

SPECIFICATION FOR AUTOMATIC DRILL POINT GRINDER

	NOTE :-				
1. The vendor (OEM) must fill the "offered" column in compliance to specified requirements and also "Deviations". (OEM- Original Equipment Manufacturer) 2. The Vendor must submit complete information against Qualifying conditions at Sl. No. 15. The offer meeting this clause would only be processed. 3. The offer and all the documents enclosed with the offer should be in English language only.					
	ADDRESS OF THE SUPPLIER :	ADDRESS OF THE INDIAN AGENTS :			
	TELEPHONE NOS.:	TELEPHONE NOS.:			
	FAX NOS.:	FAX NOS.:			
	E-MAIL ADDRESS :	E-MAIL ADDRESS :			
SCOPE:	SPECIFICATION FOR AUTOMATIC DRILL POINT GRINDER				
SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION	REMARKS
1.0	APPLICATION / DESCRIPTION				
	Quick precision grinding and sharpening of all shank type cutting tools like standard drills, core drills, countersunk drills, pilot drills, taps etc. with auto feed mechanism & powered work head for automatic rotation & cam action. It should be complete with Swivel Base, Telescopic Bevel Gear Drive, rigid Cast body structure to ensure vibration free operation, Motors of reputed make, Cooling Unit, 6 Jaws Self Centring Chuck to ensure accurate re-sharpening all Accessories & Tooling etc. and should be ready to use condition.	Vendor to offer			
2.0	JOB REQUIREMENT :				
	Repetitive grinding /regrinding and sharpening of drills /core drills etc of various drill length and diameters as follows:	Vendor to offer			
2.1	Size of drills /core drills etc. from dia 10 mm to 80 mm.	Vendor to offer			
3.0	TECHNICAL SPECIFICATION:				
3.1	Capacity: -suitable for 10 to 80 mm diameters (both even & odd flute) Drills, Core drills, Taps, Countersunk drills etc	Vendor to offer			
	Length of drill- upto 700 mm.	Vendor to offer			
3.2	Shank Details:				
	Taper Shank/ Parallel shank	Vendor to offer			
3.3	Flute type				
	Two/ three/four flute type	Vendor to offer			
3.4	Chuck				
	6 jaws precision	Vendor to offer			
3.5	Point angle-80 deg. To 160 deg.	Vendor to offer			

	Clearnace angle- 0 deg. To 18 deg.	Vendor to offer			
3.6	Web Thinning				
	After point grinding without removing drill to ensure accuracy	Vendor to confirm			
3.7	Grinding Head Motor				
	Capacity to be mentioned with calculations by vendor	Vendor to inform			
3.8	Grinding spindle speed and web thinning wheel speed				
	To be furnished by vendor	Vendor to inform			
3.9	Coolant Motor & Pump capacity				
	To be furnished by vendor	Vendor to inform			
3.10	Longitudinal & crosstravel drive motor capacity : be furnished by vendor	Vendor to inform			
3.11	Weight of the machine & dimensions To be furnished by vendor	Vendor to inform			
3.12	Vendor to submit technical literature/ write-up/ leaflet for following feature of the machine along with offer: Auto feed mechanism & powered work head for automatic rotation & cam action of Automatic Drill Point Grinder	Vendor to submit			
4.0	TECHNICAL FEATURES:				
	The drill point grinders should be heavy duty and complete in ready-to-use condition having following standard features:				
4.1	Machine should be equipped with auto feed mechanism & powered work head for automatic rotation & cam action	Vendor to offer			
4.2	Holding Chuck:				
	Precision 6 jaws self centering type suitable to accommodate drill/ core drill etc. sizes as mentioned above	Vendor to offer			
4.3	All the cutting edges of drills to be ground uniformly in one operation producing correct cutting angle and precision point	Vendor to confirm			
4.4	Fitted with adjustable work head which can be set and locked in any angle to achieve point angle from 80 degree to 160 degree	Vendor to confirm			
4.5	Provision for adjusting clearance angle with proper measuring scale	Vendor to confirm			
4.6	The work head should be fitted on robust compound slide	Vendor to confirm			
4.7	Provision for point thinning immediately after point grinding (without removing the drill) to achieve accurate ground drill point	Vendor to offer			
4.8	Drive motor should be heavy duty ball bearings with dynamically balanced rotor for smooth and vibration free grinding finish for long life	Vendor to confirm			
4.9	Main chuck should be fitted with friction less bearings and spring loaded precision thrust bearings to ensure smooth and balanced operation of the work head for long period	Vendor to confirm			

4.10,	Rigid base section having provision for storing the accessories/ tools/ grinding discs etc. with locking arrangement.The working height should be such that operator can work in standing position comfortably without fatigue	Vendor to confirm			
5.0	ACCESSORIES, TOOLINGS AND ATTACHMENTS:				
5.1	The drill point grinders should be complete with standard accessories and toolings including coolant pump, tank,machine lamp, grinding disc, hand tools so that the grinders are in ready -to-operate condition.	Vendor to offer			
5.2	Cables and hoses including input cable (5.0 meter), earthing cable, coolant hoses and also starter, switches, connectors, lamp should be provided with the grinder.	Vendor to offer			
5.3	Attachments needed for grinding different type of drills, core drills, taps, pilot drills 180 degree flat bottom drills etc.	Vendor to offer			
5.4	Recommended mechanical/ electrical spares (including complete grinding spindle) , toolings & consumables for minimum two years of smooth operation of the grinder with individual identification no. & price	Vendor to offer			
5.5	Tool box containing tools required for day-to-day operation and maintenance such as Wrench, spanner, allen key, pliers etc.	Vendor to offer			
6.0	WORKING CONDITION:				
6.1	Input Power Supply:				
	220V \pm 10%; Single phase, 50 Hz \pm 3% or 440V \pm 10%; 3 phase, 3-wire system, 50 Hz \pm 3% variation	Vendor to note			
6.2	Ambient Condition:				
	Ambient temperature 3 to 50 degree C.	Vendor to note			
	Relative humidity upto 95% in rainy season	Vendor to note			
7.0	Makes:				
7.1,	Motor:				
	Siemens/ ABB/ Kirloskar/ Crompton / Reputed made	Vendor to confirm			
7.2,	Electricals like Stator switches etc.				
	Siemens/ L&T / Reputed made	Vendor to confirm			
7.3,	Bearing :				
	SKF/ FAG/Reputed made	Vendor to confirm			
8.0,	Five sets of operation/ maintenance manuals (in English language) to be provided along with supply consisting of:				
8.1,	Operating & maintenance instructions with mechanical diagrams.	Vendor to confirm			
8.2	Dos and Don'ts.	Vendor to confirm			
8.3,	Trouble shooting & remedies.	Vendor to confirm			

8.4,	Complete spare and consumable list with identification nos of each spare & consumables.	Vendor to confirm			
8.5,	Mechanical diagrams of main components/ sub-assemblies, electrical & electronic circuit diagram with proper wire nos and component identification, make and model type.	Vendor to confirm			
9.0	Pre Dispatch Inspection: Pre dispatch inspection will be carried out by BHEL/ BHEL nominated agency at vendor's work	Vendor to note & accept			
10.0	Erection & Commissioning & Job Proving: Erection, commissioning and job proving at BHEL works by vendor. Supplier to take full responsibility for carrying out the erection, start up testing of machine, its control & all types of other supplied accessories/ attachment and job proving.	Vendor to confirm			
11.0	Foundation:				
11.1	Foundation items like foundation bolts, clamps, washers etc. to be provided by the vendor	Vendor to confirm			
11.2	Foundation drawing/ details with electrical connection details to be provided within one month of receipt of Purchase Order	Vendor to confirm			
12.0	Training: Training to BHEL personnel to be provided for operation & maintenance by vendor at BHEL works	Vendor to confirm			
13.0	Guarantee: Guarantee for 2 years trouble free operation and prompt after sales service during and after guarantee period to be confirmed	Vendor to confirm			
14.0	Packing: Sea worthy & rigid packing for all items of complete machine to avoid any damage/ loss during transit	Vendor to confirm			
15.0	Qualifying Conditions:				
15.1	Only those vendors who have supplied and commissioned at least one AUTOMATIC DRILL GRINDING MACHINE of same/ higher capacity for similar application in the past ten years (on the date of opening of tender) and such machine is presently working satisfactorily for more than one year after commissioning, should quote. The following information should be submitted by the vendor about the companies where similar machines have been supplied.	Vendor to submit			
15.2	Name of the customer/ company where similar machine have been supplied	Vendor to submit			
15.3	Complete postal address of the customer				

15.4	Month & year of commissioning	Vendor to submit			
15.5	Name & designation of the contact person of the customer	Vendor to submit			
15.6	Phone/ FAX/ email address of the contact person of the customer	Vendor to submit			
15.7	Performance certificate from the customer regarding satisfactory performance of the machine	Vendor to submit			
15.8	BHEL reserves the right to verify the information submitted by vendor. In case, the information is found to be false/ incorrect, the offer shall be rejected.	Vendor to accept & confirm			