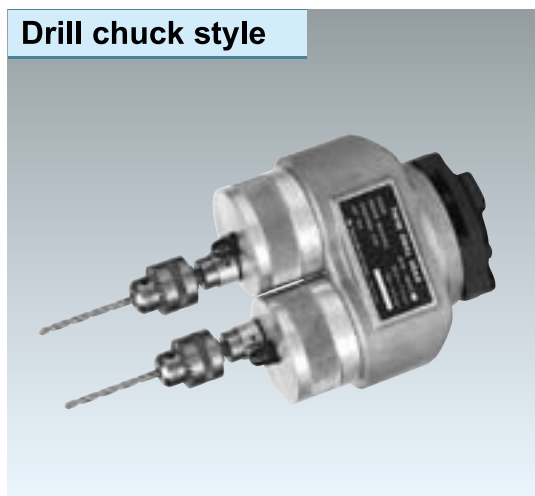


DRILL HEADS & TAPPER HEADS

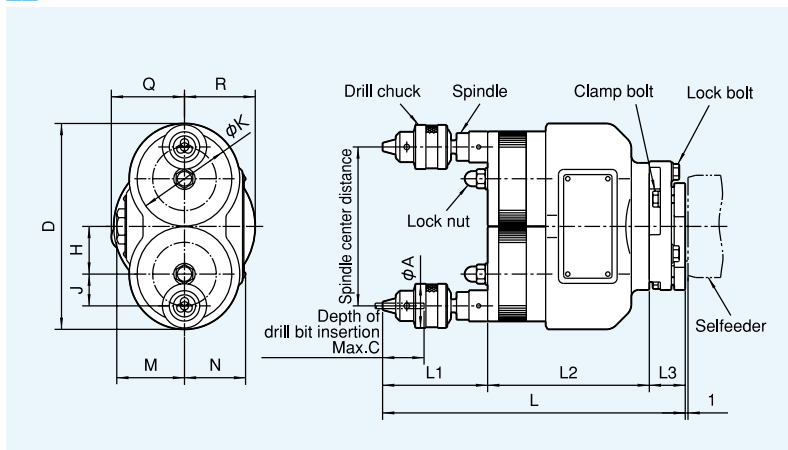
Spindle pitch adjustable type

Drill Heads with adjustable spindle pitch. Drill chuck and Collet chuck styles are available.

Drill chuck style



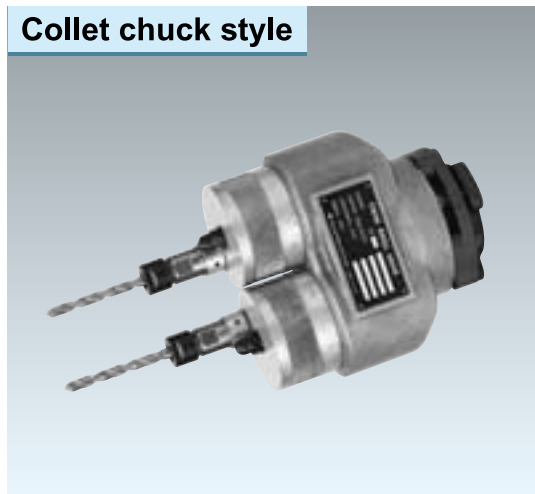
Dimensions (mm)



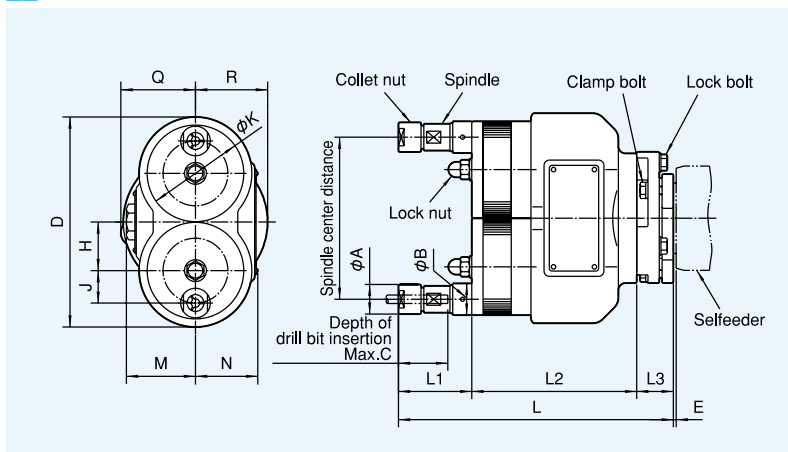
Dimensions (mm)

Model	Symbol	D	L	L1	L2	L3	A	C	H	J	K	M	N	Q	R
2D21-540AD		111	202.5	60.5	117	25	21	22	25.375	16.875	50.3	41	35	41	39
2D41-540AD		111	203.5	60.5	117	26	21	22	25.375	16.875	50.3	48	35	49	46
2D46-540AD			219.5		133										
2D41-865AD		149	219	76	117	26	32	30	34.5	23	68.5	50	44	49	46
2D46-865AD															

Collet chuck style



Dimensions (mm)



Dimensions (mm)

Model	Symbol	D	L	L1	L2	L3	A	B	C	E	H	J	K	M	N	Q	R
2D21-845AP		111	185.5	43.5	117	25	14.8	16.8	30	1	25.375	16.875	50.3	41	35	41	39
2D41-845AP		111	186.5	43.5	117	26	14.8	16.8	30	1	25.375	16.875	50.3	48	35	49	46
2D46-845AP			202.5		133												
2D41-2075AP		149	195	52	117	26	21	22.5	35	1	34.5	23	68.5	50	44	49	46
2D46-2075AP																	
2D56-50130AP		190	274	75	160	39	34	33	56	2	45	27	89	58	52	66	64
2D63-50130AP		226	289	75	163	51	34	40	56	2	54	31.5	106	72	64	87	84

 Drilling capacity(mm)

Operating air pressure :0.5MPa

Specs Model	Spindle center distance (Min.~Max.)	Chucking capacity	Chucking type	Speed ratio (Output/Input)	Max. drill size			Applicable Selffeeder model						
					Alumi- nium	Cast Iron	Carbon Steel							
2D21-540AD	22 ~ 84	1 ~ 4	Drill chuck	1	4	2.5	2	ES2-6030	GSA-2-60□□ (Notes2)					
2D21-845AP	17 ~ 84	0.8 ~ 5	Collet chuck		4	3	3	ES2-6020	GSA-2-60□□ (Notes2)					
					5	4	4	ES2-6014	GSA-2-60□□ (Notes2)					
2D41-540AD	22 ~ 84	1 ~ 4	Drill chuck	1	4.5	3.5	3	ES3C-60□□L (Notes2)						
2D41-845AP	17 ~ 84	0.8 ~ 5	Collet chuck											
2D46-540AD	22 ~ 84	1 ~ 4	Drill chuck	1	5	4.5	4	ES3C-13□□L (Notes2)						
2D46-845AP	17 ~ 84	0.8 ~ 5	Collet chuck											
2D41-865AD	32.5 ~ 114	1 ~ 6.5	Drill chuck	1	4	2.5	2	ES3C-6030L						
2D41-2075AP	23 ~ 114	1 ~ 7.5	Collet chuck		4.5	3.5	3	ES3C-6022L						
2D46-865AD 2D46-2075AP	32.5 ~ 114 23 ~ 114	1 ~ 6.5 1 ~ 7.5	Drill chuck Collet chuck	1	5	4	3.5	ES3C-1314L						
					6	5	4	ES3C-1309L						
					7	6	5	ES3C-1305L						
					5	3	3	GSB-4-1330/L						
					6	3.5	3.5	ES3P-1326L/LL	GSB-4-1323/L	GSB-2-1330/L				
					7	4.5	3.5	ES3P-1318L/LL	GSB-4-1315/L	GSB-2-1320/L				
					7	5.5	5	ES3P-1314L/LL						
					7.5	6	5	ES3P-1310L/LL	GSB-4-1310/L	GSB-2-1315/L				
					7.5	6	5	ES3P-1307L/LL	GSB-4-1307/L	GSB-2-1312/L				
					8	6.5	5.5	ES3P-1305L/LL						
					2D56-50130AP	36.5 ~ 143	1.5 ~ 13	Collet chuck	1	8	5	4.5	ES5-1320	GSC-4-1321/L
										9	6	5.5	ES5-1314	GSC-4-1315/L
9	7	6	ES5-1311	GSC-4-1311/L						GSC-2-1315/L				
10	7	6	ES5-1308											
11	7.5	6.5	ES5-1306	GSC-4-1307/L										
11.5	8	6.5	ES5-1304											
2D63-50130AP	45.5 ~ 170	1.5 ~ 13	Collet chuck	1	13	8.5	8	ES6-2411						
					13	11	10	ES6-2408						
					13	12	11	ES6-2406						
					13	11	9.5	ES6-2405						
					13	12	11	ES6-2403						
					13	12	11	ES6-2402						

Notes1.The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 ,Carbon Steel : S45C

2.Other models of Selffeeder are applicable. Please contact our local distributor or subsidiary for the details.

3.Please use the collet chuck spindle noses when the hardness of the carbide drill and tool shank is higher than that of a general high speed steels.

DRILL HEADS & TAPPER HEADS

Fixed spindle type

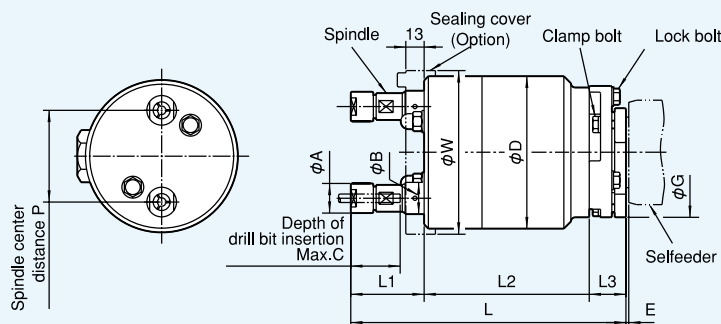
Collet chuck style

Sugino can provide Drill Heads for your special requirements.
Various collet diameters are available.

2-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	L3	A	B	C	E	G	W
2D21-1540BTE		12 ~ 12.6	108	179	37	117	25	11.8	—	23.5	1	78	112
2D21-550BP		12.6 ~ 17	108	186	44	117	25	12.4	—	25	1	78	112
2D21-845BP		17 ~ 23	108	185.5	43.5	117	25	14.8	16.8	30	1	78	112
2D21-570BP		17.2 ~ 23	108	195	53	117	25	16	—	36	1	78	112
2D21-2075BP		23 ~ 69	108	194	52	117	25	21	22.5	35	1	78	112
2D41-1530BTE		10 ~ 11	108	162.5	31.5	105	26	9.8	—	22.5	1	92	112
2D46-1530BTE				178.5		121							
2D41-1530BTE		11 ~ 12	108	164	33	105	26	10.8	—	22.5	1	92	112
2D46-1530BTE				180		121							
2D41-1540BTE		12 ~ 12.6	108	180	37	117	26	11.8	—	23.5	1	92	112
2D46-1540BTE				196		133							
2D41-550BP		12.6 ~ 17	108	187	44	117	26	12.4	—	25	1	92	112
2D41-845BP		17 ~ 23	108	186.5	43.5	117	26	14.8	16.8	30	1	92	112
2D46-845BP				202.5		133							
2D41-570BP		17.2 ~ 23	108	196	53	117	26	16	—	36	1	92	112
2D46-570BP				212		133							
2D41-2075BP		23 ~ 69	108	195	52	117	26	21	22.5	35	1	92	112
		69 ~ 109	148										152
2D46-2075BP		23 ~ 69	108										112
		69 ~ 109	148										152
2D56-5100BP		24.2 ~ 41	148	264	65	160	39	24	—	46	2	128	152
2D56-50130BP		41 ~ 97	148	274	75	160	39	34	40	56	2	128	152
		97 ~ 137	188										194
2D6N-5100BP		24.2 ~ 41	148	279	65	163	51	24	—	46	2	176	152
2D6N-50130BP		41 ~ 97	148	289	75	163	51	34	40	56	2	176	152
		97 ~ 137	188										194

Note: Heads with different spindle pitch not shown in the above chart can be manufactured. Please contact our local distributor or subsidiary for details.

 Drilling capacity (mm)

Operating air pressure :0.5MPa

Specs Model	Spindle center distance (Min.~Max.)	Chucking capacity	Chucking type Collet chuck	Max. drill size			Applicable Selffeeder model
				Alumi- nium	Cast Iron	Carbon Steel	
2D21-1540BTE	12 ~ 12.6	1.1 ~ 4	Screw-in type	3.5	2.5	2	ES2-60□□ (Notes2) GSA-2-60□□ (Notes2)
2D21-550BP	12.6 ~ 17	1.1 ~ 5	Push-in type	4	3	3	ES2-60□□ (Notes2) GSA-2-60□□ (Notes2)
2D21-845BP	17 ~ 23	0.8 ~ 5	Push-in type	4	2.5	2	ES2-6030 GSA-2-60□□ (Notes2)
				4	3	3	ES2-6020 GSA-2-60□□ (Notes2)
				5	4	4	ES2-6014 GSA-2-60□□ (Notes2)
2D21-570BP	17.2 ~ 23	1.1 ~ 7	Push-in type	4	2.5	2	ES2-6030 GSA-2-6030
				4	3	3	ES2-6020 GSA-2-6020
				5	4	4	ES2-6014 GSA-2-6015
				5	4.5	4	GSA-2-6011
2D21-2075BP	23 ~ 69	1 ~ 7.5	Push-in type	4	2.5	2	ES2-6030 GSA-2-6030
				4	3	3	ES2-6020 GSA-2-6020
				5	4	4	ES2-6014 GSA-2-6015
				5	4.5	4	GSA-2-6011
2D46-1530BTE	10 ~ 11	1.1 ~ 3	Screw-in type	2	1.5	1.5	ES3C-13□□L, ES3P-13□□L/LL (Notes2) GSB-4-13□□/L (Notes2)
2D46-1530BTE	11 ~ 12	1.1 ~ 3	Screw-in type	2.5	2	1.5	ES3C-13□□L, ES3P-13□□L/LL (Notes2) GSB-4-13□□/L (Notes2)
2D46-1540BTE	12 ~ 12.6	1.1 ~ 4	Screw-in type	3.5	2.5	2	ES3C-13□□L, ES3P-13□□L/LL (Notes2) GSB-4-13□□/L (Notes2)
2D41-550BP	12.6 ~ 17	1.1 ~ 5	Push-in type	4	3.5	3	ES3C-60□□L (Notes2)
2D41-845BP	17 ~ 23	0.8 ~ 5	Push-in type	4.5	3.5	3	ES3C-60□□L (Notes2)
2D46-845BP	17 ~ 23	0.8 ~ 5	Push-in type	5	4.5	4	ES3C-13□□L, ES3P-13□□L/LL (Notes2) GSB-4-13□□/L (Notes2)
2D41-570BP	17.2 ~ 23	1.1 ~ 7	Push-in type	4	2.5	2	ES3C-6030L
				4.5	3.5	3	ES3C-6022L
2D46-570BP	17.2 ~ 23	1.1 ~ 7	Push-in type	5	4	3.5	ES3C-1314L
				6	5	4	ES3C-1309L
				7	6	5	ES3C-1305L
				5	3	3	GSB-4-1330/L
				6	3.5	3.5	ES3P-1326L/LL GSB-4-1323/L
				7	4.5	3.5	ES3P-1318L/LL GSB-4-1315/L
				7	5.5	5	ES3P-1314L/LL
2D41-2075BP	23 ~ 109	1 ~ 7.5	Push-in type	4	2.5	2	ES3C-6030L
				4.5	3.5	3	ES3C-6022L
2D46-2075BP	23 ~ 109	1 ~ 7.5	Push-in type	5	4	3.5	ES3C-1314L
				6	5	4	ES3C-1309L
				7	6	5	ES3C-1305L
				5	3	3	GSB-4-1330/L
				6	3.5	3.5	ES3P-1326L/LL GSB-4-1323/L GSB-2-1330/L
				7	4.5	3.5	ES3P-1318L/LL GSB-4-1315/L GSB-2-1320/L
				7	5.5	5	ES3P-1314L/LL
				7.5	6	5	ES3P-1310L/LL GSB-4-1310/L GSB-2-1315/L
				7.5	6	5	ES3P-1307L/LL GSB-4-1307/L GSB-2-1312/L
2D56-5100BP	24.2 ~ 41	1.1 ~ 10	Push-in type	8	6.5	5.5	ES3P-1305L/LL GSB-4-1306/L
				8	5	4.5	ES5-1320 GSC-4-1321/L
				9	6	5.5	ES5-1314 GSC-4-1315/L GSC-2-1321/L
				9	7	6	ES5-1311 GSC-4-1311/L GSC-2-1315/L
				10	7	6	ES5-1308 GSC-4-1307/L
				10	8	6.5	ES5-1304
				10	9	7.5	ES5-1302
2D56-50130BP	41 ~ 137	1.5 ~ 13	Push-in type	8	5	4.5	ES5-1320 GSC-4-1321/L
				9	6	5.5	ES5-1314 GSC-4-1315/L GSC-2-1321/L
				9	7	6	ES5-1311 GSC-4-1311/L GSC-2-1315/L
				10	7	6	ES5-1308 GSC-4-1307/L
				11.5	8	6.5	ES5-1304
				13	9	7.5	ES5-1302
2D6N-5100BP	24.2 ~ 41	1.1 ~ 10	Push-in type	10	8.5	8	ES6-2411E
2D6N-50130BP	41 ~ 137	1.5 ~ 13	Push-in type	13	8.5	8	ES6-2411E
				13	11	10	ES6-2408E
				13	12	11	ES6-2406E
				13	11	9.5	ES6-2405E
				13	12	11	ES6-2403E
				13	12	11	ES6-2402E

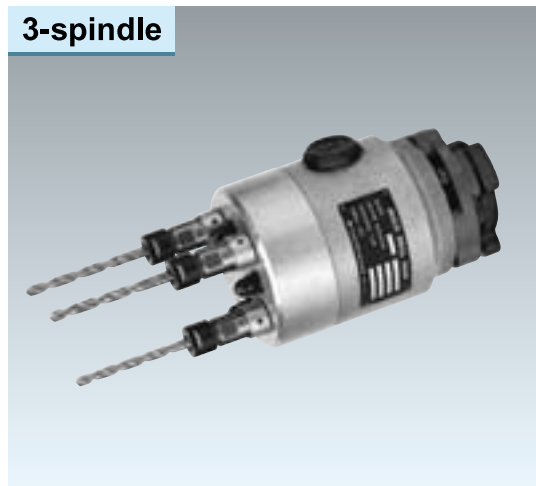
Notes1. The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 , Carbon Steel : S45C

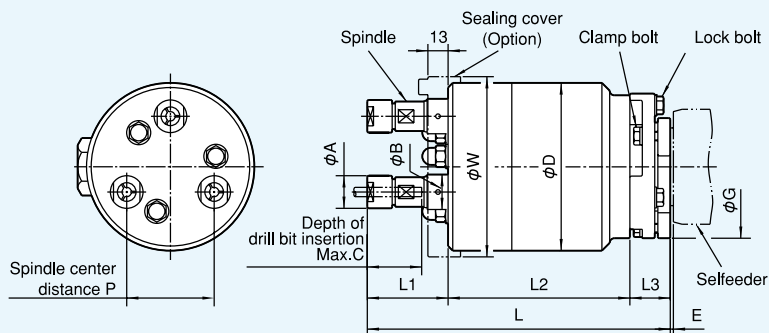
2. Other models of Selffeeder are applicable. Please contact our local distributor or subsidiary for the details.

DRILL HEADS & TAPPER HEADS

3-spindle



Dimensions (mm)



Dimensions (mm)

Model \ Symbol	P	D	L	L1	L2	L3	A	B	C	E	G	W
3D41-1530BTE	10 ~ 11	108	162.5	31.5	105	26	9.8	—	22.5	1	92	112
3D46-1530BTE			178.5		121							
3D41-1530BTE	11 ~ 12	108	164	33	105	26	10.8	—	22.5	1	92	112
3D46-1530BTE			180		121							
3D41-1540BTE	12 ~ 12.6	108	180	37	117	26	11.8	—	23.5	1	92	112
3D46-1540BTE			196		133							
3D41-550BP	12.6 ~ 17	108	187	44	117	26	12.4	—	25	1	92	112
3D46-550BP			203		133							
3D41-845BP	17 ~ 23	108	186.5	43.5	117	26	14.8	16.8	30	1	92	112
3D46-845BP			202.5		133							
3D41-570BP	17.2 ~ 23	108	196	53	117	26	16	—	36	1	92	112
3D46-570BP			212		133							
3D41-2075BP	23 ~ 59	108	195	52	117	26	21	22.5	35	1	92	112
	59 ~ 94	148										152
3D46-2075BP	23 ~ 59	108										112
	59 ~ 94	148										152
3D56-5100BP	24.2 ~ 41	148	264	65	160	39	24	—	46	2	128	152
3D56-50130BP	41 ~ 84	148	274	75	160	39	34	40	56	2	128	152
	84 ~ 118	188										194
3D6N-5100BP	24.2 ~ 41	148	279	65	163	51	24	—	46	2	176	152
3D6N-50130BP	41 ~ 84	148	289	75	163	51	34	40	56	2	176	152
	84 ~ 118	188										194

Note: Heads with different spindle pitch not shown in the above chart can be manufactured. Please contact our local distributor or subsidiary for details.

Drilling capacity (mm)

Operating air pressure :0.5MPa

Model	Specs Spindle center distance (Min.~Max.)	Chucking capacity	Chuck type Collet chuck	Max. drill size			Applicable Selffeeder model					
				Alumi-nium	Cast Iron	Carbon Steel						
3D46-1530BTE	10 ~ 11	1.1 ~ 3	Screw-in type	2	1.5	1.5	ES3C-13□□L, ES3P-13□□L/LL (Notes2)					
3D46-1530BTE	11 ~ 12	1.1 ~ 3	Screw-in type	2.5	2	1.5	ES3C-13□□L, ES3P-13□□L/LL (Notes2)					
3D46-1540BTE	12 ~ 12.6	1.1 ~ 4	Screw-in type	3.5	2.5	2	ES3C-13□□L, ES3P-13□□L/LL (Notes2)					
3D41-550BP	12.6 ~ 17	1.1 ~ 5	Push-in type	3.5	2.5	2	ES3C-60□□L (Notes2)					
3D46-550BP	12.6 ~ 17	1.1 ~ 5	Push-in type	4	3.5	3	ES3C-13□□L (Notes2)					
3D41-845BP	17 ~ 23	0.8 ~ 5	Push-in type	3	2	2	ES3C-6030L					
3D46-845BP	17 ~ 23	0.8 ~ 5	Push-in type	4.5	4	3.5	ES3C-13□□L (Notes2)					
				5	4.5	3.5	ES3P-13□□L/LL (Notes2)					
3D41-570BP	17.2 ~ 23	1.1 ~ 7	Push-in type	3.5	2.5	2	ES3C-6022L					
3D46-570BP	17.2 ~ 23	1.1 ~ 7	Push-in type	4	3.5	3	ES3C-1314L					
				4.5	4	3.5	ES3C-1309L					
				6	5	4	ES3C-1305L					
				4	3	3	GSB-4-1330/L					
				5	3.5	3.5	ES3P-1326L/LL					
				6	4	3.5	ES3P-1318L/LL					
				6	5	3.5	ES3P-1314L/LL					
				6	5	3.5	ES3P-1310L/LL					
				6	5	3.5	ES3P-1307L/LL					
				6.5	5	4	ES3P-1305L/LL					
				6.5	4	4	ES4P-1320/L					
				7	5	4	ES4P-1314/L					
				7	5	4.5	ES4P-1311/L					
3D41-2075BP	23 ~ 94	1 ~ 7.5	Push-in type	3.5	2.5	2	ES3C-6022L					
3D46-2075BP	23 ~ 94	1 ~ 7.5	Push-in type	4	3.5	3	ES3C-1314L					
				4.5	4	3.5	ES3C-1309L					
				6	5	4	ES3C-1305L					
				4	3	3	GSB-4-1330/L					

Specs Model	Spindle center distance (Min.~Max.)	Chucking capacity	Chucking type Collet chuck	Max. drill size			Applicable Selffeeder model
				Alumi- nium	Cast Iron	Carbon Steel	
3D46-2075BP	23 ~ 94	1 ~ 7.5	Push-in type	5	3.5	3.5	ES3P-1326L/LL GSB-4-1323/L GSB-2-1330/L
				6	4	3.5	ES3P-1318L/LL GSB-4-1315/L GSB-2-1320/L
				6	5	3.5	ES3P-1314L/LL
				6	5	3.5	ES3P-1310L/LL GSB-4-1310/L GSB-2-1315/L
				6	5	3.5	ES3P-1307L/LL GSB-4-1307/L GSB-2-1312/L
				6.5	5	4	ES3P-1305L/LL GSB-4-1306/L
				6.5	4	4	ES4P-1320/L
				7	5	4	ES4P-1314/L
				7	5	4.5	ES4P-1311/L
				7.5	5.5	5	ES4P-1308/L
				7.5	5.5	5	ES4P-1306/L
				7.5	6	5	ES4P-1304/L
3D56-5100BP	24.2 ~ 41	1.1 ~ 10	Push-in type	7	4	4	ES5-1320 GSC-4-1321/L
				7	5.5	5	ES5-1314 GSC-4-1315/L GSC-2-1321/L
				7.5	5.5	5	ES5-1311 GSC-4-1311/L GSC-2-1315/L
				8	6	5.5	ES5-1308
				8	6	6	ES5-1306 GSC-4-1307/L
				9	6	6	ES5-1304
3D56-50130BP	41 ~ 118	1.5 ~ 13	Push-in type	7	4	4	ES5-1320 GSC-4-1321/L
				7	5.5	5	ES5-1314 GSC-4-1315/L GSC-2-1321/L
				7.5	5.5	5	ES5-1311 GSC-4-1311/L GSC-2-1315/L
				8	6	5.5	ES5-1308
				8	6	6	ES5-1306 GSC-4-1307/L
				9	6	6	ES5-1304
3D6N-5100BP	24.2 ~ 41	1.1 ~ 10	Push-in type	10	6.5	6	ES6-2414E
				10	8.5	8	ES6-2411E
3D6N-50130BP	41 ~ 118	1.5 ~ 13	Push-in type	12	6.5	6	ES6-2414E
				11	8.5	8	ES6-2411E
				13	10	8	ES6-2408E
				13	12	9	ES6-2406E
				11.5	9.5	8	ES6-2405E
				13	10.5	9	ES6-2403E
				13	12	9	ES6-2402E

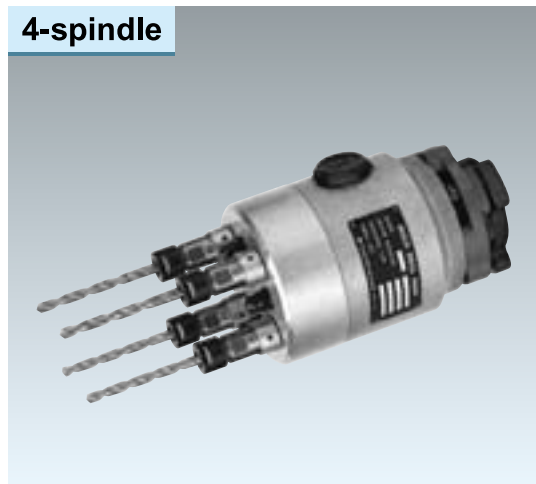
Notes1.The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 ,Carbon Steel : S45C

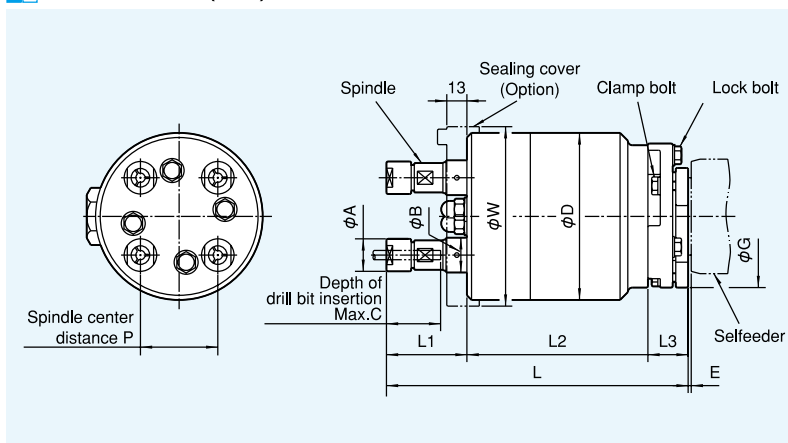
2.Other models of Selffeeder are applicable. Please contact our local distributor or subsidiary for the details.

DRILL HEADS & TAPPER HEADS

4-spindle



Dimensions(mm)



Dimensions(mm)

Model	Symbol	P	D	L	L1	L2	L3	A	B	C	E	G	W
4D46-1530BTE		10 ~ 11	108	178.5	31.5	121	26	9.8	—	22.5	1	92	112
4D46-1530BTE		11 ~ 12	108	180	33	121	26	10.8	—	22.5	1	92	112
4D46-1540BTE		12 ~ 12.6	108	196	37	133	26	11.8	—	23.5	1	92	112
4D41-550BP		12.6 ~ 17	108	187	44	117	26	12.4	—	25	1	92	112
4D46-550BP				203		133							
4D41-845BP		17 ~ 23	108	186.5	43.5	117	26	14.8	16.8	30	1	92	112
4D46-845BP				202.5		133							
4D41-570BP		17.2 ~ 23	108	196	53	117	26	16	—	36	1	92	112
4D46-570BP				212		133							
4D41-2075BP		23 ~ 77	148	195	52	117	26	21	22.5	35	1	92	152
4D46-2075BP													
4D56-5100BP		24.2 ~ 41	148	264	65	160	39	24	—	46	2	128	152
4D56-50130BP		41 ~ 68	148	274	75	160	39	34	40	56	2	128	152
		68 ~ 96	188										194
4D6N-5100BP		24.2 ~ 41	148	279	65	163	51	24	—	46	2	176	152
4D6N-50130BP		41 ~ 68	148	289	75	163	51	34	40	56	2	176	152
		68 ~ 96	188										194

Note: Heads with different spindle pitch or five or more spindle heads are manufactured. Please contact our local distributor or subsidiary for details.

Drilling capacity(mm)

Operating air pressure :0.5MPa

Model	Specs	Spindle center distance (Min.~Max.)	Chuck capacity	Chuck type	Max. drill size			Applicable Selffeeder model
					Aluminum	Cast Iron	Carbon Steel	
4D46-1530BTE		10 ~ 11	1.1 ~ 3	Screw-in type	2	1.5	1.5	ES3C-13□□L, ES3P-13□□L/LL(Notes2)
4D46-1530BTE		11 ~ 12	1.1 ~ 3	Screw-in type	2.5	2	1.5	ES3C-13□□L, ES3P-13□□L/LL(Notes2)
4D46-1540BTE		12 ~ 12.6	1.1 ~ 4	Screw-in type	3.5	2.5	2	ES3C-13□□L, ES3P-13□□L/LL(Notes2)
4D46-550BP		12.6 ~ 17	1.1 ~ 5	Push-in type	3	2.5	2	ES3C-13□□L (Notes2)
4D46-845BP	17 ~ 23	0.8 ~ 5	Push-in type		3	2.5	2	ES3C-1314L
					4	3.5	3	ES3C-1309L
					5	4	3.5	ES3C-1305L
					4	3.5	2.5	ES3P-1326L/LL
					5	3.5	2.5	ES3P-1318L/LL
					5	4	2.5	ES3P-1314L/LL
					5	4	3	ES3P-1310L/LL
					5	4	3.5	ES3P-1307L/LL
					5	4	3.5	ES3P-1305L/LL
					3	2.5	2	ES3C-1314L
					4	3.5	3	ES3C-1309L
					5	4	3.5	ES3C-1305L
4D46-570BP	17.2 ~ 23	1.1 ~ 7	Push-in type		4	3.5	2.5	ES3P-1326L/LL
					5	3.5	2.5	ES3P-1318L/LL
					5	4	2.5	ES3P-1314L/LL
					5	4	3	ES3P-1310L/LL
					5	4	3.5	ES3P-1307L/LL
					5	4	3.5	ES3P-1305L/LL
					6	3.5	3.5	ES4P-1320/L
					6	4	4	ES4P-1314/L
					6	4	4	ES4P-1311/L
					6.5	4.5	4	ES4P-1308/L
					6.5	4.5	4	ES4P-1306/L
					6.5	5	4.5	ES4P-1304/L
4D46-2075BP	23 ~ 77	1 ~ 7.5	Push-in type		3	2.5	2	ES3C-1314L
					4	3.5	3	ES3C-1309L
					5	4	3.5	ES3C-1305L
					4	3.5	2.5	ES3P-1326L/LL
					5	3.5	2.5	ES3P-1318L/LL

Specs Model	Spindle center distance (Min.~Max.)	Chucking capacity	Chuck type Collet chuck	Max. drill size			Applicable Selffeeder model
				Alumi- nium	Cast Iron	Carbon Steel	
4D46-2075BP	23 ~ 77	1 ~ 7.5	Push-in type	5	4	2.5	ES3P-1314L/LL
				5	4	3	ES3P-1310L/LL
				5	4	3.5	ES3P-1307L/LL
				5	4	3.5	ES3P-1305L/LL
				6	3.5	3.5	ES4P-1320/L
				6	4	4	ES4P-1314/L
				6	4	4	ES4P-1311/L
				6.5	4.5	4	ES4P-1308/L
				6.5	4.5	4	ES4P-1306/L
				6.5	5	4.5	ES4P-1304/L
4D56-5100BP	24.2 ~ 41	1.1 ~ 10	Push-in type	6.5	4	4	ES5-1320
				6.5	4.5	4	ES5-1314
				6.5	4.5	4	ES5-1311
				6.5	5	4	ES5-1308
				7	5	4.5	ES5-1306
				7	6	5	ES5-1304
				7	6	5	ES5-1302
4D56-50130BP	41 ~ 96	1.5 ~ 13	Push-in type	6.5	4	4	ES5-1320
				6.5	4.5	4	ES5-1314
				6.5	4.5	4	ES5-1311
				6.5	5	4	ES5-1308
				7	5	4.5	ES5-1306
				7	6	5	ES5-1304
				8	6	5	ES5-1302
4D6N-5100BP	24.2 ~ 41	1.1 ~ 10	Push-in type	10	6.5	6	ES6-2414E
				9.5	8	7	ES6-2411E
				10	9	7.5	ES6-2408E
				10	8	7.5	ES6-2405E
4D6N-50130BP	41 ~ 96	1.5 ~ 13	Push-in type	10	6.5	6	ES6-2414E
				9.5	8	7	ES6-2411E
				11	9	7.5	ES6-2408E
				13	9.5	7.5	ES6-2406E
				10	8	7.5	ES6-2405E
				12	9.5	7.5	ES6-2403E
				13	9.5	7.5	ES6-2402E

Notes1.The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 ,Carbon Steel : S45C

2.Other models of Selffeeder are applicable. Please contact our local distributor or subsidiary for the details.

DRILL HEADS & TAPPER HEADS

Fixed spindle type

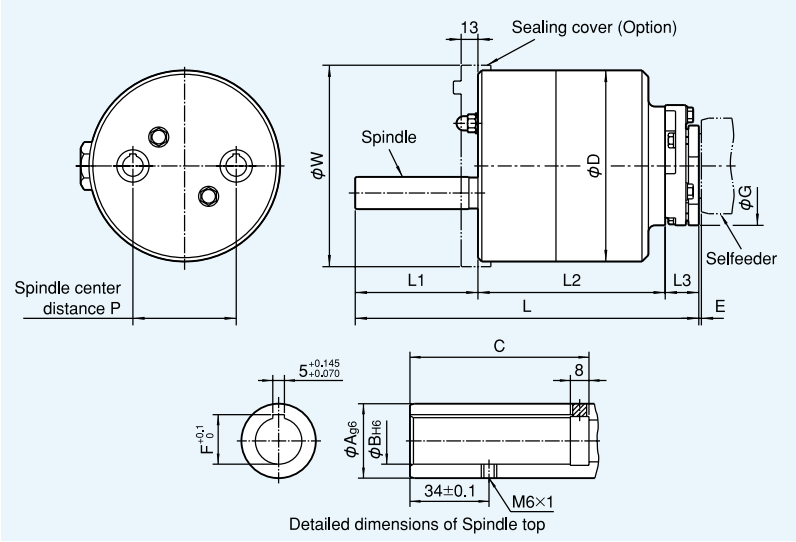
Adjustable spindle nose style

These Drill Heads are used with adjustable adapters. Pre-set tooling is required for specific applications.

2-spindle



Dimensions(mm)



Dimensions(mm)

Symbol Model	Applicable adapter	P	D	L	L1	L2	L3	A	B	C	F	E	G	W
2D46-AM1E	BILZ16	26 ~ 57	108	266	95	145	26	25	16	74	17.3	1	92	112
		57 ~ 100	148											152
	BILZ20	33 ~ 52	108	271	100	145	26	32	20	77	21.3	1	92	112
		52 ~ 95	148											152
2D56-AM1E	BILZ16	26 ~ 100	148	294	95	160	39	25	16	74	17.3	2	128	152
		100 ~ 142	188											194
	BILZ20	33 ~ 95	148	299	100	160	39	32	20	77	21.3	2	128	152
		95 ~ 137	188											194
2D6N-AM1E	BILZ16	26 ~ 100	148	309	95	163	51	25	16	74	17.3	2	176	152
		100 ~ 142	188											194
	BILZ20	33 ~ 95	148	314	100	163	51	32	20	77	21.3	2	176	152
		95 ~ 137	188											194

Note:Heads with different spindle pitch or with different spindle nose to meet other maker's holder can be supplied upon request.
Please contact our local distributor or subsidiary for details.

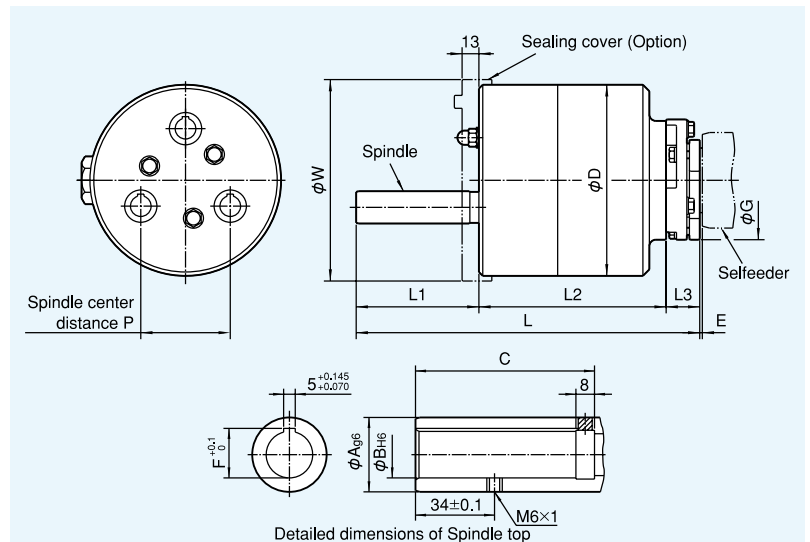


Speed increase type single spindle head
(Max.15,000min⁻¹)

3-spindle



Dimensions (mm)



Dimensions (mm)

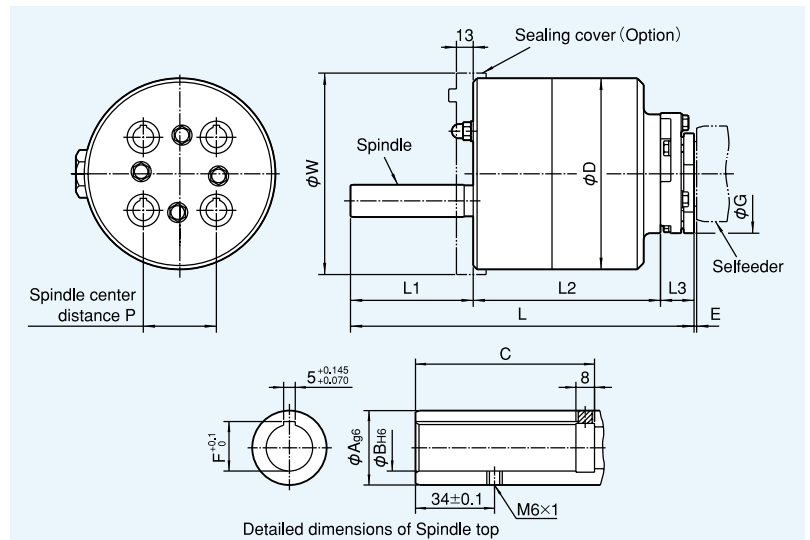
Model	Symbol	Applicable adapter	P	D	L	L1	L2	L3	A	B	C	F	E	G	W
3D46-AM1E		BILZ16	26 ~ 86	148	266	95	145	26	25	16	74	17.3	1	92	152
		BILZ20	33 ~ 82	148	271	100	145	26	32	20	77	21.3	1	92	152
3D56-AM1E	BILZ16		26 ~ 86	148	294	95	160	39	25	16	74	17.3	2	128	152
			86 ~ 122	188											194
	BILZ20		33 ~ 82	148	299	100	160	39	32	20	77	21.3	2	128	152
			82 ~ 118	188											194
3D6N-AM1E	BILZ16		26 ~ 86	148	309	95	163	51	25	16	74	17.3	2	176	152
			86 ~ 122	188											194
	BILZ20		33 ~ 82	148	314	100	163	51	32	20	77	21.3	2	176	152
			82 ~ 118	188											194

Note: Heads with different spindle pitch or with different spindle nose to meet other maker's holder can be supplied upon request.
Please contact our local distributor or subsidiary for details.

4-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	Applicable adapter	P	D	L	L1	L2	L3	A	B	C	F	E	G	W
4D46-AM1E		BILZ16	26 ~ 70	148	266	95	145	26	25	16	74	17.3	1	92	152
		BILZ20	33 ~ 67	148	271	100	145	26	32	20	77	21.3	1	92	152
4D56-AM1E	BILZ16		26 ~ 70	148	294	95	160	39	25	16	74	17.3	2	128	152
			70 ~ 100	188											194
	BILZ20		33 ~ 67	148	299	100	160	39	32	20	77	21.3	2	128	152
			67 ~ 96	188											194
4D6N-AM1E	BILZ16		26 ~ 70	148	309	95	163	51	25	16	74	17.3	2	176	152
			70 ~ 100	188											194
	BILZ20		33 ~ 67	148	314	100	163	51	32	20	77	21.3	2	176	152
			67 ~ 96	188											194

Note: Heads with different spindle pitch or five or more spindle heads are also manufactured. Please contact our local distributor or subsidiary for details.

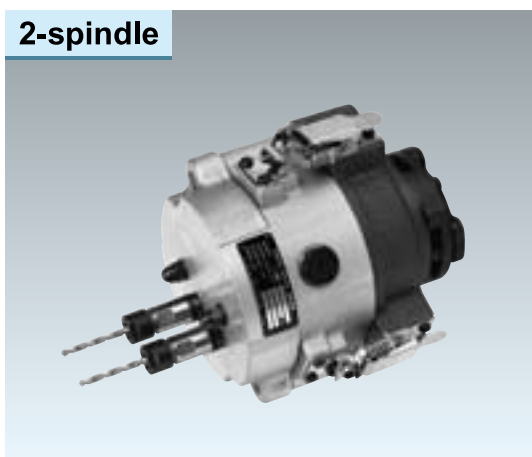
DRILL HEADS & TAPPER HEADS

Quick change "Catch-Clip" type

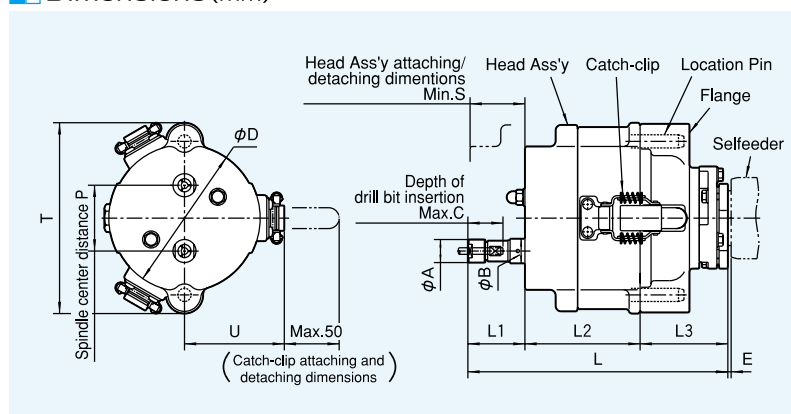
Collet chuck style

"Catch-Clip" equipped Drill Heads require very little change-over time, increasing productivity by minimizing machine idle time.

2-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	L3	A	B	C	E	S	T	U
2D41-550CP		12.6 ~ 17	134	229	44	105	80	12.4	—	25	1	55	174	91
2D46-550CPB												65		
2D41-845CP		17 ~ 23	134	228.5	43.5	105	80	14.8	16.8	30	1	55	174	91
2D46-845CPB												65		
2D41-570CP		17.2 ~ 23	134	238	53	105	80	16	—	36	1	55	174	91
2D46-570CPB												65		
2D41-2075CP		23 ~ 91	134	237	52	105	80	21	22.5	35	1	55	174	91
2D46-2075CPB												65		
2D56-5100CP		24.2 ~ 41	192	316	65	142	109	24	—	46	2	65	254	116
2D56-50130CP		41 ~ 125	192	326	75	142	109	34	40	56	2	65	254	116
2D6N-5100CP		24.2 ~ 41	192	327	65	142	120	24	—	46	2	60	254	116
2D6N-50130CP		41 ~ 125	192	337	75	142	120	34	40	56	2	60	254	116

Note: Heads with different spindle pitch not shown in the above chart can be manufactured. Please contact our local distributor or subsidiary for details.

3-spindle



A photograph of a 3-spindle drill head assembly. The assembly is cylindrical and metallic, with three drill bits protruding from the front. The bits are arranged in a triangular pattern. The assembly is mounted on a base with various adjustment screws and a label.

Technical drawing of the Selffeeder attachment, showing front and side views with dimensions and labels.

Front View (Left):

- Overall diameter: ϕD
- Spindle center distance P
- Distance from spindle center to attachment center: U
- Maximum distance U: Max. 50
- Depth of drill bit insertion: Max. C
- Catch-clip attaching and detaching dimensions (indicated by a bracket)

Side View (Right):

- Head Ass'y attaching/detaching dimensions Min. S
- Head Ass'y
- Catch-clip
- Location Pin
- Flange
- Selffeeder
- Dimensions: ϕA , ϕB , L1, L2, L3, L, E

Symbol Model	P	D	L	L1	L2	L3	A	B	C	E	S	T	U
3D41-550CP	12.6 ~ 17	134	229	44	105	80	12.4	—	25	1	55	174	91
3D46-550CPB											65		
3D41-845CP	17 ~ 23	134	228.5	43.5	105	80	14.8	16.8	30	1	55	174	91
3D46-845CPB											65		
3D41-570CP	17.2 ~ 23	134	238	53	105	80	16	—	36	1	55	174	91
3D46-570CPB											65		
3D41-2075CP	23 ~ 78	134	237	52	105	80	21	22.5	35	1	55	174	91
3D46-2075CPB											65		
3D56-5100CP	24.2 ~ 41	192	316	65	142	109	24	40	46	2	65	254	116
3D56-50130CP	41 ~ 108	192	326	75	142	109	34	—	56	2	65	254	116
3D6N-5100CP	24.2 ~ 41	192	327	65	142	120	24	40	46	2	60	254	116
3D6N-50130CP	41 ~ 108	192	337	75	142	120	34	—	56	2	60	254	116

Note: Heads with different spindle pitch not shown in the above chart can be manufactured. Please contact our local distributor or subsidiary for details.

4-spindle



A photograph of a 4-spindle machine head, likely a CNC router or drill press. It features a white body with a black motor housing and four drill bits mounted on the front. The machine is shown from a three-quarter perspective against a light blue background.

Technical drawings of the Head Ass'y showing top and side views with dimensions and labels.

Top View Labels:

- ϕD
- T
- Spindle center distance P
- U
- Max.50
- (Catch-clip attaching and detaching dimensions)

Side View Labels:

- Head Ass'y attaching/detaching dimensions Min.S
- Head Ass'y
- Catch-clip
- Location Pin
- Flange
- Selffeeder
- Depth of drill bit insertion Max.C
- ϕA
- ϕB
- $L1$
- $L2$
- $L3$
- L
- E

Model \ Symbol	P	D	L	L1	L2	L3	A	B	C	E	S	T	U
4D41—550CP	12.6 ~ 17	134	229	44	105	80	12.4	—	25	1	55	174	91
4D46—550CPB											65		
4D41—845CP	17 ~ 23	134	228.5	43.5	105	80	14.8	16.8	30	1	55	174	91
4D46—845CPB											65		
4D41—570CP	17.2 ~ 23	134	238	53	105	80	16	—	36	1	55	174	91
4D46—570CPB											65		
4D41—2075CP	23 ~ 64	134	237	52	105	80	21	22.5	35	1	55	174	91
4D46—2075CPB											65		
4D56—5100CP	24.2 ~ 41	192	316	65	142	109	24	—	46	2	65	254	116
4D56—50130CP	41 ~ 88	192	326	75	142	109	34	40	56	2	65	254	116
4D6N—5100CP	24.2 ~ 41	192	327	65	142	120	24	—	46	2	60	254	116
4D6N—50130CP	41 ~ 88	192	337	75	142	120	34	40	56	2	60	254	116

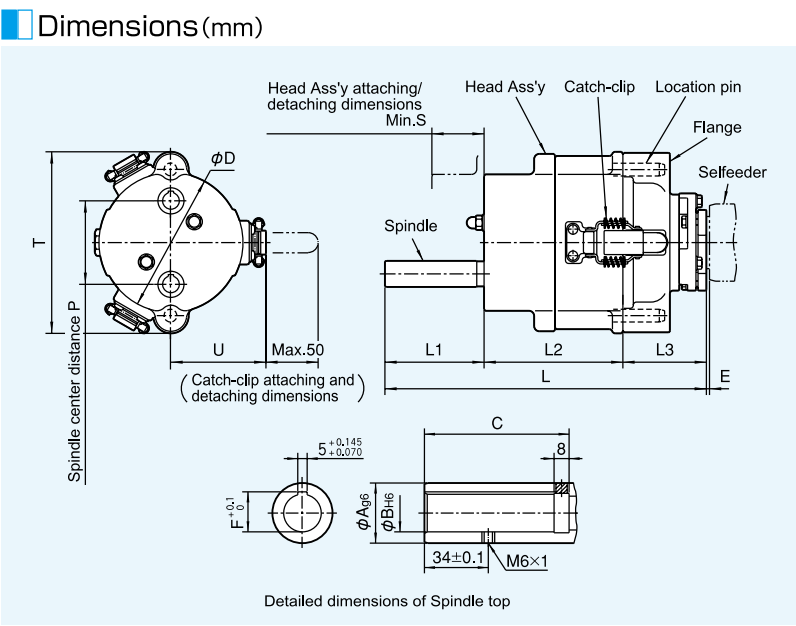
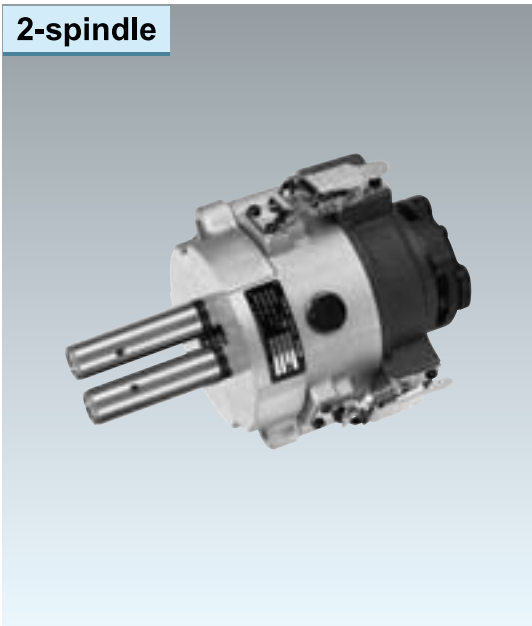
Note: Heads with different spindle pitch or five or more spindle heads are manufactured. Please contact our local distributor or subsidiary for details.

DRILL HEADS & TAPPER HEADS

Quick change "Catch-Clip" type

Adjustable spindle nose style

"Catch-Clip" equipped Drill Heads, are available with adjustable adapters.



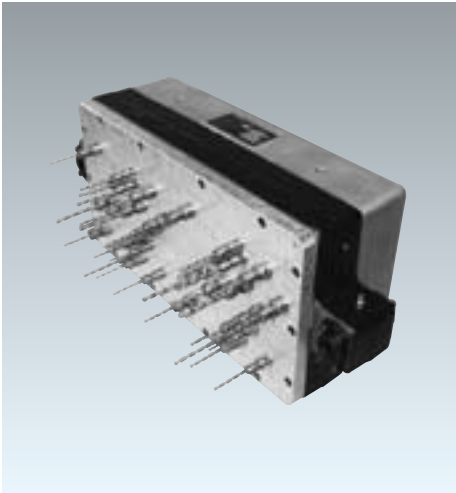
Dimensions (mm)

Model	Symbol	Applicable adapter	P	D	L	L1	L2	L3	A	B	C	F	E	S	T	U
2D46—AM1C(B)E		BILZ16	26 ~ 82	134	308	95	133	80	25	16	74	17.3	1	65	174	91
		BILZ20	33 ~ 78	134	313	100	133	80	32	20	77	21.3	1	65	174	91
2D56—AM1CE		BILZ16	26 ~ 129	192	346	95	142	109	25	16	74	17.3	2	65	254	116
		BILZ20	33 ~ 125	192	351	100	142	109	32	20	77	21.3	2	65	254	116
2D6N—AM1CE		BILZ16	26 ~ 129	192	357	95	142	120	25	16	74	17.3	2	60	254	116
		BILZ20	33 ~ 125	192	362	100	142	120	32	20	77	21.3	2	60	254	116

Note: Heads with different spindle pitch or with different spindle nose to meet other maker's holder can be supplied upon request.
Please contact our local distributor or subsidiary for details.

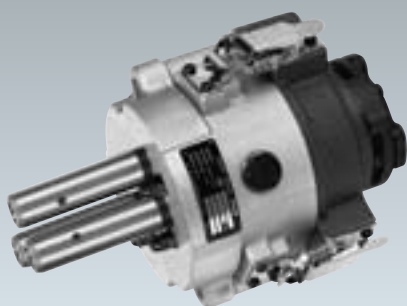


9-spindle head with guide bush

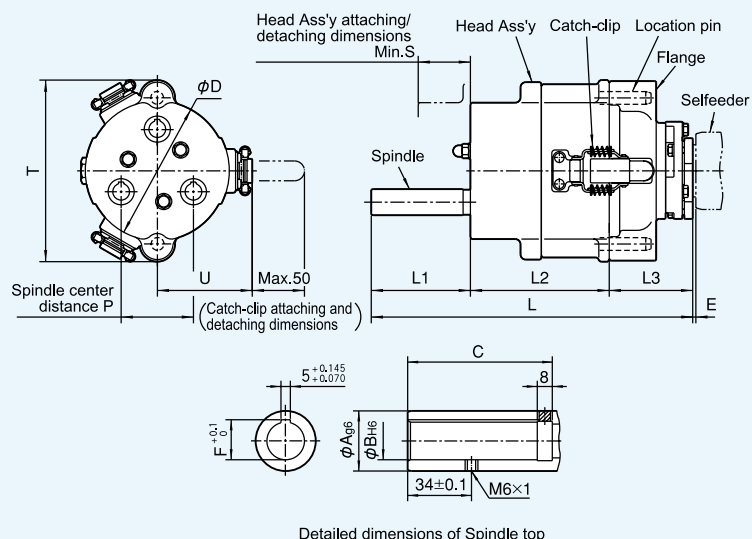


34-spindle head

3-spindle



Dimensions (mm)



Dimensions (mm)

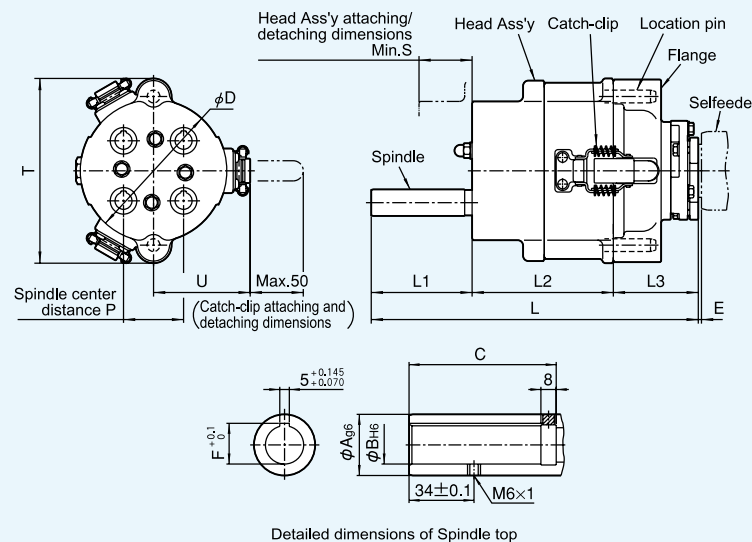
Model	Symbol	Applicable adapter	P	D	L	L1	L2	L3	A	B	C	F	E	S	T	U
3D46-AM1C(B)E		BILZ16	26 ~ 71	134	308	95	133	80	25	16	74	17.3	1	65	174	91
		BILZ20	33 ~ 67	134	313	100	133	80	32	20	77	21.3	1	65	174	91
3D56-AM1CE		BILZ16	26 ~ 111	192	346	95	142	109	25	16	74	17.3	2	65	254	116
		BILZ20	33 ~ 108	192	351	100	142	109	32	20	77	21.3	2	65	254	116
3D6N-AM1CE		BILZ16	26 ~ 111	192	357	95	142	120	25	16	74	17.3	2	60	254	116
		BILZ20	33 ~ 108	192	362	100	142	120	32	20	77	21.3	2	60	254	116

Note: Heads with different spindle pitch or with different spindle nose to meet other maker's holder can be supplied upon request.
Please contact our local distributor or subsidiary for details.

4-spindle



Dimensions (mm)



Dimensions (mm)

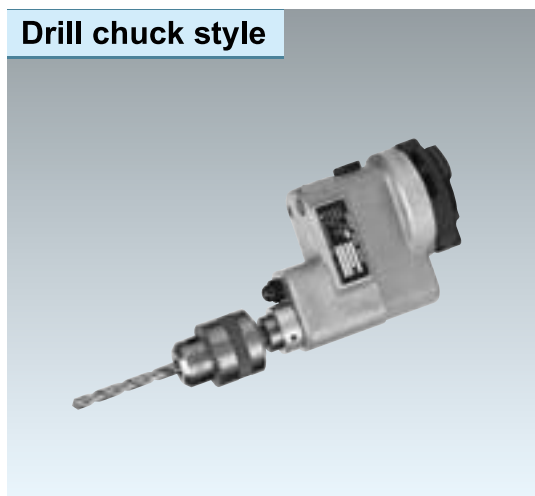
Model	Symbol	Applicable adapter	P	D	L	L1	L2	L3	A	B	C	F	E	S	T	U
4D56-AM1CE		BILZ16	26 ~ 91	192	346	95	142	109	25	16	74	17.3	2	65	254	116
		BILZ20	33 ~ 88	192	351	100	142	109	32	20	77	21.3	2	65	254	116
4D6N-AM1CE		BILZ16	26 ~ 91	192	357	95	142	120	25	16	74	17.3	2	60	254	116
		BILZ20	33 ~ 88	192	362	100	142	120	32	20	77	21.3	2	60	254	116

Note: Heads with different spindle pitch or five or more spindle heads are also manufactured. Please contact our local distributor or subsidiary for details.

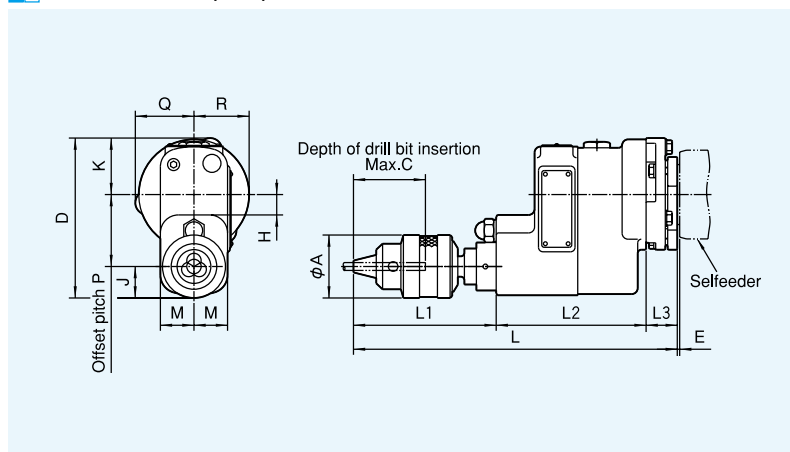
Offset fixed type

Drill Heads which avoid interference with drill units jig fixtures or workpieces.

Drill chuck style



Dimensions (mm)



Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	L3	A	C	E	H	J	K	M	Q	R
OD21-865D		45	106	199	76	98	25	32	30	1	10	20	41	26	41	39
OD41-0130D		60	135.3	270	119	125	26	52.5	60	1	17	26.25	49	28	49	46
OD46-0130D		78	174	291	119	133	39	52.5	60	2	25	30	66	32	66	64

Note: Other Offset heads not shown in the above chart can be supplied. Please contact our local distributor or subsidiary for details.

Drilling capacity (mm)

Operating air pressure :0.5MPa

Model	Specs	Offset pitch	Chuck capacity	Chuck type	Speed ratio (Output/Input)	Max. drill size			Applicable Selffeeder model							
						Aluminium	Cast Iron	Carbon Steel								
OD21-865D	45	1 ~ 6.5	Drill chuck	1		5	3	2.5	ES2-6030	GSA-2-60□□ (Notes2)						
						6	4	3	ES2-6020	GSA-2-60□□ (Notes2)						
						6.5	5	4	ES2-6014	GSA-2-60□□ (Notes2)						
OD41-0130D	60	1.2 ~ 13	Drill chuck	1		5	2.5	2	ES3C-6030L							
						6	3.5	3	ES3C-6022L							
						7	5.5	5	ES3C-1314L							
OD46-0130D	60	1.2 ~ 13	Drill chuck	1		8	7	6	ES3C-1309L							
						10	8	7	ES3C-1305L							
						7.5	3.5	3.5	ES3P-1326L/LL	GSB-4-1323/L						
						8.5	5	4	ES3P-1318L/LL	GSB-4-1315/L						
						9.5	6	5.5	ES3P-1314L/LL							
						10	7	6.5	ES3P-1310L/LL	GSB-4-1310/L						
						11	8	7.5	ES3P-1307L/LL	GSB-4-1307/L						
						13	10	9	ES3P-1305L/LL	GSB-4-1306/L						
						9	5	4.5	ES4P-1320/L							
						10	6	6	ES4P-1314/L							
						11	8	7	ES4P-1311/L							
						12	9	8	ES4P-1308/L							
OD56-0130D	78	1.2 ~ 13	Drill chuck	1		11	5	4.5	ES5-1320							
						12	6.5	6	ES5-1314	GSC-4-1315/L						
						12	8	7.5	ES5-1311	GSC-4-1311/L						
						13	10	9	ES5-1308							
						13	12	10	ES5-1306	GSC-4-1307/L						
						13	13	11	ES5-1304							

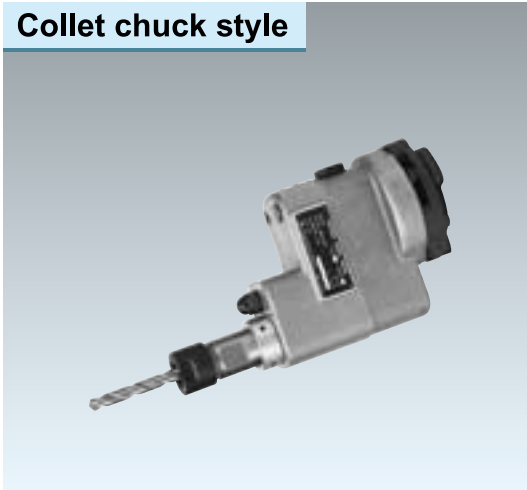
Notes1. The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 , Carbon Steel : S45C

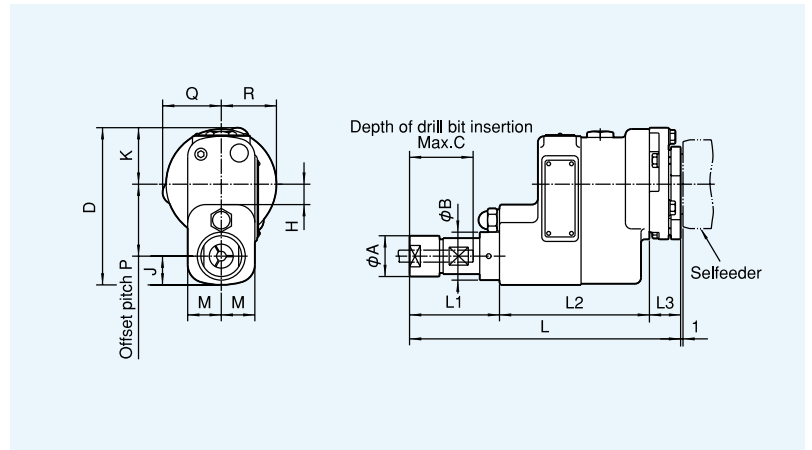
2. Other models of Selffeeder are applicable. Please contact our local distributor or subsidiary for the details.

3. Please use the collet chuck spindle noses when the hardness of the carbide drill and tool shank is higher than that of a general high speed steels.

Collet chuck style



Dimensions (mm)



Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	L3	A	B	C	H	J	K	M	Q	R
OD21-2075P		45	106	175	52	98	25	21	22.5	35	10	20	41	26	41	39
OD41-50130P		60	133	226	75	125	26	34	40	56	17	24	49	28	49	46
OD46-50130P																

Note: Other Offset heads not shown in the above chart can be supplied. Please contact our local distributor or subsidiary for details.

Drilling capacity (mm)

Operating air pressure :0.5MPa

Model	Offset pitch	Chuck capacity	Chuck type	Speed ratio (Output/Input)	Max. drill size			Applicable Selffeeder model								
					Aluminium	Cast Iron	Carbon Steel									
OD21-2075P	45	1 ~ 7.5	Push-in type	1	5	3	2.5	ES2-6030	GSA-2-60 (Notes2)							
					6	4	3	ES2-6020	GSA-2-60 (Notes2)							
					7	5	4	ES2-6014	GSA-2-60 (Notes2)							
OD41-50130P	60	1.5 ~ 13	Push-in type	1	5	2.5	2	ES3C-6030L								
					6	3.5	3	ES3C-6022L								
					7	5.5	5	ES3C-1314L								
OD46-50130P	60	1.5 ~ 13	Push-in type	1	8	7	6	ES3C-1309L								
					10	8	7	ES3C-1305L								
					7.5	3.5	3.5	ES3P-1326L/LL	GSB-4-1323/L							
					8.5	5	4	ES3P-1318L/LL	GSB-4-1315/L							
					9.5	6	5.5	ES3P-1314L/LL								
					10	7	6.5	ES3P-1310L/LL	GSB-4-1310/L							
					11	8	7.5	ES3P-1307L/LL	GSB-4-1307/L							
					13	10	9	ES3P-1305L/LL	GSB-4-1306/L							
					9	5	4.5	ES4P-1320/L								
					10	6	6	ES4P-1314/L								
					11	8	7	ES4P-1311/L								
					12	9	8	ES4P-1308/L								

Notes1. The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 , Carbon Steel : S45C

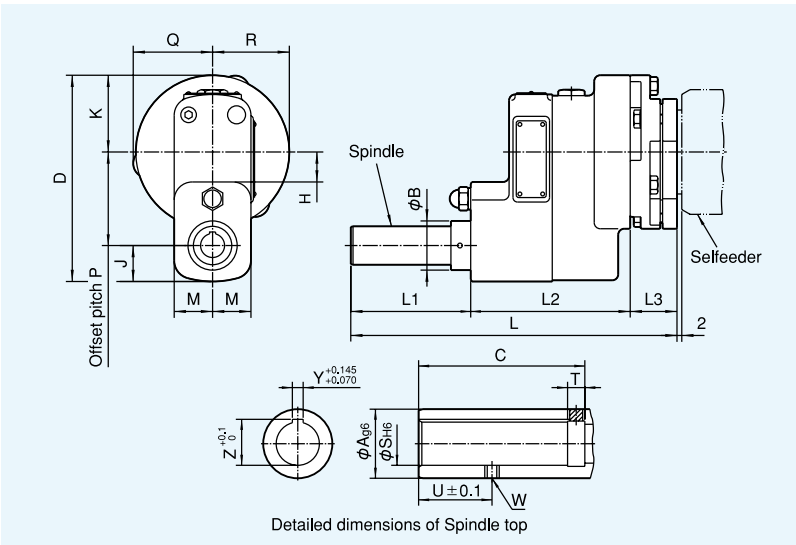
2. Other models of Selffeeder are applicable. Please contact our local distributor or subsidiary for the details.

DRILL HEADS & TAPPER HEADS

Adjustable spindle nose style



Dimensions(mm)



Detailed dimensions of Spindle top

Dimensions(mm)

Model	Symbol	Applicable adapter	P	D	L	L1	L2	L3	A	B	C	S	T	U	W	Y	Z	H	J	K	M	Q	R
OD56-AM1		BILZ20	78	174	272	100	133	39	32	41	77	20	8	34	M6X1	5	21.3	25	30	66	32	66	64
OD63-AM2		BILZ25	88	208	310	105	154	51	37	46	85	25	10	38	M8X1.25	6	26.7	29	33	87	40	87	84

Note: Heads to meet other maker's holder can be supplied upon request. Please contact our local distributor or subsidiary for details.

Drilling capacity(mm)

Operating air pressure :0.5MPa

Specs Model	Offset pitch	Spindle nose model	Speed ratio (Output/Input)	Max. drill size			Applicable Selffeeder model
				Alumi-nium	Cast Iron	Carbon Steel	
OD56-AM1	78	BILZ20	1	11	5	4.5	ES5-1320
				12	6.5	6	ES5-1314 GSC-4-1315/L
				12	8	7.5	ES5-1311 GSC-4-1311/L
				13	10	9	ES5-1308
				14	12	10	ES5-1306 GSC-4-1307/L
				14	13	11	ES5-1304
OD63-AM2	88	BILZ25	1	—	—	—	ES6-24□□(Notes2)

Notes1.The materials quoted are equivalent to following JIS code.
Aluminium : ADC , Cast Iron : FC200 ,Carbon Steel : S45C
2.Other models of Selffeeder are applicable. Please contact our local distributor or subsidiary for the details.



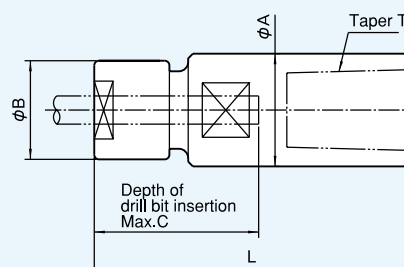
Drill Head Faceplate type

Collet Holder

Single collet chuck type holder which is to be attached to the spindle of drill unit.



■ Dimensions (mm)



■ Dimensions (mm)

Model	Specs	Chucking capacity	Chucking type	Symbol				
			Collet chuck	A	B	C	L	T
CH-845J1		0.8 ~ 5	Push-in type	14	14.8	30	50	JT1
CH-2075J1		1 ~ 7.5	Push-in type	20	21	35	56	JT1
CH-2075J6		1 ~ 7.5	Push-in type	24	21	35	67	JT6
CH-50130J6		1.5 ~ 13	Push-in type	30	34	56	88	JT6

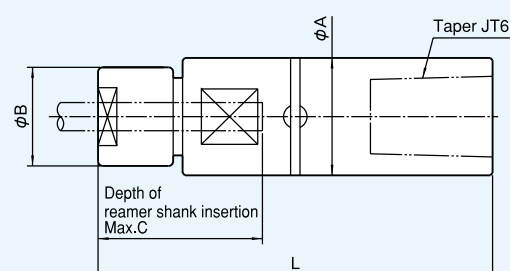
Note: Other Collet holders not shown in the above chart can be supplied.
Please contact our local distributor or subsidiary for details.

Reamer Holder

Single collet chuck type holder for reaming which has a radial floating.



■ Dimensions (mm)



■ Dimensions (mm)

Model	Specs	Chucking capacity	Chucking type	Radial floating amount	Symbol			
			Collet chuck		A	B	C	L
RH-2076J6		1 ~ 7.5	Push-in type	0.7	25	21	35	84
RH-50130J6		1.5 ~ 13	Push-in type	1.1	42	34	55	121

Note: Other Reamer holders not shown in the above chart can be supplied.
Please contact our local distributor or subsidiary for details.

Spindle pitch adjustable type

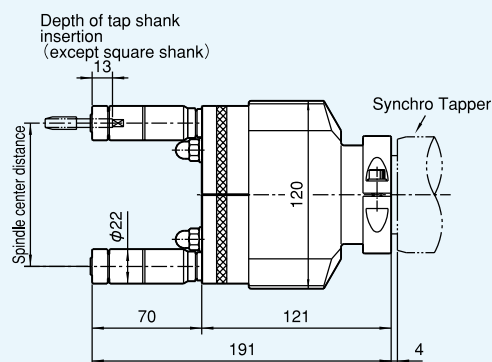
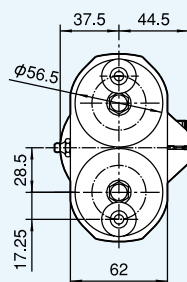
Tapper Heads with adjustable center distances.

Sleeve style

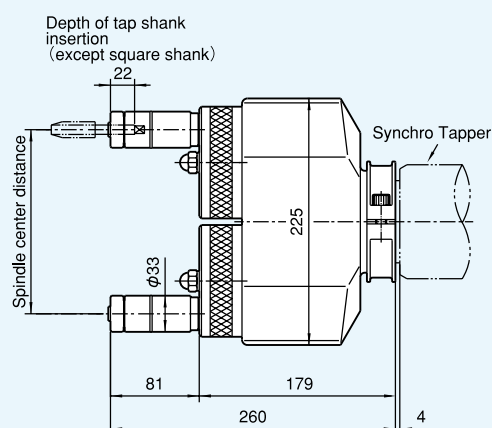
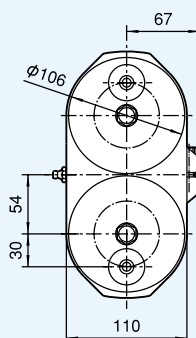


Dimensions (mm)

2TC-E1040AC
2TC-E3080AF



2TD-60120AF



Tapping capacity (mm)

Model	Specs	Spindle center distance (Min.~Max.)	Chuck capacity	Type of tap holding	Speed ratio (Output/Input)	Tapping capacity			Applicable Synchro Tapper		
						Aluminium	Cast Iron	Carbon steel	Model	Revolution (min ⁻¹)	
2TC-E1040AC		23 ~ 91	M1 ~ M4	Centering	1	M4	M4	M4	STB-H108	1,200	1,440
2TC-E3080AF	23 ~ 91	M3 ~ M8	Floating ※0.2	1		M4	M4	M4	STB-L108	920	1,100
						M6	M5	M4	STB-H108	750	900
						M6	M6	M5		520	620
						M5	M4	M4		920	1,100
						M6	M5	M5	STB-L108	580	690
						M8	M6	M6		350	420
						M8	M6	M6		220	260
						M12	M8	M8		600	720
2TD-60120AF	48.5 ~ 167	M6 ~ M12	Floating ※0.4	1		M12	M10	M10	STC-P316	400	490

Notes1. The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 , Carbon Steel : S45C

2. Tapping capacities shown in the above chart are the value in case of using spiral tap or point tap and the tapping depth is up to 1.5 times of tap diameter.

3. ※ mark stands for the radial floating volume. (diameter)

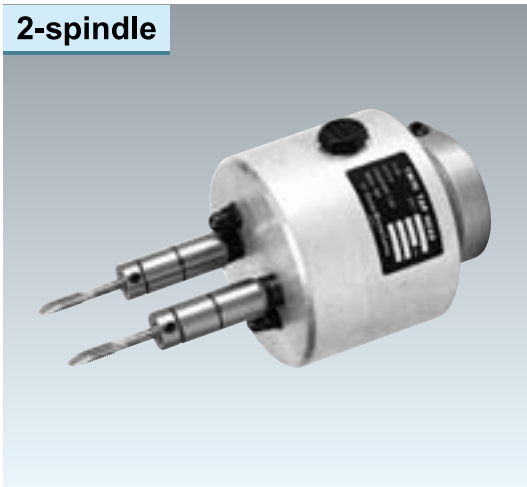
4. Other models of Synchro Tapper are applicable. Please contact our local distributor or subsidiary for the details.

Fixed spindle type

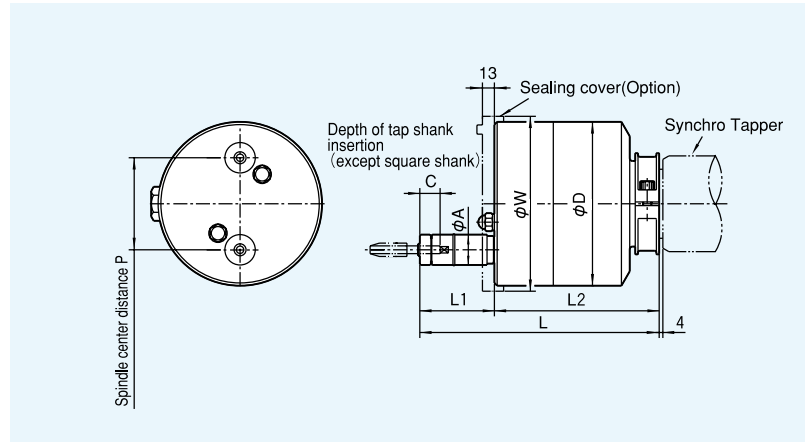
Sleeve style • Collet chuck style

Sugino can provide Tapper Heads for your special requirements.

2-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	A	C	W
2TC-E1040TBFE		10 ~ 12	88	229.5	81.5	148	9.8	18.5	92
2TC-E1050TBFE		12 ~ 14	88	231	83	148	11.8	19	92
2TC-E1080TBFE		14 ~ 15	88	228	80	148	13.6	19	92
2TC-E1040BF		15 ~ 60	88	200.5	52.5	148	14.6	8	92
2TC-E3080BF		23 ~ 91	124	192	70	122	22	13	128
2TD-3080BF		23 ~ 29	138	241	70	171	22	13	142
		29 ~ 90	138	217		147			142
		90 ~ 130	178	217		147			182
2TD-60120BF		35 ~ 90	138	260	81	179	33	22	142
		90 ~ 123	178						182
2TD-80160BF		45 ~ 88	138	261	82	179	40	19	142
		88 ~ 121	178						182

Note: Heads with different spindle pitch not shown in the above chart can be manufactured.
Please contact our local distributor or subsidiary for details.

Tapping capacity (mm)

Model	Specs	Spindle center distance (Min.~Max.)	Chuck capacity	Chuck type	Type of tap holding	Tapping capacity			Applicable Synchro Tapper		
						Aluminium	Cast Iron	Carbon Steel	Model	Revolution (min ⁻¹)	
2TC-E1040TBFE		10 ~ 12	M1 ~ M4	Collet chuck	Centering	M2.5	M2	M2	STB-L108	—	—
2TC-E1050TBFE		12 ~ 14	M1 ~ M5	Collet chuck	Centering	M3	M2.5	M2	STB-L108	—	—
2TC-E1080TBFE		14 ~ 15	M1 ~ M8	Collet chuck	Centering	M3.5	M3	M2.5	STB-L108	—	—
2TC-E1040BF		15 ~ 60	M1 ~ M4	Sleeve	Centering	M4	M3	M3	STB-H108	1,200	1,440
2TC-E3080BF	23 ~ 91	M3 ~ M8	Sleeve	Floating ※0.2		M4	M3	M3	STB-L108	920	1,100
						M6	M5	M4	STB-H108	750	900
						M6	M6	M5		520	620
						M5	M4	M4	STB-L108	920	1,100
						M6	M5	M5		580	690
						M8	M6	M6		350	420
						M8	M6	M6		220	260
						M8	M6	M6	STC-P316	600	720
2TD-3080BF	23 ~ 130	M3 ~ M8	Sleeve	Floating ※0.2		M12	M8	M8	STC-P316	600	720
2TD-60120BF	35 ~ 123	M6 ~ M12	Sleeve	Floating ※0.4		M12	M10	M10		400	490
2TD-80160BF	45 ~ 121	M8 ~ M16	Sleeve	Floating ※0.4		M14	M10	M10	STC-P316	400	490
						M16	M12	M12		210	250

Notes1. The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 , Carbon Steel : S45C

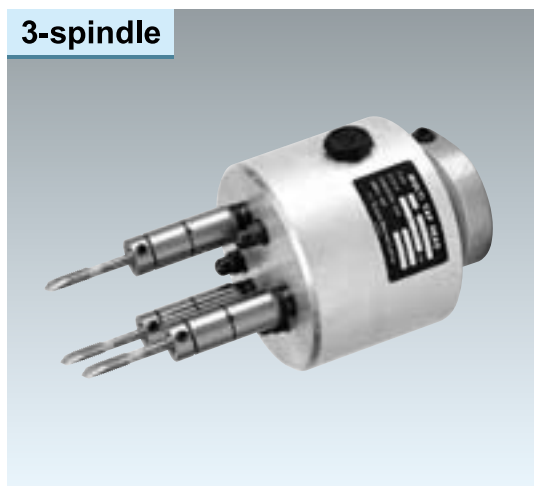
2. Tapping capacities shown in the above chart are the value in case of using spiral tap or point tap and the tapping depth is up to 1.5 times of tap diameter.

3. ※ mark stands for the radial floating volume. (diameter)

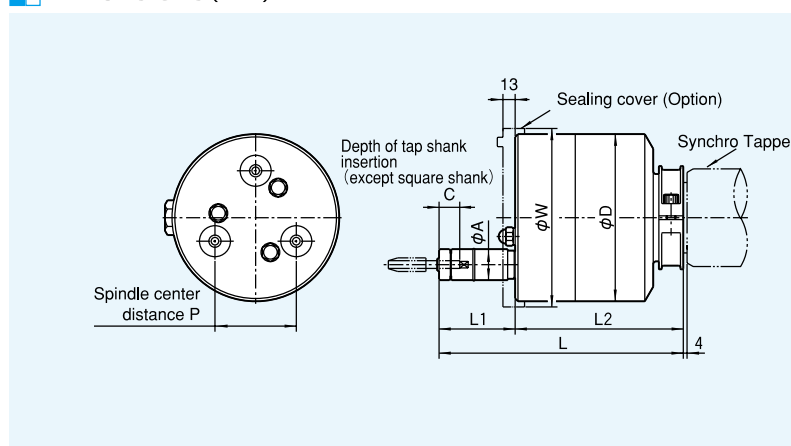
4. Other models of Synchro Tapper are applicable. Please contact our local distributor or subsidiary for the details.

DRILL HEADS & TAPPER HEADS

3-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	A	C	W
3TC-E1040TBFE		10 ~ 12	88	229.5	81.5	148	9.8	18.5	92
3TC-E1050TBFE		12 ~ 14	88	231	83	148	11.8	19	92
3TC-E1080TBFE		14 ~ 15	88	228	80	148	13.6	19	92
3TC-E1040BF		15 ~ 52	88	200.5	52.5	148	14.6	8	92
3TC-E3080BF		23 ~ 78	124	192	70	122	22	13	128
3TD-3080BF		29 ~ 80	138	217	70	147	22	13	142
		80 ~ 110	178						182
3TD-60120BF		35 ~ 78	138	260	81	179	33	22	142
		78 ~ 106	178						182

Note: Heads with different spindle pitch not shown in the above chart can be manufactured.
Please contact our local distributor or subsidiary for details.

Tapping capacity (mm)

Model	Specs	Spindle center distance (Min.~Max.)	Chuck capacity	Chuck type	Type of tap holding	Tapping capacity			Applicable Synchro Tapper		
						Aluminium	Cast Iron	Carbon Steel	Model	Revolution (min ⁻¹)	
3TC-E1040TBFE		10 ~ 12	M1 ~ M4	Collet Chuck	Centering	M2.5	M2	M2	STB-L108	—	—
3TC-E1050TBFE		12 ~ 14	M1 ~ M5	Collet Chuck	Centering	M3	M2.5	M2	STB-L108	—	—
3TC-E1080TBFE		14 ~ 15	M1 ~ M8	Collet Chuck	Centering	M3.5	M3	M2.5	STB-L108	—	—
3TC-E1040BF	15 ~ 52	M1 ~ M4	Sleeve	Centering		M4	M3	M3	STB-H108	1,200	1,440
						M4	M3	M3		750	900
						M4	M3	M3	STB-L108	920	1,100
						M4	M3	M3		580	690
3TC-E3080BF	23 ~ 78	M3 ~ M8	Sleeve	Floating ※0.2		M5	M4	M3	STB-H108	750	900
						M6	M5	M4		520	620
						M4	M3	M3	STB-L108	920	1,100
						M5	M4	M4		580	690
						M6	M5	M5		350	420
						M8	M6	M6		220	260
3TD-3080BF	29 ~ 110	M3 ~ M8	Sleeve	Floating ※0.2		M8	M6	M6	STC-P316	600	720
3TD-60120BF	35 ~ 106	M6 ~ M12	Sleeve	Floating ※0.4		M10	M6	M6	STC-P316	600	720
						M12	M8	M8		400	490
						M12	M10	M10		210	250

Notes1. The materials quoted are equivalent to following JIS code.

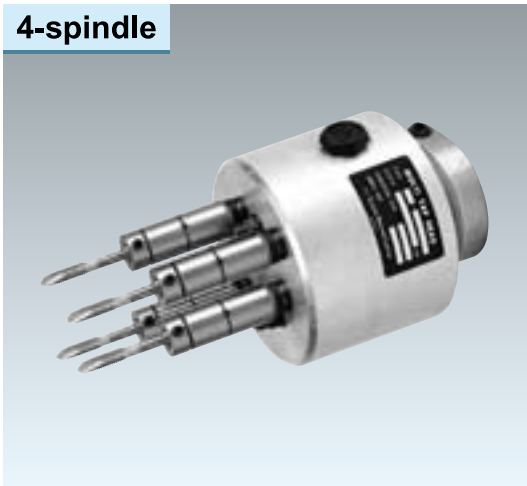
Aluminium : ADC , Cast Iron : FC200 , Carbon Steel : S45C

2. Tapping capacities shown in the above chart are the value in case of using spiral tap or point tap and the tapping depth is up to 1.5 times of tap diameter.

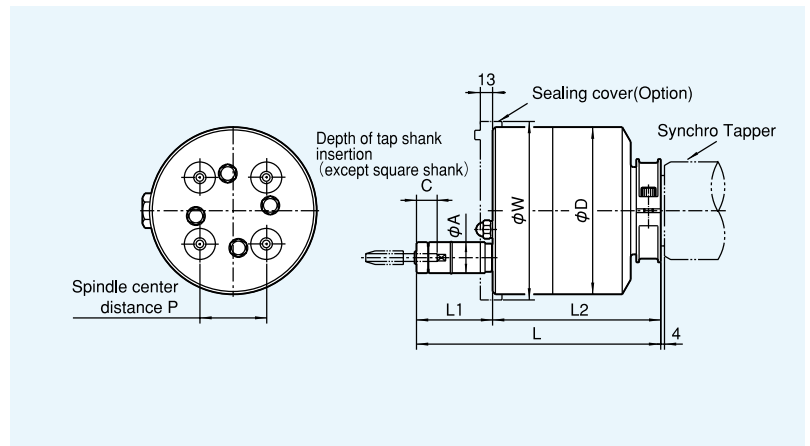
3. ※ mark stands for the radial floating volume. (diameter)

4. Other models of Synchro Tapper are applicable. Please contact our local distributor or subsidiary for details.

4-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	A	C	W
4TC-E1050TBFE		12 ~ 14	88	231	83	148	11.8	19	92
4TC-E1080TBFE		14 ~ 15	88	228	80	148	13.6	19	92
4TC-E1040BF		15 ~ 64	124	174.5	52.5	122	14.6	8	128
4TC-E3080BF		23 ~ 64	124	192	70	122	22	13	128
4TD-3080BF		29 ~ 66	138	217	70	147	22	13	142
		66 ~ 93	178						182
4TD-60120BF		35 ~ 86	178	260	81	179	33	22	182

Note: Heads with different spindle pitch or five or more spindle heads are manufactured.
Please contact our local distributor or subsidiary for details.

Tapping capacity (mm)

Model	Specs	Spindle center distance (Min.~Max.)	Chuck type	Type of tap holding	Tapping capacity			Applicable Sincro Tapper		
					Aluminium	Cast Iron	Carbon Steel	Model	Revolution (min ⁻¹)	
4TC-E1050TBFE		12 ~ 14	Collet chuck	Centering	M3	M2.5	M2	STB-L108	—	—
4TC-E1080TBFE		14 ~ 15	Collet chuck	Centering	M3.5	M3	M2	STB-L108	—	—
4TC-E1040BF	15 ~ 64	M1 ~ M4	Sleeve	Centering	M4	M3	M2	STB-H108	1,200	1,440
					M4	M3	M3		750	900
					M4	M3	M3		520	620
					M4	M3	M2	STB-L108	920	1,100
					M4	M3	M3		580	690
4TC-E3080BF	23 ~ 64	M3 ~ M8	Sleeve	Floating ※0.2	M5	M4	M4	STB-H108	520	620
					M5	M4	M3	STB-L108	580	690
					M5	M5	M4		350	420
					M6	M6	M5		220	260
					M8	M5	M5	STC-P316	600	720
4TD-3080BF	29 ~ 93	M3 ~ M8	Sleeve	Floating ※0.2	M8	M6	M6		400	490
4TD-60120BF	35 ~ 86	M6 ~ M12	Sleeve	Floating ※0.4	M10	M6	M6	STC-P316	400	490
					M12	M8	M8		210	250

Notes1. The materials quoted are equivalent to following JIS code.

Aluminium : ADC , Cast Iron : FC200 , Carbon Steel : S45C

2. Tapping capacities shown in the above chart are the value in case of using spiral tap or point tap and the tapping depth is up to 1.5 times of tap diameter.

3. "※" mark stands for the radial floating volume. (diameter)

4. Other models of Sincro Tapper are applicable. Please contact our local distributor or subsidiary for details.

Fixed spindle type

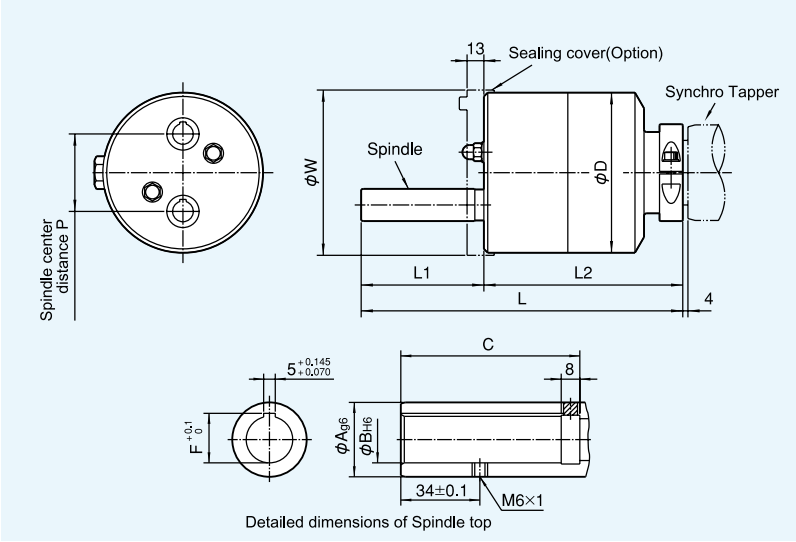
Adjustable spindle nose style

Tapper Heads with adjustable spindle nose for adjustable adapter.

2-spindle



Dimensions(mm)



Dimensions(mm)

Model	Symbol	Applicable adapter	P	D	L	L1	L2	A	B	C	F	W	Applicable tapping chuck (NT made)
2TC—EAM1E		BILZ16	26 ~ 82	124	249	95	154	25	16	74	17.3	128	WFLP030—0/Tr.16×1.5
		BILZ20	34 ~ 78	124	254	100	154	32	20	77	21.3	128	WFLP32.40—0/Tr.20×2
2TD—AM1E		BILZ16	26 ~ 94	138	274	95	179	25	16	74	17.3	142	WFLP030—0/Tr.16×1.5
			94 ~ 129	178								182	
		BILZ20	34 ~ 90	138	279	100	179	32	20	77	21.3	142	WFLP32.40—0/Tr.20×2
			90 ~ 125	178								182	

Note:Heads with different spindle pitch or with different spindle nose to meet other maker's holder can be supplied upon request.
Please contact our local distributor or subsidiary for details.



Oil-bath type 2-spindle head

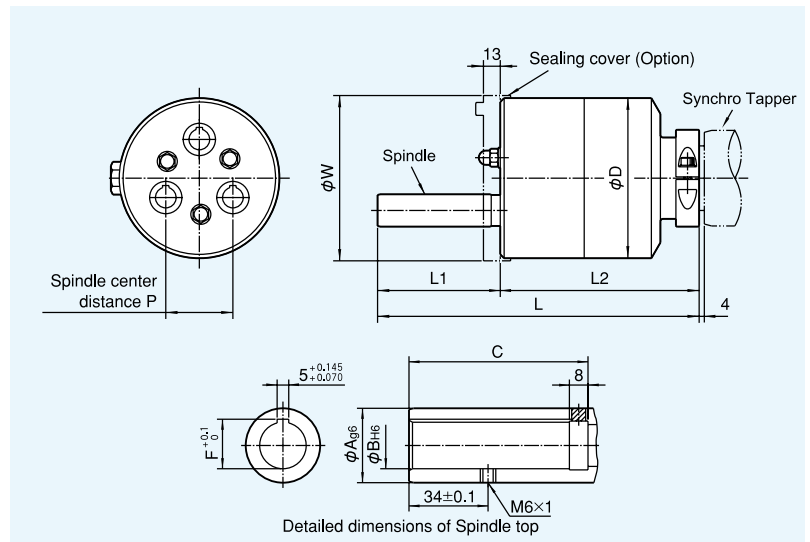


Motor directly connected 6-spindle head

3-spindle



Dimensions (mm)



Dimensions (mm)

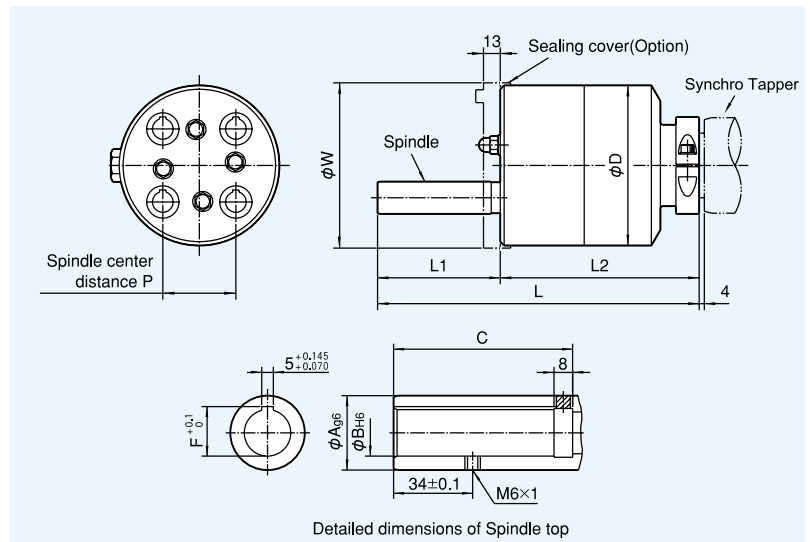
Model	Symbol	Applicable adapter	P	D	L	L1	L2	A	B	C	F	W	Applicable tapping chuck (NT made)
3TC-EAM1E		BILZ16	26 ~ 71	124	249	95	154	25	16	74	17.3	128	WFLP030-0/Tr.16x1.5
		BILZ20	34 ~ 67	124	254	100	154	32	20	77	21.3	128	WFLP32.40-0/Tr.20x2
3TD-AM1E	BILZ16		26 ~ 81	138	274	95	179	25	16	74	17.3	142	WFLP030-0/Tr.16x1.5
			81 ~ 111	178								182	
	BILZ20		34 ~ 78	138	279	100	179	32	20	77	21.3	142	WFLP32.40-0/Tr.20x2
			78 ~ 108	178								182	

Note: Heads with different spindle pitch or with different spindle nose to meet other maker's holder can be supplied upon request.
Please contact our local distributor or subsidiary for details.

4-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	Applicable adapter	P	D	L	L1	L2	A	B	C	F	W	Applicable tapping chuck (NT made)
4TD-AM1E		BILZ16	26 ~ 91	178	274	95	179	25	16	74	17.3	182	WFLP030-0/Tr.16x1.5
		BILZ20	34 ~ 88	178	279	100	179	32	20	77	21.3	182	WFLP32.40-0/Tr.20x2

Note: Heads with different spindle pitch or five or more spindle heads are also manufactured. Please contact our local distributor or subsidiary for details.

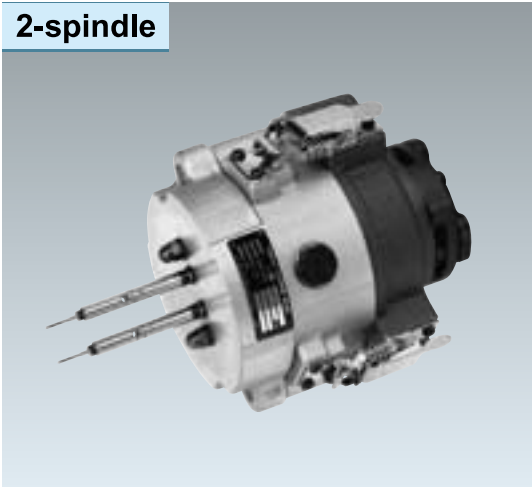
DRILL HEADS & TAPPER HEADS

Quick change "Catch-Clip" type

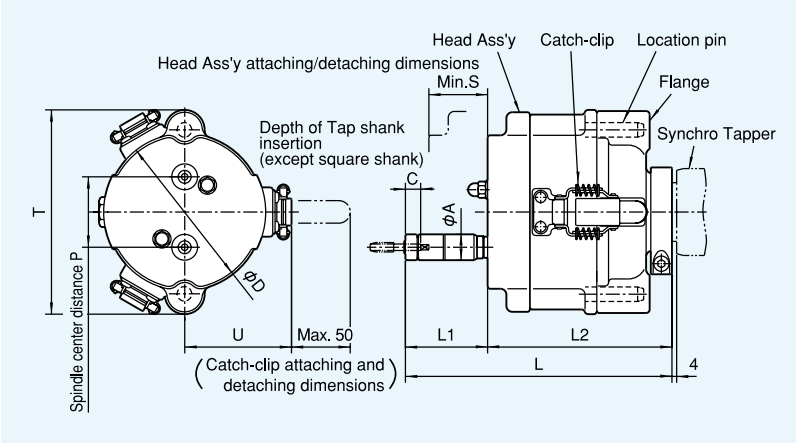
Sleeve style • Collet chuck style

Attaching and detaching of head ass'y can be easily done by Catch-clip. The changing time required is only 1 ~ 2 minutes. Reduction of idle time is possible.

2-spindle



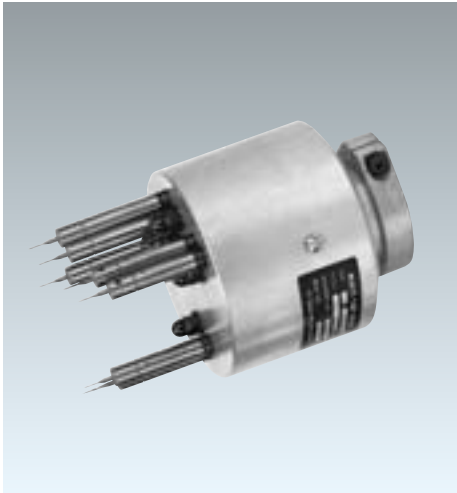
Dimensions (mm)



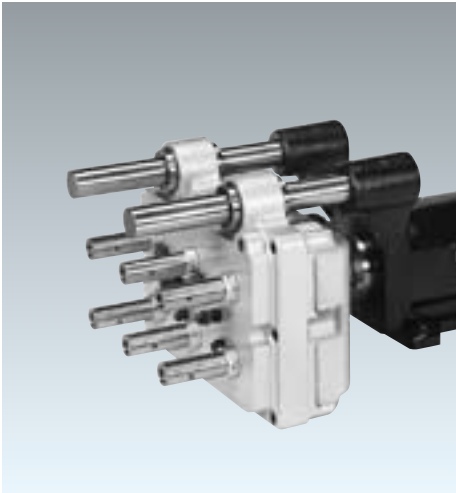
Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	A	C	S	T	U
2TC-E1050TCFE		12 ~ 14	134	240	83	157	11.8	19	55	174	91
2TC-E1080TCFE		14 ~ 15	134	237	80	157	13.6	19	55	174	91
2TC-E1040CF		15 ~ 91	134	209.5	52.5	157	14.6	8	55	174	91
2TC-E3080CF		23 ~ 91	134	227	70	157	22	13	55	174	91
2TD-3080CF		23 ~ 130	192	269	70	199	22	13	65	254	116
2TD-60120CF		35 ~ 123	192	312	81	231	33	22	65	254	116

Note: Heads with different spindle pitch not shown in the above chart can be manufactured. Please contact our local distributor or subsidiary for details.

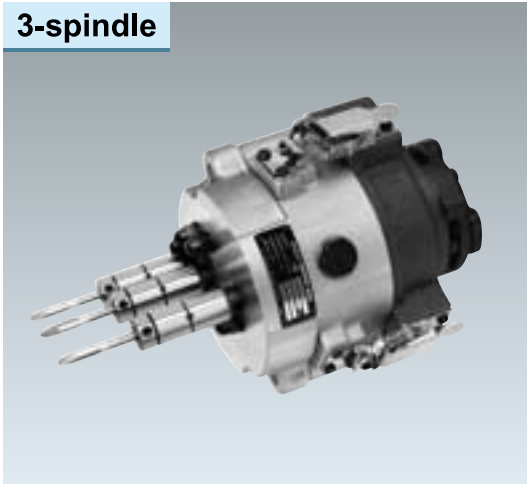


7-spindle tapper head

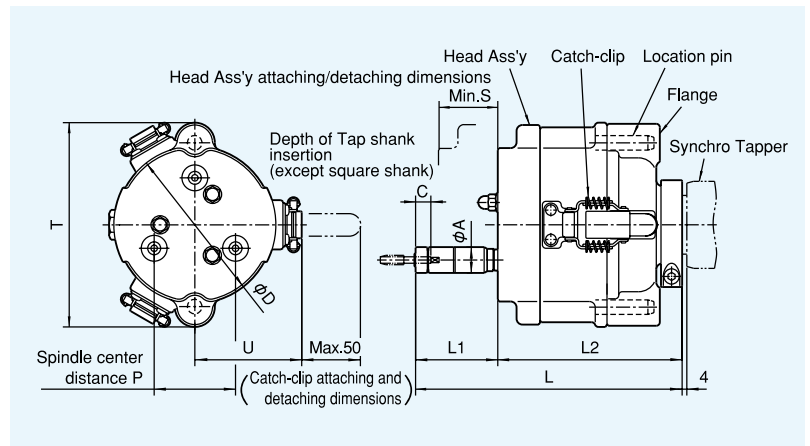


6-spindle head with guide bars

3-spindle



Dimensions (mm)

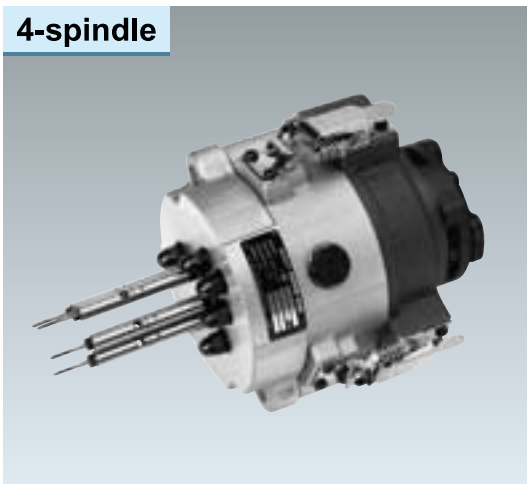


Dimensions (mm)

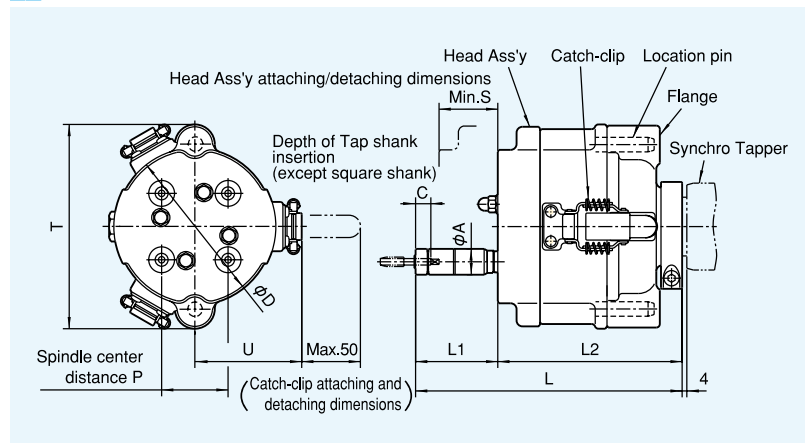
Model	Symbol	P	D	L	L1	L2	A	C	S	T	U
3TC-E1050TCFE		12 ~ 14	134	240	83	157	11.8	19	55	174	91
3TC-E1080TCFE		14 ~ 15	134	237	80	157	13.6	19	55	174	91
3TC-E1040CF		15 ~ 78	134	209.5	52.5	157	14.6	8	55	174	91
3TC-E3080CF		23 ~ 78	134	227	70	157	22	13	55	174	91
3TD-3080CF		29 ~ 110	192	269	70	199	22	13	65	254	116
3TD-60120CF		35 ~ 106	192	312	81	231	33	22	65	254	116

Note: Heads with different spindle pitch not shown in the above chart can be manufactured. Please contact our local distributor or subsidiary for details.

4-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	P	D	L	L1	L2	A	C	S	T	U
4TC-E1050TCFE		12 ~ 14	134	240	83	157	11.8	19	55	174	91
4TC-E1080TCFE		14 ~ 15	134	237	80	157	13.6	19	55	174	91
4TC-E1040CF		15 ~ 64	134	209.5	52.5	157	14.6	8	55	174	91
4TC-E3080CF		23 ~ 64	134	227	70	157	22	13	55	174	91
4TD-3080CF		29 ~ 93	192	269	70	199	22	13	65	254	116
4TD-60120CF		35 ~ 86	192	312	81	231	33	22	65	254	116

Note: Heads with different spindle pitch of five or more spindle heads are manufactured. Please contact our local distributor or subsidiary for details.

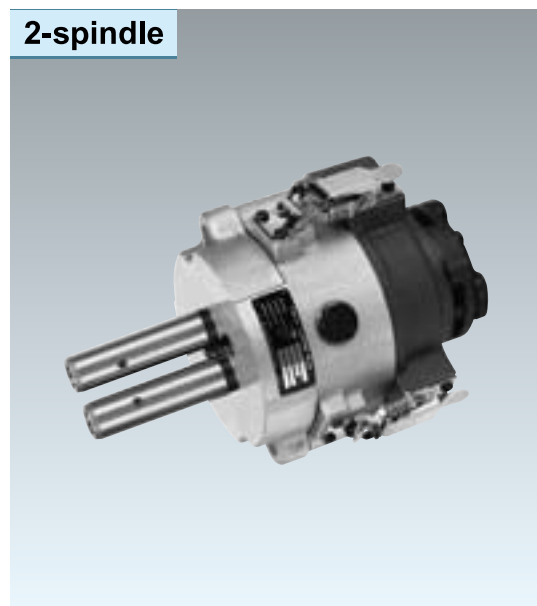
DRILL HEADS & TAPPER HEADS

Quick change "Catch-Clip" type

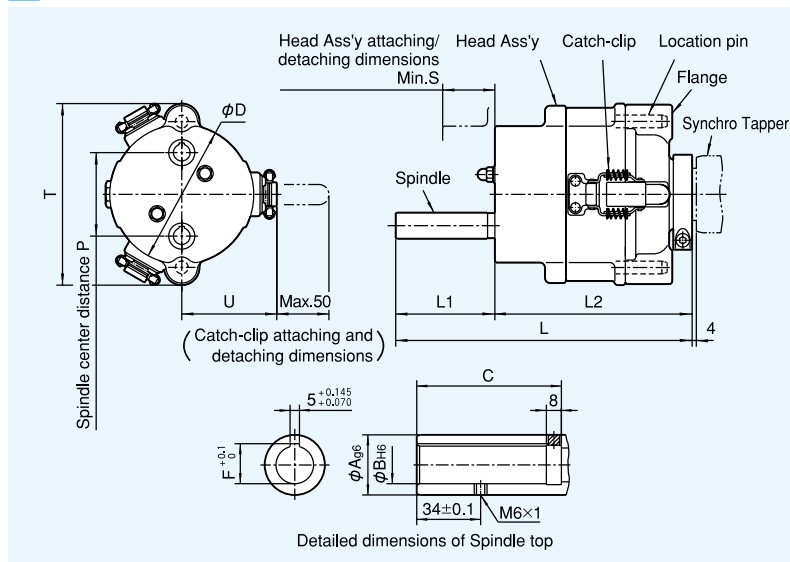
Adjustable spindle nose style

"Catch-Clip" type Tapper Heads with adjustable spindle nose for adjustable adapter.

2-spindle



Dimensions (mm)



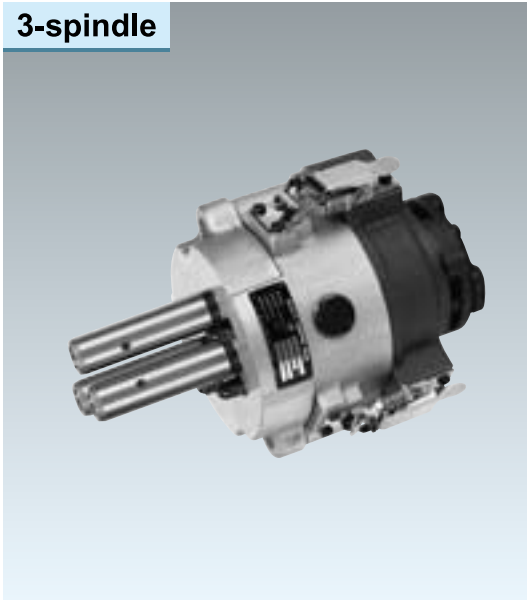
Dimensions (mm)

Model	Symbol	Applicable adapter	P	D	L	L1	L2	A	B	C	F	S	T	U	Applicable tapping chuck (NT made)
2TC-EAM1CE		BILZ16	26 ~ 82	134	284	95	189	25	16	74	17.3	55	174	91	WFLP030-0/Tr.16×1.5
		BILZ20	34 ~ 78	134	289	100	189	32	20	77	21.3	55	174	91	WFLP32.40-0/Tr.20×2
2TD-AM1CE		BILZ16	26 ~ 129	192	326	95	231	25	16	74	17.3	65	254	116	WFLP030-0/Tr.16×1.5
		BILZ20	34 ~ 125	192	331	100	231	32	20	77	21.3	65	254	116	WFLP32.40-0/Tr.20×2

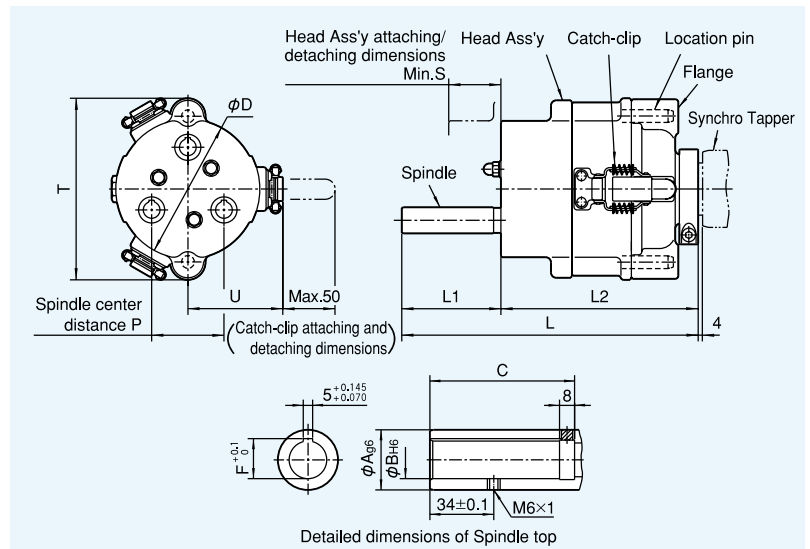
Note: Heads with different spindle pitch or with different spindle nose to meet other maker's holder can be supplied upon request.

Please contact our local distributor or subsidiary for details.

3-spindle



Dimensions (mm)



Dimensions (mm)

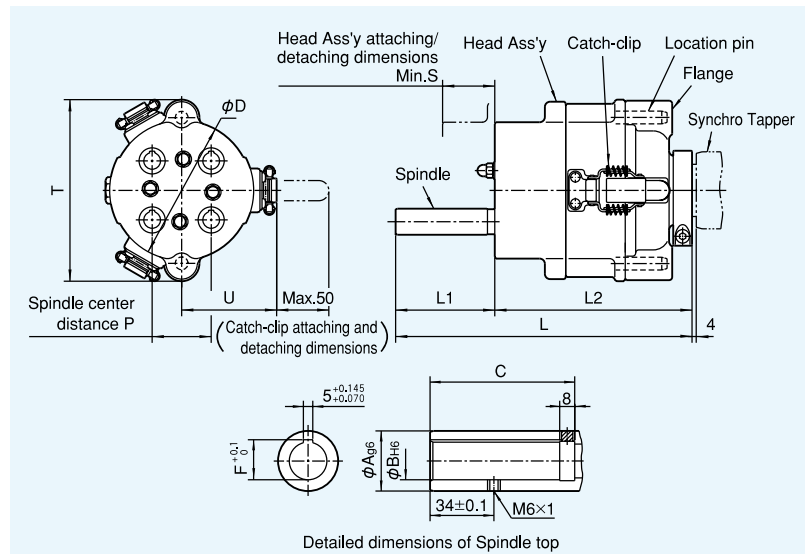
Model	Symbol	Applicable adapter	P	D	L	L1	L2	A	B	C	F	S	T	U	Applicable tapping chuck (NT made)
3TC-EAM1CE		BILZ16	26 ~ 71	134	284	95	189	25	16	74	17.3	55	174	91	WFLP030-0/Tr.16×1.5
		BILZ20	34 ~ 67	134	289	100	189	32	20	77	21.3	55	174	91	WFLP32.40-0/Tr.20×2
3TD-AM1CE		BILZ16	26 ~ 111	192	326	95	231	25	16	74	17.3	65	254	116	WFLP030-0/Tr.16×1.5
		BILZ20	34 ~ 108	192	331	100	231	32	20	77	21.3	65	254	116	WFLP32.40-0/Tr.20×2

Note: Heads with different spindle pitch or with different spindle nose to meet other maker's holder can be supplied upon request.
Please contact our local distributor or subsidiary for details.

4-spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	Applicable adapter	P	D	L	L1	L2	A	B	C	F	S	T	U	Applicable tapping chuck (NT made)
4TD-AM1CE		BILZ16	26 ~ 91	192	326	95	231	25	16	74	17.3	65	254	116	WFLP030-0/Tr.16×1.5
		BILZ20	34 ~ 88	192	331	100	231	32	20	77	21.3	65	254	116	WFLP32.40-0/Tr.20×2

Note: Heads with different spindle pitch of five or more spindle heads are manufactured. Please contact our local distributor or subsidiary for details.

Offset fixed type

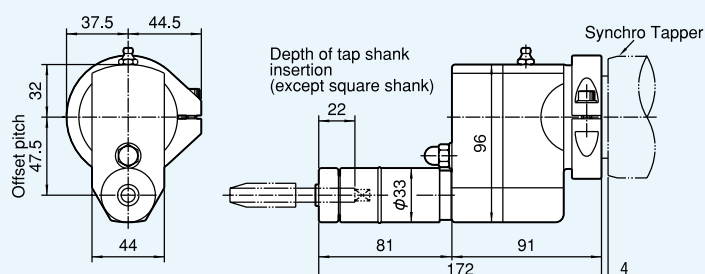
Tapper Heads which avoid interference between tapping unit and jig fixture or workpiece.

Sleeve style

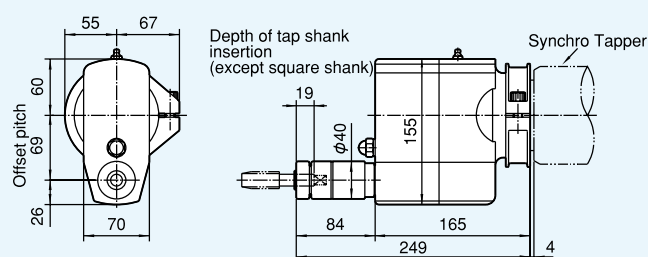


Dimensions (mm)

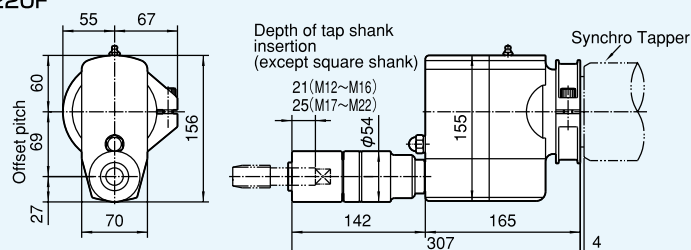
OTC-100F



OTD-160F



OTD-220F



Tapping capacity (mm)

Model	Specs	Offset pitch	Chuck capacity	Type of tap holding	Speed ratio (Output/Input)	Applicable Synchro Tapper model
OTC-100F		47.5	M3 ~ M12	Floating ※0.4	1	STB-L108
OTD-160F		69	M3 ~ M16	Floating ※0.4	1	STC-P316
OTD-220F		69	M12 ~ M22	Floating ※0.4	1	STC-P316

Notes 1. "※" mark stands for radial floating volume.(diameter)

2. Offset heads not shown above chart are available. Please contact our local distributor or subsidiary for details.

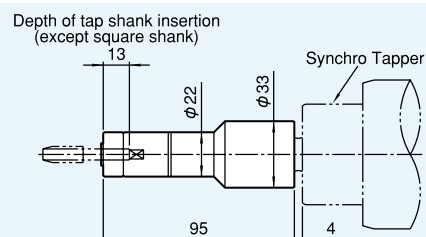
Tap Holders

Head holder exclusively used for tapping.
Four models available for different type size.

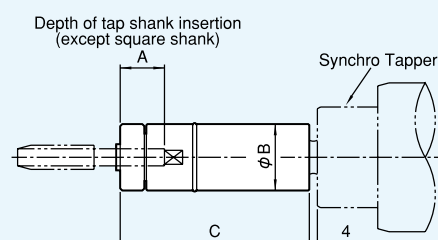


■ Dimensions (mm)

1TC-60C



1TC-100F
1TD-160F
1TD-220F



■ Tapping capacity (mm)

Model	Specs	Chuck capacity	Type of tap holding	Applicable Synchro Tapper model
1TC-60C		M 1 ~ M3	Centering	STB-H108
1TC-100F		M3 ~ M12	Floating ※0.4	STB-L108
1TD-160F		M3 ~ M16	Floating ※0.4	STC-P316
1TD-220F		M12 ~ M22	Floating ※0.4	STC-P316

■ Dimensions (mm)

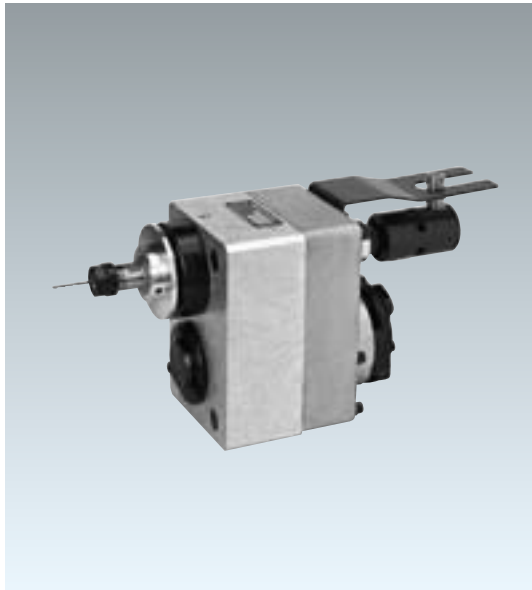
Model	Symbol	A	B	C
1TC-100F		22	33	94
1TD-160F		19	40	95
1TD-220F		21 (M12~M16) 25 (M17~M22)	54	109

Notes1.※mark stands for radial floating volume.(diameter)

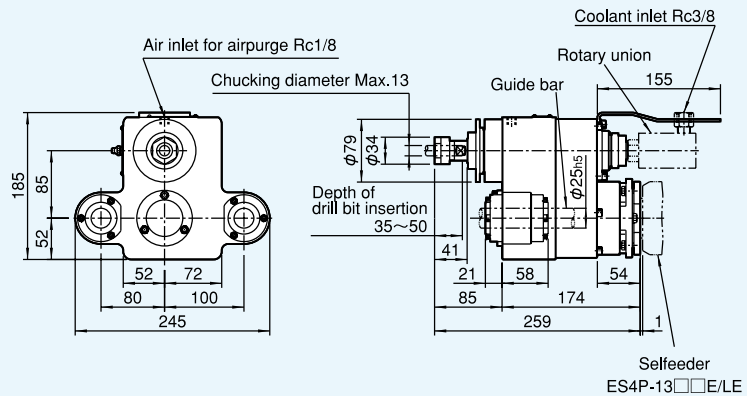
2.Tap holder not shown above chart is available.Please contact our local distributor or subsidiary for details.

Coolant Holder

Coolant Holder for oil hole drilling. High-speed drilling for deep hole possible by adopting high pressure coolant.



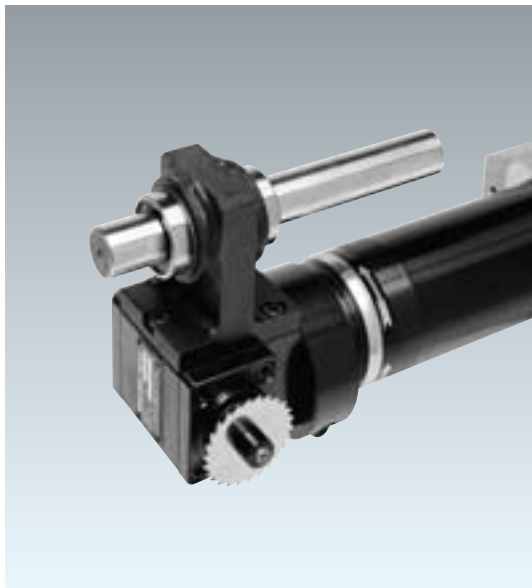
■ Dimensions (mm)



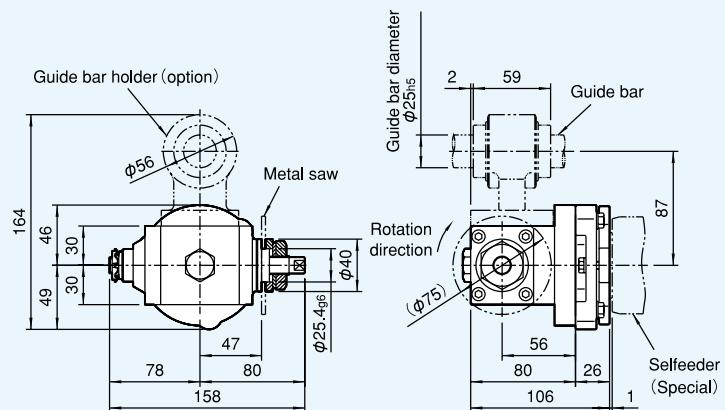
- Notes 1. Speed ratio 1.37 (Output/Input)
 2. Must be used at rotation speed of $10,000 \text{ min}^{-1}$ or coolant pressure of 6.8MPa or less.
 3. Guide bar is user's option.

Milling Head

Head for cutting by Metal saw or grooving.
 Head with Guide bar available.



■ Dimensions (mm)



- Notes 1. Guide bar and metal saw are to be provided by user.
 2. Spindle shape of Selffeeder is special.
 3. Other models are also applicable. Please contact our distributor or our subsidiary for the details.

INQUIRY SHEET FOR MULTI-SPINDLE DRILLING,TAPPING HEADS

INQ. No.	Date
Company Name	
Name	Phone
Fax	E-mail Address

* To ensure the proper design for your fixed type multi-spindle heads, please provide the following technical information for all quotation request and orders.

- | | | | | | |
|----------------------|---|---|-----------------------------|---|--------------------|
| 1. Workpiece | : | _____ | 2. Material and Hardness | : | _____ |
| 3. Kind of Coolant | : | _____ | 4. Actual Machining Time/pc | : | _____ |
| 5. Type of Head | : | ☐ Fixed ☐ Catch-clip | 6. Voltage | : | _____ V × _____ Hz |
| 7. Working Direction | : | ☐ Vertical Down ☐ Slant Down ☐ Horizontal ☐ Vertical Up ☐ Slant Up | | | |

Specific Information		Drilling	Tapping	Others ()
1	Hole (Tap) Dia. × Depth			
2	Pre-hole Dia. × Depth			
3	Tap Pitch & Standard			
4	Required Unit Stroke	(Total)	(Total)	(Total)
5	Type of Tool	Straight Shank Morse Taper Shank (No.)	Hand, Spiral, Point, Roll Shank Size Dia.X Sq.	
6	Tool (Material)	HSS, carbide, etc ()	HSS, carbide, etc ()	HSS, carbide, etc ()
7	Necessity of Adjustable Adapter	BILZ (16,20,25) , No Use Others ()	BILZ (16,20,25), No Use Others ()	BILZ (16,20,25), No Use Others ()
8	Water Proof of Spindle	Use / No Use	Use / No Use	Use / No Use
9	Requested Driving Unit	Model:	Model:	Model:

Hole Pattern: Please describe the exact hole dia., position, size and their tolerance below.

* Mark center position of the head on this sketch if required to follow.

Please also attach drawing with indication of the portion to be machined, if necessary.

Remarks:

Selffeeders & Synchro Tappers



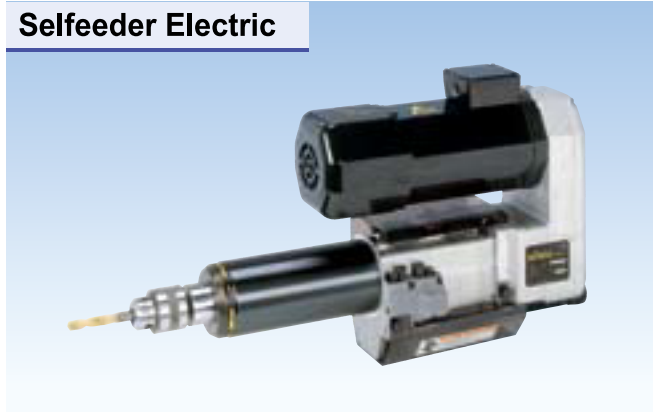
Sugino Selffeeders continually provide the latest technology to meet high speed processing requirements while maintaining high accuracies.
We provide the highest quality Selffeeders to match your specific requirements.

Selffeeder Global



Global Selffeeders are economical drill units designed and built to maintain high accuracy and high durability. Standard motors provide consistent RPM and high efficiency while maintaining high torque. Sugino's lineup provides a wide range pulley combination from low to high speed RPM options.

Selffeeder Electric



A cost effective drilling unit combining pneumatic thrust hydraulically checked with many powerful horsepower motor options.
Appropriate units can be selected according to machining specification capacity charts.



Sugino Synchro Tappers are mechanical feed tapping units which meet high speed tapping and integrated automation requirements.
Feed rates are synchronized with tool rotation, therefore very thin or soft materials can be tapped efficiently. (capable of class 3 thread accuracy)

Model : STB-H/L



Compact and light, allows flexible set-ups.
High speed (H Type) and high torque (L Type) units are available.

Model : STC-P



This tapping unit has 120mm total stroke.
Large single spindle capacity with increased efficiency by attaching a multiple spindle head for tapping more holes simultaneously.



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