

DRILL HEADS & TAPPER HEADS

Sugino Drill and Tapper Heads ideal for high speed and high efficient drilling and tapping



Features of Drill Heads and Tapper Heads

1 Conforming with customer's needs

Meeting customer requirements, such as Specific Center Distances, Quantity of Spindles per job, Spindle length and types or capacities

2 High Accuracy and High Rigidity

Taper Collet adapted for connection with Selffeeders (for flange type head). Excellent rigidity and durability provided

SUGINO

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■ Drill Heads

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■ Tapper Heads

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Spindle Pitch Adjustable Type

Drill Chuck Style



The image shows a dual-chuck drill bit holder, a tool used for holding and rotating two drill bits simultaneously. It features a black handle and a silver-colored metal body. Two drill bits are inserted into the chucks. A label on the side of the device provides technical specifications:

- Model: 1000
- Material: 1000
- Size: 1/2"
- Length: 10"
- Weight: 1.5 lbs
- Capacity: 1/2"
- Material: 1000
- Size: 1/2"
- Length: 10"
- Weight: 1.5 lbs

The technical drawing illustrates the SPM 1000 lathe tool post in two views: a top view (left) and a side view (right).

Top View Dimensions:

- G:** Overall width.
- R:** Radius of the outer profile.
- L:** Overall height.
- F:** Distance from the top edge to the center of the upper tool hole.
- J:** Distance from the center of the upper tool hole to the center of the lower tool hole.
- M:** Distance from the left edge to the center of the lower tool hole.
- N:** Distance from the center of the lower tool hole to the right edge.
- ØK:** Diameter of the central mounting hole.

Side View Dimensions and Labels:

- Drill Chuck:** The component used to hold a drill bit.
- Spindle:** The main rotating shaft of the lathe.
- Clamp Bolt:** A bolt used to secure the tool post to the spindle.
- Lock Bolt:** A bolt used to lock the tool post in position.
- Lock Nut:** A nut used to lock the tool post in position.
- Drill Bit Insert or Max C:** The cutting tool being used.
- Depth of Insert:** The length of the cutting tool insert.
- Self-feeder:** The mechanism that allows for automatic tool feed.
- L:** Total length of the tool post assembly.
- L':** Distance from the spindle to the center of the tool hole.
- L2:** Distance from the spindle to the center of the lower tool hole.
- L3:** Distance from the spindle to the self-feeder mechanism.

Symbol Model	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														

[illegible]

The technical drawing illustrates the dimensions and components of a 2-roller type feeder. The top view (left) shows the overall footprint with dimensions: Q (total width), R (roller width), C (center-to-center distance), L (total length), H (roller height), M (roller offset), N (roller width offset), and ϕK (roller diameter). The side view (right) shows the assembly with labels: Co's Nut, Spindle, Clamp Bolt, Lock Bolt, Lock Nut, Spindle Distance, Depth of Bolt Insert on Max C, and Self-feeder. Dimensions L' , L , L_2 , L_3 , and E are indicated for the side view.

Model	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
2D6N-50130AP	226	289	75	163	51	34	40	56	2	54	31.5	106	72	64	87	84

Specs		Spindle Center Distance (Min.~Max.)	Chuck Capacity	Chuck Type	Speed Ratio (Output/Input)	Max. Aluminum	Drill Size Cast Iron	Drill Size Carbon Steel	Applicable Selffeeder Model			
Model												
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		4.5	3.5	4					
					5	4.5	4					
2D46~540AD	22 ~ 84	1 ~ 4	Drill Chuck	1	4	2.5	2	ES3C-13□□L (Notes2)				
2D46~845AP	17 ~ 84	0.8 ~ 5	Collet Chuck		5	3.5	3					
					4.5	3.5	3					
2D41~865AD	32.5 ~ 114	1 ~ 6.5	Drill Chuck	1	5	4	2.5	ES3C-6030L				
2D41~2075AP	23 ~ 114	1 ~ 7.5	Collet Chuck		4.5	3.5	3	ES3C-6022L				
					5	4	3.5	ES3C-1314L				
				1	6	5	4	ES3C-1309L				
					7	6	5	ES3C-1305L				
					5	3	3	GSB-4-1330/L				
2D46~865AD	32.5 ~ 114	1 ~ 6.5	Drill Chuck		6	3.5	3.5	ES3P-1326L/L	GSB-4-1323/L	GSB-2-1330/L		
2D46~2075AP	23 ~ 114	1 ~ 7.5	Collet Chuck		7	4.5	3.5	ES3P-1318L/L	GSB-4-1315/L	GSB-2-1320/L		
					7	5	5	ES3P-1314L/L				
					7.5	6	5	ES3P-1310L/L	GSB-4-1310/L	GSB-2-1315/L		
					7.5	6	5	ES3P-1307L/L	GSB-4-1307/L	GSB-2-1312/L		
					8	6.5	5.5	ES3P-1305L/L	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					
				11	7.5	6.5	ES5-1306	GSC-4-1307/L				
				11.5	8	6.5	ES5-1304					
				1	13	8.5	8	ES6-2411F				
					13	11	10	ES6-2408F				
					13	12	11	ES6-2406F				
					13	11	9.5	ES6-2405F				
					13	12	11	ES6-2403F				
					13	12	11	ES6-2402F				
2D6N~50130AP	45.5 ~ 170	1.5 ~ 13	Collet Chuck									

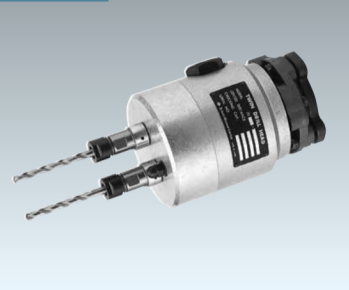
Fixed Spindle Type

Collet Chuck Style

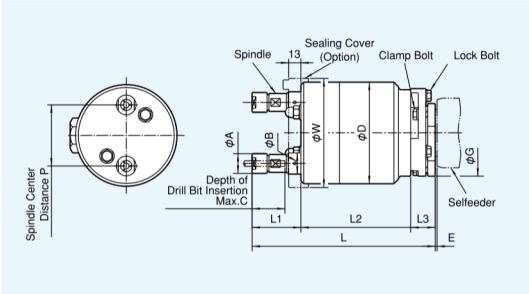
Sugino can provide Drill Heads for your special requirements.

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

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

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

2.Suitable for installation into Selffeeders other than ES-type and GS-type as well.

For more information, please contact our distributor or subsidiary nearest you.

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

3-Spindle

A photograph of a 3-spindle drill press. The device has a cylindrical body with three spindles extending from the front. Each spindle has a drill bit attached. The body is silver-colored metal, and the spindles are black. There is a black label on the side of the body with some text and a logo. The background is a light blue gradient.

Technical drawing of the Self Feeder (Model 100) showing top and side views with dimensions.

Top View Dimensions:

- Spindle Center Distance P

Side View Dimensions and Labels:

- Sealing Cover (Option)
- Spindle
- 13
- Clamp Bolt
- Lock Bolt
- ϕA
- ϕB
- Depth of Insertion Max. C
- ϕW
- ϕD
- ϕG
- Self Feeder
- L1
- L2
- L
- L3
- E

[illegible]

■ Drilling Capacity(mm)

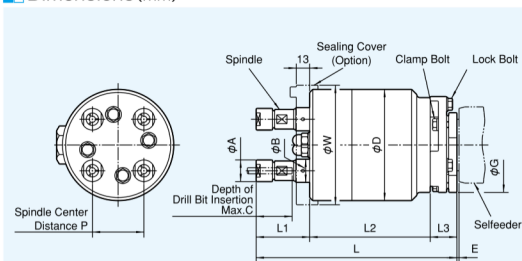
Operating Air Pressure :0.5MPa

Specs	Spindle Center Distance (Min~Max.)	Chucking Capacity	Chuck Type Collet Chuck	Max. Drill Size			Applicable Selffeeder Model			
				Alum. mm	Cast Iron	Carbon Steel				
3D46-1530BTE	10 ~ 11	1.1 ~ 3	Screw-in Type	2	1.5	1.5	ES3C-13□□□□ES3P-13□□□□/LL (Notes2)		GSB-4-13□□□□/LL (Notes2)	
3D46-1530BTE	11 ~ 12	1.1 ~ 3		2.5	2	1.5	ES3C-13□□□□ES3P-13□□□□/LL (Notes2)		GSB-4-13□□□□/LL (Notes2)	
3D46-1540BTE	12 ~ 12.6	1.1 ~ 4	Screw-in Type	3.5	2.5	2	ES3C-13□□□□ES3P-13□□□□/LL (Notes2)		GSB-4-13□□□□/LL (Notes2)	
3D41-550BP	12.6 ~ 17	1.1 ~ 5		3.5	2.5	2	ES3C-60□□□□ (Notes2)			
3D46-550BP	12.6 ~ 17	1.1 ~ 5	Push-in Type	4	3.5	3	ES3C-13□□□□/LL (Notes2)		GSB-4-13□□□□/LL (Notes2)	
3D41-845BP	17 ~ 23	0.8 ~ 5	Push-in Type	3	2	2	ES3C-6022L			
3D46-845BP	17 ~ 23	0.8 ~ 5	Push-in Type	4.5	4	3.5	ES3C-13□□□□ (Notes2)			
				5	4.5	3.5	ES3P-13□□□□/LL (Notes2)		GSB-4-13□□□□/LL (Notes2)	
3D41-570BP	17.2 ~ 23	1.1 ~ 7	Push-in Type	3.5	2.5	2	ES3C-6022L			
				4	3.5	3	ES3C-1314L			
				6.5	4	3.5	ES3C-1309L			
				4	3	3	ES3C-1305L			
				5	3.5	3.5			GSB-4-1330/L	
3D46-570BP	17.2 ~ 23	1.1 ~ 7	Push-in Type	6	4	3.5	ES3P-1326L/LL		GSB-4-1323/L	
				6	4	3.5	ES3P-1318L/LL		GSB-2-1330/L	
				6	5	3.5	ES3P-1314L/LL		GSB-4-1315/L	
				6	5	3.5	ES3P-1310L/LL		GSB-2-1315/L	
				6	5	3.5	ES3P-1307L/LL		GSB-4-1307/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	
				3.5	2.5	2	ES3C-6022L			
3D41-2075BP	23 ~ 94	1 ~ 7.5	Push-in Type	4	3.5	3	ES3C-1314L			
3D46-2075BP	23 ~ 94	1 ~ 7.5	Push-in Type	4.5	4	3.5	ES3C-1309L			
				6	5	4	ES3C-1305L			
				4	3	2			GSB-4-1330/L	

Specs Model	Spindle Center Distance (Min~Max.)	Chucking Capacity	Chucking Type Collet Chuck	Max. Drill Size			Applicable Selffeeder Model						
				Alumi- um	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		
7.5	5.5	5	ES5-1311						GSC-2-1321/L				
8	6	5.5	ES5-1308						GSC-2-1315/L				
8	6	6	ES5-1306										
9	6	6	ES5-1304										
9	6	6	ES5-1304						GSC-4-1307/L				
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						
				7.5	5.5	5	ES5-1311		GSC-2-1321/L				
				8	6	5.5	ES5-1308		GSC-2-1315/L				
				8	6	6	ES5-1306						
				9	6	6	ES5-1304		GSC-4-1307/L				
				10	7	6.5	ES5-1302						
3D6N-5100BP	24.2 ~ 41	1.1 ~ 10	Push-In Type	10	6.5	6	ES6-2414F						
				10	8.5	8	ES6-2411F						
				12	6.5	6	ES6-2414F						
3D6N-50130BP	41 ~ 118	1.5 ~ 13	Push-In Type	11	8.5	8	ES6-2411F						
				13	10	8	ES6-2408F						
				13	12	9	ES6-2406F						
				11.5	9.5	8	ES6-2405F						
				13	10.5	9	ES6-2403F						
				13	12	9	ES6-2402F						

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

■ Dimensions (mm)



Model	Symbol	P	D	L	L1	L2	L3	A	B	C	E	G	W
4D46-1530BTE	10 ~ 11	108		179.5	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 ~ 12.8	108		196	37	133	26	11.8	—	23.5	1	92	112
4D41-550BP	12.6 ~ 17	108		187	44	117							
4D46-550BP				203		133	26	12.4	—	25	1	92	112
4D41-845BP	17 ~ 23	108		186.5		117							
4D46-845BP				202.5	43.5	133	26	14.8	16.8	30	1	92	112
4D41-570BP	17.2 ~ 23	108		196	53	117							
4D46-570BP				212		133	26	16	—	36	1	92	112
4D41-2075BP	23 ~ 77	148											
4D46-2075BP				195	52	117	26	21	22.5	35	1	92	152
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											152
	68 ~ 96	188		289	75	163	51	34	40	56	2	176	194

Operating Air Pressure :0.5MPa

Specs	Spindle Center Distance (Min.~Max.)	Chucking Capacity	Chucking Type Collet Chuck	Max. Drill Size			Applicable Selffeeder Model		
				Aluminum	Cast Iron	Carbon Steel			
4D48-1530BTE	10 ~ 11	1.1 ~ 3	Screw-in Type	2	1.5	1.5	ES3C-13□□□□,ES3P-13□□□□/LL(Notes2)		
4D48-1530BTE	11 ~ 12	1.1 ~ 3	Screw-in Type	2.5	2	1.5	ES3C-13□□□□□□,ES3P-13□□□□□□/LL(Notes2)		
4D48-1540BTE	12 ~ 12.6	1.1 ~ 4	Screw-in Type	3.5	2.5	2	ES3C-13□□□□□□□□,ES3P-13□□□□□□□□/LL(Notes2)		
4D48-550BP	12.6 ~ 17	1.1 ~ 5	Push-in Type	3	2.5	2	ES3C-13□□□□□□□□(Notes2)		
				3	2.5	2	ES3C-1314L		
				4	3.5	3	ES3C-1309L		
				5	4	3.5	ES3C-1305L		
				4	3.5	2.5	ES3P-1328L/LL		
4D48-845BP	17 ~ 23	0.8 ~ 5	Push-in Type	5	3.5	2.5	ES3P-1318L/LL		GSB-4-1315/L
				5	4	2.5	ES3P-1314L/LL		
				5	4	3	ES3P-1310L/LL		GSB-4-1310/L
				5	4	3.5	ES3P-1307L/LL		GSB-4-1307/L
				5	4	3.5	ES3P-1305L/LL		GSB-4-1306/L
				3	2.5	2			
				4	3.5	3			
				5	4	3.5			
				4	3.5	2.5	ES3P-1328L/LL		GSB-4-1323/L
				5	3.5	2.5	ES3P-1318L/LL		GSB-4-1315/L
				5	4	2.5	ES3P-1314L/LL		GSB-2-1320/L
				5	4	3	ES3P-1310L/LL		GSB-4-1310/L
				5	4	3.5	ES3P-1307L/LL		GSB-4-1307/L
				5	4	3.5	ES3P-1305L/LL		GSB-2-1312/L
4D48-570BP	17.2 ~ 23	1.1 ~ 7	Push-in Type	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	

Specs Model	Spindle Center Distance (Min.~Max.)	Chuck 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	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	GSB-4-1323/L	GSB-2-1330/L
				5	3.5	2.5		ES3P-1318L/LL	GSB-4-1315/L	GSB-2-1320/L
				5	4	2.5		ES3P-1314L/LL		
				5	4	3		ES3P-1310L/LL	GSB-4-1310/L	GSB-2-1315/L
				5	4	3.5		ES3P-1307L/LL	GSB-4-1307/L	GSB-2-1312/L
				5	4	3.5		ES3P-1305L/LL	GSB-4-1306/L	
				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			GSC-4-1321/L
				6.5	4.5	4	ES5-1311			GSC-4-1315/L
				6.5	5	4	ES5-1308			GSC-4-1311/L
				7	5	4.5	ES5-1306			GSC-2-1315/L
				7	6	5	ES5-1304			GSC-4-1307/L
4D56~50130BP	41 ~ 96	1.5 ~ 13	Push-In Type	6.5	4	4	ES5-1320			GSC-4-1321/L
				6.5	4.5	4	ES5-1314			GSC-4-1315/L
				6.5	4.5	4	ES5-1311			GSC-2-1321/L
				6.5	5	4	ES5-1308			GSC-4-1311/L
				7	5	4.5	ES5-1306			GSC-2-1315/L
				7	6	5	ES5-1304			GSC-4-1307/L
4D6N~5100BP	24.2 ~ 41	1.1 ~ 10	Push-In Type	8	6	5	ES5-1302			
				10	6.5	6		ES6-2414F		
				9.5	8	7		ES6-2411F		
				10	9	7.5		ES6-2408F		
				10	8	7.5		ES6-2405F		
				10	6.5	6		ES6-2414F		
4D6N~50130BP	41 ~ 96	1.5 ~ 13	Push-In Type	9.5	8	7		ES6-2411F		
				11	9	7.5		ES6-2408F		
				13	9.5	7.5		ES6-2406F		
				10	8	7.5		ES6-2405F		
				12	9.5	7.5		ES6-2403F		
				13	9.5	7.5		ES6-2402F		

Notes)1.The materials quoted are equivalent to following JIS code.
Aluminium : ADC , Cast Iron : FC200 ,Carbon Steel : S45C
2.Suitable for installation into Selffeeders other than ES-type and GS-type as well.
For more information, please contact our distributor or subsidiary nearest you.
3.Other models of Selffeeders are applicable. Please contact our local distributor or subsidiary for the details.

Speed Increase Type Single Spindle Head
(Max.15,000min⁻¹)

Fixed Spindle Type

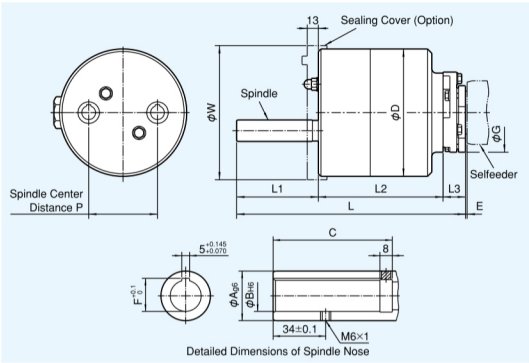
Adjustable Spindle Nose Style

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

2-Spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	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	152
		57 ~ 100	148												
		33 ~ 52	108	271	100	145	26	32	20	77	21.3	1	92	112	152
2D56-AM1E	BILZ20	52 ~ 95	148												
		26 ~ 100	148	294	95	160	39	25	16	74	17.3	2	128	152	194
		100 ~ 142	188												
2D6N-AM1E	BILZ16	33 ~ 95	148	299	100	160	39	32	20	77	21.3	2	128	152	194
		95 ~ 137	188												
		26 ~ 100	148	309	95	163	51	25	16	74	17.3	2	176	152	194
	BILZ20	100 ~ 142	188												
		33 ~ 95	148	314	100	163	51	32	20	77	21.3	2	176	152	194
		95 ~ 137	188												

Note: Heads with any Spindle pitches other than mentioned above, or ones with specific Spindle Noses for Holders from various manufacturers can be supplied upon request. Please contact our distributor or subsidiary for the details.

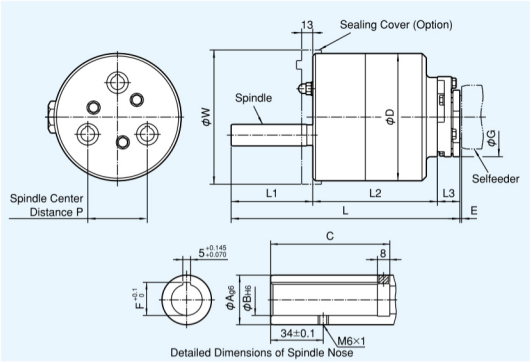


5 Spindle Head With Guide Bushes (With sealing cover)

3-Spindle



Dimensions (mm)



Dimensions (mm)

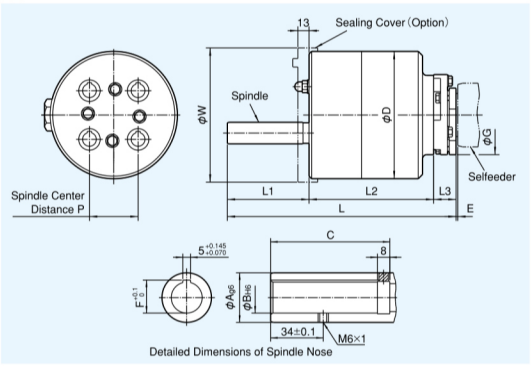
Model	Symbol	Applicable Adapter	P	D	L	L1	L2	L3	A	B	C	F	E	G	W
3D46-AM1E	BILZ16	26 ~ 86	148	266	95	145	26	25	16	74	17.3	1	92	152	152
		33 ~ 82	148	271	100	145	26	32	20	77	21.3	1	92	152	152
		26 ~ 86	148	294	95	160	39	25	16	74	17.3	2	128	152	194
3D56-AM1E	BILZ20	86 ~ 122	188												
		33 ~ 82	148	299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

Note: Heads with any Spindle pitches other than mentioned above, or ones with specific Spindle Noses for Holders from various manufacturers can be supplied upon request. Please contact our distributor or subsidiary for the details.

4-Spindle



Dimensions (mm)



Dimensions (mm)

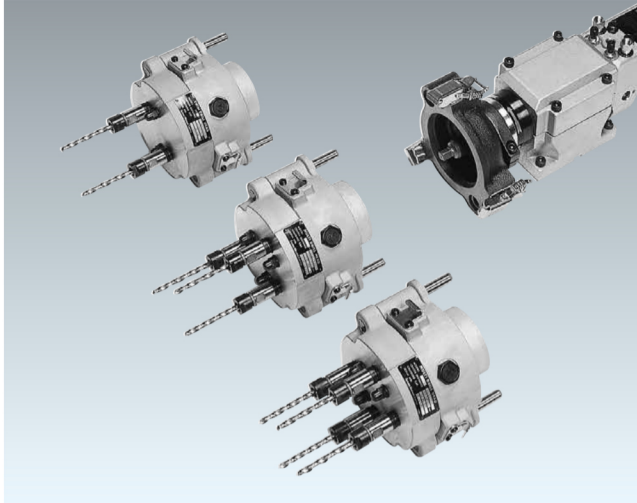
Model	Symbol	Applicable Adapter	P	D	L	L1	L2	L3	A	B	C	F	E	G	W
4D46-AM1E	BILZ16	26 ~ 70	148	266	95	145	26	25	16	74	17.3	1	92	152	152
		33 ~ 67	148	271	100	145	26	32	20	77	21.3	1	92	152	152
		26 ~ 70	148	294	95	160	39	25	16	74	17.3	2	128	152	194
4D56-AM1E	BILZ20	70 ~ 100	188												
		33 ~ 67	148	299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

Note: Heads with any spindle pitches other than mentioned above, or ones with five or more spindles can be manufactured. Please contact our distributor or subsidiary for the details.

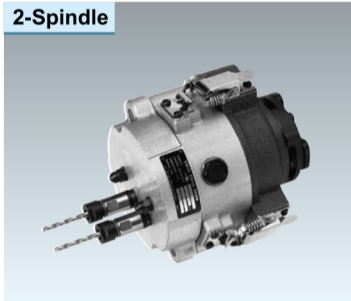
Quick Change "Catch-Clip" Type

Collet Chuck Style

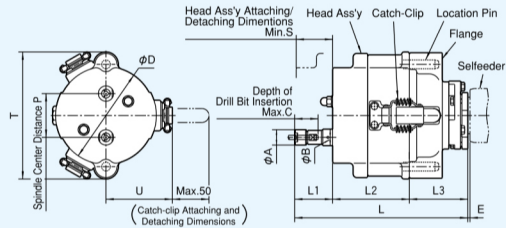
"Catch-Clip" Drill Heads require little changeover time and improve productivity with minimized machine idle time.



2-Spindle



Dimensions (mm)

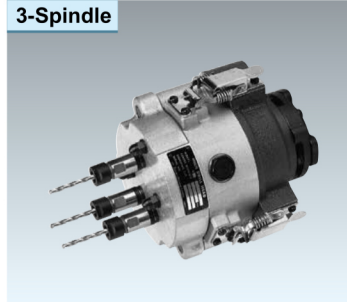


Dimensions (mm)

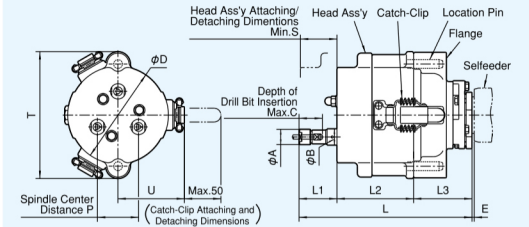
Model	Symbol	P	D	L	L1	L2	L3	A	B	C	E	S	T	U
2D41-550CP		12.6 ~ 17	134	229	44	105	80	12.4	—	25	1	55	174	91
2D46-550CPB												65		
2D41-845CP		17 ~ 23	134	228.5	43.5	105	80	14.8	16.8	30	1	55	174	91
2D46-845CPB												65		
2D41-570CP		17.2 ~ 23	134	238	53	105	80	16	—	36	1	55	174	91
2D46-570CPB												65		
2D41-2075CP		23 ~ 91	134	237	52	105	80	21	22.5	35	1	55	174	91
2D46-2075CPB												65		
2D58-5100CP		24.2 ~ 41	192	316	65	142	109	24	—	46	2	65	254	116
2D58-50130CP		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 pitches not shown in the above chart can be manufactured. Please contact our local distributor or subsidiary for details.

3-Spindle



Dimensions (mm)

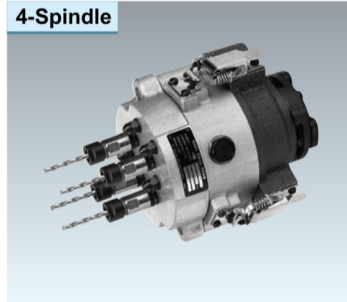


Dimensions (mm)

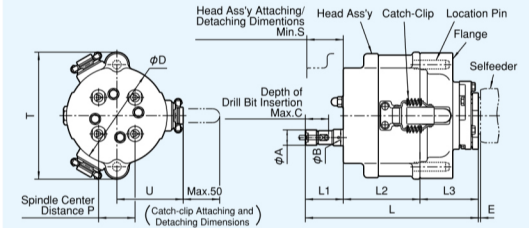
Model	Symbol	P	D	L	L1	L2	L3	A	B	C	E	S	T	U
3D41-550CP		12.6 ~ 17	134	229	44	105	80	12.4	—	25	1	55	174	91
3D46-550CPB												65		
3D41-845CP		17 ~ 23	134	228.5	43.5	105	80	14.8	16.8	30	1	55	174	91
3D46-845CPB												65		
3D41-570CP		17.2 ~ 23	134	238	53	105	80	16	—	36	1	55	174	91
3D46-570CPB												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 pitches 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	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 any spindle pitches other than mentioned above, or ones with five or more spindles can be manufactured. Please contact our distributor or subsidiary for the details.

Quick Change "Catch-Clip" Type

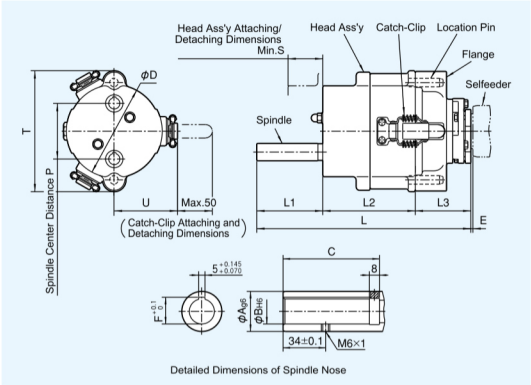
Adjustable Spindle Nose Style

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

2-Spindle



Dimensions (mm)



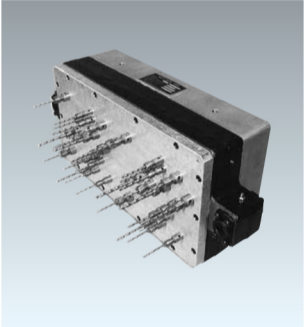
Dimensions (mm)

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.

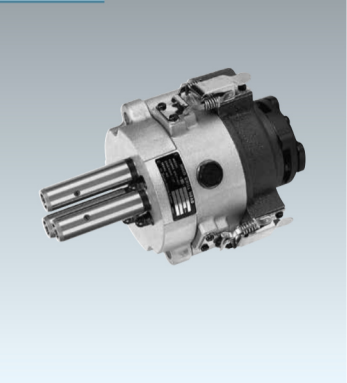


9-Spindle Head with Guide Bushes

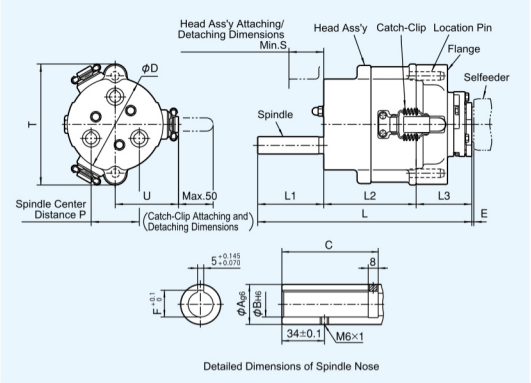


34-Spindle Head

3-Spindle



Dimensions (mm)



Dimensions (mm)

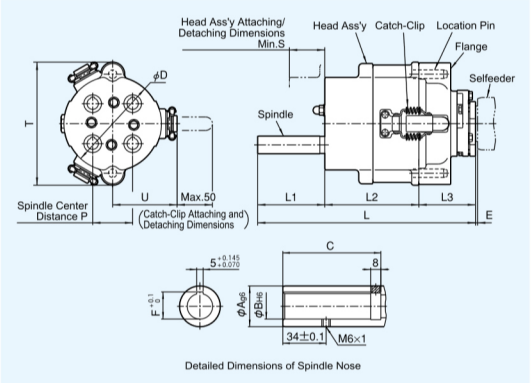
Model	Symbol	Applicable Adapter	P	D	L	L1	L2	L3	A	B	C	F	E	S	T	U
3D46-AM1C(B)E		BILZ16	26 ~ 71	134	308	95	133	80	25	16	74	17.3	1	65	174	91
		BILZ20	33 ~ 67	134	313	100	133	80	32	20	77	21.3	1	65	174	91
3D56-AM1CE		BILZ16	26 ~ 111	192	346	95	142	109	25	16	74	17.3	2	65	254	116
		BILZ20	33 ~ 108	192	351	100	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 any Spindle pitches other than mentioned above, or ones with specific Spindle Noses for Holders from various manufacturers can be supplied upon request.
Please contact our distributor or subsidiary for the 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 any spindle pitches other than mentioned above, or ones with five or more spindles can be manufactured.
Please contact our distributor or subsidiary for the details.

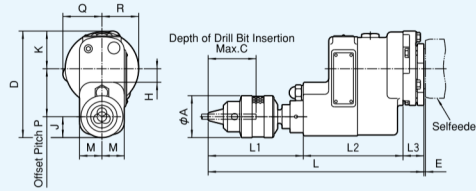
Offset Fixed Type

Drill Heads to avoid interference between
Drill Units and Jig Fixtures or work pieces.

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

Specs	Offset Pitch	Chuck Capacity	Chuck Type	Speed Ratio (Output/Input)	Max. Drill Size	Applicable Selffeeder Model
Model					Aluminum Cast Iron Carbon Steel	
OD21-865D	45	1 ~ 6.5	Drill Chuck	1	5 3 2.5	ES2-6030
					6 4 3	ES2-6020
					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
					8 7 6	ES3C-1309L
OD46-0130D	60	1.2 ~ 13	Drill Chuck	1	10 8 7	ES3C-1305L
					7.5 3.5 3.5	ES3P-1326L/LL
					8.5 5 4	ES3P-1318L/LL
					9.5 6 5.5	ES3P-1314L/LL
					10 7 6.5	ES3P-1310L/LL
					11 8 7.5	ES3P-1307L/LL
					13 10 9	ES3P-1305L/LL
					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
					11 5 4.5	ES5-1320
OD56-0130D	78	1.2 ~ 13	Drill Chuck	1	12 6.5 6	ES5-1314
					12 8 7.5	ES5-1311
					13 10 9	ES5-1308
					13 12 10	ES5-1306
					13 13 11	ES5-1304

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

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

2. Suitable for installation into Selffeeders other than ES-type and GS-type as well.

For more information, please contact our distributor or subsidiary nearest you.

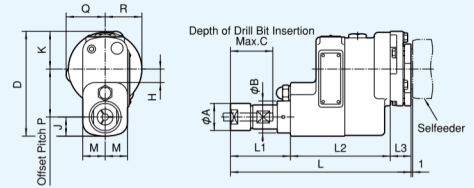
3. Other models of Selffeeders are applicable. Please contact our local distributor or subsidiary for the details.

4. Please use Collet Chuck Spindle Noses when using drills such as carbide drills which have harder tool shank than high speed steel drills.

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

Specs	Offset Pitch	Chuck Capacity	Chuck Type	Speed Ratio (Output/Input)	Max. Drill Size	Applicable Selffeeder Model
Model					Aluminum Cast Iron Carbon Steel	
OD21-2075P	45	1 ~ 7.5	Push-in Type	1	5 3 2.5	ES2-6030
					6 4 3	ES2-6020
					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
					8 7 6	ES3C-1309L
OD46-50130P	60	1.5 ~ 13	Push-in Type	1	10 8 7	ES3C-1305L
					7.5 3.5 3.5	ES3P-1326L/LL
					8.5 5 4	ES3P-1318L/LL
					9.5 6 5.5	ES3P-1314L/LL
					10 7 6.5	ES3P-1310L/LL
					11 8 7.5	ES3P-1307L/LL
					13 10 9	ES3P-1305L/LL
					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
						GSA-2-60□□ (Notes2)

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

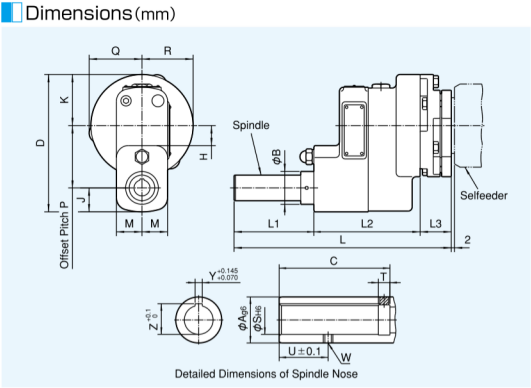
Aluminum : ADC , Cast Iron : FC200 , Carbon Steel : S45C

2. Suitable for installation into Selffeeders other than ES-type and GS-type as well.

For more information, please contact our distributor or subsidiary nearest you.

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

Adjustable Spindle Nose Style



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
OD6N-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

Model	Specs	Offset Pitch	Spindle Nose Model	Speed Ratio (Output/Input)	Max. Drill Size			Applicable Selffeeder Model														
					Aluminum	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														
OD6N-AM2	88	BILZ25	1		—	—	—	ES5-24 F (Notes2)														

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

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

2.Suitable for installation into Selffeeders other than ES-type and GS-type as well.

For more information, please contact our distributor or subsidiary nearest you.

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



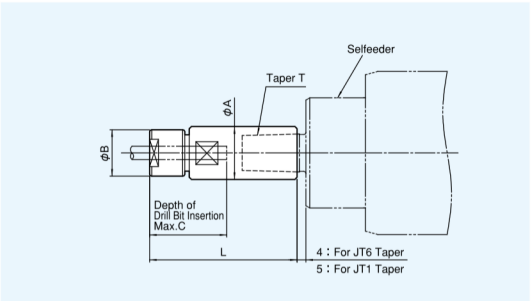
Drill Head Faceplate Type

Collet Holder

Single Collet Chuck type Holder, to be attached to the Spindle of a Drill Unit.



Dimensions (mm)



Dimensions (mm)

Model	Specs	Chuck Capacity	Chuck Type	Symbol				
				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

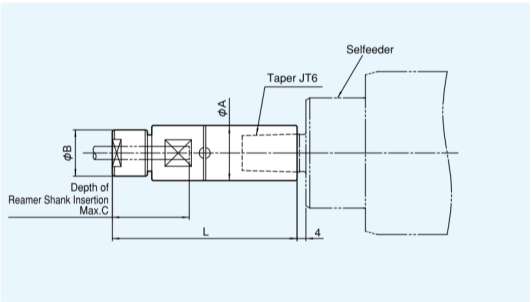
Note:Other Collet Holders not shown in the above chart can be supplied. Please contact our local distributor or subsidiary for details.

Reamer Holder

Single Collet Chuck type Holder for reaming with a radial floating.



Dimensions (mm)



Dimensions (mm)

Model	Specs	Chuck Capacity	Chuck Type	Radial Floating Amount	Symbol			
					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

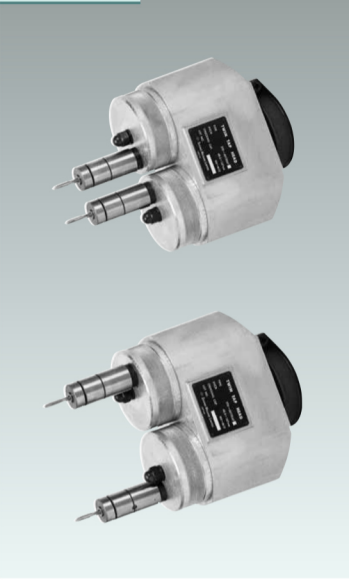
Note:Other Reamer Holders not shown in the above chart can be supplied. Please contact our local distributor or subsidiary for details.

TAPPER HEADS

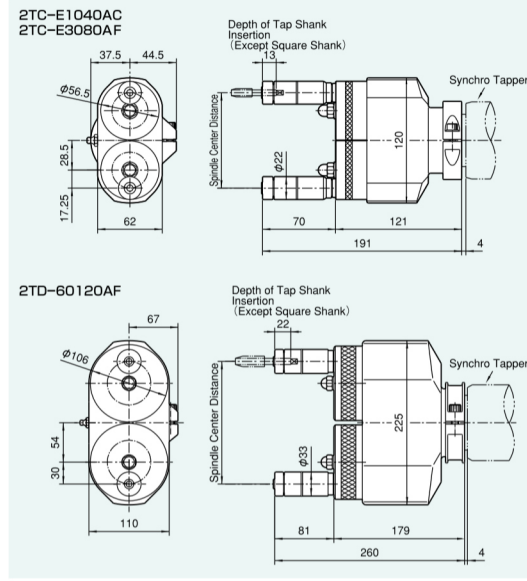
Spindle Pitch Adjustable Type

Tapper Heads with adjustable center distances.

Sleeve Style



Dimensions (mm)



Tapping Capacity (mm)

Specs Model	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
					M4	M4	M4	STB-L108	920	1,100
					M6	M5	M4	STB-H108	750	900
					M6	M6	M5	STB-H108	520	620
2TC-E3080AF	23 ~ 91	M3 ~ M8	Floating *0.2	1	M5	M4	M4	STB-L108	920	1,100
					M6	M5	M5	STB-L108	580	690
					M8	M6	M6	STB-L108	350	420
					M8	M6	M6	STB-L108	220	260
2TD-60120AF	48.5 ~ 167	M6 ~ M12	Floating *0.4	1	M12	M8	M8	STC-P316	600	720
					M12	M10	M10	STC-P316	400	490

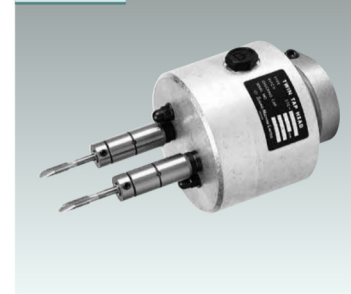
Notes1. The materials quoted are equivalent to following JIS code.
Aluminium : ADC, Cast Iron : FC200, Carbon Steel : S45C
2. Tapping capacities shown in the above chart are the value in case of using spiral tap or point tap and the tapping depth is up to 1.5 times of tap diameter.
3. The mark "*" stands for the radial floating volume. (diameter)
4. Other models of Synchro Tappers are applicable. Please contact our local distributor or subsidiary for the details.

Fixed Spindle Type

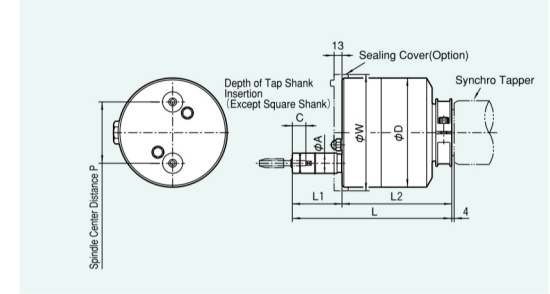
Sleeve Style • Collet Chuck Style

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		171			142
		29 ~ 90	138	217	70	147	22	13	142
		90 ~ 130	178	217		147			182
2TD-60120BF		35 ~ 90	138		81	179	33	22	142
		90 ~ 123	178						182
2TD-80160BF		45 ~ 88	138		82	179	40	19	142
		88 ~ 121	178						182

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

Tapping Capacity (mm)

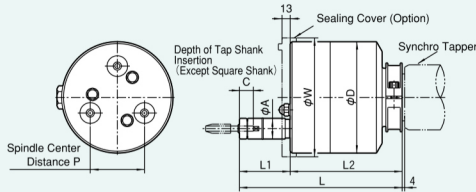
Specs Model	Spindle Center Distance (Min.~Max.)	Chuck Capacity	Chuck Type	Type of Tap Holding	Tapping Capacity			Applicable Synchro Tapper		
					Aluminium	Cast Iron	Carbon Steel	Model	Revolution (min ⁻¹)	
2TC-E1040TBFE	10 ~ 12	M1 ~ M4	Collet Chuck	Centering	M2.5	M2	M2	STB-L108	—	—
					M3	M2.5	M2	STB-L108	—	—
2TC-E1050TBFE	12 ~ 14	M1 ~ M5	Collet Chuck	Centering	M3.5	M3	M2.5	STB-L108	—	—
					M4	M3	M3	STB-H108	1,200	1,440
2TC-E1080TBFE	14 ~ 15	M1 ~ M8	Collet Chuck	Centering	M4	M3	M3	STB-L108	920	1,100
					M6	M5	M4	STB-H108	750	900
2TC-E1040BF	15 ~ 60	M1 ~ M4	Sleeve	Centering	M6	M6	M5	STB-L108	520	620
					M5	M4	M4	STB-L108	920	1,100
					M6	M5	M5	STB-L108	580	690
					M8	M6	M6	STB-L108	350	420
2TD-3080BF	23 ~ 91	M3 ~ M8	Sleeve	Floating *0.2	M8	M6	M6	STC-P316	220	260
					M8	M6	M6	STC-P316	600	720
2TD-60120BF	35 ~ 123	M6 ~ M12	Sleeve	Floating *0.4	M12	M8	M8	STC-P316	600	720
					M12	M10	M10	STC-P316	400	490
2TD-80160BF	45 ~ 121	M8 ~ M16	Sleeve	Floating *0.4	M14	M10	M10	STC-P316	400	490
					M16	M12	M12	STC-P316	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. The mark "*" stands for the radial floating volume. (diameter)
4. Other models of Synchro Tappers are applicable. Please contact our local distributor or subsidiary for the details.

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 pitches not shown in the above chart can be manufactured. Please contact our local distributor or subsidiary for details.

Tapping Capacity (mm)

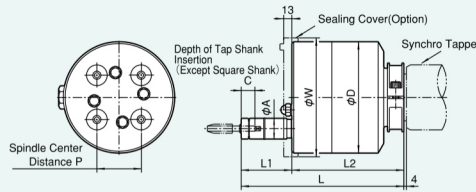
Model	Specs	Spindle Center Distance (Min~Max.)	Chuck Type	Type of Tap Holding	Tapping Capacity			Applicable Synchro Tapper	
					Aluminium	Cast Iron	Carbon Steel	Model	Revolution (min ⁻¹)
3TC-E1040TBFE	10 ~ 12	M1 ~ M4	Collet Chuck	Centering	M2.5	M2	M2	STB-L108	50Hz 60Hz
3TC-E1050TBFE	12 ~ 14	M1 ~ M5	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		920 1,100
					M5	M4	M4	STB-L108	580 690
3TD-3080BF	29 ~ 110	M3 ~ M8	Sleeve	Floating *0.2	M6	M5	M5		350 420
					M8	M6	M6		220 260
					M8	M6	M6	STC-P316	600 720
					M10	M6	M6		600 720
3TD-60120BF	35 ~ 106	M6 ~ M12	Sleeve	Floating *0.4	M12	M8	M8	STC-P316	400 490
					M12	M10	M10		210 250

Notes 1. 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. The mark "*" stands for the radial floating volume. (diameter)
4. Other models of Synchro Tappers 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 pitches 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 Synchro Tapper	
					Aluminium	Cast Iron	Carbon Steel	Model	Revolution (min ⁻¹)
4TC-E1050TBFE	12 ~ 14	M1 ~ M5	Collet Chuck	Centering	M3	M2.5	M2	STB-L108	50Hz 60Hz
4TC-E1080TBFE	14 ~ 15	M1 ~ M8	Collet Chuck	Centering	M3.5	M3	M2	STB-L108	— —
4TC-E1040BF	15 ~ 64	M1 ~ M4	Sleeve	Centering	M4	M3	M3	STB-H108	1,200 1,440
					M4	M3	M3		750 900
					M4	M3	M2	STB-L108	520 620
					M4	M3	M3		920 1,100
4TC-E3080BF	23 ~ 64	M3 ~ M8	Sleeve	Floating *0.2	M5	M4	M4	STB-H108	520 620
					M5	M4	M3		580 690
					M5	M5	M4	STB-L108	350 420
					M6	M6	M5		220 260
4TD-3080BF	29 ~ 93	M3 ~ M8	Sleeve	Floating *0.2	M8	M5	M5	STC-P316	600 720
4TD-60120BF	35 ~ 86	M6 ~ M12	Sleeve	Floating *0.4	M8	M6	M6		400 490
					M10	M6	M6	STC-P316	400 490
					M12	M8	M8		210 250

Notes 1. 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. The mark "*" stands for the radial floating volume. (diameter)
4. Other models of Synchro Tappers are applicable. Please contact our local distributor or subsidiary for details.

Fixed Spindle Type

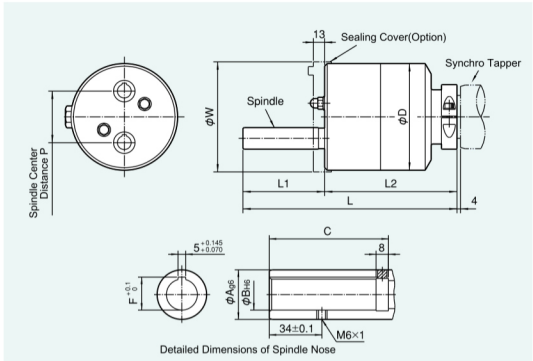
Adjustable Spindle Nose Style

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 (Made by NT Tool Co., Ltd.)
2TC-EAM1E		BILZ16	26 ~ 82	124	249	95	154	25	16	74	17.3	128	WFLP030-0/Tr.16x1.5
		BILZ20	34 ~ 78	124	254	100	154	32	20	77	21.3	128	WFLP32.40-0/Tr.20x2
2TD-AM1E		BILZ16	26 ~ 94	138	274	95	179	25	16	74	17.3	142	WFLP030-0/Tr.16x1.5
		BILZ20	34 ~ 129	178								182	WFLP32.40-0/Tr.20x2
		BILZ16	34 ~ 90	138	279	100	179	32	20	77	21.3	142	WFLP030-0/Tr.16x1.5
		BILZ20	90 ~ 125	178								182	WFLP32.40-0/Tr.20x2

Note: Heads with any Spindle pitches other than mentioned above, or ones with specific Spindle Noses for Holders from various manufacturers can be supplied upon request.
Please contact our distributor or subsidiary for the details.

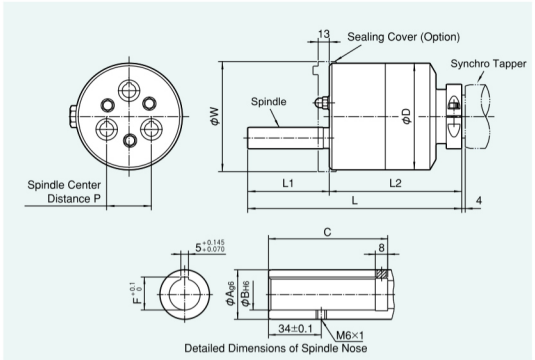


Motor Directly Connected 6-Spindle Head

3-Spindle



Dimensions (mm)



Dimensions (mm)

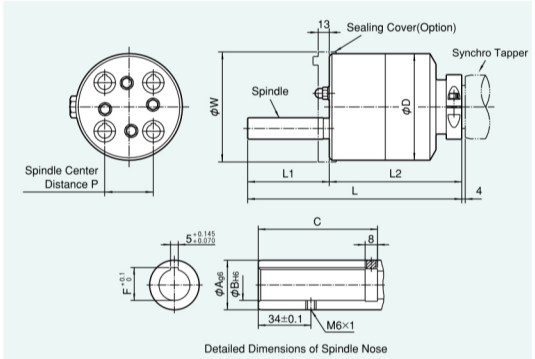
Model	Symbol	Applicable Adapter	P	D	L	L1	L2	A	B	C	F	W	Applicable Tapping Chuck (Made by NT Tool Co., Ltd.)
3TC-EAM1E		BILZ16	26 ~ 71	124	249	95	154	25	16	74	17.3	128	WFLP030-0/Tr.16x1.5
		BILZ20	34 ~ 67	124	254	100	154	32	20	77	21.3	128	WFLP32.40-0/Tr.20x2
3TD-AM1E		BILZ16	26 ~ 81	138	274	95	179	25	16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

Note: Heads with any Spindle pitches other than mentioned above, or ones with specific Spindle Noses for Holders from various manufacturers can be supplied upon request.
Please contact our distributor or subsidiary for the details.

4-Spindle



Dimensions (mm)



Dimensions (mm)

Model	Symbol	Applicable Adapter	P	D	L	L1	L2	A	B	C	F	W	Applicable Tapping Chuck (Made by NT Tool Co., Ltd.)
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

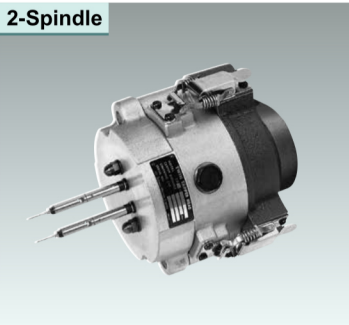
Note: Heads with any spindle pitches other than mentioned above, or ones with five or more spindles can be manufactured.
Please contact our distributor or subsidiary for the details.

Quick Change "Catch-Clip" Type

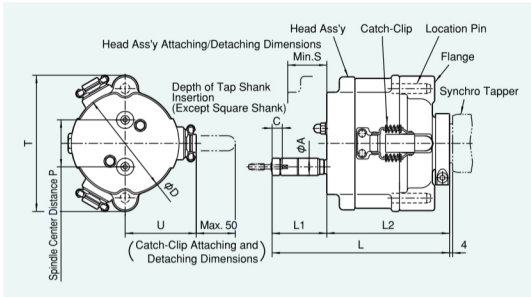
Sleeve Style • Collet Chuck Style

Tapper Head with a head body easily detachable in a single motion, improving productivity with minimized machine idle time.

2-Spindle



Dimensions (mm)

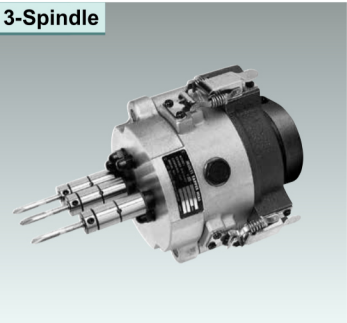


Dimensions (mm)

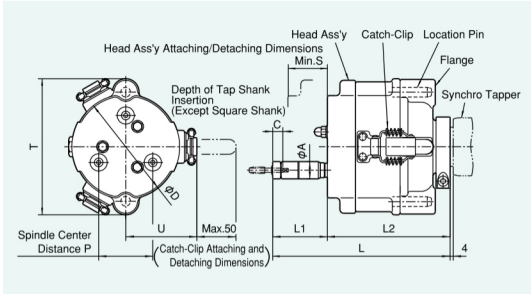
Model	Symbol	P	D	L	L1	L2	A	C	S	T	U
2TC-E1050TCFE		12 ~ 14	134	240	83	157	11.8	19	55	174	91
2TC-E1080TCFE		14 ~ 15	134	237	80	157	13.6	19	55	174	91
2TC-E1040CF		15 ~ 91	134	209.5	52.5	157	14.6	8	55	174	91
2TC-E3080CF		23 ~ 91	134	227	70	157	22	13	55	174	91
2TD-3080CF		23 ~ 130	192	269	70	199	22	13	65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

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

3-Spindle



Dimensions (mm)

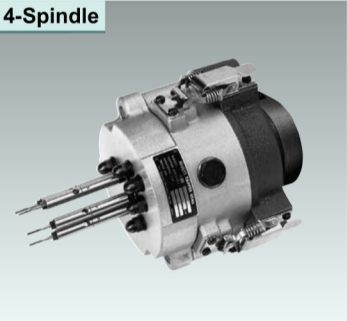


Dimensions (mm)

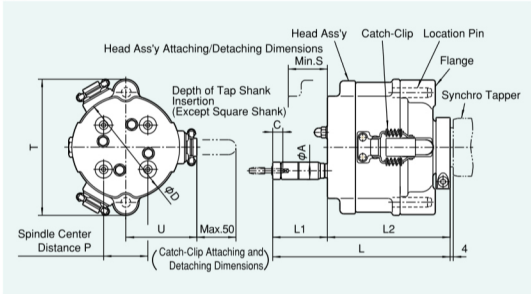
Model	Symbol	P	D	L	L1	L2	A	C	S	T	U
3TC-E1050TCFE		12 ~ 14	134	240	83	157	11.8	19	55	174	91
3TC-E1080TCFE		14 ~ 15	134	237	80	157	13.6	19	55	174	91
3TC-E1040CF		15 ~ 78	134	209.5	52.5	157	14.6	8	55	174	91
3TC-E3080CF		23 ~ 78	134	227	70	157	22	13	55	174	91
3TD-3080CF		29 ~ 110	192	269	70	199	22	13	65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

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

4-Spindle



Dimensions (mm)



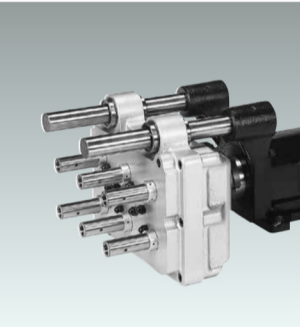
Dimensions (mm)

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 any spindle pitches other than mentioned above, or ones with five or more spindles can be manufactured. Please contact our distributor or subsidiary for the details.



7-Spindle Tapper Head



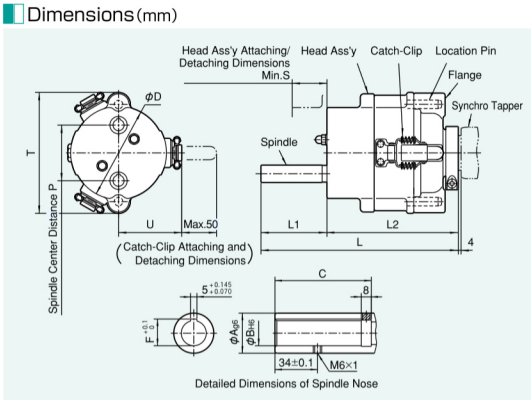
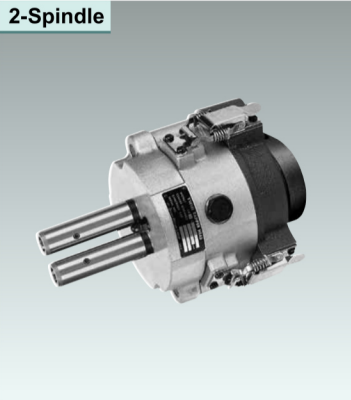
6-Spindle Head with Guide Bars

Quick Change "Catch-Clip" Type

"Catch-Clip" Tapper Heads with adjustable Spindle Nose for adjustable adapter.

Adjustable Spindle Nose Style

2-Spindle



Dimensions (mm)

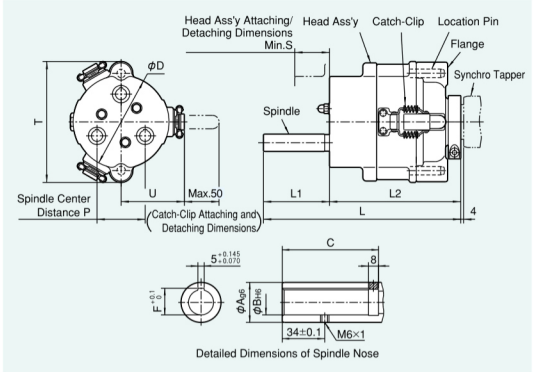
Model	Symbol	Applicable Adapter	P	D	L	L1	L2	A	B	C	F	S	T	U	Applicable Tapping Chuck (made by NT Tool Co., Ltd.)
2TC-EAM1CE		BILZ16	26 ~ 82	134	284	95	189	25	16	74	17.3	55	174	91	WFLP030-0/Tr.16×1.5
		BILZ20	34 ~ 78	134	289	100	189	32	20	77	21.3	55	174	91	WFLP32.40-0/Tr.20×2
2TD-AM1CE		BILZ16	26 ~ 129	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 any Spindle pitches other than mentioned above, or ones with specific Spindle Noses for Holders from various manufacturers can be supplied upon request.
Please contact our distributor or subsidiary for the details.

3-Spindle



Dimensions (mm)



Dimensions (mm)

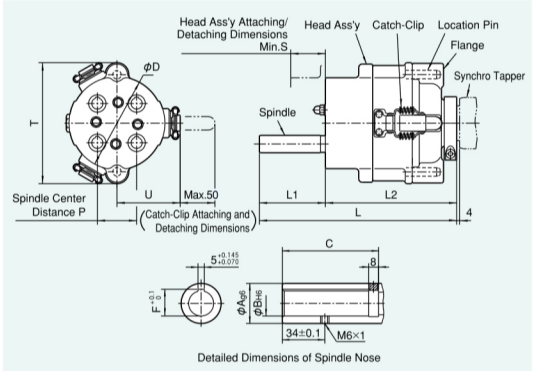
Model	Symbol	Applicable Adapter	P	D	L	L1	L2	A	B	C	F	S	T	U	Applicable Tapping Chuck (made by NT Tool Co., Ltd.)
3TC-EAM1CE		BILZ16	26 ~ 71	134	284	95	189	25	16	74	17.3	55	174	91	WFLP030-0/Tr.16×1.5
		BILZ20	34 ~ 67	134	289	100	189	32	20	77	21.3	55	174	91	WFLP32.40-0/Tr.20×2
3TD-AM1CE		BILZ16	26 ~ 111	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 any Spindle pitches other than mentioned above, or ones with specific Spindle Noses for Holders from various manufacturers can be supplied upon request.
Please contact our distributor or subsidiary for the details.

4-Spindle



Dimensions (mm)



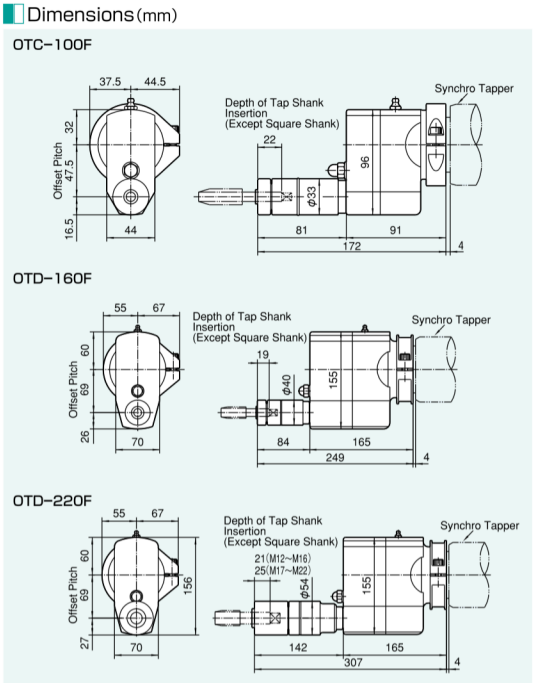
Dimensions (mm)

Model	Symbol	Applicable Adapter	P	D	L	L1	L2	A	B	C	F	S	T	U	Applicable Tapping Chuck (made by NT Tool Co., Ltd.)
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 any spindle pitches other than mentioned above, or ones with five or more spindles can be manufactured.
Please contact our distributor or subsidiary for the details.

Offset Fixed Type

Tapper Heads to avoid interference between Tapping Unit and Jig Fixture or work pieces.

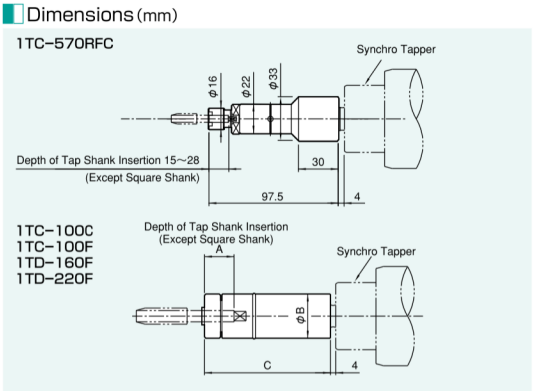


Tapping Capacity (mm)					
Model	Specs	Offset Pitch	Chuck Capacity	Type of Tap Holding	Speed Ratio (Output/Input)
OTC-100F		47.5	M3 ~ M12	Floating #0.4	1
OTD-160F		69	M3 ~ M16	Floating #0.4	1
OTD-220F		69	M12 ~ M22	Floating #0.4	1

Notes 1. The mark "*" stands for the 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 sizes.



Tapping Capacity (mm)			
Model	Specs	Chuck Capacity	Type of Tap Holding
1TC-570RFC		M 1 ~ M3	Centering
1TC-100C		M3 ~ M12	Centering
1TC-100F		M3 ~ M12	Floating #0.4
1TD-160F		M3 ~ M16	Floating #0.4
1TD-220F		M12 ~ M22	Floating #0.4

Notes 1. The mark "*" stands for the radial floating volume. (diameter)
 2. Tap holder not shown above chart is available. Please contact our local distributor or subsidiary for details.
 3. For speed of over 1,200min⁻¹, 1TC-570RFC or 1TC-100C is recommended.

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

The technical drawing illustrates the FS4P-13 Self Feeder from two perspectives: a front view (left) and a side view (right).

Front View Dimensions:

- Total width: 245
- Top flange thickness: 65
- Main body height: 185
- Bottom flange thickness: 52
- Internal horizontal spacing: 52, 72, 80, 100

Side View Dimensions and Labels:

- Air Inlet for Airpurge Rc1/8:** Located at the top left.
- Chuck Diameter Max.13:** Indicated near the top center.
- Depth of Drill Bit Insertion 35~50:** Dimensioned along the central axis.
- Guide Bar:** A vertical component on the right side.
- Rotary Union:** Located at the far right end.
- Coolant Inlet Rc3/8:** Located at the top right.
- Selffeeder:** Labeled at the bottom right corner.
- FS4P-13 F/L:** The model identifier at the bottom center.

Key Dimensions in Side View:

- Overall length: 259
- Distance from chuck to guide bar base: 41
- Guide bar diameter: $\phi 19$, $\phi 14$
- Drill bit diameter: $\phi 25 \pm 0.01$
- Other segment lengths: 21, 85, 58, 174, 54, 1

Milling Head

[illegible]

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

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:

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

Remarks: