

 EPD - BANGALORE	Purchase Specification Automated Doors for SPV	SPECIFICATION NO. EP-WEX-SPV-AD/2016-17
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TECHNICAL SPECIFICATION

FOR

AUTOMATED DOORS FOR SPV

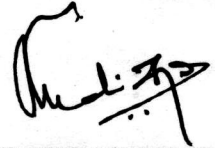
BHARAT HEAVY ELECTRICALS LIMITED
ELECTROPORCELAIN DIVISION
IISC POST, BANGALORE , INDIA 560012

REVISION DETAILS :(00)	PREPARED BY 	DATE 25.08.2016
	APPROVED BY  25/8/16	


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EPD - BANGALORE

**Purchase Specification
Automated Doors for SPV**

**SPECIFICATION NO.
EP-WEX-SPV-AD/2016-17**

Technical Specifications for Automate doors for SPV

Location - I : i) AHU Room (door no 1) - 1 no
1800mm (W) x 2100mm(H)

ii) SPV Raw material store (door no 13 & 14) - 2 nos
4500mm(W) x 3400mm (H)

Type : Motorised Roller Shutters with compact drive

Curtain Profile type	RS 81GS
Roller Curtain	Constructed from single skinned galvalume steel laths. Each lath is retained by interlocking with each other.
Surface	Galvalume
Material thickness	1 mm min
Curtain weight	13 kg/m ² min
Structure shape	Flat
Support brackets	Mild steel with one coat of grey epoxy primer by spray
Shaft	Manufactured from mild steel tube of suitable outside diameter and wall thickness to suit the shutter application
Finish	One coat of grey epoxy by spray
Bottom profile	Bend resistant double skinned extruded aluminium profile for additional strength. The bottom rail is fitted with extruded rubber bottom seal that will seal against the floor when the door is fully closed
Drive unit	European make drive
Safety	Safety mechanism for chain failure with inbuilt limit switches
Control station	Three station push button
Emergency operation	By chain
Accessories	1.Hood cover and motor cover 2. Additional three station push button

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Location-II : i) Raw material store (door no 5 & 6) - 2 nos
- 3000mm(W) x 3000mm (H)

ii) Air Compressor Room (door no 2 & 3) - 2 nos
- 2950mm (W) x 3000mm(H)
- 5550mm (W) x 3000mm(H)

Type : Motorised Roller Shutters with ventilator of around 230 mm at eye level and compact drive of European make

Curtain Profile type	RS 81GS
Roller Curtain	Constructed from single skinned galvalume steel laths. Each lath is retained by interlocking with each other.
Surface	Galvalume
Material thickness	1 mm min
Curtain weight	13 kg/m ² min
Structure shape	Flat
Support brackets	Mild steel with one coat of grey epoxy primer by spray
Shaft	Manufactured from mild steel tube of suitable outside diameter and wall thickness to suit the shutter application
Bottom profile	Bend resistant double skinned extruded aluminium profile for additional strength. The bottom rail is fitted with extruded rubber bottom seal that will seal against the floor when the door is fully closed
Finish	One coat of grey epoxy by spray
Drive unit	European make
Safety	Safety mechanism for chain failure with inbuilt limit switches
Control station	Three station push button
Emergency operation	By chain
Accessories	1.Hood cover and motor cover 2. Additional three station push button



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**Purchase Specification
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Location-III : i) Electrical Panel Room (door no 4) - 1 nos
- 2000mm(W) x 2300mm (H)

Type : Fire Rated Rolling Shutter(1 hour) with top cover and motor cover

Roller Curtain	Constructed from cold rolled galvalume steel laths with a minimum thickness of 1 mm RS81GS flat, each lath is retained by interlocking with each other.
Bottom Rail	Formed from mild steel flat bar and angle , welded back through a centrally located galvanised steel flat plate with one coat of grey epoxy primer
Side guides and angles	Mild steel angles of suitable size and thickness bolted with support angles to support the guides of width 75 mm & 105 mm with one coat of grey epoxy primer and to form a secure fix in the RCC / steel structure
Barrel assembly	The roller barrel is manufactured from mild steel tube of suitable outside diameter and wall thickness to suit the shutter application
Barrel bracket plates	Suitable design of 4 mm thickness. Fitted with suitable anchor fasteners for fixing to RCC / steel structure
Hood & Motor cover	0.9 mm thick pressed galvalume steel hood box with one coat of grey epoxy complete with reinforced bracket as required to suit the shutter width.
Operation	Electrically operated , shutters shall be fitted with geared motor complete with a three station push button with UP, DOWN and STOP buttons
Auto closing mechanism	The fire shutters shall be equipped with fusible link mechanism. Upon sensing a temperature of 74 ° C, the fusible link mechanism shall release the brake of the motor and allow it to descend by gravity. A dual fusible link (electric solenoid releaser) shall be provided to activate fire alarm signal which will be used to release the brake of the motor upon receipt of a 24 V DC, 400 mA fire alarm signal. A reset pull shall be provided to reapply the brake on the motor
Accessories	1.Hood cover and motor cover 2. Additional three station push button

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Location –IV : i) Raw material store (door no 13 & 14) - 2 nos
- 4500mm(W) x 3400mm (H)
ii) Raw material store (door no 9, 10 & 11)
- 2950mm(W) x 2900mm (H) – 1no
- 3100mm(W) x 2900mm (H) – 2 nos

Type : Rapid Roll Up Shutters for external application

Door construction	Self-supporting
Guide material / surface	Galvanised steel
Curtain	Made from modular interchangeable section 1.2 mm thick polyester flexible curtain class 2 DIN 4102 in self-extinguishing material divided into 3 to 4 sections by extruded aluminium anodised profiles. 900 – 930 mm vision field in transparent PVC 2 mm thick
Wind load	EN 12424, class 2
Door travel speed open & close	0.8 mtr/s
Electromechanical actuator	
Drive unit	Direct drive with electromagnetic brake
Drive unit position	Left hand side
Power supply	400 V – 50 hz
Control power voltage	24 V
Release system for manual opening	Crank handle
Control panel	Control cabinet IP65, travel limit adjustment, membrane push button open, Emergency stop, Close with integral automatic timer
Safety devices	Two pair of safety photocells
Additional accessories required	1. Self testing safety edge 2. Hood cover and motor cover 3.. Additional three station push button

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Location -V : i) SPV main entrance (door no 7 & 8) - 2 nos
- 4550mm (W) x 3600mm(H)
ii) Raw material store (door no 12) - 1 no
- 3100mm(W) x 3100mm (H)

Type : Motorised Industrial Over Head doors

Door construction	Self-supporting
Material, door leaf	Galvanised steel, double-skinned, 40 mm flat
Surface finish	External : Micro rib
	Internal : Stucco
Curtain colour	External : Standard similar to RAL 9010
	Internal : Standard similar to RAL 9010
Insulation	48 Kg/m ³ density, self-extinguishing class B2, CFC- free polyurethane foam
Item characteristics	Resistance to wind : Class 3 (as per EN 12424) Water tightness : Class 3 (as per EN 12425) Air permeability : Class 2 (as per EN 12426) Thermal transmittance K : 1.18 W/m ² K Acoustic Rating Value R : 24dB
Surround Profiles	-The side of the door panels are fitted with galvanized, white powder coated steel profiles -The bottom section of the first panel shall be fitted With a hideaway seal holder aluminium profile -The upper section of the last panel shall be enclosed in a back painted aluminium profile
Side Guides	Profiled angle frame, made of galvanised steel, with safety track secured with screws
Seals	Anti-ageing EPDM seals located in the following hinged points -Between panels seal -Lower doorstop lip seal -Upper doorstop finned seal fitted to seal the door neat the lintel -vertical seals, fitted to the side upright
Safety features	Finger trap protection side trap guard & safety catch for doors. Fully certified safety devices fitted as standard on all doors and will operate in the following case to avoid the covering from accidentally falling : -In case of traction cable breakage -In case of traction spring breakage
Wicket Door	Inbuilt Wicket Door – 840mm (W) x 2140mm (H)
Drive unit	Direct drive operator made in accordance with the product standard EN 13241-1 Doors and EN 12453 safety in use of power operated doors requirement
Power supply	230 V / 50-60 Hz
Torque	70 Nm
Release system for manual opening	Chain operated
Control Switch	Three station push button
Control system	Control unit with magnetic switch & wireless system
Additional accessories required	1. Self testing safety edge 2.. Additional three station push button

Note : Additional items if any may be suitably included for completeness of the system



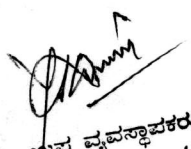
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Qualification criteria

1	<i>Bidder should be original equipment manufacturer (OEM) of the quoted item. Bidder to submit company credentials to prove as OEM. Registration certificate as a manufacturer or any other document to establish the bidder as manufacturer</i>
2	<i>Bidder should have manufactured, supplied and successfully commissioned minimum of 4 Installations of automated door system consisting of all the doors covered in this tender, in the last 3 years. Bidder to submit copy of purchase orders and performance certificates from the users, for each PO.</i>
3	<i>The bidder shall submit audited balance Sheet or tax returns or profit loss Account for the last 3 years</i>
4	<i>Offer shall be for new equipment and not For any refurbished or used equipment</i>


ವೈ. ರವಿ, ಉಪ ವ್ಯವಸ್ಥಾಪಕರು / ವೆಕ್ಸ್
ವಾई. रवि, उप प्रबंधक / वेक्स
Y. Ravi, Dy. Manager / wex
BHEL-EPD, Bengaluru - 560 012

PRICE FORMAT FOR AUTOMATED DOORS FOR SPV

For BHEL Specification No. EP-WEX-SPV-AD/2016-17

Sl no	Type / Location	Description	Qty	Supply Amount(Rs)	E & C Amount(Rs)
1	Type	Motorised Roller Shutters with compact European direct drive			
	Location - I	i) AHU Room (door no 1)			
		-1800mm (W) x 2100mm(H)	1		
		ii) Raw material store (door no 13 & 14)			
		- 4500mm(W) x 3400mm (H)	2		
		Accessories required			
		Hood and motor cover	3		
		Additional three station push button	3		
2	Type	Motorised Roller Shutters with ventilator of around 230 mm at eye level and compact European direct drive			
	Location-II	i) Raw material store (door no 5 & 6)			
		-3000mm(W) x 3000mm (H)	2		
		ii) Air Compressor Room (door no 2 & 3)			
		- 2950mm (W) x 3000mm(H)	1		
		- 5550mm (W) x 3000mm(H)	1		
		Accessories required			
		Hood and motor cover	4		
		Additional three station push button	4		
3	Type	Fire Rated Rolling Shutter(1 hour)			
	Location -III	i) Electrical Panel Room (door no 4)			
		- 2000mm(W) x 2300mm (H)	1		
		Accessories required			
		Hood and motor cover	1		
		Additional three station push button	1		
4	Type	Rapid Roll Up Shutters for external application			
	Location - IV	i) Raw material store (door no 13 & 14)			
		- 4500mm(W) x 3400mm (H)	2		
		ii) Raw material store (door no 9, 10 & 11)			
		- 2950mm(W) x 2900mm (H) - 1no	1		
		- 3100mm(W) x 2900mm (H) - 2 nos	2		
		Accessories required			
		Hood and motor cover	5		
		Additional three station push button	5		

PRICE FORMAT FOR AUTOMATED DOORS FOR SPV					
For BHEL Specification No. EP-WEX-SPV-AD/2016-17					
Sl no	Type / Location	Description	Qty	Supply Amount(Rs)	E & C Amount(Rs)
	Type	Motorised Industrial Over Head doors			
	Location - V	i) SPV main entrance (door no 7 & 8)			
5		- 4550mm (W) x 3600mm(H)	2		
		ii) Raw material store (door no 12)			
		- 3100mm(W) x 3100mm (H)	1		
		Accessories required			
		Hood and motor cover	3		
		Additional three station push button	3		
		Packing			
		ED@12.5%			
		Freight			
		CST@2% against C form			
		Service tax @15%			
		Taxes and duties			
		Total supply & installation with taxes			
		Total			

Supply + Installation

In words :

Signature and seal of the vendor