

Precision Boring Heads-F1

- High quality, excellent performance, practical design at affordable price.
- Maximum rigidity is assured even when boring bar holder is used in an offset position.
- Hardened and ground adjusting screw along with outside base design guarantees long life and trouble free use.

Adjusting Screws

Range	Order No.
for 2"	220-1201
for 3"	220-1302
For 4"	220-1401



Boring Head Dia.	Boring Bar Hole Size	Max. Offset	Grad.	1-1/2"-18 Order No.	7/8"-20 Order No.
2	1/2	5/8	.0005"	220-1200	220-1210
3	3/4	1	.0005"	220-1300	220-1310
4	1	1-5/8	.0005"	220-1400	220-1410

Boring Head Dia.	Boring Bar Hole Size	Max. Offset	Grad.	1-1/2"-18 Order No.	7/8"-20 Order No.
50	12	16	.01mm	220-1050	220-1060
75	18	25	.01mm	220-1075	220-1085
100	25	41	.01mm	220-1100	220-1110

Precision Boring Head Shanks

- All of the shank is suitable for F1.
- R8, MT2, MT3 and MT4 are suitable for F2.



Morse Taper Shank	Thread	Draw Bar Thread	Draw Bar End Order No.	Tang End Order No.
1	7/8"-20	1/4"-20	220-1511	220-1512
1	1-1/2"-18	1/4"-20	220-1513	220-1514
2	3/4"-20	3/8"-16	220-1519	220-1520
2	7/8"-20	3/8"-16	220-1521	220-1522
2	1-1/2"-18	3/8"-16	220-1523	220-1524
3	7/8"-20	3/8"-16	220-1531	220-1532
3	1-1/2"-18	3/8"-16	220-1533	220-1534
4	7/8"-20	5/8"-11	220-1541	220-1542
4	1-1/2"-18	5/8"-11	220-1543	220-1544
5	7/8"-20	1"-8	220-1551	220-1552
5	1-1/2"-18	1"-8	220-1553	220-1554

Shank Types	7/8"-20 Thread Order No.	1-1/2"-18 Thread Order No.
R8	220-1560	220-1561
1/2" Dia. Straight Shank	220-1563	220-1564
5/8" Dia. Straight Shank	220-1566	220-1567
3/4" Dia. Straight Shank	220-1569	220-1570
7/8" Dia. Straight Shank	220-1572	220-1573
1" Dia. Straight Shank	220-1575	220-1576
1-1/4" Dia. Straight Shank	220-1578	220-1579
1-1/2" Dia. Straight Shank	220-1581	220-1582
2" Dia. Straight Shank	220-1584	220-1585
30 Taper	220-1590	220-1591
40 Taper	220-1593	220-1594
50 Taper	220-1596	220-1597

Boring Combo Sets



2" Boring Combo Set

- 2" Boring head Order No. 220-1210.
- R8 shank (7/8"-20 TPI) Order No. 220-1560.
- 1/2" Boring bar set Order No. 375-1202 or 375-1206.

Order No. 220-1600

3" Boring Combo Set

- 3" Boring head Order No. 220-1300.
- R8 shank (1-1/2"-18 TPI) Order No. 220-1561.
- 3/4" Boring bar set Order No. 375-1602 or 375-1606.

Order No. 220-1800

Precision Boring Heads-F2



Boring Head Diameter	Boring Bar Hole Size	Max. Offset	Grad.	Type	Thread	Order No.
2-1/8	1/2	5/16	.001"	F2	1-5/8"-16	220-1208
54	12	8	.01mm	F2	1-5/8"-16	220-1054

Revolving Tailstock Turrets

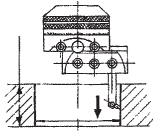
These turrets, available in 2 sizes, have 6 holes each for holding 6 tools. A trigger type handle is conveniently located which enables instant changing.



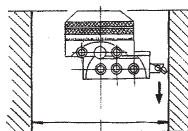
Shank	Dia. of Turret	Size of Hole	Order No.
MT1	2-1/2	5/8"	220-0900
MT2	2-1/2"	5/8"	220-0901
MT3	2-1/2"	5/8"	220-0902
MT4	2-1/2"	5/8"	220-0903
1/2" Dia. Straight Shank	2-1/2"	5/8"	220-0904
5/8" Dia. Straight Shank	2-1/2"	5/8"	220-0905
3/4" Dia. Straight Shank	2-1/2"	5/8"	220-0906
7/8" Dia. Straight Shank	2-1/2"	5/8"	220-0907
1" Dia. Straight Shank	2-1/2"	5/8"	220-0908
MT2	5"	1"	220-0911
MT3	5"	1"	220-0912
MT4	5"	1"	220-0913
7/8" Dia. Straight Shank	5"	1"	220-0915
1" Dia. Straight Shank	5"	1"	220-0916
1-1/4" Dia. Straight Shank	5"	1"	220-0917
1-1/2" Dia. Straight Shank	5"	1"	220-0918

Universal Facing And Boring Head Sets

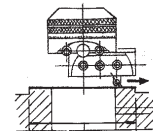
1. Bores (small diameter)



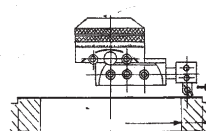
2. Bores (large diameter)



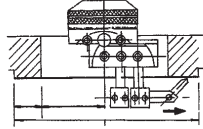
3. Surfacing (low diameter)



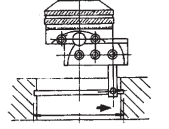
4. Surfacing (large diameter)



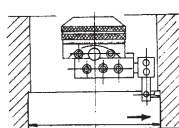
5. Surfacing (rear)



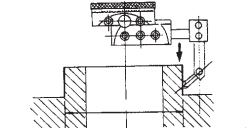
6. Slotting



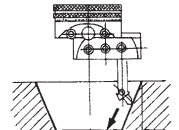
7. Recesses in large bores



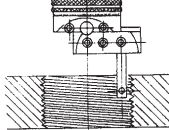
8. External turning



9. Taper turning



10. Tapping



The facing and boring head is a major accessory of Boring Machine, Milling Machine, CNC Machine etc. It also can carry out such operations as facing, outside & inside boring, boring step and inner and outside groove cutting featuring manual fine feed, rapid adjustment, various velocities for radial automatic feed and overload protection.

Type of taper shanks available for the boring heads are as following:

R8, MT3-MT6, MW3-MW6, TZIO, ISO30, 40, 45, 50, etc.



Descriptions	Order No. 220-1701	Order No. 220-1801	Order No. 220-1901
Max. facing and boring dia (mm)	150	350	450
Dia. of tool post holes in slide (mm)	18	22	22
Fine feed per graduation (mm)	0.005	0.005	0.005
Weight of head without shank (kgs)	2.9	6.1	7.8
Max. stroke of slide (mm)	+/-15	+/-25	+/- 50
Self-acting feed per revolution (mm)	0.02, 0.04, 0.06, 0.08, 0.10, 0.12	0.03, 0.06, 0.09, 0.12, 0.15, 0.18	0.03, 0.06, 0.09, 0.12, 0.15, 0.18
Max. dia. of slide (mm)	90	120	168
Height of head without shank	87.5	118	118
The length of sliding block (mm)	75	105	160
The width of sliding block (mm)	70	90	90

Solid Lathe Centers

- Hardened and ground to the closest tolerance.
- There are three type to meet your need carbon steel, high speed steel tipped, carbide tipped



Carbon Steel and High Speed Steel



Carbide Tipped

Morse Taper	Overall Length	Carbon Steel Order No.	H.S.S. Order No.	Carbide Tipped Order No.
MT1	3-3/16"	251-3011	251-3071	251-3051
MT2	3-15/16"	251-3012	251-3072	251-3052
MT3	4-15/16"	251-3013	251-3073	251-3053
MT4	6-5/16"	251-3014	251-3074	251-3054
MT5	7-7/8"	251-3015	251-3075	251-3055
MT6	11"	251-3016	251-3076	251-3056
MT7	14"	251-3017	251-3077	251-3057

Half-Notched Lathe Centers



Morse Taper	Order No.
MT1	251-3801
MT2	251-3802
MT3	251-3803
MT4	251-3804
MT5	251-3805
MT6	251-3806
MT7	251-3807

Bull Nose Live Centers



Morse Taper	Small End Dia.	Large End Dia.	Order No.
MT2	1/2"	2-7/16"	251-3702
MT3	3/4"	3"	251-3703
MT3	1-1/4"	4"	251-3704
MT3	1-1/2"	5"	251-3705
MT4	1-3/8"	5"	251-3706
MT4	2"	6"	251-3707
MT5	1-3/8"	6"	251-3708
MT5	2-1/8"	8"	251-3709