

Technical Specification for Tender No.05/2018-19

20. CNC Milling Machine

1	Table		
1.1	X - Axis	mm	1200-1300
1.2	Y - Axis	mm	900-1000
1.3	Max Weight on Table	Kg	>1000
2	Axis Travel		
2.1	X axis	mm	1000-1200
2.2	Y axis	mm	800-900
2.3	Z axis	mm	600-700
3	Feed		
3.1	Rapid Feed (X, Y,Z Axes)	m/min	25 or better
3.2	Max. Feed (X, Y,Z Axes)	m/min	16 or better
4	Spindle		
4.1	Rating	KW	22 or better
4.2	Max. Speed	rpm	8000 or better
4.3	Taper		BT40
5	Accuracy		
5.1	Positioning	µm	10 or better
5.2	Repeatability	µm	5 or better
6	Automatic Tool Changer	The bidder must provide the details in the standard scope of supply	
6.1	Magazine capacity	Nos	20 or better
6.2	Tool select by shortest & Random select		Bi-Directional
6.3	Max. tool diameter	mm	75 or better
6.4	Max. tool length	mm	150 or better
6.5	Max. tool weight	Kg	8 or better
7	Control System	The bidder must provide the details in the standard scope of supply	
7.1	Controller	Fanuc / Heidenhain/Siemens or	
7.2	Part Program Storage	GB	4 or above
7.3	Programming Functions with editor		Complete module
8	Standard Accessories		
8.1	Touch probe -One No.		
8.2	Baby Collet holder - (BT 40 ER 20 x 070 mm & BT 40 ER 20 100 mm each One No.)		
8.3	Tool Holder Shank type - (One set of BT 40 / Dia. 44.45 mm with claming dia 3 mm to 32 mm)		

8.4	Collet Holders - (BT 40 /ER 16 X 070mm , BT 40 /ER 16 X 100mm , BT 40 /ER 16 X 150mm , BT 40 /ER25 X 070mm , BT40/ER 25 X 100mm , BT40/ER 25 X 100mm , BT 40 /ER 25X 150mm , BT40/ER 32 X 070mm ,BT40/ER 32 X100mm ,BT40/ER 32 X150mm ,BT40/ER 40 X 080mm ,BT40/ER 40 X 100 mm, BT40/ER 40 X 150mm - Each One No.)
8.5	Morse Taper Adapter - (BT 40 / MTA1 x 045 mm , BT 40 / MTA1 x 120 mm , BT 40 / MTA2 x 060 mm,BT 40 / MTA2 x120 mm, BT 40 / MTA3 x 075 mm, BT 40 / MTA3 x 135 mm, BT 40 / MTA4 x 095 mm,BT 40 / MTA4 x 165 mm -Each One No.)
8.6	End Mill Holder - (BT 40 / SL 6 x 065 mm, BT 40 / SL 8 x 065 mm, BT 40 / SL 10 x 065 mm,BT 40 / SL 12 x 065 mm, BT 40 / SL 14 x 065 mm, BT 40 / SL 16 x 065 mm, BT 40 / SL 18x 065 mm, BT 40 / SL 20 x 090 mm, BT 40 / SL 25 x 090 mm, BT 40 / SL 32 x 090mm -Each one No.)
8.7	Face Mill Arbor- (BT 40 / FMB 22 x 055 mm ,BT 40 / FMB 27 x 060 mm ,BT 40 / FMB 27 x 090 mm ,BT 40 / FMB 32 x 060 mm ,BT 40 / FMB 32 x 090 mm ,BT 40 / FMB 40 x 060 mm ,BT 40 / FMB 40 x 070 mm -Each one No).

Set of accessories suitable to the machine

8.8	Shell End Mill Arbor-(BT 40 / SMS 16 x 060 mm,BT 40 / SMS 16 x 120 mm,BT 40 / SMS 22 x 060 mm,BT 40 / SMS 22 x 120 mm,BT 40 / SMS 27 x 045 mm,BT 40 / SMS 27 x 105 mm,BT 40 / SMS 32 x 045 mm,BT 40 / SMS 32x 075 mm -Each One No.)
8.9	Drill chuck arbor -BT 40 /B16 M16 -One No.)
8.1	One Set of Spring type Collet (Dia. of 3-32 mm std .length)
8.11	One Set of bay collet (Dia. 1mm-10mm Std.Length)
8.12	Zero Point Setter -One No.
8.13	Electronic Edge Finder- One No.
8.14	Edge Finder-One No.
8.15	Center finder / Wiggler - One No.
8.16	ER Wrenchs System - One nset
8.17	Assembling AIDS -One set
8.18	Precision machine vice 4" - One No.
8.19	Tool locking fixture -One set
8.2	Automatic centralized lubrication system -One set
8.21	Machine lamp -Two Nos.
8.22	Operation & maintenance manual / CD -Two Sets
8.23	Clamping kit -Two Sets
8.24	Installation kit - One Set
8.25	Voltage stabilizer -One No.
8.26	Ultra Isolation transformer - One No.
8.27	Ethernet, USB ports, RS-232C Communication Ports - One Set

9	Others	Need to specify and quote if any other accessories available /required for smooth running of the machine
10	Scope of Supply	Bidder must provide scope of supply list in the technical bid

21. Co-ordinate Measuring Machine

1	Measuring Range (X)	mm	500 – 600
2	Measuring Range (Y)	mm	500 – 600
3	Measuring Range (Z)	mm	300 - 400
4	Table Size	mm	700 – 800 X 1000 - 1100
5	Scale Resolution	µm	0.1
6	Guide		Air bearings on each axis
7	Accuracy E(MPE)	µm	3.5 – 4.5
8	Work piece Weight	Kg	> 400
9	Probing Option		Pl. Specify & quote separately for each including non-contact probing system
10	Probing heads		
11	Type of operation		Quote separately for Motorized & CNC version
12	Software		Software capabilities should be mentioned in technical bid
13	Hardware		Bidders to Specify
14	Installation & Commissioning requirement		Bidder to Specify
15	Standard Accessories		Bidders to Specify
16	Optional Accessories		Bidders to Specify

22. LINEAR HEIGHT GAUGE (2D Measurement System)

1	Measuring Range	mm	0 -600
2	Resolution	µm	0.5 or better
3	Repeatability		
3.1	on Plane / Surface	µm	2 or better
3.2	on Arc / Diameter	µm	3 or better

4	Maximum Permissible errors (Values valid with standard Ball Probe at temp. of 20 ⁰ C ±0.5 ⁰ C	µm	1.5 + L/300 (L in mm)
5	Measuring Force	N	1±0.2
6	Drive method		Manual
7	Guiding method		Roller Bearing
8	Input & Output accessories: USB , RS 232 Output , USB for pendrive Input , LCD / LCD TFT Display and Remote Keyboard		Set of accessories suitable for Input & Output of the equipment
9	Export to any CAD Software (or) AUTO CAD software		2D Drawing Export facilities to suitable CAD software
10	Standard Accessories		Need to specify and quote the standard accessories available /required for smooth running of the equipment
11	Others		Need to specify and quote if any other accessories available /required for smooth running of the equipment
12	Scope of Supply		Bidder must provide scope of supply list in the technical bid

23. Optical Profile Projector

1	X, Y Axis measuring Range	mm	300 x 150
2	Top Surface Dimensions	mm	500 – 550 X 300 - 350
3	Resolution	mm	0.001
4	Focus	mm	75 - 100
5	Three lens turret mount with 10x lens		
6	Magnification	--	10 X, 20 X, 50 X
7	Diameter of Screen	mm	400 – 500
8	Digital angle display and the screen with 0.01o resolution		
9	Swiveling angle		± 5 ⁰
10	Maximum Loading		15 – 20kg
11	Standard Accessories		Bidder to specify
12	Optional Accessories		Bidder to specify