

	<u>BHARAT HEAVY ELECTRICAL LIMITED</u>				Enquiry No. :	
	<u>UNIT'S ADDRESS:</u>				Due Date :	
	<u>CONTACT PERSON'S NAME/DESIGN./PHONE NO./E-MAIL (FROM PURCHASE DEPTT.)</u>				Supplier Qtn. No.:	
					Date :	
<p align="center"><u>SPECIFICATION OF ELECTRICALLY OPERATED ROLLING SHUTTERS</u></p>						
<p>NOTE:-</p>						
<p>1. Vendor must submit complete information against clause no. 11 (Qualifying Condition). The offer meeting this clause would only be processed.</p>						
<p>2. The "Offered" Column and where applicable, the "Deviations" & "Remarks" Column of this format shall be filled in by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance.</p>						
<p>3. The offer and all documents enclosed with offer should be in English language only.</p>						
<p>NAME & ADDRESS OF THE SUPPLIER :</p>				<p>NAME & ADDRESS OF THE INDIAN AGENT :</p>		
<p>TELEPHONE NOS.:</p>				<p>TELEPHONE NOS.:</p>		
<p>FAX NOS.:</p>				<p>FAX NOS.:</p>		
<p>E-MAIL ADDRESS :</p>				<p>E-MAIL ADDRESS :</p>		
<p>SCOPE: SUPPLY & INSTALLATION OF ELECTRICALLY OPERATED ROLLING SHUTTERS COMPLYING WITH SPECIFICATIONS AS BELOW</p>						

SNO	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
1.0 PURPOSE & WORKPIECE MATERIAL					
1.1	Purpose:				
	Electrical operated springless motorized rolling shutters with electrical continuity are required as gate between transformer room adjacent to UHV laboratory.	Indentor			
2.0 SPECIFICATION: Type of shutter - rolling, springless					
2.1	Rolling shutter opening size: 4.0m(w) x 6.0m(H), Qty :- 1 no. 4.0m(w) x 4.0m(H), Qty :- 1 no. 6.0m(w) x 6.0m(H), Qty :- 1 no. 3.0m(w) x 4.0m(H), Qty :- 1 no. 5.0m(w) x 6.0m(H), Qty. -1 No. 9.4m(w) x 8.0m(H), Qty. -3 Nos. 4.0m(w) x 10.0m(H), Qty. -1 No. 8.0m(w) x 8.0m(H), Qty. -1 No.	Vendor to confirm			
2.2	Shutter should have motorized arrangement (springless).	Vendor to confirm			
2.3	Interlocking GI rolling shutters with minimum 1 mm (tk) x 75mm wide strip	Vendor to confirm			
2.4	Guide channel : 3.15 mm x 100 mm or suitable size.	Vendor to confirm			
2.5	18 gauge MS sheet top cover with braket, clamps, handles and two coat of primer including fixing	Vendor to confirm			
2.6	Motor shall be 3-phase with thermostatic setting.	Vendor to confirm			
2.7	The motor should have limit switch, safety brake, manual chain drive, push button switch, gear with sprocket chain drive.	Vendor to confirm			

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2.8	Suitable coating is to be done to make the shutters corrosion resistant.	Vendor to confirm			
2.9	Maximum speed of the shutter is to be around 3m/min.	Vendor to confirm			
2.10	Sheet thickness of the shutter should be greater than or equal to 1.0 mm.	Vendor to confirm			
2.11	Shutter should have backup provision for manual operation through a ratchet spanner / handwheel / chain.	Vendor to specify			
2.12	Deflection of the curtain to be limited to around 40mm over the width of 10000mm	Vendor to confirm			
2.13	Suitable blinker lights are to be incorporated when to door is in operation, on both sides of the shutter.	Vendor to confirm			
2.14	Suitable end position limit switches & sensors are to be provided for the safe operation of the shutter.	Vendor to confirm			
2.15	Controls / Protection :				
	o Mechanical anti-fall protection				
	o Breaking - dynamic				
	o Limit switches at ends & positive stopper.				
	o Buzzer : 1 No.				
	o Any other protection needed for safe working.				
2.16	In order to maintains electrical continuity with the existing walls of the test bay and rolling shutter, suitable provision of copper flaps is required on both sides of shutter upto full height.	Vendor to confirm & specify the argt.			

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3.0	SAFETY ARRANGEMENTS:				
3.1	Following safety features in addition to other standard safety features should be provided on the system:	Vendor to confirm			
3.2	1. System should have adequate and reliable safety interlocks / devices to avoid damage to the system and the operator due to the malfunctioning or mistakes.	Vendor to confirm			
4.0	ACCESSORIES:				
4.1	Vendor to furnish list and details of accessories if any	Vendor to specify			
5.0	SPARES:				
5.1	All necessary spares for two years trouble-free operation.	Vendor to Confirm			
6.0	DOCUMENTATION : 4 copies of each of the following shall be supplied along with the system	Vendor to Confirm			
6.1	Instruction manual	Vendor to Confirm			
6.2	Maintenance manual along with circuit diagrams and schematics	Vendor to Confirm			
6.3	List of customer where equipment has been supplied earlier	Vendor to Confirm			
7.0	SYSTEM INSPECTION:				
7.1	Inspection at suppliers works before dispatch	Vendor to Confirm			

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8.0	INSTALLATION & COMMISSIONING				
8.1	Supplier to take full responsibility for installation and commissioning	Vendor to confirm			
8.2	Demonstration of all features of the electrically operated rolling shutter & all accessories to the satisfaction of BHEL for their efficient and effective use.	Vendor to confirm			
9.0	AMBIENT CONDITIONS & THERMAL STABILITY :				
9.1	<p>Total System and all supplied items should work trouble free and efficiently under following operating conditions and should give specified accuracies. Power Supply:</p> <p>Voltage: 415 V - 10%, +10% , 3 - phase</p> <p>Frequency: 50 Hz \pm 1.5 Hz Operating Humidity : 10% to 90%</p> <p>Operating Temperature : 0°C to 45°C</p> <p>(Vendor to confirm that system is suitable for above and details of provisions on the system for the same are to be furnished by Vendor.</p>	Vendor to confirm			
10.0	GUARANTEE :				
10.1	12 months from the date of commissioning of the system.	Vendor to confirm			

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11.0	QUALIFYING CONDITIONS :				
11.1	Only those vendors, who have supplied and commissioned at least one electrically operated rolling shutters with size 6m x 10m and such shutter is presently working satisfactorily for more than one year after commissioning (more than 6 months after commissioning if supplied to BHEL) , should quote. The following information is to be submitted by the vendor about the companies where similar shutter been supplied. This is required from all the vendors for qualification of their offer.	Vendor to confirm			
	1. Name of the customer / company where similar system is installed.				
	2. Complete postal address of the customer.				
	3. Year of commissioning.				
	4. Application for which the system is supplied with details of accuracies achieved on the job.				
	5. Name and designation of the contact person of the customer.				
	6. Phone, FAX no. and email address of the contact person of the customer.				
	7..BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false / incorrect , the offer shall be rejected.				