

## CNC MILLING CUTTING TOOLS

S.No	Tool/Insert/Adaptor/Accessories	Technical Specification	Qty
1.	Dia 40 End mill	Dia 40mm end mill with tangential pockets to accommodate the below mentioned insert. OAL=110, approach 90 deg with 4 no of pocket, weldon shank of Dia 32.Capable to take Depth of cut of 12.50. Cutter should be capable to produce shoulder with no mismatch. Cutter should also be capable of Ramp down as well.	1
2.	40mm Dia End mill Insert	Insert Suitable for dia 40 end mill cutter with 4 cutting helical and positive geometry edges having length of 13.73 mm capable to take depth of cut of 12.50 mm, with nose radius of 0.8mm having thickness of 6.65mm, capable to run at max feed of 0.3mm/ tooth.	50
3.	Dia 20 End mill	Dia 20mm end mill with tangential pockets to accommodate the below mentioned insert. OAL=90,approch 90 deg with 3 no of pocket, weldon shank of dia 20.Capable to take Depth of cut of 8mm. Cutter should be capable to produce shoulder with no mismatch. Cutter should be capable of Ramp down as well.	1
4.	20 mm dia End mill Insert	Insert Suitable for dia 20 end mill cutter & with 4 cutting helical and positive geometry edges having length of 8.59mm capable to take depth of cut of 8mm, with nose radius of 0.4mm having thickness of 4.24mm, capable to run at max feed of 0.3mm/ tooth.	50
5.	Dia 16mm end mill	Dia 16mm end mill with tangential pockets to accommodate the below mentioned insert. OAL=90,approch 90 deg with 2 no of pocket, weldon shank of dia 16.Capable to take Depth of cut of 8mm Cutter should be capable to produce sholder with no mismatch. Cutter should be capable of Ramp down as well.	1
6.	16 Dia end mill Insert	Insert Suitable for dia 16 end mill cutter & with 4 cutting helical and positive geometry edges having length of 8.59mm capable to take depth of cut of 8mm, with nose radius of 0.4mm having thickness of 4.24mm, capable to run at max feed of 0.3mm/ tooth.	50
7.	63 dia face mill cutter	Dia 63 mm face mill cutter with tangential pockets to accommodate the below mentioned insert. Approach angle is 90 degree with 6 no of pockets, capable to take depth of cut of 12.50mm, bore is of 22 mm and with through coolant. Cutter should be capable of Ramp down as well.	1
8.	63 Dia face mill Insert	Insert Suitable for dia 63 face mill cutter with 4 cutting helical and positive geometry edges having length of 13.73 mm capable to take depth of cut of 12.50 mm, with nose radius of 0.8mm having thickness of 6.65mm, capable to run at max feed of 0.25mm/ tooth.	50
9.	80 mm dia face mill cutter	Dia 80 mm face mill cutter with Radially mounted pockets to accommodate the below mentioned insert. Approach angle is 90 degree and bore is of 27 mm and with through coolant. Cutter should be with inclined dovetail pocket to provide high rigidity and also capable of plunging as well. Capable of ramp down also.	1
10.	80 dia 90 degree face mill insert	Insert Suitable for dia 80 face mill cutter with 4 cutting helical and positive geometry edges having length of 16.70 mm capable to take depth of cut of 16.30 mm, with nose radius of 0.8mm having thickness of 10.40mm, capable to run at max feed of 0.40mm/ tooth. Insert with high positive rake angle and capable to produce very good surface finish at a very high feed.	50
11.	80 dia 45 degree face mill insert	Octagonal insert with helical and positive geometry 16 cutting edges/insert. Insert capable of taking max feed of	50

	specification with 16 edges	0.40/tooth Insert thickness of 5.5 mm .Max depth of cut of 3.50 mm.	
12.	80 dia 45 degree face mill insert specification with 8 edges	Square insert with helical and positive geometry cutting edges having length of 13.00mm capable to take depth of cut of 6.0mm, with nose radius of 0.8mm having thickness of 6.20mm, capable to run at feed of 0.4mm/ teeth.	50
13.	80 dia 45 degree face mill cutter to accommodate both the 8 and 16 edge insets	Common Cutter suitable for above said both inserts, having 45 degree approach, cutter dia 80 mm, bore dia 27 mm and with 7 insert pockets capable of taking both square insert of 8 edges and octagonal insert of 16 edges in the same cutter body.	1
14.	Dia 50 mm feed mill insert specification	Trigon shaped Insert with 6 positive geometry cutting edges having length of 8.8mm capable to take depth of cut of max 2.0 mm, with nose radius of 1.2mm having thickness of 6.8mm, capable to run at maximum feed of 2.00mm/ tooth for high material removal rate, insert should have larger radius cutting edge.	1
15.	Dia 50 mm feed mill cutter specification	Dia 50mm high feed cutter having approach of 90 deg with 6 no of pocket suitable for the above insert and should be capable to take Depth of cut of 2.0 mm at a very high feed even with long overhang.	50
16.	Multi master threaded insert head of end mill dia 10 mm	Interchangeable head for sholder milling application, of dia 10mm with 4 flutes and square thread, capable to run at max feed of 0.11mm/ teeth. Capable to take depth of 7 mm, with nose radius of 0.5 mm	6
17.	Multi master threaded insert head of ball nose end mill dia 8 mm	Interchangeable head with ball nose head for milling application, of dia 8mm with 4 flutes, capable of taking max depth of 5 mm and with square thread	6
18.	Multi master threaded insert head ball nose end mill dia 12 mm	Interchangeable head with ball nose head for milling application, of dia 8mm with 4 flutes, capable of taking max depth of 9 mm and with square thread	6
19.	Multi master threaded insert head of 8 mm for centre drilling/ 45 degree chamfering .	Interchangeable head for centre drilling and 45 degree chamfering application, of dia 8mm with 2 flutes and square thread	6
20.	Shank for multi master with Square thread of T05	Steel shank dia 8 mm, OVL of 70 mm and with square thread of T05 capable of taking all multi master heads with T05 square thread.	2
21.	Shank for multi master with Square thread of T08	Steel shank dia 20 mm, OVL of 170 mm, effective length of 68.60 mm and with square thread of T08 capable of taking all multi master heads with T08 square thread.	2
22.	Shank for multi master with Square thread of T06	Steel shank dia 20 mm, OVL of 160 mm, effective length of 45.0 mm and with square thread of T06 capable of taking all multi master heads with T06 square thread.	2
23.	Solid carbide ball nose mill dia 6.0 mm	Solid carbide ball nose end mill of 4 flute and 30 degree helix angle of OVL 100 mm	6
24.	Collet chuck adaptor with BT40-MAS taper for ER16 collets	BT 40 -MAS adaptor for holding collet ER 16 , OVL of 200 mm to accommodate ER16 collets from 0.50 -10 mm. Adaptor taper of AT3 quality, 58-60 HRc and with dynamic balancing of G2.5	1
25.	Collet chuck adaptor with BT40-MAS taper for ER20 collets-Extra long	BT 40 -MAS adaptor for holding collet ER 20 , OVL of 150 mm to accommodate ER 20 collets from 1.0-13 mm. Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
26.	Collet chuck adaptor with BT40-MAS taper for ER32 collets-Extra long	BT 40 -MAS adaptor for holding collet ER32 , OVL of 200 mm to accommodate ER 32 collets from 2.0-20 mm. Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
27.	End mill adaptor with BT40-MAS taper and bore 12mm	BT 40 -MAS adaptor for holding end mills of shank dia 12 mm , effective L of 65 mm .Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1

28.	End mill adaptor with BT40-MAS taper and bore 16mm	BT 40 -MAS adaptor for holding end mills of shank dia 16 mm , effective L of 65 mm .Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
29.	End mill adaptor with BT40-MAS taper and bore 20mm	BT 40 -MAS adaptor for holding end mills of shank dia 20 mm , effective L of 75 mm .Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
30.	End mill adaptor with BT40-MAS taper and bore 25mm	BT 40 -MAS adaptor for holding end mills of shank dia 25 mm , effective L of 105 mm .Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
31.	End mill adaptor with BT40-MAS taper and bore 32mm	BT 40 -MAS adaptor for holding end mills of shank dia 25 mm , effective L of 110 mm .Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
32.	Face mill adaptor with BT40-MAS taper for 63 dia cutter	BT 40 -MAS adaptor for holding face mills of bore dia 22 mm , effective L of 60 mm .Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
33.	Morse taper MT2 adaptor with BT40-MAS taper	BT 40 -MAS adaptor for holding MT2 taper shank , effective L of 60 mm .Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
34.	Face mill adaptor with BT40-MAS taper for 80 dia cutter	BT 40 -MAS adaptor for holding face mills of bore dia 27 mm , effective L of 105 mm .Adaptor taper of AT3 quality, 58-60 HRc and dynamic balancing of G2.5	1
35.	ER 16 Collet from 0.50-10 mm	Collet set of ER16 as per DIN 6499 from 0,50-10 mm in steps of 1 mm.TIR within 0.01 mm: 10 Nos/set	1 Set
36.	ER 20 Collet from 1.0-13 mm	Collet set of ER 20 as per DIN 6499 from 1.0-13 mm in steps of 1 mm.TIR within 0.01 mm: 12 Nos/set	1 Set
37.	ER 32 Collet from 2.0-20 mm	Collet set of ER 32 as per DIN 6499 from 2.0-20 mm in steps of 1 mm.TIR within 0.01 mm: 18 Nos/set	1 Set
38.	Drill body for 18 mm	Inserted type drill dia 18mm, Flute length of 54 mm, shank dia 25mm, OAL of 130 mm, with through coolant and having common insert for both central and peripheral pockets (2 inserts /drill).	1
39.	Drill body for 20 mm	Inserted type drill dia 20 mm, shank dia 25mm, flute length of 60 mm, OVL of 136 mm and with through coolant, having common insert for both central and peripheral pockets (2 inserts/drill).	1
40.	Inserts for 18 and 20 mm drill	Common Insert to suit the drill dia 18 and 20 mm, with 4 cutting edge and insert length of 6.20 mm and thickness 3.20mm and nose radius of 0.4mm	50
41.	Tool clamping fixture	Tool clamping fixture ,Rotary type suitable for BT 40 MAS adaptor	1 Set
42.	Spare screws 10 nos/cutter body	Spare screws 20 nos each suitable for each cutter body-1 set	20/tool
43.	1 Spare tox key	1 Spare tox key for each cutter body-1 set	1 Spare Tox
44.	Dia 8mm Solid Carbide End Mill	4 flute SC EM , with 38° helix with variable pitch for good finish even at high feeds. High material removal rate and chatter free, Variable Pitch for Chatter Dampening, Neck Relief to reduce chatter marks at high feeds. Used for machining alloyed steels etc.Having OAL=63mm FL=18mm	6
45.	Dia 10mm Solid Carbide end mill	4 flute SC EM, with 38° helix with variable pitch for good finish even at high feeds. High material removal rate and chatter free, Variable Pitch for Chatter Dampening, Neck Relief to reduce chatter marks at high feeds. Used for machining alloyed steels etc. Having OAL=72mm FL=22mm	6
46.	Dia 12mm Solid Carbide end mill	4 flute SC EM, with 38° helix with variable pitch for good finish at high feeds, high material removal rates, chatter free, Variable Pitch for Chatter Dampening and With Neck Relief to reduce chatter marks at high feeds. Used for	6

		machining alloy steel etc. Having OAL=83mm Fl=26mm	
47.	Dia 16mm Solid Carbide end mill	4 flute SC EM, with 38° helix with variable pitch for good finish even at high feeds. High material removal rate and chatter free, Variable Pitch for Chatter Dampening with Neck Relief to reduce chatter marks at high feeds. Used for machining alloy steels etc. Having OAL=100mm Fl=34mm	6
48.	Rough Boring Bar Dia range 36-50mm	Rough boring head dia 35.5mm to 50 mm range, having workable length of 200mm, with MB coupling of 63 dia, capable to have Insert holder in staggered manner	1
49.		Insert tool holder to suite above boring bar, capable of machining bore of dia range 35.5-50mm, having length of 32mm and width of 15mm	1
50.		Insert tool holder to suite above boring bar, capable of machining bore of dia range 35.5-50mm, having length of 32mm and width of 14.8mm	1
51.		Common Insert to Suite above said Insert Holders	50
52.	Adaptor for the rough boring bar	BT 40 -MAS adaptor for holding Boring head with MB Coupling of dia 63 mm, of L of 66 mm. Adaptor taper of AT3 quality, 58-60 HRC and dynamic balancing of G2.5	1
53.	Solid carbide reamer dia 8 mm	Solid carbide drill reamers with straight flute and with included angle of 140 degrees and with through coolant Flute length 29 mm, OVL of 79 mm.	3
54.	Solid carbide reamer dia 10 mm	Solid carbide drill reamers with straight flute and with included angle of 140 degrees and with through coolant Flute length 47 mm, OVL of 89 mm	3
55.	Solid carbide reamer dia 12 mm	Solid carbide drill reamers with straight flute and with included angle of 140 degrees and with through coolant Flute length 55 mm, OVL of 102 mm	3
56.	Shank for reaming head dia from 14.0 and 16.0 mm	Reamer shank dia 16 mm to accommodate interchangeable head in the range of 13.501 to 16.0 mm , with through coolant, effective length of 3D, OVL of 105.50 mm	1
57.	Solid carbide reaming head of 14.0mm for the above shank	Solid carbide reaming head with 6 left hand helical flutes of 20 degree helix angle and with through coolant holes. Thickness of head 9.20 mm	1
58.	Solid carbide reaming head of 16.0mm for the above shank	Solid carbide reaming head with 6 left hand helical flutes of 20 degree helix angle and with through coolant holes. Thickness of head 9.20 mm	1