High precision, compact design and with guiding function

Specification

Series	DXSM	DXSL
Action	Double acting	
Bore	Ø10, Ø16, Ø20, Ø25, Ø32	
Operating fluid	Compressed air	
Proof pressure	1.05MPa (10.7kgf/cm²)	
Max. operating pressure	0.7MPa (7.1kgf/cm²)	
Min. operating pressure	Ø10, Ø16	0.1MPa (1.0kgf/cm²)
	Ø20~Ø32	0.05MPa (0.51kgf/cm²)
Piston speed range	Ø10~Ø20	30～700mm/s
	Ø25, Ø32	30～600mm/s
Temperature range	-10°C~ + 60°C(not frozen)	
Lubrication	Non-lube	
Port size	Ø10~Ø20	M5X0.8
	Ø25、Ø32	Rc(PT)1/8"
Stroke adjustable range	0~-5 mm compared to the standard stroke	
Bearing type	Slide bearing	Linear bearing
Cushion	Standard with rubber (both sides)	

Theoretical output

(N)

Bore (mm)	Rod (mm)	Operating direction	Piston area (mm²)	Operating pressure (MPa)						
				0.1	0.2	0.3	0.4	0.5	0.6	0.7
DXS □10	6	OUT	157	15.7	31.4	47.1	62.8	78.5	94.2	110
		IN	100	10.0	20.0	30.0	40.0	50.0	60.0	70.0
DXS □16	8	OUT	353	35.3	70.6	106	141	177	212	247
		IN	252	25.2	50.4	75.6	101	126	151	176
DXS □20	10	OUT	628	62.8	126	188	251	314	377	440
		IN	471	47.1	94.2	141	188	236	283	330
DXS □25	12	OUT	982	98.2	196	295	393	491	589	687
		IN	756	75.6	151	227	302	378	454	529
DXS □32	16	OUT	1608	161	322	482	643	804	965	1126
		IN	1206	121	241	362	482	603	724	844

※ Theoretical output (N) = pressure X piston area (mm^2)

How to order

DXS — Series

L — Bearing type

M	Bushing 
L	Linear bearing 

20 — Bore

Ø10
Ø16
Ø20
Ø25
Ø32

50 — Stroke

Please refer to standard stroke list

TE-Z73 — Reed switch

TE-Z73 2-wire type, reed switch, normally open	
TE-Y59A 3-wire type, solid state output, normally open, NPN current sinking	
TE-Y7P 3-wire type, solid state output, normally open, PNP current sinking	

※Please refer to 4 06.01

2 — Switch quantity

1	1PC
2	2PCS

Weight list

(kg)

Model	Standard stroke (mm)							
	10	20	30	40	50	60	75	100
DXSM10	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.33
DXSL10	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.33
DXSM16	0.25	0.28	0.30	0.33	0.36	0.39	0.435	0.51
DXSL16	0.27	0.30	0.32	0.35	0.38	0.41	0.435	0.53
DXSM20	0.40	0.44	0.48	0.51	0.55	0.585	0.65	0.74
DXSL20	0.43	0.46	0.50	0.53	0.57	0.605	0.66	0.75
DXSM25	0.61	0.66	0.72	0.77	0.83	0.89	0.97	1.10
DXSL25	0.62	0.67	0.73	0.78	0.84	0.895	0.98	1.11
DXSM32	1.15	1.23	1.32	1.40	1.49	1.58	1.71	1.93
DXSL32	1.16	1.25	1.34	1.42	1.51	1.595	1.72	1.94

Standard stroke

(mm)

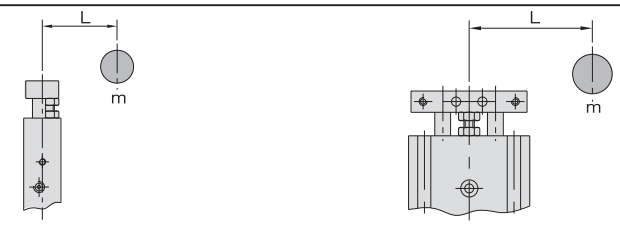
Model	Standard stroke								Long stroke			
	10	20	30	40	50	60	75	100	125	150	175	200
DXS □10	●	●	●	●	●	●	●	●				
DXS □16	●	●	●	●	●	●	●	●	●	●		
DXS □20	●	●	●	●	●	●	●	●	●	●	●	●
DXS □25	●	●	●	●	●	●	●	●	●	●	●	●
DXS □32	●	●	●	●	●	●	●	●	●	●	●	●

Model selection

⚠ Caution

Theoretical output must be confirmed separately, referring to the table on page 3 23.01.

Vertical mounting

Mounting orientation					
Max. speed (mm/s)		Under 200	Under 400	Under 600	Under 700 (800)
Stroke(mm)		All stroke			
Selection graph	Ø10	(A)	(B)	(C)	(D)
	Ø16				
	Ø20				
	Ø25				
	Ø32				

Horizontal mounting

Mounting orientation		 ※ Refer to the caution notes below.									
Max. speed (mm/s)		Under 10		Under 30		Under 50		Under 75		Under 100	
Stroke(mm)		Under 400	Over 400	Under 400	Over 400	Under 400	Over 400	Under 400	Over 400	Under 400	Over 400
Selection graph	Ø10	(E)	(F)	(G)	(H)	(I)	(J)	(K)		(L)	
	Ø16										
	Ø20										
	Ø25										
	Ø32										

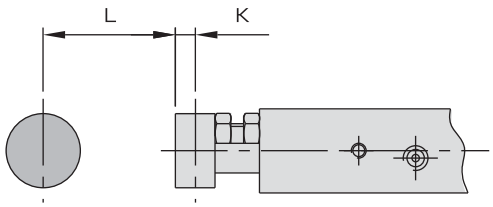
※ The respective maximum speed for Ø10 to Ø 32 are : Ø10 : 800 mm/s : Ø16 Ø20 : 700 mm/s : Ø25, Ø32 : 600 mm/s

⚠ Caution

If the cylinder is horizontally mounted and the plate end does not reach the load's center of gravity, use the formula below to calculate the imaginary stroke L' that includes the distance between the load's center of gravity and the plate end. Select the graph that corresponds to the imaginary stroke L'.
Imaginary stroke L = (Stroke) + K + L

K : Distance between the center and end of the plate

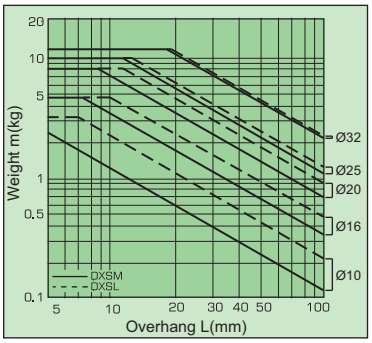
Bore	K
Ø10	4 mm
Ø16	5 mm
Ø20	6 mm
Ø25	
Ø32	8 mm



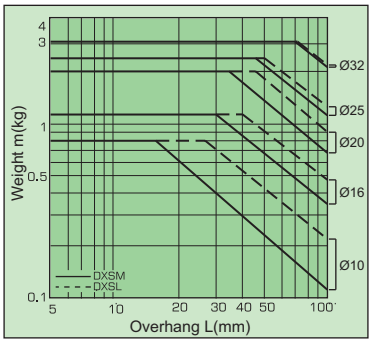
[Example]
When using DXSM6-10 X 10 and L = 15mm:
Imaginary stroke L = 10 + 4 + 15 = 29
Therefore, the graph used for your model selection should be the one for DXSM10 X 30

Vertical mounting Ø10~Ø32

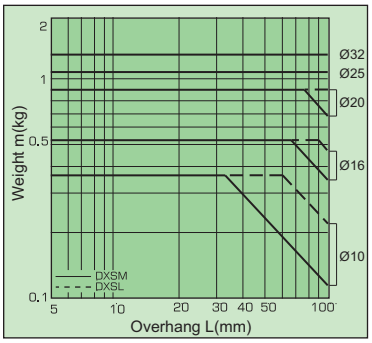
(A) V=200 mm/s



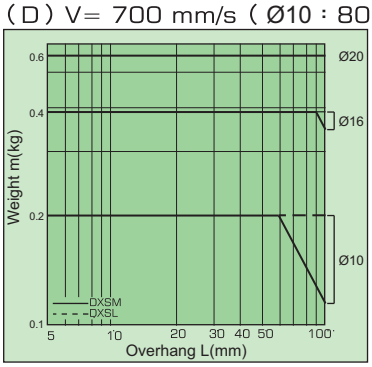
(B) V= 400 mm/s



(C) V= 600 mm/s

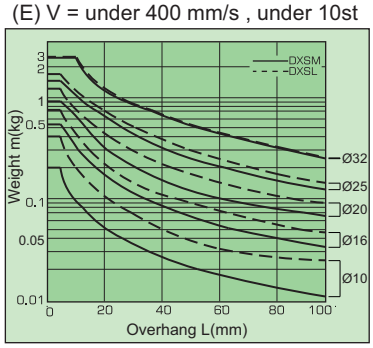


(D) V= 700 mm/s (Ø10 : 800 mm/s)

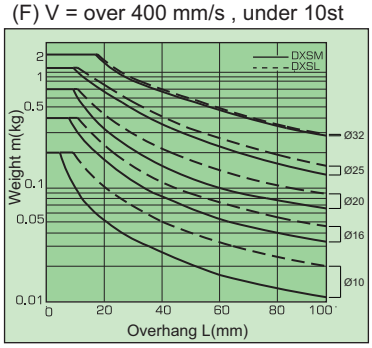


Horizontal mounting Ø10~Ø32

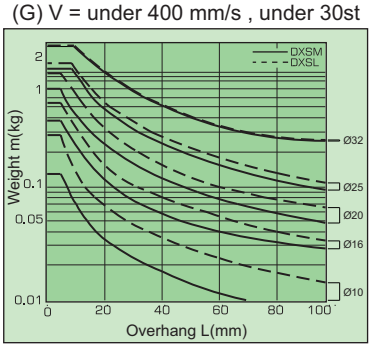
(E) V = under 400 mm/s , under 10st



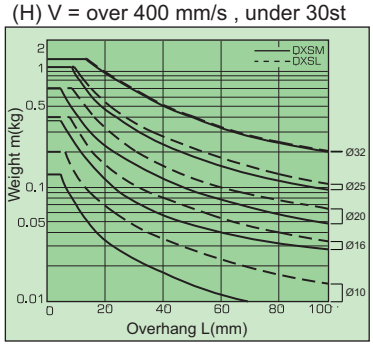
(F) V = over 400 mm/s , under 10st



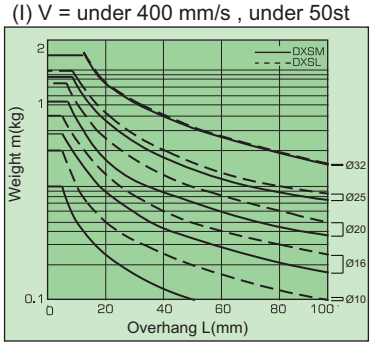
(G) V = under 400 mm/s , under 30st



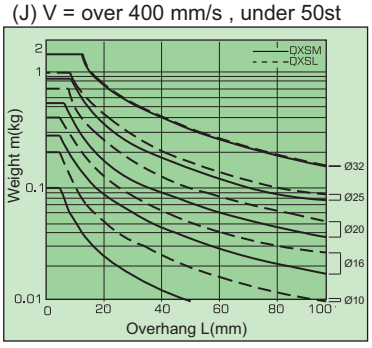
(H) V = over 400 mm/s , under 30st



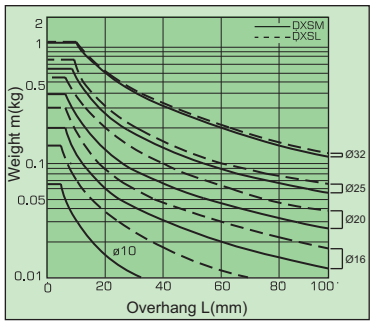
(I) V = under 400 mm/s , under 50st



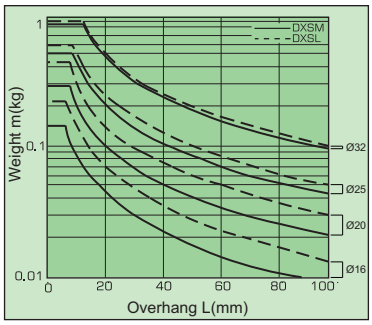
(J) V = over 400 mm/s , under 50st



(K) V = over 400 mm/s , under 75st

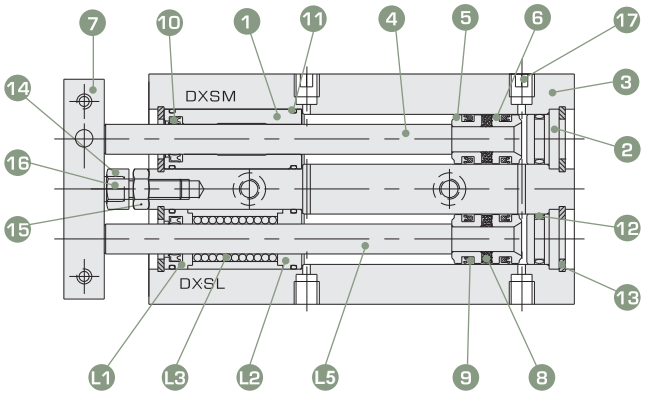


(L) V = over 400 mm/s , under 100st

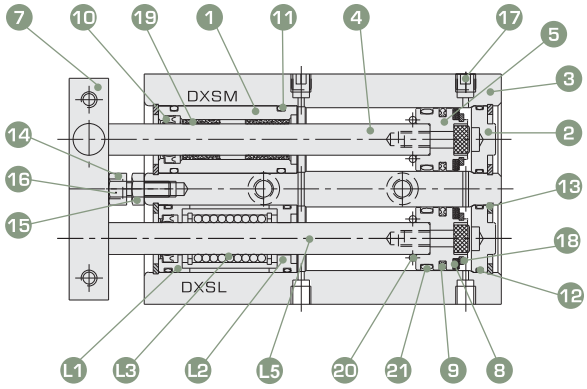


Internal construction

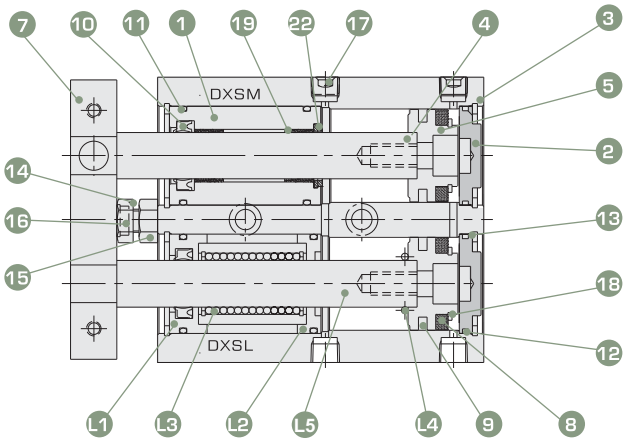
DXSM/DXSL 10



DXSM/DXSL 16~25



DXSM/DXSL 32



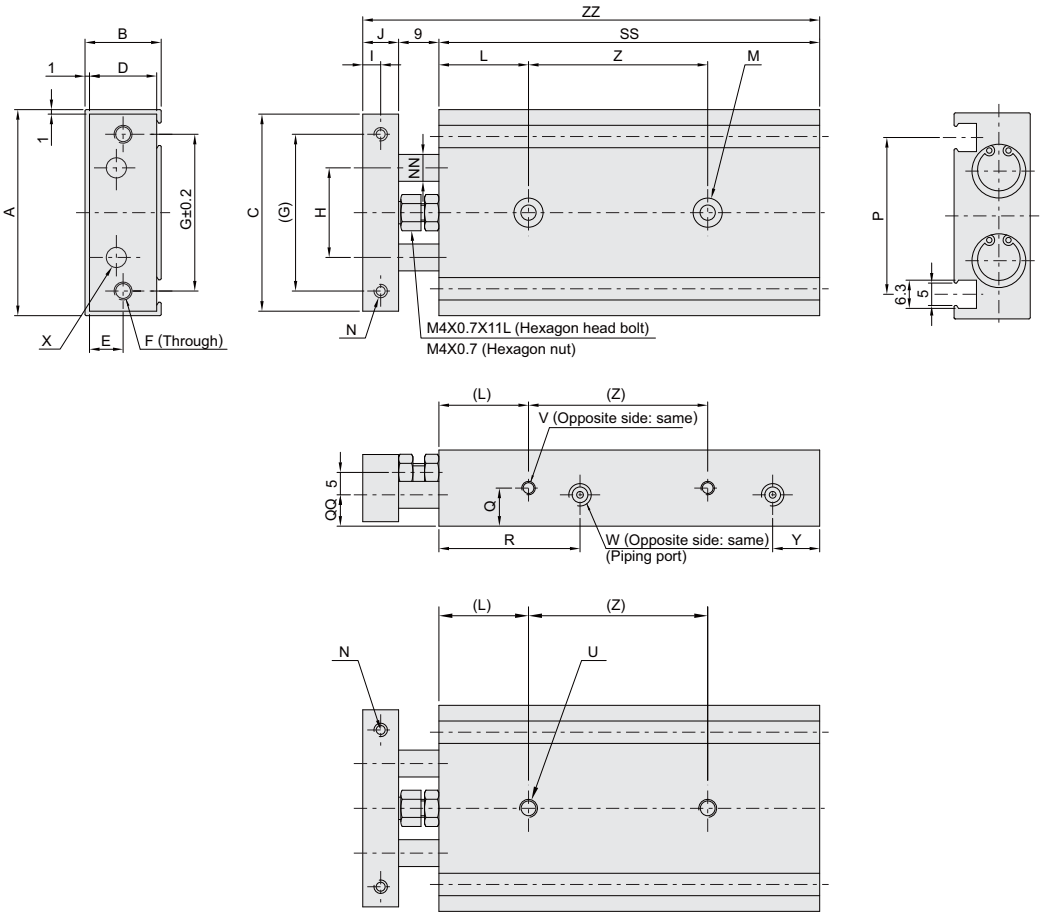
Part lists

NO.	Description	Material	Qty
1	Front end cover	Anodized aluminium alloy	2
2	Rear end cover	Anodized aluminium alloy	2
3	Barrel	Anodized aluminium alloy	1
4	Piston rod	SUS 303	2
5	Piston	Aluminium alloy	2
6	Magnetic piston	Aluminium alloy	2
7	Plate	Anodized aluminium alloy	1
8	Magnet	Magnetic material	2
9	Piston seal	NBR	2
10	Piston seal	NBR	2
11	O-ring	NBR	4
12	O-ring	NBR	2
13	Snap ring	SK5M	4
14	Bumper bolt	Carbon steel	1

NO.	Description	Material	Qty
15	Hexagon nut	Carbon steel	1
16	Bumper	PU	1
17	Mounted screw	Carbon steel	2
18	Wear ring	POM	2
19	Bush	—	4
20	O-ring	NBR	2
21	Wear ring	POM	2
22	Bumper	PU	2
L1	Front end cover	Anodized aluminium alloy	2
L2	Front end cover (Right)	Anodized aluminium alloy	2
L3	Ball bushing bearing	—	2
L4	O-ring	NBR	2
L5	Piston rod	SUJ2	2

External dimensions

DXS□10~16

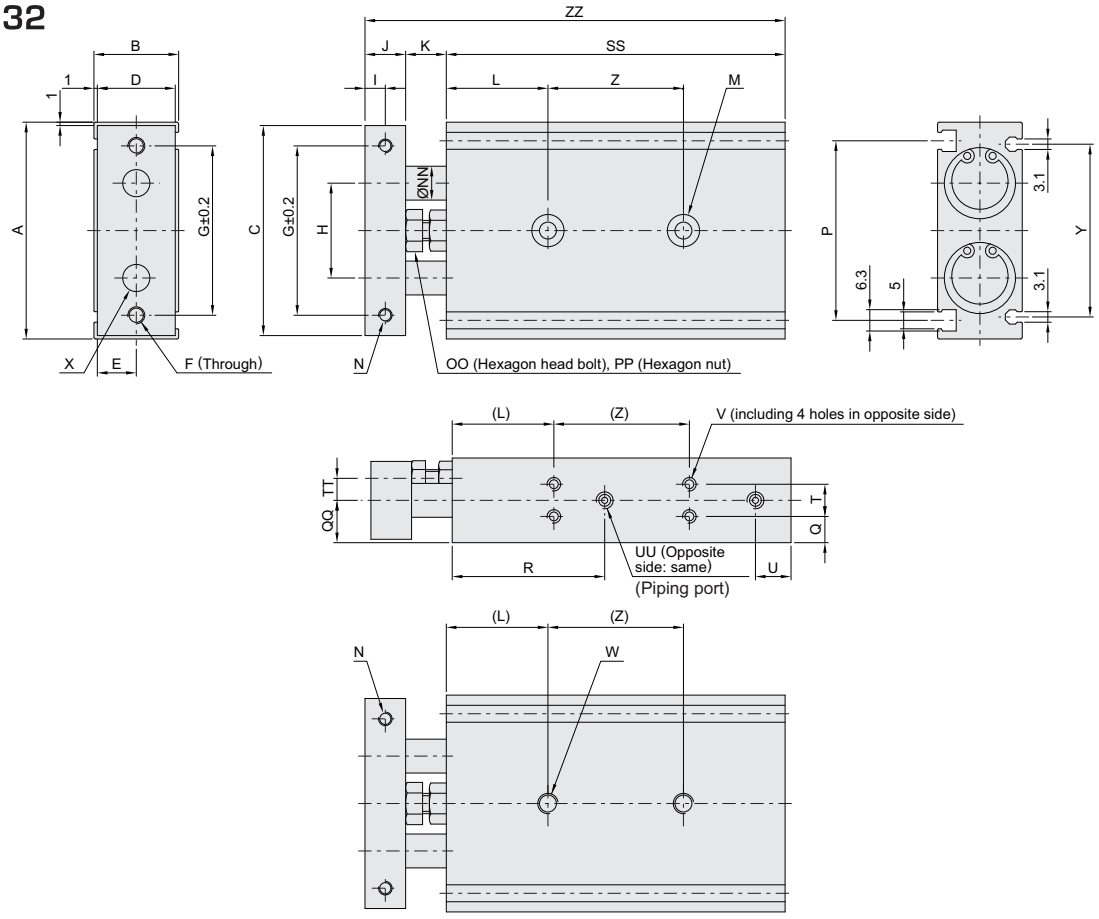


Model	A	B	C	D	E	F	G	H	I	J	L	M	N	NN	P	Q	QQ	R	V	W	Y	U
DXS□10	46	17	44	15	7.5	2-M4X0.7	35	20	4	8	20	2-Ø3.4 through 2-Ø6.5 counterbore with depth 4	2-M3X0.5 dp5	ø6	35	8.5	7	31.5	2-M3X0.5 dp4.5	4-M5X0.8 dp4.5	9.5	2-M4X0.7 dp8
DXS□16	58	20	56	18	9	2-M5X0.8	45	25	5	10	30	2-Ø4.3 through 2-Ø8 counterbore with depth 4.4	2-M4X0.7 dp6	ø8	48	10	10	39.5	4-M4X0.7 dp5	4-M5X0.8 dp4.5	9	2-M5X0.8 dp8

Stroke / Model	SS										Z				ZZ									
	10	15	20	25	30	40	50	60	75	100	10, 15 20, 25	30 40, 50	60, 75	100	10	15	20	25	30	40	50	60	75	100
DXS□10	65	70	75	80	85	95	105	115	130	155	30	40	50	60	82	87	92	97	102	112	122	132	147	172
DXS□16	70	75	80	85	90	100	110	120	135	160	25	35	45	55	89	94	99	104	109	119	129	139	154	179

External dimensions

DXS□ 20~32



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	NN	OO	P
DXS□20	64	25	62	23	11.5	2-M5X0.8	50	28	6	12	12	30	2-Ø5.5 through 2-Ø9.5 counterbore with depth 5.3	2-M4X0.7 dp6	ø10	M6X1.0	53
DXS□25	80	30	78	28	14	2-M6X1.0	60	35	6	12	12	30	2-Ø6.9 through 2-Ø11 counterbore with depth 6.3	2-M5X0.8 dp7.5	ø12	M6X1.0	64
DXS□32	98	38	96	36	18	2-M6X1.0	75	44	8	16	14	30	2-Ø6.9 through 2-Ø11 counterbore with depth 6.3	2-M5X0.8 dp10	ø16	M8X1.25	76

Model	PP	Q	QQ	R	T	TT	U	UU	V	Y	W
DXS□20	M6X1.0	7.75	12.5	45	9.5	6.5	10.5	4-M5X0.8 dp4.5	8-M4X0.7 dp6	51	2-M6X1.0 dp10
DXS□25	M6X1.0	8.5	15	48	13	9	10	4-PT 1/8” dp6.5	8-M5X0.8 dp7.5	62	2-M8X1.25 dp12
DXS□32	M8X1.25	9	19	57.5	20	11.5	10.5	4-PT 1/8” dp6.5	8-M5X0.8 dp7.5	74	2-M8X1.25 dp12

Stroke / Model	SS										Z			ZZ								
	10	15	20	25	30	40	50	60	75	100	10, 15 20, 25	30 40, 50	60 75, 100	10	15	20	25	30	40	50	60	75	100
DXS□20	80	85	90	95	100	110	120	130	145	170	30	40	60	104	109	114	119	124	134	144	154	169	194
DXS□25	82	87	92	97	102	112	122	132	147	172	30	40	60	106	111	116	121	126	136	146	156	171	196
DXS□32	92	97	102	107	112	122	132	142	157	182	40	50	70	122	127	132	137	142	152	162	172	187	212