lights shall be with handrail including Skirt
	Handrail Inlet Cap
	It should be made of Plastic
	Roller
	Rollers must be made of hydrolysis resistant poly urethane tire (running surface) and special rolling-contact bearings
	Truss
	Truss shall be made of stainless steel (grade : SUS 304/441).
	Direction Arrows
	LED direction arrows to indicate direction for passenger
f) Power Supply	3 phase AC, 50/60 Hz for main and 1phase, 50/60Hz for lighting
g) Motor Power rating	7.5 KW (max.) (for up to 18' floor height) & 9.5 KW (max.)(for 20' floor height)
h) Inclination Angle	30°/35° (rise up to 6000mm)
	30° (rise up to 7000mm)
i) Speed	0.5m/sec
j) Passenger handling Capacity	6700 persons/hr for step width 800mm
	9000 persons/hr for step width 1000mm

8.2.1

Brand & country of origin (Type A) :

KONE (Finland), MITSUBISHI (Japan), OTIS (USA / Japan / France), Schindler (Switzerland), TKE (Germany), FUJITEC (Japan), HITACHI (Japan) or equivalent product; provided the escalator manufacturing company shall have multi-continental manufacturing plant. Besides, it shall have lift/ escalator manufacturing experience for a period of not less than 60 years in it's particular manufacturing plant where proposed brand of escalator will be manufactured .The proposed brand of escalator shall be manufactured and tested in **FINLAND / FRANCE / GERMANY / JAPAN / SWITZERLAND / UK / USA**, complying all other detailed specifications and standards stated in the item. .

	Step Width (mm)	Angle	Floor Height (mm) (approx)	Unit Price (Tk) for All Zones
8.2.1.1	800	30°	3050(10')	Tk. 15,654,194.00
8.2.1.2			3660(12')	Tk. 15,835,797.00
8.2.1.3			4270(14')	Tk. 16,380,607.00
8.2.1.4			4880(16')	Tk. 17,288,623.00
8.2.1.5			5490(18')	Tk. 18,196,638.00
8.2.1.6			6100(20')	Tk. 19,104,654.00
8.2.1.7	800	35°	3050(10')	Tk. 15,127,545.00
8.2.1.8			3660(12')	Tk. 15,309,148.00
8.2.1.9			4270(14')	Tk. 15,853,957.00
8.2.1.10			4880(16')	Tk. 16,761,973.00
8.2.1.11			5490(18')	Tk. 17,669,989.00
8.2.1.12	1000	30°	3050(10')	Tk. 16,026,480.00
8.2.1.13			3660(12')	Tk. 16,208,084.00
8.2.1.14			4270(14')	Tk. 16,752,893.00
8.2.1.15			4880(16')	Tk. 17,660,909.00
8.2.1.16			5490(18')	Tk. 18,568,925.00
8.2.1.17			6100(20')	Tk. 19,476,941.00
8.2.1.18	1000	35°	3050(10')	Tk. 15,327,308.00
8.2.1.19			3660(12')	Tk. 15,508,911.00
8.2.1.20			4270(14')	Tk. 16,053,721.00
8.2.1.21			4880(16')	Tk. 16,961,737.00
8.2.1.22			5490(18')	Tk. 17,869,753.00

8.2.2

Brand & country of origin (Type B) :

KONE (China), MITSUBISHI (Thailand/China), OTIS (China/ South Korea), Schindler (China), TKE (China/ South Korea), HITACHI (China), or equivalent product; provided the escalator manufacturing company shall have :

- multi-continental manufacturing plants .
- lift/ escalator manufacturing experience for a period of not less than 25 years in **it's particular manufacturing plant where proposed brand of escalator will be manufactured.**
- lift/ escalator manufacturing experience for a period of not less than 60 years in **USA/ EUROPE/JAPAN .**

The proposed brand of escalator, shall be manufactured and tested in **CHINA / THAILAND**, complying all other detailed specification & standard stated in the item.

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SRH(China), XIZI Unite (China), Fuji HD (China) , Mashiba (Malaysia), Toshiba (Thailand), Nidec(China), Sigma (China), Auxe (China), Schneider (China), Japan Sanyo (China), Bester (China) or equivalent product; provided the escalator manufacturing company shall have lift / escalator manufacturing experience in their own factory for a period of not less than 20 years and where the escalator shall be manufactured and tested in **CHINA / MALAYSIA / THAILAND/ INDIA**, complying all other detailed specification/ standard stated in the item.

	Step Width (mm)	Angle	Floor Height (mm) (approx)	Unit Price (Tk) for All Zones
8.2.3.1	800	30°	3050(10')	Tk. 6,864,600.00
8.2.3.2			3660(12')	Tk. 8,237,520.00
8.2.3.3			4270(14')	Tk. 9,871,949.00
8.2.3.4			4880(16')	Tk. 10,689,163.00
8.2.3.5			5490(18')	Tk. 11,506,377.00
8.2.3.6			6100(20')	Tk. 12,323,592.00
8.2.3.7	800	35°	3050(10')	Tk. 8,678,816.00
8.2.3.8			3660(12')	Tk. 8,842,259.00
8.2.3.9			4270(14')	Tk. 9,332,587.00
8.2.3.10			4880(16')	Tk. 10,149,802.00
8.2.3.11	1000	30°	5490(18')	Tk. 10,967,016.00
8.2.3.12			3050(10')	Tk. 9,357,104.00
8.2.3.13			3660(12')	Tk. 9,520,547.00
8.2.3.14			4270(14')	Tk. 10,010,875.00
8.2.3.15			4880(16')	Tk. 10,828,089.00
8.2.3.16			5490(18')	Tk. 11,645,304.00
8.2.3.17	1000	35°	6100(20')	Tk. 12,462,518.00
8.2.3.18			3050(10')	Tk. 8,883,119.00
8.2.3.19			3660(12')	Tk. 9,046,562.00
8.2.3.20			4270(14')	Tk. 9,536,891.00
8.2.3.21			4880(16')	Tk. 10,354,105.00
8.2.3.22			5490(18')	Tk. 11,171,319.00

8.2.3.22		5490(18)	1k.	11,171,319.00
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TERMS AND CONDITIONS OF LIFT (Part and parcel of tender document)

- 1 The bidder shall submit the technical proposal of Lift items with sealed & signed by manufacturing company on their Letterhead pad and main catalogue (marked) including mentioning brand, model & country of origin of the proposed lift.
- 2 The bidder shall submit a certificate issued by manufacturing Company stating the time span of Lift manufacturing experience of the manufacturer. The certificate must be authenticated by chamber of commerce/Ministry of Commerce/Ministry of foreign Affairs of Lift manufacturing Company. The bidder shall submit the detail address of the factory, telephone no., website address, e-mail address and company profile of the lift manufacturing company.
- 3 The proposed lift manufacturing company shall have it's own testing tower and R&D(Research and development) wing/centre, related document to be submitted with tender.
- 4 The bidder shall submit a certificate by manufacturing company stating that minimum 1000 Nos. of the proposed brand of lift have been used in minimum 10 (ten) countries of the world including the manufacturing country for equal to or more than ten years. The certificate must be authenticated by Chamber of Commerce/ Ministry of Commerce/ Ministry of Foreign Affairs of the lift manufacturing company.
- 5 EN 81 related certificates (EN 81-20 & EN 81-50, EN-81-77 for all types of lifts, EN 81-72:2015 for firefighter's lift, EN-81-31:2010 for Cargo lift) or its latest edition and Standard test certificates, Certified Test Certificates and Type Test reports (not older than 5 years), ISO certificates for management, occupational health and safety standard certificates, Environmental safety certificates obtained by lift manufacturer shall be submitted by Tenderer.
- 6 Each bidder must be the Sole agent /Representative / Distributor of the lift brand proposed in the tender and the bidder must submit its all valid supporting documents issued by original manufacturing company. Manufacturer's certificate stating that the bidder has sufficient trained and experienced manpower to install, test and commission the lift as per EN 81-21 code and relevant standard and conformities.
- 7 The bidder shall have B, C class contractor license provided by the electric licensing board. After completion of the work, the bidder and the manufacturing company shall provide the certification about installation, testing and commissioning of the lift and as built drawing of hoistway and machine room.
- 8 The bidder shall have one year's experience of maintenance of minimum 20 nos of lift and a detailed list of that experience shall be certified in a prescribed form and attested by the concerned Executive Engineer of PWD.
- 9 The bidder shall give the assurance from the manufacturing company to supply of spare parts for minimum 20 years and this assurance must be authenticated by the Chamber of Commerce/ Ministry of Commerce/ Ministry of foreign affairs of the concerned manufacturing company.
- 10 The bidder shall submit a certificate by manufacturing company stating that they manufacture PMS (Permanent Magnet Synchronus) type gearless motor, Polyurethane coated steel belt & Regenerative drive (in required cases), controller, inverter, motherboard, Door Inverter & all PCBs (Printed Circuit Boards) in their own factory. The certificate must be authenticated by Chamber of Commerce / Ministry of Commerce / Ministry of Foreign Affairs of the Lift Manufacturing Company.
- 11 The block diagram of the complete lift system including all control system with ACVVVF, power components, Regen drive (in required case) on manufacturer's letterhead pad must be submitted with the contract.
- 12 The bidder shall submit a work program to complete the Lift supply and installation work and submit a statement that before opening LC, they shall get selection of Lift items from Procuring entity prior to manufacturing.
- 13 The successful bidder must submit the detail packing list with sealed and signed by the lift manufacturing company to the concerned Executive Engineer minimum 15 days before shipment and Lift equipment shall be listed packet wise in detail. That packing list must comply the items described in the agreement and as per selection. The manufacturing company must certify that all parts/items are supplied in the packing list. The name of the project and LC no. shall be marked clearly in the packets. Equipment of one contract cannot be packetized together with other equipment/ other contracts.
- 14 Before shipment, Factory Acceptance Test (performance test of safety devices of lift and Quality assurance tests of the products as per standards) shall have to be carried out by the manufacturer in presence of nominated engineers of PWD at the lift manufacturing factory premises. One engineer will be nominated for one lift. For two lifts in a single tender minimum one engineer will accomplish this inspection and

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testing. For more than two lifts in a single tender, the number of nominated engineers will be increased by one per two lifts. All cost related to engineers' travel, food, accommodation, etc. will be borne by awarded organization/Manufacturer. The expenditure for this will be incorporated by the bidder at the time of participation. For special reasons if inspection is not performed by the engineers of the PWD, taking prior approval of the procuring entity quality assurance tests will be carried out by Internationally accepted inspection agencies(home and abroad).

- 15 Post landing inspection for imported lift(s) shall be done by representatives of Procuring Entity according to the packing list and the expenditure for it will be carried out by Contractor /Supplier. After post landing inspection from the port, the imported equipment shall be reached directly to the project site according to the condition of the contract.
- 16 The bidder shall certify that all given certificates/ documents/ drawings are complete and correct. If any error is found, the contract will be cancelled and the bidder will be disqualified from future participation of any tender.
- 17 Maintenance engineers of the tenderer must receive service level 1-2-3 certification, employees of them must receive quarterly training
- 18 Yearly Confirmation of Periodic Safety Inspection (CPSI) must be done on full portfolio of the tenderer organisation and yearly technical clarification audit must be done with mother company/Principal

****N.B.** Above mentioned 16 T&C alongwith Checklist for time duration for various steps of Lift import & installation, Checklist asking name and address of manufacturer of major parts of proposed Lift must be mapped in e-GP tender process by concerned Procuring Entity

TERMS AND CONDITIONS OF ESCALATOR **(Part and parcel of tender document)**

- 1 The bidder shall submit the technical proposal of Escalator with sealed & signed by manufacturing company on it's Letterhead pad and main catalogue (marked) including mentioning brand, model & country of origin of the proposed escalator.
- 2 The bidder shall submit a certificate issued by manufacturing Company stating the time span of Escalator manufacturing experience of the manufacturer. The certificate must be authenticated by chamber of commerce/Ministry of Commerce/ Ministry of foreign Affairs of escalator manufacturing Company. The bidder shall submit the detail address of the factory, telephone no., website address, e-mail address and company profile of the escalator manufacturing company.
- 3 The proposed escalator manufacturing company shall have their own testing facility and R&D(Research and development) wing/centre, related document to be submitted with tender.
- 4 The bidder shall submit a certificate by manufacturing company stating that minimum 100 Nos. of the proposed brand of Escalator have been used in minimum 10 (ten) countries of the world including the manufacturing country for equal to or more than ten years. The certificate must be authenticated by Chamber of Commerce/ Ministry of Commerce/ Ministry of Foreign Affairs of the escalator manufacturing company.
- 5 Latest EN 81 related certificates EN 81-115 or latest code for Escalator and Standard test certificates, Certified Test Certificates and Type Test reports (not older than 5 years), ISO certificates for management, occupational health and safety standard certificates, Environmental safety certificates obtained by escalator manufacturer shall be submitted by Tenderer.
- 6 Each bidder must be the sole agent/representative / Distributor of the Escalator brand proposed in the tender and the bidder must submit its all valid supporting documents issued by original manufacturing company. Manufacturer's certificate stating that the bidder has sufficient trained and experienced manpower to install, test and commission the EN 81-115 as per related code and relevant standard and conformities.
- 7 The bidder shall have B, C class contractor license provided by the electric licensing board. After completion of the work, the bidder and the manufacturing company shall provide the certification about installation, testing and commissioning of the Escalator and as built drawing of complete Escalator.
- 8 The bidder shall provide the assurance from the manufacturing company to supply of spare parts for

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Escalator for minimum 20 years and this assurance must be authenticated by the Chamber of Commerce/ Ministry of Commerce/ Ministry of foreign affairs of the concerned manufacturing company.

- 9 The bidder shall submit a certificate by Escalator manufacturing company stating that they manufacture Drive system, Auto-Lubrication System, Braking system, Safety devices, Landing Platforms, Truss, Tracks, Steps, Handrail, Escalator Exterior (Balustrade) in their own factory. The certificate must be authenticated by Chamber of Commerce / Ministry of Commerce / Ministry of Foreign Affairs of the escalator Manufacturing Company.
- 10 The block diagram of the complete Escalator system including all control system with ACVVVF, power components, on manufacturer's letterhead pad must be submitted with the contract.
- 11 The bidder shall submit a work program to complete the Escalator supply and installation work and a statement that before opening LC & Procuring entity shall complete selection process of Escalator items prior to manufacturing.
- 12 The successful bidder must submit the detail packing list with sealed and signed by the Escalator manufacturing company to the concerned Executive Engineer minimum 15 days before shipment and Escalator equipments shall be listed packet wise in detail. That packing list must comply the items described in the agreement and as per selection. The manufacturing company must certify that all parts/items are supplied in the packing list. The name of the project and LC no. shall be marked clearly in the packets. Equipment of one contract cannot be packetized together with other equipment/ other contracts.
- 13 Before shipment, Factory Acceptance Test (performance test of safety devices of escalator and Quality assurance tests of the products as per standards) shall have to be carried out by the manufacturer in presence of nominated engineers of PWD at the Escalator manufacturing factory premises. One engineer will be nominated for one unit Escalator. For two units Escalators in a single tender minimum one engineer will accomplish this inspection and testing. For more than two units of Escalator in a single tender, the number of nominated engineers will be increased by one per two units of Escalator. All cost related to engineers' travel, food, accommodation, etc. will be borne by awarded organization/Manufacturer. The expenditure for this will be incorporated by the bidder at the time of participation. For special reasons if inspection is not performed by the engineers of the PWD, taking prior approval of the procuring entity quality assurance tests will be carried out by Internationally accepted inspection agencies (home and abroad).
- 14 Post landing inspection of Escalator(s) shall be done by representatives of Procuring Entity according to the packing list and the expenditure for it will be carried out by Contractor/Supplier. After post landing inspection from the port, the imported equipment shall be reached directly to the project site according to the condition of the contract.
- 15 The bidder shall submit a valid statement authenticated by concerned Executive Engineer of PWD for successful completion of minimum 20 Units of proposed brand of Escalator have been done in Bangladesh and out of 15 shall be in the list with location, capacity, rise and year of installation.
- 16 The bidder shall certify that all given certificates/ documents/ drawings are complete and correct. If any error is found, the contract will be cancelled and the bidder will be disqualified from future participation of any contract.
- 17 Maintenance engineers of the tenderer must receive service level 1-2-3 certification, employees of them must receive quarterly training
- 18 Yearly Confirmation of Periodic Safety Inspection (CPSI) must be done on full portfolio of the tenderer organisation and yearly technical clarification audit must be done with mother company/Principal

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Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
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8.3 LIFT INSTALLATION

Installation, testing and commissioning of the above lift including supplying of necessary fixing materials, Architrave & transom : Stainless Sheet steel mirror/hairline finish architrave covering the door entrances sides and transom covering the top about 400mm for main entry & Narrow architrave Mirror /Hairline finish for typical floor. Stainless steel (Steel grade : SUS 304 /441) mirror/Hairline finish Transom Panel shall be provided at main entry. Architrave for Ground Floor :Made of hairline or mirror polished stainless steel (Steel grade : SUS 304/441).Architrave for typical floor :Narrow jamb made of hairline or mirror polished stainless steel of minimum 50mm x 50mm size. Transom for Ground Floor : Made of hairline or mirror polished stainless steel as per width of door entrance top,shaft lighting with wirings, additional works on base foundation (if necessary) for machineries and painting of all parts and initial lubrication shall be carried out as per BSEN-81 /EN-81.21(Lift Directive 95/16/EC)/DIN/ VDE/ ANSI /ASME A17.1/ JIS

For ride quality measurement, ISO 18738/5 is to be followed (noise in car at it's highest speed not more than 60 dBA, maximum horizontal vibration at car platform at highest speed shall be 20dBA, maximum vertical vibration at car platform at highest speed shall be 30dBA). The supplier / Installer shall carry out 16 hours per day trial run operation for 30 (thirty) days before handing over the lift to the competent authority.

All electrical and civil works mending good the damages in connection with installation of the lift shall be carried out in accordance with the provision of the Bangladesh National Building code, latest Bangladesh Electricity Rules, Regulations & PWD specification. All non-current carrying metallic enclosure of electrical materials/equipment viz. electric motor frames, control panel, other metallic cases, door, call and control button, car switch, limit switch, junction boxes & similar electric fittings shall be properly connected to the earthing system. All the works in this regard shall conform to general standards, codes and specifications of PWD. The bidder shall ensure to use steel scaffolding items (preferably) avoiding bamboo,barricade, lifeloine,safety shoes,

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Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
	Helmets,Gloves, Goggles and all the safety measure as per international safety codes for the workers, supervisors and others during the installation period. (For Passenger/Bed/Panorama/Fire Fighter's Lift)					
8.3.1	For 630 kg. - 1000 kg. capacity					
8.3.1.1	Upto 3-stop	Job	Tk. 94,715.00	Tk. 93,010.00	Tk. 86,569.00	Tk. 86,569.00
8.3.1.2	Next per stop (up to 10 stops)	Job	Tk. 19,004.00	Tk. 18,662.00	Tk. 17,370.00	Tk. 17,370.00
8.3.1.3	Next per stop (11 stops & above)	Job	Tk. 20,904.00	Tk. 20,529.00	Tk. 19,106.00	Tk. 19,106.00
8.3.2	For 1250 kg. - 1500/1600kg. capacity					
8.3.2.1	Upto 3-stop	Job	Tk. 110,826.00	Tk. 108,832.00	Tk. 101,295.00	Tk. 101,295.00
8.3.2.2	Next per stop (up to 10 stops)	Job	Tk. 19,004.00	Tk. 18,661.00	Tk. 17,369.00	Tk. 17,369.00
8.3.2.3	Next per stop (11 stops & above)	Job	Tk. 20,904.00	Tk. 20,527.00	Tk. 19,106.00	Tk. 19,106.00
8.3.3	For 1800 kg. - 2000 kg. capacity					
8.3.3.1	Upto 3-stop	Job	Tk. 125,717.00	Tk. 123,455.00	Tk. 114,906.00	Tk. 114,906.00
8.3.3.2	Next per stop (up to 10 stops)	Job	Tk. 19,004.00	Tk. 18,661.00	Tk. 17,369.00	Tk. 17,369.00
8.3.3.3	Next per stop (11 stops & above)	Job	Tk. 20,904.00	Tk. 20,527.00	Tk. 19,106.00	Tk. 19,106.00
8.3.4	For 2100kg-2500 kg capacity					
8.3.4.1	Upto 3-stop	Job	Tk. 138,289.00	Tk. 135,800.00	Tk. 126,396.00	Tk. 126,396.00
8.3.4.2	Next per stop (up to 10 stops)	Job	Tk. 19,004.00	Tk. 18,661.00	Tk. 17,369.00	Tk. 17,369.00
8.3.4.3	Next per stop (11 stops & above)	Job	Tk. 20,904.00	Tk. 20,527.00	Tk. 19,106.00	Tk. 19,106.00
8.3.5	For 3000 kg. - 5000 kg. capacity Car lift					
8.3.5.1	Upto 3-stop	Job	Tk. 490,819.00	Tk. 481,985.00	Tk. 448,609.00	Tk. 448,609.00
8.3.5.2	Next per stop (up to 10 stops)	Job	Tk. 122,705.00	Tk. 120,496.00	Tk. 112,152.00	Tk. 112,152.00
8.3.5.3	Next per stop (11 stops & above)	Job	Tk. 134,975.00	Tk. 132,546.00	Tk. 123,367.00	Tk. 123,367.00
8.3.6	For 1600 kg. - 5000 kg. capacity Cargo/ Goods/ Service lift					
8.3.6.1	Upto 3-stop	Job	Tk. 269,951.00	Tk. 265,092.00	Tk. 246,735.00	Tk. 246,735.00
8.3.6.2	Next per stop (up to 10 stops)	Job	Tk. 49,082.00	Tk. 48,198.00	Tk. 44,861.00	Tk. 44,861.00
8.3.6.3	Next per stop (11 stops & above)	Job	Tk. 53,990.00	Tk. 53,018.00	Tk. 49,347.00	Tk. 49,347.00

8.4 ESCALATOR INSTALLATION

Installation, testing and commissioning of the above escalator unit including supplying of necessary fixing materials, additional works on base foundation (if necessary) for machineries and painting of all parts and initial lubrication shall be carried out as per EN-1115/DIN/ VDE/ ANSI /ASME A17.1/ JIS .The supplier / Installer shall carry out 16 hours per day trial run operation for 30 (thirty) days before handing over the Escalator to the competent authority.

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Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
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All electrical and civil works mending good the damages in connection with installation of the Escalator shall be carried out in accordance with the provision of the Bangladesh National Building code, latest Bangladesh Electricity Rules, Regulations & PWD specification. All non-current carrying metallic enclosure of electrical materials/equipment viz. electric motor frames, control panel, other metallic cases, steps, handrail, junction boxes & similar electric fittings shall be properly connected to the earthing system. All the works in this regard shall conform to general standards, codes and specifications of PWD. The bidder shall ensure all the safety measure as per international safety codes for the workers, supervisors and others during the installation period.

Per Unit Tk. 55,217.00 Tk. 54,223.00 Tk. 50,469.00 Tk. 50,469.00

8.5 ARD

(For replacing the existing used unserviceable ARD only)

Providing & fixing Automatic rescue device set(ARD) of lift set of following specification travel height : 3.5 m to 7.0 m

Drive system : min 3 times/h and starting time after min 20 sec & max 180 sec that can be set manually

Direction : up or down which side is heavier

Battery: Maintenance free Sealed Gelled / AGM battery or equivalent as per direction of the Engineer-in-Charge.

8.5.1	Capacity : 630 kg to 800 kg lift	P/Job	Tk. 223,026.00	Tk. 223,026.00	Tk. 223,026.00	Tk. 223,026.00
8.5.2	Capacity : 1000 kg and above	P/Job	Tk. 294,520.00	Tk. 294,520.00	Tk. 294,520.00	Tk. 294,520.00

8.6 AVR

Supply, installation, testing & commissioning of following 415V, 3-phase, 50Hz electronically controlled, automatic voltage stabilizer/regulator locally assembled in metallic painted cabinet suitable for input voltage range 300 - 460V, output stepless continuous voltage 400V \pm 3%, correction speed 20V/sec. (minimum) complete with phase failure and spike & surge-fluctuation voltage protection, auto shut off at high & low voltage with auto reset system, overload & instantaneous short circuit protection by MCCB & relay, transient suppression circuit, ON-OFF-TRIP indicators, voltmeter & ammeter, bypass circuit etc.

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Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
	Assembled by AEG/ MICRO/ NAVANA/ RAHIMAFROOZ / GREEN POWER/ GIGA POWER/ JUST POWER or equivalent accepted/approved by the Engineer.					
8.6.1	10 KVA AVR	Each	Tk. 84,850.00	Tk. 84,850.00	Tk. 84,850.00	Tk. 84,850.00
8.6.2	15 KVA AVR	Each	Tk. 93,103.00	Tk. 93,103.00	Tk. 93,103.00	Tk. 93,103.00
8.6.3	20 KVA AVR	Each	Tk. 108,508.00	Tk. 108,508.00	Tk. 108,508.00	Tk. 108,508.00
8.6.4	30KVA AVR	Each	Tk. 126,421.00	Tk. 126,421.00	Tk. 126,421.00	Tk. 126,421.00
8.6.5	40KVA AVR	Each	Tk. 177,893.00	Tk. 177,893.00	Tk. 177,893.00	Tk. 177,893.00
8.6.6	50KVA AVR	Each	Tk. 230,466.00	Tk. 230,466.00	Tk. 230,466.00	Tk. 230,466.00
8.6.7	60KVA AVR	Each	Tk. 238,047.00	Tk. 238,047.00	Tk. 238,047.00	Tk. 238,047.00
8.6.8	75KVA AVR	Each	Tk. 308,592.00	Tk. 308,592.00	Tk. 308,592.00	Tk. 308,592.00
8.6.9	100KVA AVR	Each	Tk. 458,279.00	Tk. 458,279.00	Tk. 458,279.00	Tk. 458,279.00
8.6.10	150KVA AVR	Each	Tk. 550,887.00	Tk. 550,887.00	Tk. 550,887.00	Tk. 550,887.00
8.6.11	200KVA AVR	Each	Tk. 668,615.00	Tk. 668,615.00	Tk. 668,615.00	Tk. 668,615.00
8.7	<u>LIFT ACCESSORIES</u>					
	<u>Counter weight</u>					
	Supply and fixing of counter weight of cast iron as required (local made)	Per kg.	Tk. 67.00	Tk. 67.00	Tk. 67.00	Tk. 67.00
8.8	<u>JOIST</u>					
8.8.1	Providing, fitting & fixing of Joist or support beam between two lift shafts with ney. materials in/c. fabrication, fittings, fixing, reveting, welding, hoisting by rivets, bolts etc. & painting the same complete. (I-section size 250 mm x 125mm & Shall be 10 mm thick M.S plate) as per sample accepted/approved by the Engineer in charge.	Per meter	Tk. 4,739.00	Tk. 4,739.00	Tk. 4,739.00	Tk. 4,739.00
8.8.2	Providing, fitting & fixing of Joist or support beam between two lift shafts with ney. materials in/c. fabrication, fittings, fixing, reveting, welding, hoisting by rivets, bolts etc. & painting the same complete. (I-section size 300 mm x 150 mm & Shall be 10 mm thick M.S plate) as per sample accepted/approved by the Engineer in charge.	Per meter	Tk. 6,824.00	Tk. 6,824.00	Tk. 6,824.00	Tk. 6,824.00
8.9	<u>ARCHITRAVES</u>					
	Providing, fitting & fixing of wide jam architraves in front of lift door made by smooth stainless steel mirror polished/mirror finished sheet Shall be 1.5 mm thick in/c. fabrication, riveting, the same complete as per sample accepted/approved by the Engineer in charge.	P/sqm.	Tk. 38,212.00	Tk. 38,212.00	Tk. 38,212.00	Tk. 38,212.00
8.10	<u>MAIN ROPE</u>					
	Providing & fixing Main Rope shall be of bright steel wires with Ham/ fiber cores having a safety factor at least 14 as required as per sample accepted/approved by the Engineer in charge.					

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
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8.10.1	Size : 6/8 mm dia	P/mtr	Tk. 212.00	Tk. 212.00	Tk. 212.00	Tk. 212.00
8.10.2	Size : 10 mm dia	P/mtr	Tk. 290.00	Tk. 290.00	Tk. 290.00	Tk. 290.00
8.10.3	Size : 12 mm dia	P/mtr	Tk. 375.00	Tk. 375.00	Tk. 375.00	Tk. 375.00

8.11 LIFT REPAIRING**Trailing Cable**

Labour charge for disconnecting the old/ damaged trailing cables from panel board/ control box/ switching unit/ control unit/door control/ signaling unit/ power supply unit etc. in all floors, machine room and car top including wrapping re-connecting pre-supplied trailing cables with all the controls/ devices in all the floors, machine room and car top with checking, testing, adjusting and leveling all the controls and devices etc for smooth operation of the lift.

8.11.1	Upto 3 stop lift	Each	Tk. 15,364.00	Tk. 15,364.00	Tk. 15,364.00	Tk. 15,364.00
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8.11.2	Add Tk.2800.00 per lift per stop (after 3 stops)					
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8.12 MONTHLY SERVICING & MAINTENANCE OF LIFT

Monthly servicing and maintenance of lift such as cleaning, checking, trouble shooting, adjusting, balancing, greasing, oiling fixing of spares etc. as described in details by Engineer in Charge required for trouble free operation of lift.

8.12.1	Upto 3-stop: Per Lift	Per Month	Tk. 4,431.00	Tk. 4,431.00	Tk. 4,431.00	Tk. 4,431.00
8.12.2	Next per stop (up to 11 stop) : Per Lift	Per Month	Tk. 402.00	Tk. 402.00	Tk. 402.00	Tk. 402.00
8.12.3	12-stop and above: Per Lift	Per Month	Tk. 9,654.00	Tk. 9,654.00	Tk. 9,654.00	Tk. 9,654.00

8.13 MONTHLY OPERATION OF LIFT

Operation of lift as per lift operation manual and direction of the E/Ch by engaging required number of lift operators. (Rate to be determined based on zone and area)

For Dhaka Metropolitan Areas	Per Person Per Month	Tk. 20,656.00				
For Chattogram, Khulna, Rajshahi, Sylhet, Barishal, Rangpur, Narayanganj and Gazipur City Corporation and Savar Municipality Areas	Per Person Per Month	Tk. 19,495.00	Tk. 19,495.00	Tk. 19,495.00	Tk. 19,495.00	
Other Areas	Per Person Per Month	Tk. 18,920.00	Tk. 18,920.00	Tk. 18,920.00	Tk. 18,920.00	

As per circular issued by Finance Division, Ministry of Finance, No- 07.153.029.07.00.01.2019-259 Date: 10/06/2019)

[Handwritten signatures and initials]