

QRs/ TDs OF ARTIFICIAL CLIMBING WALL
Technical Specification (4 Face Wall)

All parameters/ specifications mentioned in QRs will be checked by the Board of Officers by ascertaining/verifying following checks in the presence of Vender/Supplier/Manufacturer. In case of any discrepancies/problem, the vender/rep of firm will demonstrate the features to the Board of Officers of the force concerned. Further, if proper testing instrument for testing these parameters is not available with user, same will be arranged by the vender.

- i) **Physical Checks** : - In this category, specification of the equipment will be checked physically as per QR.
- ii) **Functional Checks**: - The vender will show all the features/ configuration of the equipment functioning on ground to the Board of Officers during trial.
- iii) **Submission of certificates**: - Specification which cannot be checked due to lack of testing facilities/expertise, self-certificate of OEM has to be provided by the vender/bidder during trial.

S/ No	Specification	Qualitative Requirement (QR)	Trial Directives
FACE-1 (Tactical Climbing Wall)			
1.	Vertical height of wall	15.0 Meter	The Board will carry out physical check as well as functional test of height of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
2.	Width of faces	6.0 Meter	The Board will carry out physical check as well as functional test of width of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
3.	Number of face of wall	Face 6.0 Meter wide with Lead Climbing Panels	The Board will carry out physical check as well as functional test of face of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
4.	Total climbing surface	Single face 100 Sq. meter Including side cover Panels	The Board will carry out physical check as well as functional test of climbing surface. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
5.	Usage	Multipurpose training (beginners, as well as intermediate/advance level climbers)	The Board will carry out physical check as well as functional test of usage of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
6.	Number of climbers	At least 3 climbers simultaneously per face	The Board will carry out physical check as well as functional test of climbing surface. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.

2073

A B cm

7.	Support Structure	Self-Standing M.S. Structure as per IS:800	The Board will carry out physical check as well as functional test of support structure. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender for IS: 800 Certificate.
8.	Surface	Climbing surface of wall EN:12572-2017 certified 3D and 2D polyester resin panel having SAND FINISH on outer face minimum 10mm thick on flanges and 6mm in the centre thickness with provision of fixing external movable holds @ min.4 Nos./Sq.Mtr meant for outdoor use to take loading and reaction force as per Climbing Standard.	The Board will carry out physical check as well as functional test of the provided specification and also check the EN certificate of the panels provided by the vender. Further, in case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
9.	Safety Top Rope Anchor	4 Nos. Fixed Top per face. Anchors security system EN:12572-2017 Certified	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate Submitted by the vender for EN:12572-2017 certification.
10.	TUV/UIAA/UL Certified Holds with certificatory	250 Nos TUV/UIAA/UL Certified Holds	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officers will check the OEM compliance Certificate submitted by the vender for TUV/UIAA/UL certification.
11.	Bolts and Nuts	Hot dip galvanized or Zinc plated TUV/UIAA/UL Certified	The Board will carry out physical check as well as functional test of mentioned specification. Also check the OEM certification provided by the vender for material used in Bolts & Nuts.
12.	Lead protection/ anchors loading	Individual Protection Point (IPP) to take loading as per EN 12572-2017.	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate submitted by the vender for EN: 12572-2017 certification.
13.	Foundation	2.0 Meter depth RCC as per IS 456 :2000. May vary as per soil condition /site condition.	The Board of Officer will check the OEM Certificate submitted by the vender for RCC construction and IS 456:2000 Certificate for certifying prescribed construction norms.
FACE-2 (IFSC Standard Speed Climbing Wall)			
1.	Vertical height of wall face wise specifications	15 meter	The Board will carry out physical check as well as functional test of height of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.

20/3

H Cm

2.	Width of faces	6 meters	The Board will carry out physical check as well as functional test of width of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
3.	Number of face of wall	1 Face 6.0 meter wide	The Board will carry out physical check as well as functional test of face of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
4.	Total Climbing surface	93.0 Sq. meter	The Board will carry out physical check as well as functional test of climbing surface. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
5.	Usage	Multipurpose training (beginners, as well as intermediate/advance level climbers)	The Board will carry out physical check as well as functional test of usage of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
6.	Number of climbers	2 Climbers simultaneously.	The Board will carry out physical check as well as functional test of climbing surface. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
7.	Support Structure	Self-Standing M.S. Structure as per IS:800	The Board will carry out physical check as well as functional test of support structure. Also the Board of Officers will check the OEM compliance Certificate submitted by the vender for IS: 800 certificate.
8.	Surface	Climbing surface of wall EN: 12572-2017 certified 2D FRP (fiber reinforced plastic) panels with top and bottom layer of chopped and woven roving fiber glass and resin and a polyvinyl chloride core and shape with minimum 18mm thickness. Panels shall have provision of insert holes @ minimum 110 no's per panels for fixing holds The panels should be able to withstand climbers	The Board will carry out physical check as well as functional test of the provided specification and also check the EN: 12572-2017 certification provided by the vender. Further, in case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.

[Handwritten signatures and initials in blue ink]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

		weight, weather proof for outdoor use and meet norms as per EN12572:2017 STANDARDS.	
9.	Safety Top Rope Anchor	2 No.s Fixed Top Anchors security system EN: 12572-2017 Certified	The Board will carry out physical check as Well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate submitted by the vender for EN:12572-2017 certification.
10.	Speed Holds	IFSC certified speed Climbing Holds 40 Nos. Hand Holds 22 Nos. Foot Holds TUV/UIAA/UL Certified	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender for TUV/UIAA/UL certification.
11.	Bolts and Nuts	Hot dip galvanized or Zinc plated TUV/UIAA/UL Certified	The Board will carry out physical check as well as functional test of mentioned specification. Also check the OEM certification provided by the vender for material used in Bolts & Nuts.
12.	Lead protection/ anchors loading	Individual Protection Point (IPP) to take loading as per EN 12572-2017	The Board will carry out physical check as well as functional test of mentioned parameter. Also the Board of Officer will check the OEM Certificate submitted by the vender for EN:12572-2017 certification.
13.	Foundation	2.0 Meter depth RCC as per IS 456 :2000. May vary as per soil condition /site condition.	The Board of Officer will check the OEM Certificate submitted by the vender for RCC construction and IS 456:2000 Certificate for certifying prescribed construction norms.
FACE-3 (Rappelling Climbing Wall)			
1.	Vertical height of wall face wise specifications	15 meter	The Board will carry out physical check as well as functional test of height of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
2.	Width of faces	3 meters	The Board will carry out physical check as well as functional test of width of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
3.	Number of face of wall	1 Face 3.0 meter wide	The Board will carry out physical check as well as functional test of face of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
4.	Total Climbing surface	50.0 Sq. meter including side cover panels	The Board will carry out physical check as well as functional test of climbing surface. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
5.	Usage	Multipurpose training	The Board will carry out physical check

2/7/23

d/cum

		(beginners, as well as intermediate/advance level climbers_	as well as functional test of usage of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
6.	Number of climbers	1 Climbers	The Board will carry out physical check as well as functional test of climbing surface. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
7.	Support Structure	Self-Standing M.S. Structure as per IS:800	The Board will carry out physical check as well as functional test of support structure. Also the Board of Officers will check the OEM compliance Certificate submitted by the vender for IS: 800 certificate.
8.	Surface	Climbing surface of wall EN:12572-2017 certified 3D and 2D polyester resin panel having SAND FINISH on outer face minimum 10mm thick on flanges and 6mm in the centre thickness with provision of fixing external movable holds @ min.4 Nos./Sq.Mtr meant for outdoor use to take loading and reaction force as per Climbing Standard.	The Board will carry out physical check as well as functional test of the provided specification and also check the EN: 12572-2017 certification provided by the vender. Further, in case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
9.	Safety Top Rope Anchor	1 No.s Fixed Top Anchors security system EN: 12572-2017 Certified	The Board will carry out physical check as Well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate submitted by the vender for EN:12572-2017 certification.
10.	Bolts and Nuts	Hot dip galvanized or Zinc plated . TUV/UIAA/UL Certified	The Board will carry out physical check as well as functional test of mentioned specification. Also check the OEM certification provided by the vender for material used in Bolts & Nuts.
11.	Lead protection/ anchors loading	Individual Protection Point (IPP) to take loading as per EN 12572-2017	The Board will carry out physical check as well as functional test of mentioned parameter. Also the Board of Officer will check the OEM Certificate submitted by the vender for EN:12572-2017 certification.
FACE-4 (Lead Climbing Wall)			
1.	Vertical height of wall	15.0 Meter	The Board will carry out physical check as

en3

of cm

			well as functional test of height of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
2.	Width of faces	3.0 Meter	The Board will carry out physical check as well as functional test of width of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
3.	Number of face of wall	Face 3.0 Meter wide with Lead Climbing Panels	The Board will carry out physical check as well as functional test of face of wall. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
4.	Total climbing surface	Single face 50 Sq. meter Including side cover Panels	The Board will carry out physical check as well as functional test of climbing surface. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
5.	Usage	Multipurpose training (beginners, as well as intermediate/advance level climbers)	The Board will carry out physical check as well as functional test of usage of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
6.	Number of climbers Support	At 1 climber simultaneously per face	The Board will carry out physical check as well as functional test of climbing surface. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.
7.	Structure	Self-Standing M.S. Structure as per IS:800	The Board will carry out physical check as well as functional test of support structure. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender for IS: 800 Certificate.
8.	Surface	Climbing surface of wall EN:12572-2017 certified 2D polyester resin panel having SAND FINISH on outer face minimum 10mm thick on flanges and 6mm in the centre thickness with provision of fixing external movable holds @ min.4 Nos./Sq.Mtr meant for outdoor use to take loading and reaction force as per Climbing	The Board will carry out physical check as well as functional test of the provided specification and also check the EN certificate of the panels provided by the vender. Further, in case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.

[Handwritten signatures and initials in blue ink]

[Handwritten signatures and initials in blue ink]

		Standard.	
9.	Safety Top Rope Anchor	2 Nos. Fixed Top per face. Anchors security system EN:12572-2017 Certified	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate Submitted by the vender for EN:12752-2017 certification.
10.	TUV/UIAA/UL Certified Holds with certificatory	125 Nos TUV/UIAA/UL Certified Holds	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officers will check the OEM compliance Certificate submitted by the vender for TUV/UIAA/UL certification.
11.	Bolts and Nuts	Hot dip galvanized or Zinc plated TUV/UIAA/UL Certified	The Board will carry out physical check as well as functional test of mentioned specification. Also check the OEM certification provided by the vender for material used in Bolts & Nuts.
12.	Lead protection/ anchors loading	Individual Protection Point (IPP) to take loading as per EN 12572-2017.	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate submitted by the vender for EN: 12572-2017 certification.
13	Foundation	2.0 Meter depth RCC as per IS 456 :2000. May vary as per soil condition /site condition.	The Board of Officer will check the OEM Certificate submitted by the vender for RCC construction and IS 456:2000 Certificate for certifying prescribed construction norms.
	List of Equipment/Accessories		Prospective bidder should provide and fix: (a) SS Belay anchor point – 8 nos. (b) Climbing holds (Imported) – 250 nos. (with nut-bolt) (c) Speed climbing holds (20 Hand Holds + 11 Feet Holds) – 2 set (d) Dynamic climbing rope of 10.1 mm – 400 meter. (e) Sports climbing seat harness – 15 nos. (f) D-shaped screw carabineer – 25 nos. (g) Steel Quick Draw – 30 Nos. (h) Belay device – 10 nos. (i) GRIGRI – 4 nos. (j) Mittens – 20 Pair (k) Allen Keys – 5 Nos. Note: The above equipment/accessories must be CE, EN/UIAA/UL certified. Any additional tools/accessories required for the project may be quoted by the vendor.
	Design & performance Criteria:-	Walls shall withstand the effects of gravity	The vender / firm will submit ASCE/SE 17 Certificate.

E73 A CM

		loads, wind loads (130 km/hr wind load) and live loads determined according to ASCE/SE17.	
		Walls shall withstand the effects of earthquake motions as per ASCE/SE 17.	The vender / firm will submit ASCE/SE 17 Certificate.
		Walls to allow for thermal movements from ambient and surface temperature changes for temperature change of 40 deg. C to 100 deg. C, material surfaces.	The vender/firm will submit certificate from OEM in this regard.
	<u>Training & risk management</u>	Manufacturers shall have a minimum of 03 years of experience working in the design and manufacturing of climbing wall.	Past performance/experience certificate to be produced before the board of officers in conformity of experience.
		The manufacturer shall provide risk management procedures in the form of a procedures manual designed specifically for the facility.	The vender/ firm will produce manual as required.
		The manufacturer shall provide onsite training for the Owner's personnel on risk management operations and maintenance.	The vender/firm will arrange training of 20 Master trainers for 2 weeks. 8 Hours per day.
		All training shall be managed by personnel holding certifications from Climbing Wall association (CWA)	The vender/firm will submit CWA approved certificate before the Board of Officers for checking.

Platform for slithering and rappelling shall be as per organizational requirement with provision of shed kept optional.

Photographs attached are symbolic and may vary with the customization/ requirements of individual organization.

Landing Area around the climbing structure

S/No	Items	Dimensions
1	Height of perimeter wall	2 ft 4 inch
2	Length	21.8 Mtr
3	Breadth	21.8 Mtr

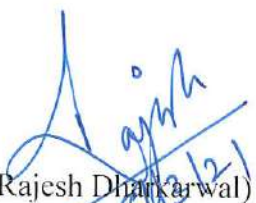
273 dk <um

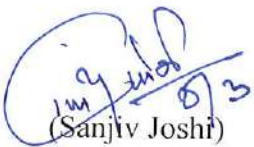
Gymnastic Landing Mats optional for additional safety to avoid injuries .
Timing devices optional

Note :-

Different configurations have been worked out keeping in view the general requirements. However, the artificial climbing wall may be customized i.e. **different height, width, type and number of faces**, depending on following:-

- 1) Organizational specific combat requirements.
- 2) Institutions training capacity and requirements.
- 3) Infrastructure for training to participate in wall climbing competitions.

 (K. Sunil Emmanuel) DIG. NSG Member	 (Rajesh Dhankarwal) DIG. CRPF Member	 (A. Hemochandra) Comdt. SSB Member	 (Ajay Singh) Comdt. CISF, Member
--	---	--	---

 (Sanjiv Joshi) Comdt. BSF Member	 (Anil Kumar) Dy. Comdt. ITBP Member
--	--


(Sanjay Chander)
SDG(Works), Dte. CRPF
(Chairman/P.O)

Approved / Not Approved


(Kuldip Singh), IPS
DG CRPF