SUGINO

CAT.NO.N2204E

selfeeder™ pneumatic

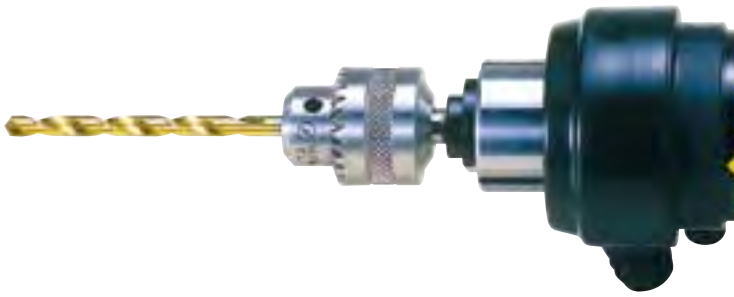
Compact, light-weight pneumatically-operated drilling units

SUGINO MACHINE LIMITED

selfeeder™

pneumatic

A compact, light-weight, economical drilling unit that features a small body diameter, high torque with a durable air motor built-in. Drilling and feed motions are pneumatically operated for safe use in an environment where no electricity is available. These units can be installed close to one another in any direction.

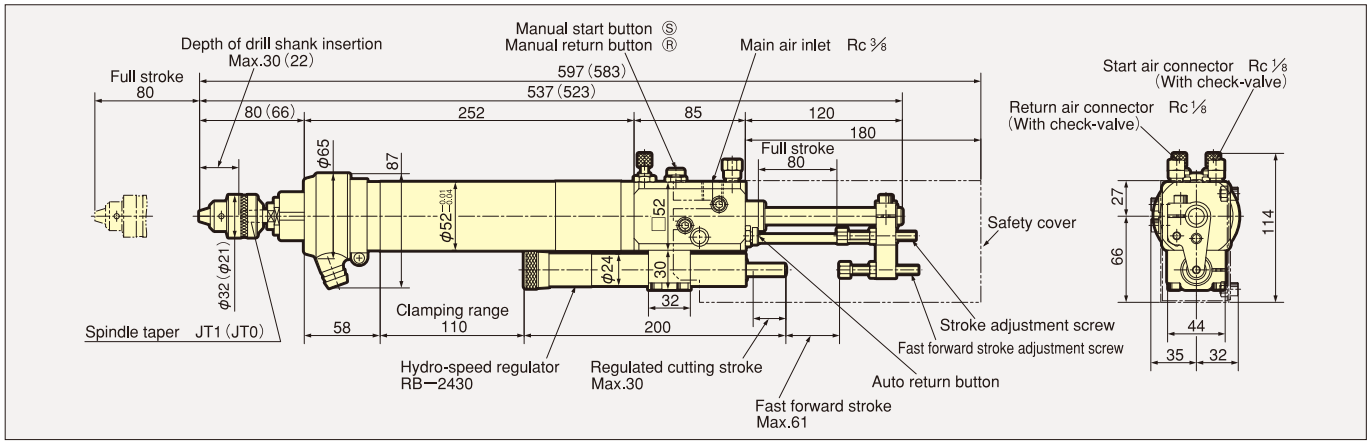


Capacity

Specs. / Model	Spindle speed (no load)	Drill chuck capacity	Max. drill size 1 spindle Aluminium (ADC)	1 spindle Cast Iron (FC200)	1 spindle Carbon Steel (S45C)	2 spindles Aluminium (ADC)	2 spindles Cast Iron (FC200)	2 spindles Carbon Steel (S45C)	Stroke Max.	Stroke Regulated cutting	Thrust	Operating air pressure	Air consumption No load	Air consumption Max. load	Air inlet connectors Main air	Air inlet connectors Pilot air	Weight
	min^{-1}	mm	mm			mm			mm	mm	N	MPa	m^3/min(ANR)	m^3/min(ANR)	—	—	kg
SFB—4140	14,000	4	4	3	2	—	—	—	80	0~30 (Option: 0~60)	440	$0.5^{+0.1}_{0}$	0.25	0.35	Rc3/8 Hose I.D. ϕ7mm or more	Rc1/8 Hose I.D. ϕ2.5mm or more	4.5
SFB—6080	8,000	6.5	5	4	3	3	2.4	1.8									
SFB—6028	3,000	6.5	6	5	4	4	3	2									
SFB—6016	1,600	6.5	6.5	5.5	5	4	3	2.3									
SFB—6005	550	6.5	8	7.5	7	5	4.2	3.5									

Note 1. Maximum capacity drill size will vary depending on input operating air pressure. (Operating air pressure: 0.5MPa)
2. In most cases of small hole drilling (dia. 1mm or less) except plastic; spindle speeds of 7,000rpm or less are generally recommended.
3. The RB-2430 is installed as a standard type Hydro-Speed Regulator. Specify an optional Hydro-Speed Regulator as necessary.
4. Model selection should be done from the above chart, based on workpiece specifications, material hardness, diameter of hole and cutting speed.
5. To achieve maximum power, it is necessary for the spindle to progress forward 7mm or more.
6. When the hardness of the cemented carbide drill and tool shank is higher than that of a high speed steels, please contact our local distributor or subsidiary for detailed specifications.

Dimensions (mm)



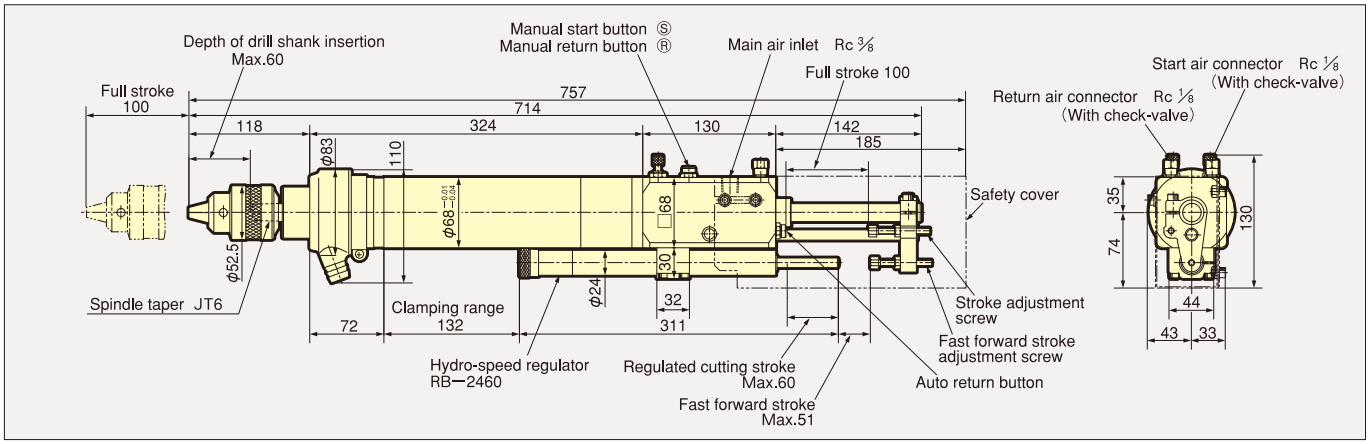
Note : Values in brackets show for model SFB-4140.

Capacity

Specs. / Model	Spindle speed (no load)	Drill chuck capacity	Max. drill size 1 spindle			2 spindles			3 spindles			4 spindles			Stroke		Thrust	Operating air pressure	Air consumption		Air inlet connectors		Weight
			Aluminium (ADC)	Cast Iron (FC200)	Carbon Steel (S45C)	Aluminium (ADC)	Cast Iron (FC200)	Carbon Steel (S45C)	Aluminium (ADC)	Cast Iron (FC200)	Carbon Steel (S45C)	Aluminium (ADC)	Cast Iron (FC200)	Carbon Steel (S45C)	Max.	Regulated cutting			No load	Max. load	Main air	Pilot air	
Model	min^{-1}	mm	mm			mm			mm			mm			mm	mm	N	MPa	m^3/min(ANR)	m^3/min(ANR)	—	—	kg
SFC−1338	3,800	13	8	6.5	5	5	4	3	3	2.5	2	2	1.5	1	100	0〜60	680	$0.5^{+0.1}_{0}$	0.45	0.55	Rc3/8 Hose I.D. ϕ9mm or more	Rc1/8 Hose I.D. ϕ2.5mm or more	10
SFC−1325	3,000	13	10	8	6	6	5	4	4	3.5	3	3	2.5	2									
SFC−1311	1,100	13	12	10	8	7	6	5	5	4.5	4	4	3.5	3									
SFC−1305	700	13	14	12	10	8	7	6	7	6	5	5	4.5	4									

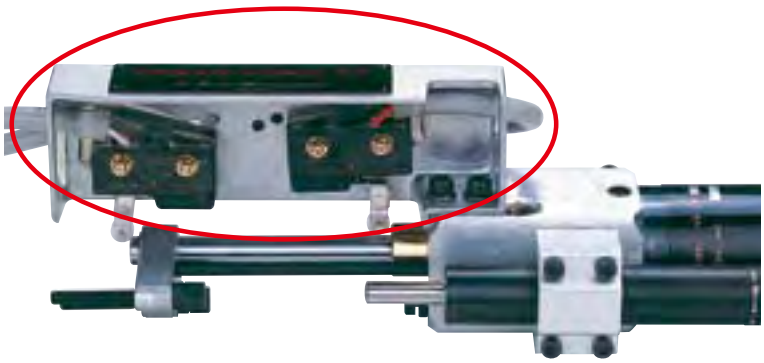
Note 1. Maximum capacity drill size will vary depending on input operating air pressure. (Operating air pressure : 0.5MPa)
2. Model selection should be done from the above chart, based on workpiece specifications, material hardness, diameter of hole and cutting speed.
3. To achieve maximum power, it is necessary for the spindle to progress forward 7mm or more.
4. When the hardness of the cemented carbide drill and tool shank is higher than that of a high speed steels, please contact our local distributor or subsidiary for detailed specifications.

Dimensions (mm)



Operate-Signal Kits

The operate-signal kit [OSK] is a means to supply specific drill movement location such as home or maximum depth location signals via a micro switch or pneumatic valve. The output signal is used to trigger an external operation and coordinate sequencing with other associated devices (PLC, index table or automatic clamping unit). Adjustable signal trip dogs are provided for detecting precise motion location of the Selfeeder pneumatic.



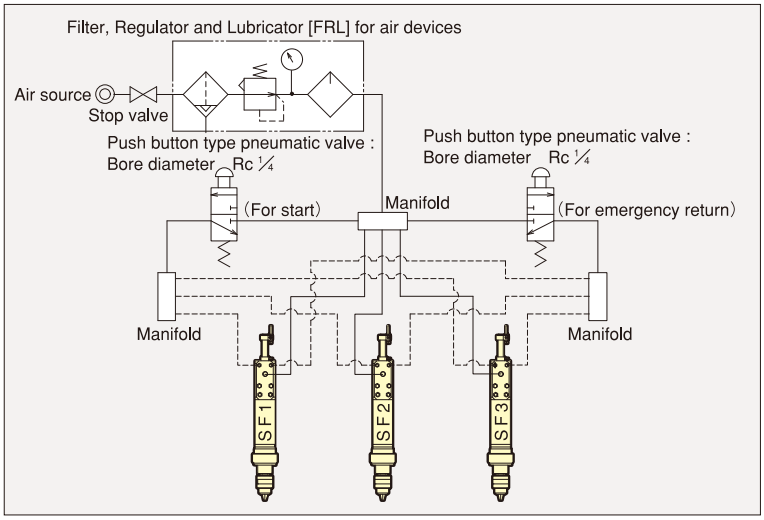
Specifications

Model	Type of signal	Type of Detection	Applicable Selfeeder
OSK−80B−FM	Electrical signal	Detection of max. drilling depth position	SFB type
OSK−80B−EM	Electrical signal	Detection of return position	
OSK−80B−EP	Air signal		
OSK−80B−RM	Electrical signal	Open signal during return	
OSK−80B−RP	Air signal		
OSK−80B−WM	Electrical signal	Detection of max. drilling depth position and return position	
OSK−100C−FM	Electrical signal	Detection of max. drilling depth position	SFC type
OSK−100C−EM	Electrical signal	Detection of return position	
OSK−100C−EP	Air signal		
OSK−100C−RM	Electrical signal	Open signal during return	
OSK−100C−RP	Air signal		
OSK−100C−WM	Electrical signal	Detection of max. drilling depth position and return position	

Air Pressure Control Circuits

(Simultaneous start-up and simultaneous emergency return by remote operation.)

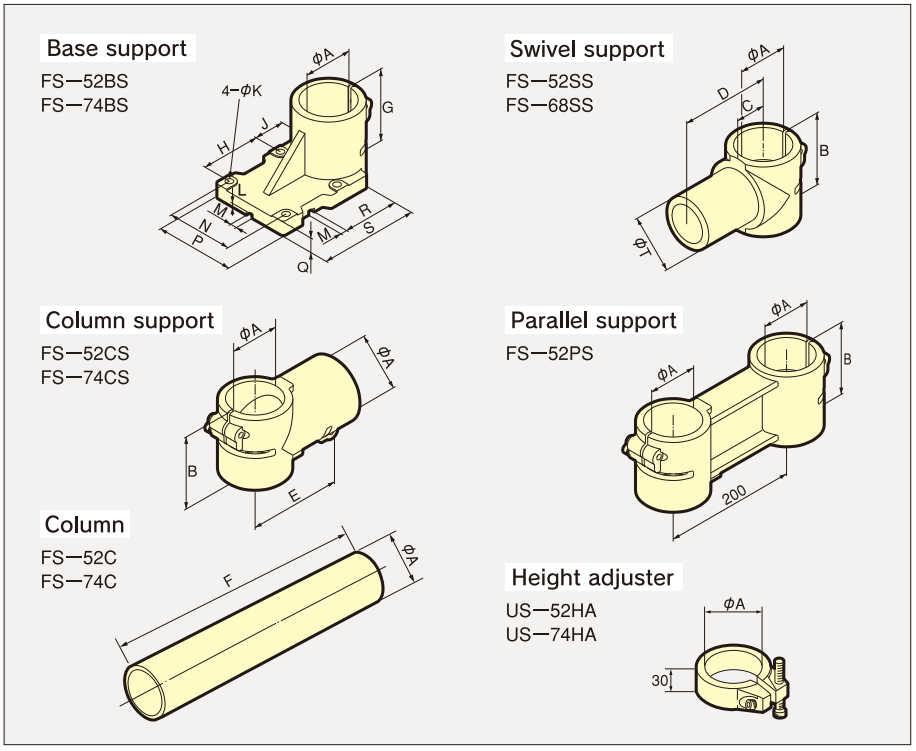
Pressing the start button will start three Selfeeders simultaneously. Pressing the emergency return button during the drill operation will return all three Selfeeders to their original positions at the same time and stop rotation.
The size of the valve varies depending on the number and the models of the Selfeeders operating simultaneously.



Flex stands

Fixtures capable of holding selfeeder pneumatic at any angle.

Dimensions (mm)



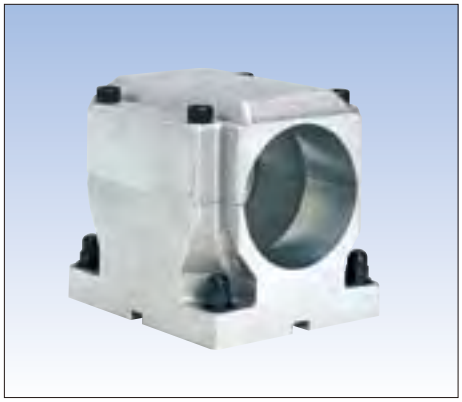
Dimensions (mm)

Model \ Symbol	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	Applicable selfeeder
FS—52	52	80	40	115	120	500	80	70	35	11	6	$10^{+0.04}_{0}$	90	110	21	65	120	52	SFB type
FS—68	68	100	40	130	—	—	—	—	—	—	—	—	—	—	—	—	—	74	SFC type※
FS—74	74	110	—	—	140	600	110	90	35	11	6	$10^{+0.04}_{0}$	100	120	22	75	140	—	

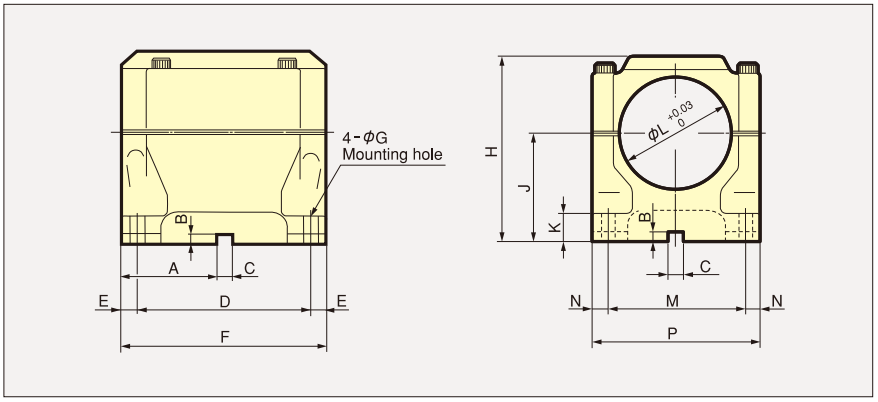
※When they are attached to SFC model, the combinations are as below.
- Base support : FS—74BS
- Column support : FS—74CS
- Swivel support : FS—68SS
- Column : FS—74C
- Height adjuster : US—74HA

Level Clamps

Fixtures to set selfeeder pneumatic parallel to machine base.



Dimensions (mm)



Dimensions (mm)

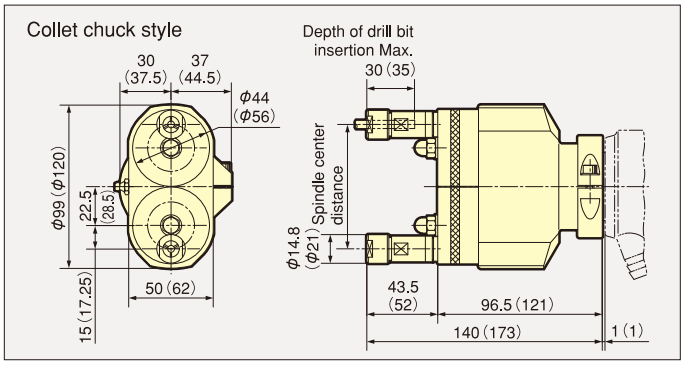
Model \ Symbol	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Applicable selfeeder
LC—52	30	6	$10^{+0.04}_{0}$	50	10	70	6.5	95	60	14	52	64	8	80	SFB type
LC—68	45	6	$10^{+0.04}_{0}$	80	10	100	9	116	70	15	68	80	10	100	SFC type

Multi-Spindle Drilling Heads

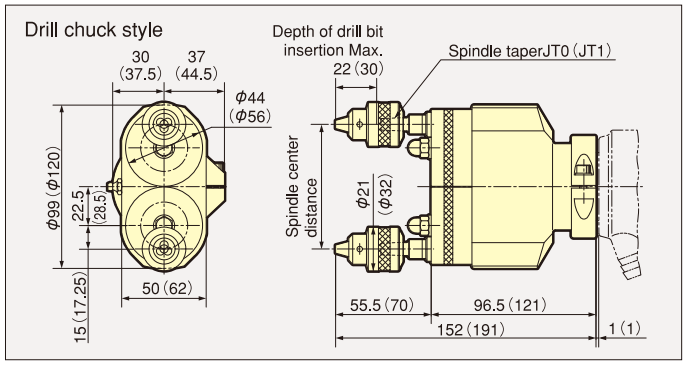
Using the Multi-Spindle drilling head will improve productivity.

Dimensions (mm)

Spindle pitch adjustable type

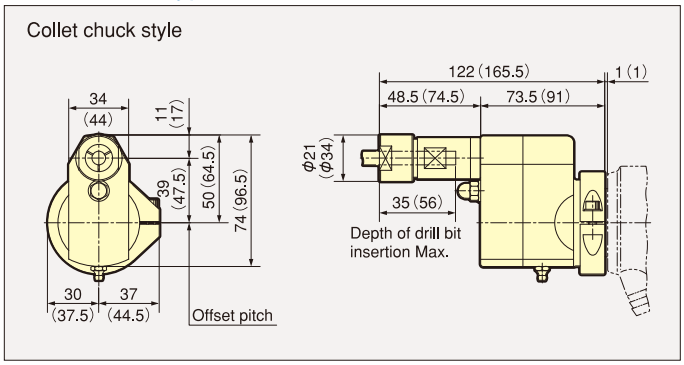


Note : Values in the brackets show for dimensions of 2DC type.

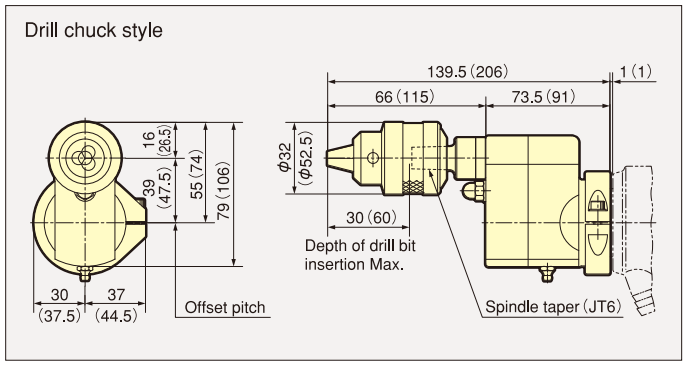


Note : Values in the brackets show for dimensions of 2DC type.

Offset fixed type



Note : Values in the brackets show for dimensions of ODC type.



Note : Values in the brackets show for dimensions of ODC type.

Capacity (mm)

Spindle pitch adjustable type

Operating air pressure : 0.5MPa

Model	Spindle center distance (Min.~Max.)	Chucking capacity	Chucking type	Rotation ratio (output /input)	Max. drill size			Applicable selfeeder	Weight kg
					Aluminium (ADC)	Cast Iron (FC200)	Carbon Steel (S45C)		
2DB－845AP	15 ～75	0.8～4.5	Collet chuck (Push in type)	0.75	3	2.4	1.8	SFB－6080	1.2
					4	3	2	SFB－6028	
					4	3	2.3	SFB－6016	
					5	4.2	3.5	SFB－6005	
2DB－040AD	22 ～75	0.5～4	Drill chuck	0.75	3	2.4	1.8	SFB－6080	
					4	3	2	SFB－6028	
					4	3	2.3	SFB－6016	
					5	4.2	3.5	SFB－6005	
2DC－2075AP	23 ～91	2 ～7.5	Collet chuck (Push in type)	0.79	5	4	3	SFC－1338	1.8
					6	5	4	SFC－1325	
					7	6	5	SFC－1311	
					8	7	6	SFC－1305	
2DC－065AD	32.5～91	0.8～6.5	Drill chuck	0.79	5	4	3	SFC－1338	
					6	5	4	SFC－1325	
					7	6	5	SFC－1311	
					8	7	6	SFC－1305	

Fixed spindle type

Operating air pressure : 0.5MPa

Spindles	Model	Spindle center distance (Min.~Max.)	Chucking capacity	Chucking type	Max. drill size			Applicable selfeeder	Weight kg
					Aluminium (ADC)	Cast Iron (FC200)	Carbon Steel (S45C)		
2 spindles	2DB－1530BT	13～15	1.5～3	Collet chuck (Screw in type)	3	2.4	1.8	SFB－6080	1.6
					3	3	2	SFB－6028	
					3	3	2.3	SFB－6016	
					3	3	3	SFB－6005	
	2DB－845BP	15～64	0.8～4.5	Collet chuck (Push in type)	3	2.4	1.8	SFB－6080	
					4	3	2	SFB－6028	
					4	3	2.3	SFB－6016	
					5	4.2	3.5	SFB－6005	
	2DB－2075BP	22～60	2 ～7.5	Collet chuck (Push in type)	3	2.4	1.8	SFB－6080	
					4	3	2	SFB－6028	
					4	3	2.3	SFB－6016	
					5	4.2	3.5	SFB－6005	
	2DC－845BP	15～78	0.8～4.5	Collet chuck (Push in type)	5	4	3	SFC－1338	2
					5	4.5	4	SFC－1325	
	2DC－2075BP	22～78	2 ～7.5	Collet chuck (Push in type)	5	4	3	SFC－1338	2.2
					6	5	4	SFC－1325	
					7	6	5	SFC－1311	
					8	7	6	SFC－1305	
3 spindles	3DC－1530BT	13～15	1.5～3	Collet chuck (Screw in type)	3	2.5	2	SFC－1338	2.0
					3	3	3	SFC－1325	
	3DC－845BP	15～67	0.8～4.5	Collet chuck (Push in type)	3	2.5	2	SFC－1338	
					4	3.5	3	SFC－1325	
					5	4.5	4	SFC－1311	
	3DC－2075BP	22～67	2 ～7.5	Collet chuck (Push in type)	3	2.5	2	SFC－1338	
					4	3.5	3	SFC－1325	
					5	4.5	4	SFC－1311	
					7	6	5	SFC－1305	
4 spindles	4DC－1530BT	13～15	1.5～3	Collet chuck (Screw in type)	2	1.5	1	SFC－1338	2.5
					3	2.5	2	SFC－1325	
					3	3	3	SFC－1311	
	4DC－845BP	15～55	0.8～4.5	Collet chuck (Push in type)	2	1.5	1	SFC－1338	
					3	2.5	2	SFC－1325	
					4	3.5	3	SFC－1311	
					5	4.5	4	SFC－1305	
	4DC－2075BP	22～55	2 ～7.5	Collet chuck (Push in type)	2	1.5	1	SFC－1338	
					3	2.5	2	SFC－1325	
					4	3.5	3	SFC－1311	
					5	4.5	4	SFC－1305	

Note : Drill heads other than the above table are available. Please contact our local distributor or subsidiary for the details.

Offset fixed type

Operating air pressure : 0.5MPa

Model	Offset pitch	Chucking capacity	Chucking type	Rotation ratio (output /input)	Applicable selfeeder	Weight kg
ODB－2075P	39	2 ～ 7.5	Collet chuck (Push in type)	1.0	SFB－6080	0.7
					SFB－6028	
ODB－065D	39	0.8～ 6.5	Drill chuck		SFB－6016	
					SFB－6005	
ODC－50130P	47.5	5 ～13	Collet chuck (Push in type)		SFC－1338	1.0
					SFC－1325	
ODC－0130D	47.5	1.2～13	Drill chuck		SFC－1311	
					SFC－1305	

Note : In case of mounting an offset drill head, the maximum drilling capacity varies depending on the applicable Selfeeder.
(Please refer to capacity chart on page 2, 3)

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