

CIPET, KORBA

E-Tender ref: CIPET/ KRB /MACHINE&EQP/2019-20/04, Dtd. 07.01.2020

1 Horizontal Milling Machine (Amended Technical Specification)

Sl.No	Description	Unit	Specification	Amendment
1	Make		Bidder to specify	-
2	Model		Bidder to specify	-
3	Axis Travel			-
3.1	X-Axis (mm)		700-800	-
3.2	Y-Axis (mm)		200-300	-
3.3	Z-Axis (mm)		300-400	-
4	Table			-
4.1	Length (mm)		1200-1600	-
4.2	Width (mm)		300-400	-
4.3	T-Slot Width (mm)		14-16	-
4.4	Number of Std T-Slots		3 or more	-
5	Feed			-
5.1	Motor (KW)		1.5 or better	-
5.2	Cutting Feed (RPM)		1200 or better	Description-Cutting Feed(mm/min)
6	Spindle			-
6.1	Rating (KW)		Bidder to specify	-
6.2	Max. Speed (rpm)		8000 or better	Specification-2000
6.3	Taper		BT40	-
7.1	Vertical Milling Attachment		Bidder to specify	-
7.2	Max weight on table		300 kgs	-
8	Essential Accessories			-
8.1	Machine Lamp	Bidder to specify		-
8.2	Tools Kit			-
8.3	Coolant pump			-
8.4	One set of manual			-
8.5	Clamping Kit			-
8.6	Anti-vibration pad			-
9	General features :			-
9.1	The specification of feed drive motors with make, model no., Max. nominal torque.		Bidder to specify the features of the machine	-

9.2	<p>Preferably the guideways of all axes should have telescopic type protective covers with adequate sealing on joints to prevent seepage of dust & coolant oil inside. Guide ways should be of hardened steel with hardness HRC60 or more.</p>		-
9.3	<p>The machine must have rigid streamlined and vibration free construction. All gears must be case hardened and ground and all the slides should be rigid to withstand heavy stock removal. It should Have independent main drive and feed drive motors. Anti-vibration pad is to be provided for each leg of the machine.</p>		-
9.4	<p>Each axis should have electrical limit switches interlocked with feed/ rapid drive as well as mechanical stopper .</p>	<p>Bidder to specify the features of the machine</p>	-
10	<p>Any Others Acessories</p>	<p>Bidder to specify and quote if any other accessories available / required for smooth running of the machine.</p>	-
11	<p>Terms & Conditions</p>	<p>Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India which is education institutions centrally funded institution. A Satisfactory Performance certificate from two institutions to be provided for eligibility. Bidder should submit complete contact details.</p>	-
		<p>Authorization Letter from OEM</p>	-
		<p>List of clients in last five years to be provided.</p>	-
12	<p>Scope of supply</p>	<p>Bidder should submit complete scope of supply (Machine, standard acessories, Optional Acessories etc with make model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.</p>	-

2 Universal Milling Machine (Amended Technical Specifications)

SI.No	Description	Unit	Specification	Amendment
1	Make		Bidder to specify	-
2	Model		Bidder to specify	-
3	Axis Travel			-
3.1	X-Axis (mm)		400-500	-
3.2	Y-Axis (mm)		500-600	-
3.3	Z-Axis (mm)		200-400	-
4	Table			-
4.1	Length (mm)		1000-1200	-
4.2	Width (mm)		200-300	-
4.3	T-Slot Width (mm)		14-16	-
4.4	Number of Std T-Slots		3 or more	-
5	Feed			-
5.1	Motor (H.P.)		2 or better	-
5.2	Cutting Feed (RPM)		2000 or better	Description-Cutting Feed(mm/min)
6	Spindle			-
6.1	Rating (KW)		Bidder to specify	-
6.2	Max. Speed (rpm)		4000 or better	Specification-2000
6.3	Taper		Bidder to specify	-
7.1	Vertical Milling Attachment		Bidder to specify	-
7.2	Max weight on table		400 kgs	-
8	Essential Accessories			-
8.1	Machine Lamp	Bidder to specify		-
8.2	Tools Kit			-
8.3	Coolant pump			-
8.4	One set of manual			-
8.5	Clamping Kit			-
8.6	Anti-vibration pad			-
9	General features :			-
9.1	The specification of feed drive motors with make, model no., Max. nominal torque.		Bidder to specify the features of the machine	-

9.2	Preferably the guideways of all axes should have telescopic type protective covers with adequate sealing on joints to prevent seepage of dust & coolant oil inside. Guide ways should be of hardened steel with hardness HRC60 or more.		-
9.3	The machine must have rigid streamlined and vibration free construction. All gears must be case hardened and ground and all the slides should be rigid to withstand heavy stock removal. It should Have independent main drive and feed drive motors. Anti-vibration pad is to be provided for each leg of the machine.		-
9.4	Each axis should have electrical limit switches interlocked with feed/ rapid drive as well as mechanical stopper .	Bidder to specify the features of the machine	-
10	Any Others Acessories	Bidder to specify and quote if any other accessories available/required for smooth running of the machine.	-
11	Terms & Conditions	Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India which is education institutions centrally funded institution. A Satisfactory Performance certificate from two institutions to be provided for eligibility. Bidder should submit complete contact details	-
		Authorization Letter from OEM	-
		List of clients in last five years to be provided.	-
12	Scope of supply	Bidder should submit complete scope of supply (Machine, standard accessories, Optional Acessories etc with make model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.	-

3. Vertical Milling Machine (Amended Technical Specifications)

SI.No	Description	Unit	Specification	Amendment
1	Make		Bidder to specify	
2	Model		Bidder to specify	
3	Axis Travel			
3.1	X-Axis (mm)		700-800	
3.2	Y-Axis (mm)		300-400	
3.3	Z-Axis (mm)		400-500	
4	Table			
4.1	Length (mm)		1000-1200	
4.2	Width (mm)		200-300	
4.3	T-Slot Width (mm)		14-16	
4.4	Number of Std T-Slots		5 or better	
5	Feed			
5.1	Motor (H.P.)		5 or better	
5.2	Cutting Feed (RPM)		4000 or better	Description-Cutting Feed(mm/min)
6	Spindle			
6.1	Rating (KW)		Bidder to specify	
6.2	Max. Speed		8000 or better	Specification-2000
6.3	Taper		Bidder to specify	
7.1	Vertical Milling Attachment		Bidder to specify	
7.2	Max weight on table		400 kgs	
8	Essential Accessories			
8.1	Machine Lamp	Bidder to specify		
8.2	Tools Kit			
8.3	Coolant pump			
8.4	One set of manual			
8.5	Clamping Kit			
8.6	Anti-vibration pad			
9	General features :			
9.1	The specification of feed drive motors with make, model no., Max. nominal torque.	Bidder to specify the features of the machine		

9.2	<p>Preferably the guideways of all axes should have telescopic type protective covers adequate sealing on joints to prevent seepage of dust & coolant oil inside. Guide ways should be of hardened steel with hardness HRC60 or more.</p>		
9.3	<p>The machine must have rigid streamlined and vibration free construction. All gears must be case hardened and ground and all the slides should be rigid to withstand heavy stock removal. It should have main drive and feed drive motors. Anti-vibration pad is to be provided for each leg of the machine.</p>		
9.4	<p>Each axis should have electrical limit switches interlocked with feed/rapid drive as well as mechanical stopper.</p>	<p>Bidder to specify the features of the machine</p>	
10	<p>Any Others Accessories</p>	<p>Bidder to specify and quote if any other accessories available/required for smooth running of the machine.</p>	
11	<p>Terms & Conditions</p>	<p>Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India which is education institutions centrally funded institution. A Satisfactory Performance certificate from two institutions to be provided for eligibility. Bidder should submit complete contact details</p> <p>Authorization Letter from OEM</p> <p>List of clients in last five years to be provided.</p>	
12	<p>Scope of supply</p>	<p>Bidder should submit complete scope of supply (Machine, standard accessories, Optional Accessories etc with make model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.</p>	

8. Cylindrical Grinding Machine (Amended Technical Specifications)

Sl. No.	Description	Unit	Specification	Amendment
1	Type	mm	Hydraulic	-
2	Centre Height	mm	200-300	-
3	Grinding details			-
3.1	Max. Grinding Diameter	mm	200-300	-
3.2	Max. Grinding Length	mm	1800	750
3.3	Max. Grinding Diameter (Internal Grinding)	mm	5-200	-
4	Admit between Centre	mm	Minimum 1000	Minimum 800
5	Table Speed Min./Max	mm/ min	100 / 4000 or better	-
6	Table Swivel	degree	± (5 – 15)	+ (3 – 10)
7	Work Head and Tail Stock			
7.1	Speed of work head spindle	rpm	25-350	-
7.2	Morse taper in work head		Specify	-
7.3	Swivel of work head	degree	± (30- 45)	-
7.4	Morse taper in tail stock		Bidder to Specify	-
8	Wheel Head and Wheel speed			
8.1	Grinding Wheel Diameter	mm	500	400
8.2	Grinding Wheel width	mm	40-80	-
8.3	Grinding Wheel Bore	mm	76.2-127	-
8.4	Speed of the Grinding Wheel	rpm	2000 – 3000 or better	-
9	Internal Grinding Attachment			
9.1	Grinding Spindle Diameter		60	-
9.2	Max. Quill length		81	-
9.3	Quill Diameter		15	-
9.4	Min. & Max. dia. of hole grinding		16-150	-
9.5	Spindle Speed		8000 or better	-
10	Electrical Motors			
10.1	Wheel head motor	HP	Bidder to specify and quote required for smooth running of the machine	-
10.2	Work Head Motor	HP		-
10.3	Hydraulic pump motor	HP		-
10.4	Coolant pump motor	HP		-
10.5	Internal grinding Attachment motor	HP		-

11	Accessories:		
11.1	Motors electrical panel, pump are fitted on the machine, Poly V-belt, coolant tank with piping, Grinding wheel with one flange, 2 dead centres, True Chuck Flange, Two Point Steady Rest., Three Point Steady Rest., set of Oil seals	Set of accessories suitable to the machine	-
11.2	Three Jaw chuck (ø150mm)		-
11.3	Four Jaw Chuck (ø 150mm)		-
11.4	Dogs & Carriers (5 – 30 mm)		-
11.5	Internal grinding Attachment		-
11.6	Machine Lamp		-
11.7	Diamond Tool with holder		-
11.8	Coolant splash guard		-
11.9	Wheel balancing stand		-
11.10	wheel Puller with extracting nut		-
11.11	Wheel guard		-
11.12	One set of manuals		-
11.13	One set of Service Tools, Keys, allen keys, Spanner		-
11.14	Grinding wheel (Al2O3) / SiC – 02 Nos.		Set of accessories suitable to the machine
11.15	Anti-vibration Pads	-	
12	Others	Bidder to specify and quote if any other accessories available.	-
13	General features :		
13.1	The specification of feed drive motors with make, model no., Max. nominal torque.	Bidder to specify the features of the machine	-
13.2	Preferably the guideways of all axis should have telescopic type protective covers adequate sealing on joints to prevent seepage of dust & coolant oil inside. Guide ways should be of hardened steel with hardness HRC60 or more		
13.3	The machine must have rigid streamlined and vibration free construction. All gears must be case hardened and ground and all the slides should be rigid to withstand heavy stock removal. It should have main drive and feed drive motors. Anti-vibration pad is to be provided for each leg of the machine.		
13.4	Each axis should have electrical limit switches interlocked with		

	feed/rapid drive as well as mechanical stopper.		
14	Any Others Accessories	Bidder to specify and quote if any other accessories available /required for smooth running of the machine.	-
15	Terms & Conditions	Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India which are educational institutions. A Satisfactory Performance certificate from two institutions to be provided for eligibility. Bidder should submit complete contract details.	-
		Equipment should be CE certified	Deleted
		Authorization Letter from OEM	-
		List of clients in last five years to be provided.	-
16	Scope of supply	Bidder should submit complete scope of supply (Machine, standard accessories, Optional accessories etc. with make- model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.	-

13. Radial Drilling Machine(Amended Technical Specifications)

Sl.No	Description	Unit	Specification	Amendment
1	Max. Drilling Capacity	mm	50-60	-
2	Drilling Radius Max./ Min.	mm	(1200-1500) / (450-600)	-
3	Vertical Traverse of Arm	mm	1000-1200	-
4	Horizontal Movement of Drill Head	mm	800-1000	-
5	Column Diameter		200-400	-
6	Cross travel	mm	1000-1200	-
7	Morse Taper in Spindle	mm	MT-5	-
8	Number of Speeds		12	-
9	Range of Speed	RPM	40-1800	-
10	Angle of Arm Rotation	Degree	360	-
11	Angle of Drill Head Rotation	Degree	360	SI No 11 is to be Deleted
12	Base working surface	mm	(1200- 1500) x (800-1000)	-
13	Spindle Travel	mm	200-400	-
14	Motor	HP	2.25 HP or better	-
15	Feed		Manual & Auto feed Both type	-
16	Accessories			-
16.1	Box Shape Worktable	Set of accessories suitable to the machine		-
16.2	Machine Vise 8"			-
16.3	Taper / Reduction sleeves			-
16.4	Quick Change Drill Chuck			-
16.5	Coolant Equipment			-
16.6	Machine Lamp			-
16.7	Drifts			-
16.8	One set of manuals			-
16.9	One set of Service Tools,Keys			-
17	Others			Bidder to specify and quote if any other accessories available /required for smooth running of the machine
18	General features :			-
18.1	The specification of feed drive motors with make, model no., Max. nominal torque.	Bidder to specify the features of the machine		-

18.2	Preferably the guideways of all axes should have telescopic type protective covers with adequate sealing on joints to prevent seepage of dust & coolant oil inside. Guide ways should be of hardened steel with hardness HRC60 or more.		-
18.3	The machine must have rigid streamlined and vibration free construction. All gears must be case hardened and ground and all the slides should be rigid to withstand heavy stock removal. It should have independent main drive and feed drive motors. Anti-vibration pad is to be provided for each leg of the machine.		-
18.4	Each axis should have electrical limit switches interlocked with feed/ rapid drive as well as mechanical stopper .		-
19	Any Others Acessories	Bidder to specify and quote if any other accessories available/required for smooth running of the machine.	-
20	Terms & Conditions	Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India which is education institutions centrally funded institution. A Satisfactory Performance certificate from two institutions to be provided for eligibility. Bidder should submit complete contact details	-
		Equipment should be CE certified	-
		Authorization Letter from OEM	-
		List of clients in last five years to be provided.	-
21	Scope of supply	Bidder should submit complete scope of supply (Machine, standard acessories, Optional Acessories etc with make model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.	-

14.A CNC Lathe – I (Amended Technical Specification)

Sl.No	Description	Unit	Specification	Amendment
	Make		Bidder to specify	-
	Model		Bidder to specify	-
1	Capacity			-
1.1	Swing over bed	mm	450-550	-
1.2	Swing over carriage	mm	200-300	-
1.3	Max. turning diameter	mm	250-300	-
1.4	Max. turning length	mm	400-500	-
1.5	Distance between centres	mm	500-600	-
2	Travel			-
2.1	X-Axis Travel (Cross)	mm	150-200	-
2.2	Z-Axis Travel (Longitudinal)	mm	400-450	-
3	Main Spindle			-
3.1	Spindle motor Power	KW	7.5 or better	-
3.2	Max. Speed	rpm	4000 or better	-
3.3	Spindle Bore	mm	50-60	-
3.4	Spindle Nose		A2-6	-
4	Feed Rate			-
4.1	Rapid Traverse X axis	mts./min	20 or better	-
4.2	Rapid Traverse Z axis	mts./min	20 or better	-
4.3	Feed Rate	mm/min	5000 or better	-
5	Turret			-
5.1	No. of station	Nos.	8 or better	-
5.2	Tool shank size	mm	20x20 or better	-
5.3	Boring bar dia.	mm	32 or better	-
5.4	Turret indexing		Bi Directional	-
6	Tailstock			-
6.1	Quill dia	mm	60-80	-
6.2	Quill stroke	mm	100-120	-
6.3	Quill taper	-	MT4 or better	-
7	CNC System			-
7.1	Controller		Siemens/Fanuc (Latest with complete module)	-
7.2	Part Program Storage	GB	"Bidder to specify"	-
7.3	Programming Functions with editor		Complete module	-
8	Accuracy			-

8.1	Positioning uncertainty	µm	5	-
8.2	Overall Axis Repeatability (X,Z)	µm	5	-
8.3	Part Surface Finish	µm	5	Unit=Ra
8.4	Roundness	µm	5	-
8.5	Turret Indexing Repeatability	µm	5	-
9	Essential Accessories			-
9.1	Programmable Tailstock with sleeves	one No.		-
9.2	Automatic Tool setter	one No.		-
9.3	Hydraulic 3 Jaw Chuck	Max. turning diameter of the quoted machine		-
9.4	Hydraulic 4 Jaw Chuck	Max. turning diameter of the quoted machine		-
9.5	Soft Jaws	two sets		-
9.6	Drill Chuck	25 mm		-
9.7	Hydraulic Collet chuck with set of collets	Size: 26 mm; set of collets upto 25 mm		-
9.8	Set of standard Cutting Tools with holder for replaceable inserts (for Facing,Turning, boring, threading, grooving, parting, drilling etc)	Various operation suitable various size of jobs each one No. Drills-Centre Drill and 1to 20 mm drills		-
9.9	Coolant System	Bidder to specify and quote suitable for the machine		-
9.10	Start up Tool kit	Bidder to specify and quote suitable for the machine		-
9.11	Foot switch			-
9.12	Work light			-
9.13	Centralized lub. System			-
9.14	Set of Rubber mounts			-
9.15	Voltage Stabilizer			-
9.16	Ultra Isolation transformer			-
9.17	Others	Ethernet, USB ports, RS-232C Communication Ports, Set of manual (or) CD		-
10	Any Others Accessories	Bidder to specify and quote if any other accessories available/required for smooth running of the machine.		-
11	Terms & Conditions	Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India which is education institutions centrally funded institution. A Satisfactory Performance certificate from two institutions to be provided for eligibility. Bidder should submit complete contact details		-
		Equipment should be CE certified		-
		Authorization Letter from OEM		-

		List of clients in last five years to be provided.	-
12	Scope of supply	Bidder should submit complete scope of supply (Machine, standard accessories, Optional Accessories etc with make model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.	-

14.B

CNC Lathe – II (Amendment Technical Specification)

Sl.No	Description	Unit	Specification	Amendment
	Make		Bidder to specify	-
	Model		Bidder to specify	-
1	Capacity			-
1.1	Swing over bed	mm	500-600	-
1.2	Swing over carriage	mm	300-400	-
1.3	Max. turning diameter	mm	400-500	-
1.4	Max. turning length	mm	1000-1500	-
1.5	Distance between centres	mm	1400-1600	-
2	Travel			-
2.1	X-Axis Travel (Cross)	mm	200-300	-
2.2	Z-Axis Travel (Longitudinal)	mm	1400-1600	-
3	Main Spindle			-
3.1	Spindle motor Power	KW	20 or better	-
3.2	Max. Speed	rpm	3000 or better	-
3.3	Spindle Bore	mm	Bidder to specify	-
3.4	Spindle Nose		A2-8 or better	-
4	Feed Rate			-
4.1	Rapid Traverse X axis	mts./min	15 or better	-
4.2	Rapid Traverse Z axis	mts./min	15 or better	-
4.3	Feed Rate	mm/min	4000 or better	-
5	Turret			-
5.1	No. of station	Nos.	8 or better	-
5.2	Tool shank size	mm	25x25 or better	-
5.3	Boring bar dia.	mm	40 or better	-
5.4	Turret indexing		Bi Directional	-
6	Tailstock			-
6.1	Quill dia	mm	80-120	-

6.2	Quill stroke	mm	Bidder to specify	-
6.3	Quill taper	-	MT5 or better	-
7	CNC System			-
7.1	Controller		Siemens/Fanuc (Latest with complete module)	-
7.2	Part Program Storage	GB	Bidder to specify	-
7.3	Programming Functions with editor		Complete module	-
8	Accuracy			-
8.1	Positioning uncertainty	µm	5	-
8.2	Overall Axis Repeatability (X,Z)	µm	5	-
8.3	Part Surface Finish	µm	5	Unit=Ra
8.4	Roundness	µm	5	-
8.5	Turret Indexing Repeatability	µm	5	-
9	Essential Accessories			-
9.1	Programmable Tailstock with sleeves	One No.		-
9.2	Automatic Tool setter	One No.		-
9.3	Hydraulic 3 Jaw Chuck	Max. turning diameter of the quoted machine		-
9.4	Hydraulic 4 Jaw Chuck	Max. turning diameter of the quoted machine		-
9.5	Soft Jaws	Two sets		-
9.6	Drill Chuck	25 mm		-
9.7	Hydraulic Collet chuck with set of collets	Size: 26 mm; set of collets upto 25 mm		-
9.8	Set of standard Cutting Tools with holder for replaceable inserts (for Facing Turning, boring, threading, grooving, parting, drilling etc)	Various operation suitable various size of jobs each one No. Drills-Centre Drill and 1to 20 mm drills		-
9.9	Coolant System	Bidder to specify and quote suitable for the machine		-
9.10	Start up Tool kit			-
9.11	Foot switch			-
9.12	Work light			-
9.13	Centralized lub. System			-
9.14	Set of Rubber mounts			-
9.15	Voltage Stabilizer			-
9.16	Ultra Isolation transformer			-
9.17	Others	Ethernet, USB ports, RS-232C Communication Ports, Set of manual (or) CD		-

10	Any Others Accessories	Bidder to specify and quote if any other accessories available/required for smooth running of the machine.	-
11	Terms & Conditions	Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India which is education institutions centrally funded institution. A Satisfactory Performance certificate from two institutions to be provided for eligibility. Bidder should submit complete contact details.	-
		Equipment should be CE certified	-
		Authorization Letter from OEM	-
		List of clients in last five years to be provided.	-
12	Scope of supply	Bidder should submit complete scope of supply (Machine, standard accessories, Optional Accessories etc with make model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.	-

. 15.A CNC Milling Machine – I (Amended Technical Specification)

SI.No	Description	Unit	Specification	Amendment
1	Make		Bidder to specify	-
2	Model		Bidder to specify	-
3	Axis Travel			-
3.1	X-Axis (mm)		400-500	-
3.2	Y-Axis (mm)		300-400	-
3.3	Z-Axis (mm)		250-300	-
4	Table			-
4.1	Length (mm)		800-1000	-
4.2	Width (mm)		300-400	-
4.3	T-Slot Width (mm)		14-16	-
4.4	Number of Std T-Slots		3 or more	-
5	Feed			-
5.1	Rapid Feed (X, Y,Z Axes) (m/min)		15 or better	-
5.2	Max. Cutting Feed (X, Y,Z Axes) (m/min)		12 or better	-
6	Spindle			-
6.1	Rating (KW)		Bidder to specify	-
6.2	Max. Speed (rpm)		6000 or better	-
6.3	Taper		BT40	-
7	Accuracy			-
7.1	Positioning (µm)		10 or better	-
7.2	Repeatability (µm)		5 or better	-
8	Automatic Tool Changer			-
8.1	Magazine capacity (Nos)		10 or better	-

8.2	Tool select by shortest & random select		Bi-Directional	-
8.3	Max. tool diameter (mm)		80 or better	-
9	Control System			
9.1	Controller	Fanuc / Siemens /or equivalent (Latest with complete module) with the screen size of 19" or more with touch screen technology, app based which leads to a smart paperless shop floor management and monitoring.	Fanuc / Siemens /or equivalent (Latest with complete module) with the screen size of 14" or more.	
9.2	Part Program Storage(GB)	Capable to store large CAM programs for continuous running (Minimum 4 GB)		-
9.3	Programming Functions with editor	Complete Module with technical calculator for power and torque requirements , with dxf file import facility, 3D simulation		-
10	Essential Accessories			-
10.1	Servo stabilizer	Bidder to specify and quote suitable for the machine		-
10.2	Ultra Isolation transformer			-
10.3	Air Compressor with drier and multi dry filter			-
10.4	Automatic centralized lubrication system			-
10.5	Touch Probe	Bidder to specify and quote Branded quality(Renishaw /Blum) Touch Probe		-
10.6	Machine protection	Monitoring vibration during machining to protect machine and spindle failure. User autorisation to the control system and the machine. Safety during power failure and Panel cooler for electrical cabinet. Door interlock for safety		-
10.7	Industry 4.0 features leads to smart machine	Live status of important component of the machine in operation, internet based remote diagnosis of the machine like fault on the machine		-
10.8	Operation hardware	Electronic handwheel, Flushing gun for internal cleaning, Coolant tank with chip conveyor		-
10.9	Tool holding devices	Bidder to specify and quote Set of suitable Cutting Tool holders		-
		ER 25 collet chuck -1 No.		-
		ER 25 collets Dia 3 to Dia 14 in steps of 1mm - 1 each		-
		ER 32 collet chuck - 1 No.		-
		ER 32 collets Dia 10 to Dia 20 in steps of 1mm - 1 each		-
		ER 40 collet chuck -1 No.		-
		ER 40 collets Dia 20 to Dia 25 in steps of 1mm - 1 each		-
ER 25 Tap collets with square		-		

		drive for M8 and M10 taps- 1 each	-
		ER 32 Tap collet with square drive for M12 tap-1 each	-
		Side lock adaptors Dia 16, 20, 25 & 32 -1 each	-
		Keyless drill chuck 0-13mm	-
		Holder (adapter) for 40 mm Face mill - 1 No	-
		Holder (adapter) for 80 mm Face mill - 1 No	-
		Holder (adapter) for 125 mm Face mill - 1 No	-
		Holder (adapter) for 50 mm Bull - 1 No	-
		Tool locking device-1 No.	-
		Pull stud- 30 no's	-
10.10	Cutting Tools		-
		Bidder to specify and quote Set of Cutting tools	-
		Face mill cutter (with replaceable inserts 20 nos.) - Dia 80 mm	-
		Bull nose cutter (with replaceable inserts 20 nos)- Dia 50 mm	-
		End Mill cutter (with replaceable inserts 20 nos)- Dia 32 mm	-
		Bull nose cutter (with replaceable inserts 20 nos)- Dia 25 mm	-
		Endmill cutter (with replaceable inserts 20 nos)- Dia 20 mm	-
		Endmill cutter (with replaceable inserts 20 nos)- Dia 16 mm	-
		Carbide End Mill cutter (each two)- Dia. 3, 4, 5, 6, 8, 10, 12, 16 mm	-
		Carbide Ball End Mill cutter (each two)- Dia. 3, 4, 5, 6, 8, 10,12, 16 mm	-
		M8, M10,M12 HSS Tap with suitable Carbide Drills - 2 Sets	-
		HSS Drills (one set) - Dia. 1 to 20 mm	-
		Centre Drill (Carbide & HSS) - each 3 Diff. Sizes	-
		Finish boring kit dia 10 to 40- 1 set	-
10.11	Clamping Kit	Clamp set Precision Hydraulic Vise with jaw opening of 275 mm and clamping force 60 KN - 1 No 3 Jaw chuck - 300 mm dia - 1 no..	-
	Others	Ethernet, USB ports	-
10.12	Software & Workstation	CAM software with post processor suitable for the machine to be quoted separately with workstation	-
11	Any other accessories if available for better utilization	Bidder to specify and quote if any other accessories available /required for smooth running and better utilization of the machine.	-

12	Terms & Conditions	Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India which is education institutions centrally funded institution. A Satisfactory Performance certificate from two institutions to be provided for eligibility. Bidder should submit complete contact details	-
		Equipment should be CE certified	-
		Authorization Letter from OEM	-
		List of clients in last five years to be provided.	-
13	Scope of supply	Bidder should submit complete scope of supply (Machine, standard accessories, Optional Accessories etc with make model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.	-

15.B CNC Milling Machine(Amended Technical Specification)

Sl.No	Description	Unit	Specification	Amendment
1	Make		Bidder to specify	-
2	Model		Bidder to specify	-
3	Axis Travel			-
3.1	X-Axis (mm)		800-1200	-
3.2	Y-Axis (mm)		600-700	-
3.3	Z-Axis (mm)		500-700	-
4	Table			-
4.1	Length (mm)		1000-1300	-
4.2	Width (mm)		600-700	-
4.3	T-Slot Width (mm)		16-20	-
4.4	Number of Std T-Slots		5 or more	-
5	Feed			-
5.1	Rapid Feed (X, Y,Z Axes) (m/min)		20 or better	-
5.2	Max. Cutting Feed (X, Y,ZAxes) (m/min)		15 or better	-
6	Spindle			-
6.1	Rating (KW)		Bidder to specify	-
6.2	Max. Speed (rpm)		6000 or better	-
6.3	Taper		BT40	-
7	Accuracy			-
7.1	Positioning	(μ m)	10 or better	-
7.2	Repeatability	(μ m)	5 or better	-
8	Automatic Tool Changer			-
8.1	Magazine capacity (Nos)		10 or better	-
8.2	Tool select by shortest & Random select		Bi-Directional	-

		<p>for M8 and M10 taps- 1 each. ER 32Tap collet with square drive for M12 tap-1each Side lock adaptors Dia 16, 20, 25 & 32 -1 each Keyless drill chuck 0-13mm Holder (adapter) for 40 mm Face mill - I No Holder (adapter) for 80 mm Face mill - I No Holder (adapter) for 125 mm Face mill - I No Holder (adapter) for 50 mm Bull - I No Tool locking device-1 No. Pull stud- 30 no's</p>	-
10.10	Cutting Tools	<p>Bidder to specify and quote Set of suitable Cutting Tool holders Face mill cutter(with replaceable inserts 20nos.) - Dia 80 mm Bull nose cutter(with replaceable inserts 20 nos)- Dia 50 mm End Mill cutter (with replaceable inserts 20 nos)- Dia 32 mm Bull nose cutter (with replaceable inserts 20 nos)- Dia 25 mm Endmill cutter (with replaceable inserts 20 nos)- Dia 20 mm Endmill cutter (with replaceable inserts 20 nos)- Dia 16 mm Carbide End Mill cutter (each two)- Dia. 3,4,5,6,8, 10,12,16 mm Carbide Ball End Mill cutter (each two)- Dia. 3,4, 5, 6, 8, 10, 12, 16 mm M8, M10,M12 HSS Tap with suitable Carbide Drills - 2 Sets HSS Drills (one set) - Dia. 1 to 20 mm Centre Drill (Carbide & HSS)-each 3 Different Sizes. Finish boring kit dia 10 to 40- 1 set</p>	- - - - - - - - - - - -
10.11	Clamping Kit	Clamp set	-
		<p>Precision Hydraulic Vise with jaw opening of 275 mm and clamping force 60 KN - I No 3 Jaw chuck - 300 mm dia - 1 no..</p>	-
10.12	Others	Ethernet, USB ports	-
10.13	Software & Workstation	CAM software with post processor suitable for the machine to be quoted separately with Workstation	-
11	Any other accessories (if available for better utilization)	Bidder to specify and quote if any other accessories available /required for smooth running and better utilization of the machine.	-
12	Terms & Conditions	<p>Manufacture/Supplier should have sizable installation of or better model worldwide and at least five in India which is educationally centrally funded institution. A Satisfactory Performance certificate from two</p>	- - - - -

		institutions to be provided for eligibility. Bidder should submit complete contact details	-
		Equipment should be CE certified	-
		Authorization Letter from OEM	-
		List of clients in last five years to be provided.	-
13	Scope of supply	Bidder should submit complete scope of supply (Machine, standard accessories, Optional Accessories etc with make model) in the technical bid without price. Bidder should supply complete start up package necessary to prove the machine and provide training.	-
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