

3 Finger Parallel Style Air Gripper

Series **MHS3**

Size: 16, 20, 25, 32, 40, 50, 63, 80, 100, 125

Features

- Autoswitches can be added, and wide range sizes available.
- Vertically compact due to its wedge-shape cam construction. Optimally used in loading/unloading cylindrically shaped workpieces onto machine tools and in operations that require the application of an external force, such as in press fitting operations.



Standard Type



With Dust Cover Type
Series MHSJ3 (ø16 to ø80)
Also available, consult Best Pneumatics catalogue.

Through-hole Type
Series MHSH3 (ø16 to ø80)
Also available, consult Best Pneumatics catalogue.

Long Stroke Type
Series MHSL3 (ø16 to ø125)
Also available, consult Best Pneumatics catalogue.

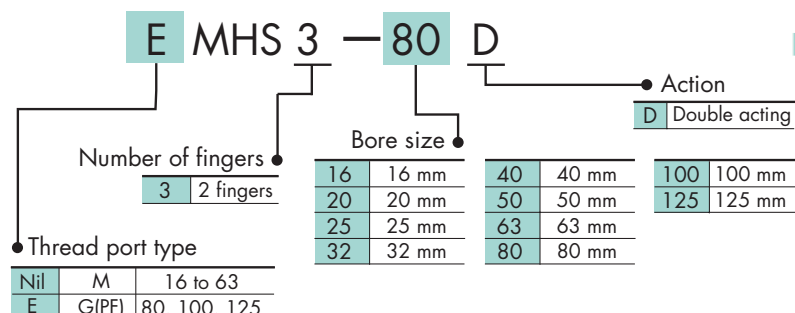
Model/Specifications

Model		MHS3-16D	MHS3-20D	MHS3-25D	MHS3-32D	MHS3-40D	MHS3-50D	MHS3-63D	MHS3-80D	MHS3-100D	MHS3-125D
Cylinder bore size (mm)		16	20	25	32	40	50	63	80	100	125
Fluid		Air									
Operating pressure (MPa)		0.2 to 0.6				0.1 to 0.6					
Ambient and fluid temperature (°C)		-10 to 60									
Repeatability (mm)		±0.01									
Max. operating frequency (c.p.m.)		120				60				30	
Lubrication		Not required									
Action		Double acting									
Effective gripping force (N) at 0.5 MPa ⁽¹⁾	External grip	14	25	42	74	118	187	335	500	750	1,270
	Internal grip	16	28	47	82	130	204	359	525	780	1,320
Opening/Closing stroke (mm) (dia.)		4	4	6	8	8	12	16	20	24	32
Weight (g)		60	100	140	237	351	541	992	1,850	3,340	6,460

Note 1) Values for ø16 to ø25 are with gripping point L = 20 mm, for ø32 to ø63 with gripping point L = 30 mm, and for ø80 to ø125 with gripping point L = 50 mm.

Note 2) Open and closed diameter values apply for external gripping of workpieces.

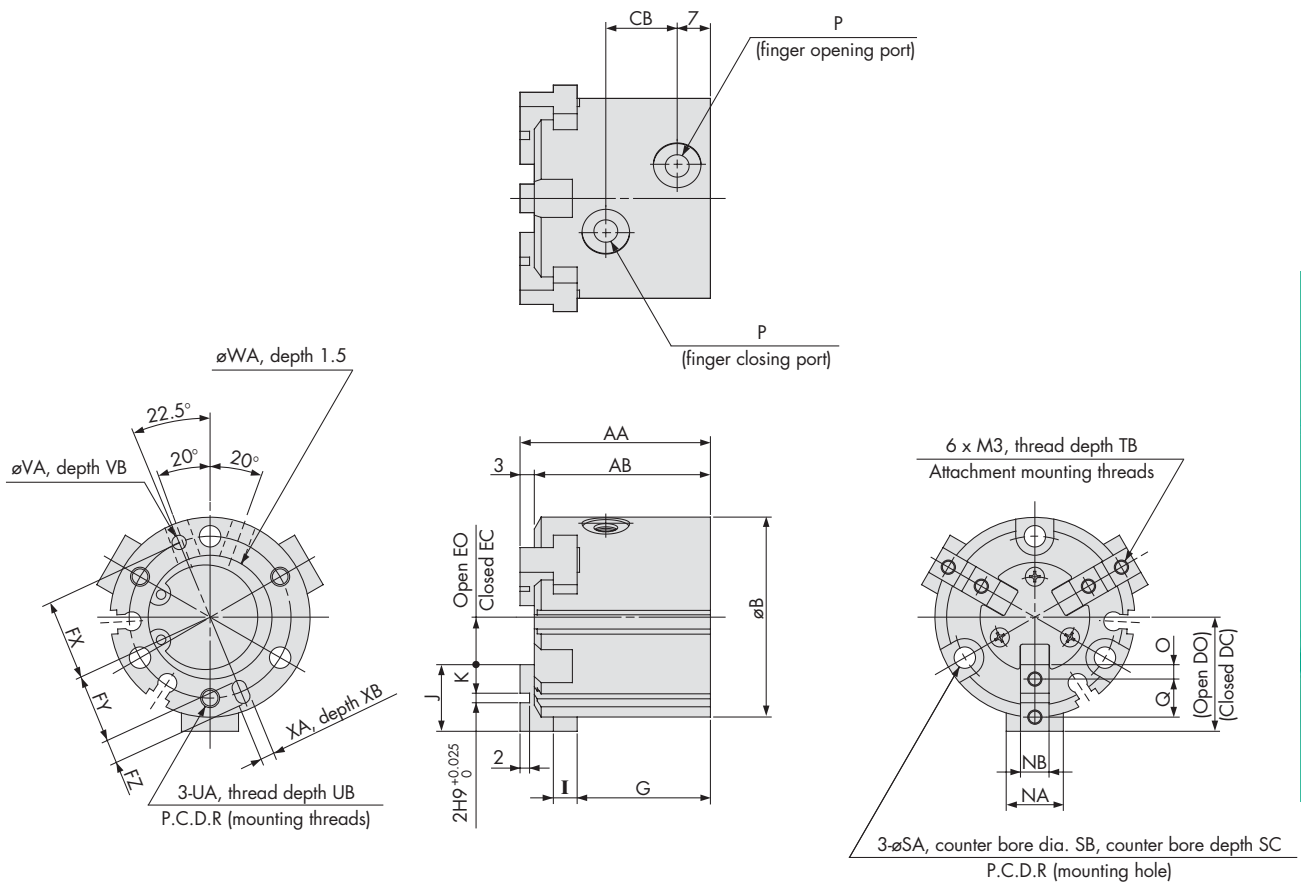
How to Order



Auto Switch Specifications

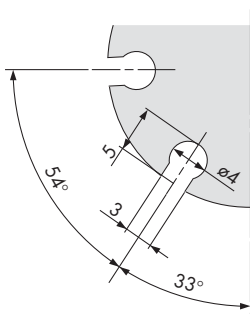
Refer to switch section.

Dimensions: MHS3-16D to 25D

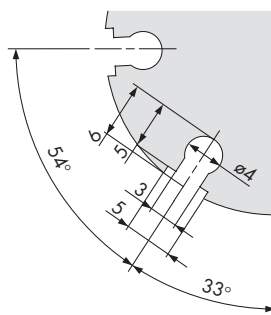


Auto switch mounting groove positions (2 locations)

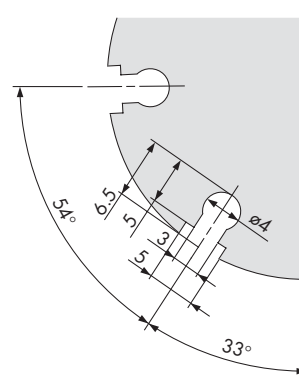
MHS3-16D



MHS3-20D



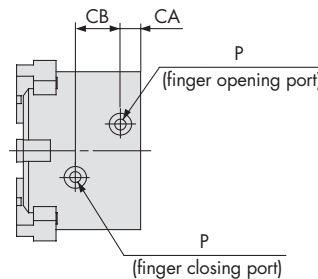
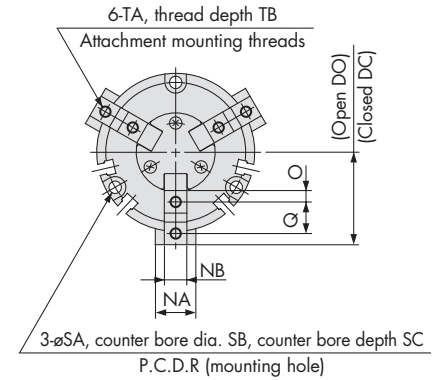
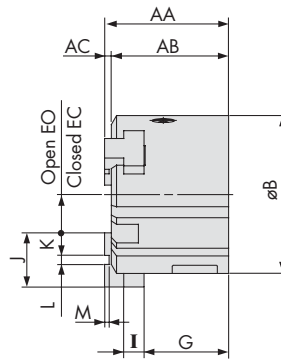
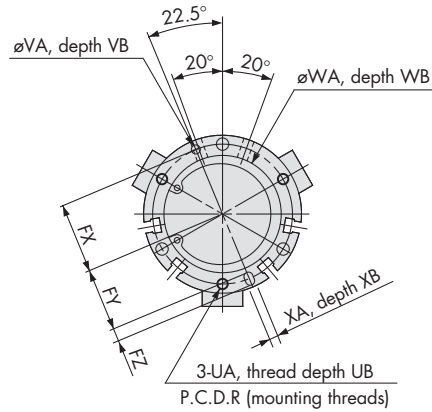
MHS3-25D



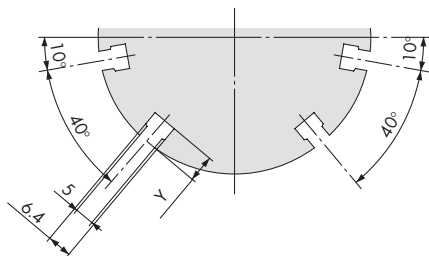
Model	AA	AB	B	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	NA	NB	O	P	Q	R
MHS3-16D	35	32	30	11	15	17	5	7	12.5	11	3	25	4	10	4	8	5h9 ⁰ _{-0.030}	2	M3	6	25
MHS3-20D	38	35	36	13	18	20	6	8	14.5	13	3	27	5	12	5	10	6h9 ⁰ _{-0.030}	2.5	M5	7	29
MHS3-25D	40	37	42	15	21	24	7	10	17	14.5	5	28	5	14	6	12	6h9 ⁰ _{-0.030}	3	M5	8	34

Model	SA	SB	SC	TB	UA	UB	VA	VB	WA	XA	XB
MHS3-16D	3.4	6.5	8	5	M3	4.5	2H9 ^{+0.025} ₀	2	17H9 ^{+0.043} ₀	2H9 ^{+0.025} ₀	2
MHS3-20D	3.4	6.5	9.5	6	M3	6	2H9 ^{+0.025} ₀	2	21H9 ^{+0.052} ₀	2H9 ^{+0.025} ₀	2
MHS3-25D	4.5	8	10	6	M4	6	3H9 ^{+0.025} ₀	3	26H9 ^{+0.052} ₀	3H9 ^{+0.025} ₀	3

Dimensions: MHS3-32D to 80D



Auto switch mounting groove positions (4 locations)

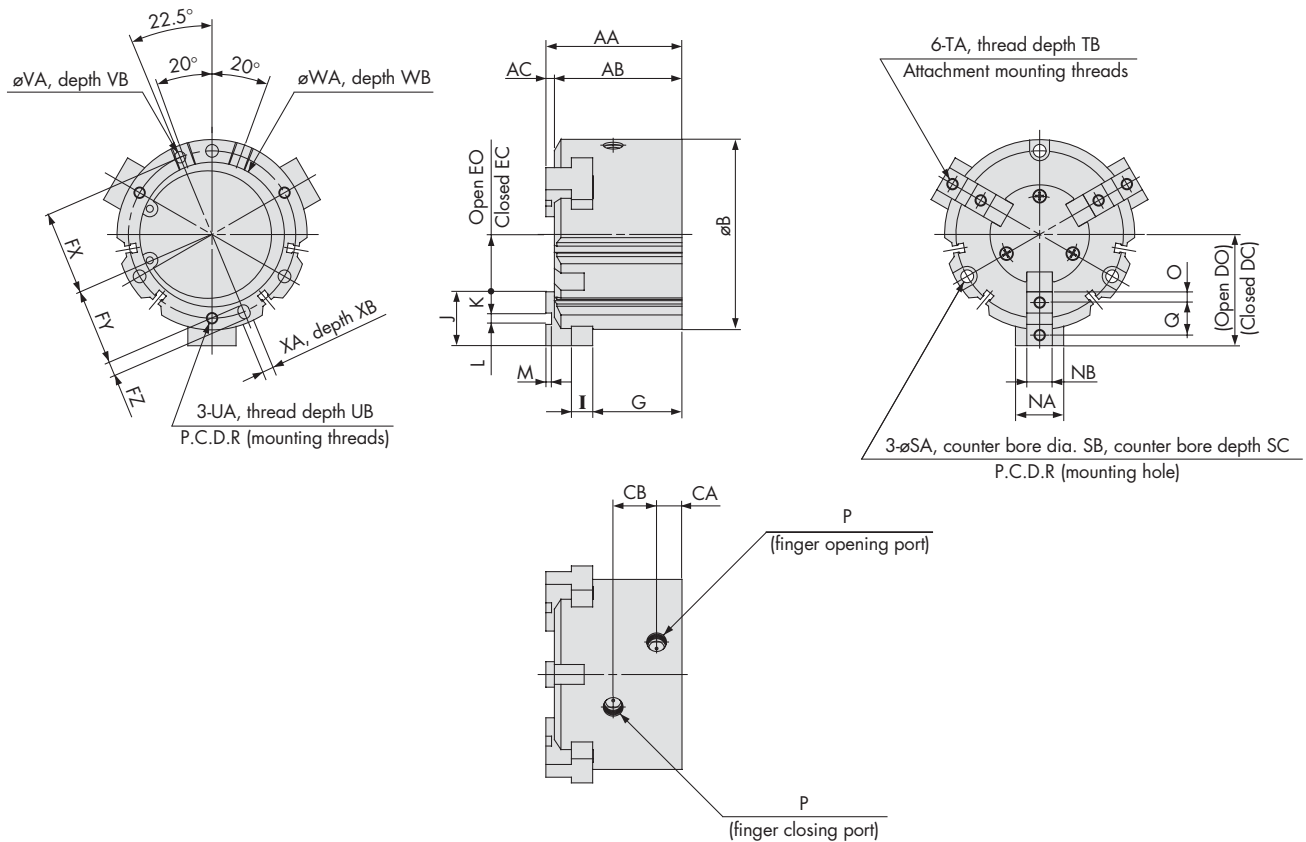


(mm)

Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB
MHS3-32D	44	41	3	52	8	16	28	32	8	12	22	19.5	5	30.5	6	20	9	2H9 ^{+0.025} ₀	2	14	8h9 ⁰ _{-0.036}
MHS3-40D	47	44	3	62	9	17	31	35	10	14	26.5	23.5	6	32	7	21	9	3H9 ^{+0.025} ₀	2	16	8h9 ⁰ _{-0.036}
MHS3-50D	55	52	3	70	9	20	35	41	11	17	31	28	6	37.5	9	24	10	4H9 ^{+0.030} ₀	2	18	10h9 ⁰ _{-0.036}
MHS3-63D	66	62	4	86	12	22	43	51	15	23	38	34.5	7	44	11	28	11	6H9 ^{+0.030} ₀	3	24	12h9 ⁰ _{-0.043}
MHS3-80D	82	77	5	106	13.5	27	53.5	63.5	21.5	31.5	47.5	43.5	8	56	12	32	12	8H9 ^{+0.036} ₀	4	28	14h9 ⁰ _{-0.043}

Model	O	P	Q	R	SA	SB	SC	TA	TB	UA	UB	VA	VB	WA	WB	XA	XB	Y
MHS3-32D	4.5	M5	11	44	4.5	8	9	M4 x 0.7	8	M4	6	3H9 ^{+0.025} ₀	3	34H9 ^{+0.062} ₀	2	3H9 ^{+0.025} ₀	3	6
MHS3-40D	4.5	M5	12	53	5.5	9.5	9	M4 x 0.7	8	M5	7.5	4H9 ^{+0.030} ₀	4	42H9 ^{+0.062} ₀	2	4H9 ^{+0.030} ₀	4	8
MHS3-50D	5	M5	14	62	5.5	9.5	12	M5 x 0.8	10	M5	10	4H9 ^{+0.030} ₀	4	52H9 ^{+0.074} ₀	2	4H9 ^{+0.030} ₀	4	7
MHS3-63D	5.5	M5	17	76	6.6	11	14	M5 x 0.8	10	M6	9	5H9 ^{+0.030} ₀	5	65H9 ^{+0.074} ₀	2.5	5H9 ^{+0.030} ₀	5	7.5
MHS3-80D	6	1/8	20	95	6.6	11	19	M6 x 1	12	M6	12	6H9 ^{+0.030} ₀	6	82H9 ^{+0.087} ₀	3	6H9 ^{+0.030} ₀	6	8

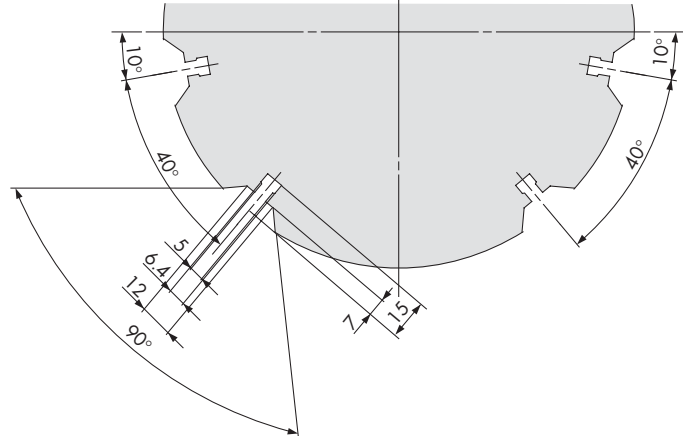
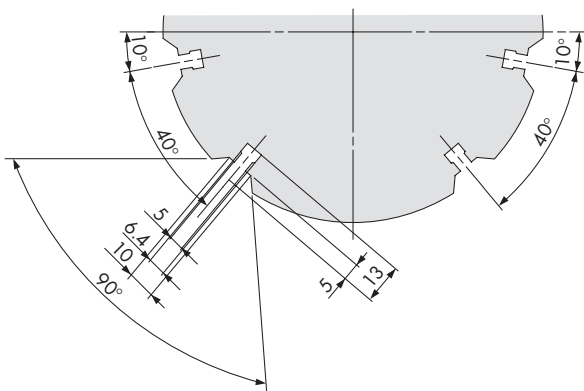
Dimensions: MHS3-100D, 125D



Auto switch mounting groove positions (4 locations)

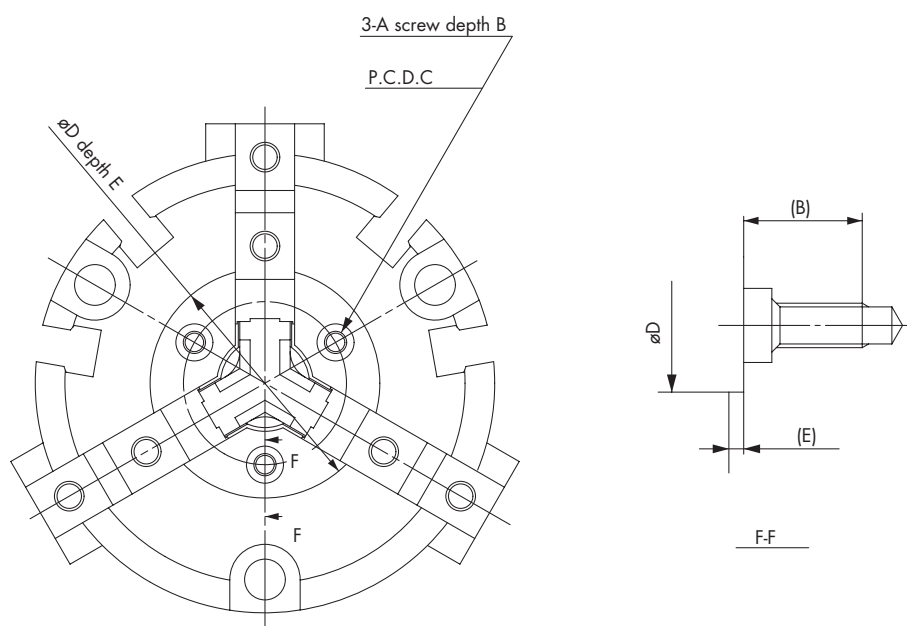
MHS3-100D

MHS3-125D



																					(mm)		
Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB		
MHS3-100D	96	90	6	134	18	30.6	66	78	28	40	59	54	10	63	15	38	15	8H9 ^{+0.036} ₀	4	34	18h9 ⁰ _{0.043}		
MHS3-125D	122	114	8	166	23.5	38	82	98	30	46	74	68	12	84	18	52	21	10H9 ^{+0.036} ₀	6	40	22h9 ⁰ _{0.052}		
Model	O	P	Q	R	SA	SB	SC	TA	TB	UA	UB	VA	VB	WA	WB	XA	XB						
MHS3-100D	7.5	1/4	23	118	9	14	21	M8	16	M8	16	8H9 ^{+0.036} ₀	6	102H9 ^{+0.087} ₀	4	8H9 ^{+0.036} ₀	6						
MHS3-125D	10.5	3/8	31	148	11	17.5	34	M10	20	M10	20	10H9 ^{+0.036} ₀	8	130H9 ^{+0.100} ₀	6	10H9 ^{+0.036} ₀	8						

Dimensions: Detailed Dimensions of Mounting Portion of End Plate



(mm)

Model	A	B	C	øD	E
MHS3-16D	M2	5.5	12.5	18H8 ^{+0.027} ₀	0.5
MHS3-20D		5.4	15	21H8 ^{+0.033} ₀	0.6
MHS3-25D			17	23H8 ^{+0.033} ₀	
MHS3-32D		5.2	21	27H8 ^{+0.033} ₀	0.8
MHS3-40D	M3	8	22	31H8 ^{+0.039} ₀	1
MHS3-50D			26	35H8 ^{+0.039} ₀	
MHS3-63D			33	42H8 ^{+0.039} ₀	
MHS3-80D	M4	9.5	40	52H8 ^{+0.046} ₀	1.5
MHS3-100D			54	70H8 ^{+0.046} ₀	
MHS3-125D			62	82H8 ^{+0.054} ₀	

4 Finger Parallel Style Air Gripper

Series **MHS4**

Size: 16, 20, 25, 32, 40, 50, 63



Features

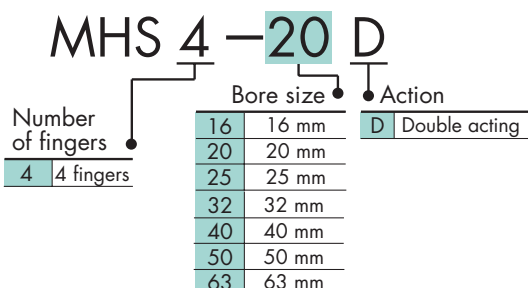
- ➔ Vertically compact due to its wedge-shape cam construction. Optimally holds rectangular workpieces for locating operations.
- ➔ Autoswitches can be added.
- ➔ Simple to mount body.

Model/Specifications

Model		MHS4-16D	MHS4-20D	MHS4-25D	MHS4-32D	MHS4-40D	MHS4-50D	MHS4-63D
Bore size (mm)		16	20	25	32	40	50	63
Fluid		Air						
Operating pressure (MPa)		0.2 to 0.6			0.1 to 0.6			
Ambient and fluid temperature (°C)		−10 to 60						
Repeatability (mm)		±0.01						
Max. operating frequency (c.p.m.)		120			60			
Lubrication		Not required						
Action		Double acting						
Effective gripping force (N) at 0.5 MPa ⁽¹⁾	External grip	10	19	31	55	88	140	251
	Internal grip	12	21	35	61	97	153	268
Opening/Closing stroke (mm)		4	4	6	8	8	12	16
Weight (g)		66	110	154	300	390	590	1,095

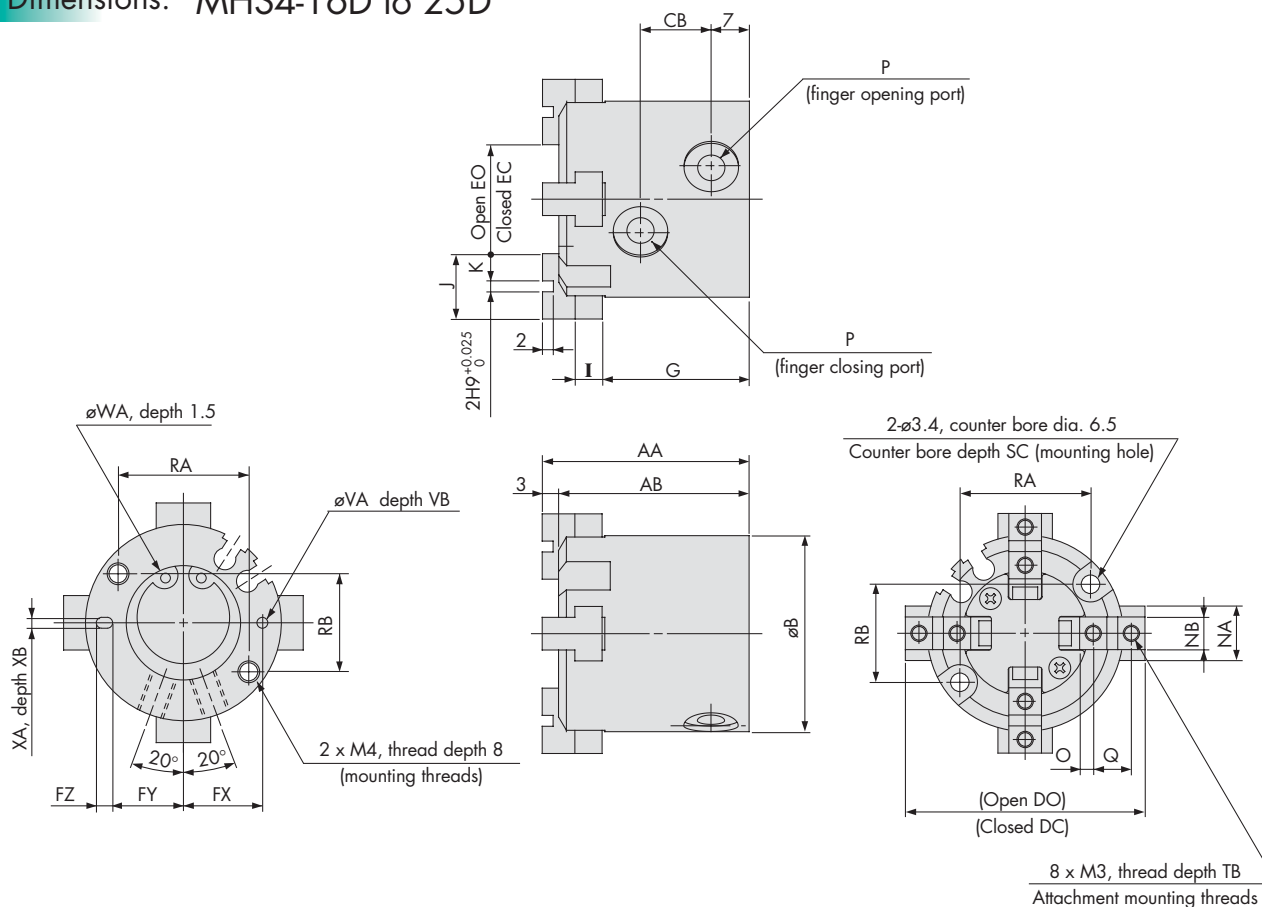
Note) Values for ø16 to ø25 are with gripping point L = 20 mm, and for ø32 to ø63 with gripping point L = 30 mm.

How to Order



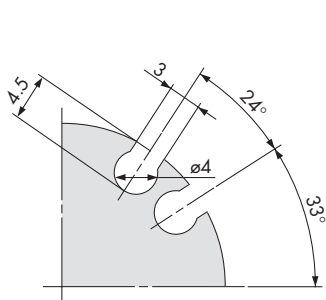
➔ **Auto Switch Specifications**
Refer to switch section.

Dimensions: MHS4-16D to 25D

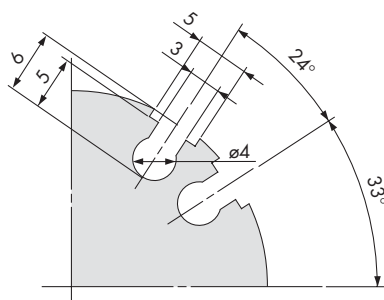


Auto switch mounting groove positions (2 locations)

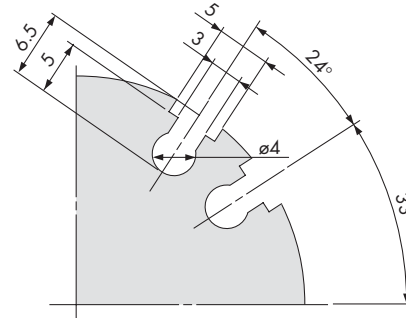
MHS4-16D



MHS4-20D



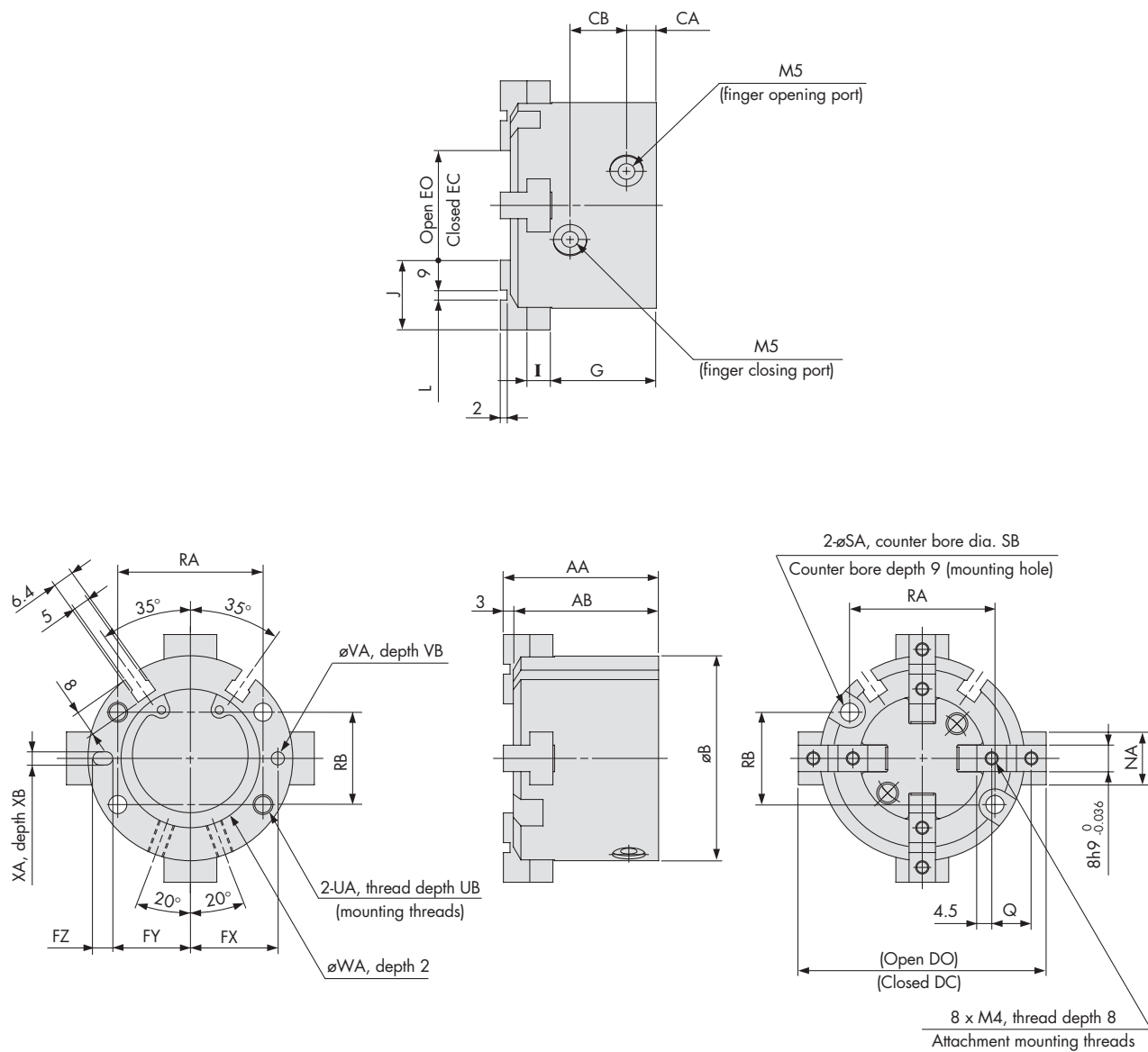
MHS4-25D



Model	AA	AB	B	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	NA	NB	O	P	Q
MHS4-16D	35	32	30	11	33	37	13	17	12.5	11	3	25	4	10	4	8	5h9 ⁰ / _{-0.030}	2	M3	6
MHS4-20D	38	35	36	13	39	43	15	19	14.5	13	3	27	5	12	5	10	6h9 ⁰ / _{-0.030}	2.5	M5	7
MHS4-25D	40	37	42	15	48	54	20	26	17	14.5	5	28	5	14	6	12	6h9 ⁰ / _{-0.030}	3	M5	8

Model	RA	RB	SC	TB	VA	VB	WA	XA	XB
MHS4-16D	18	16	8	5	2H9 ^{+0.025} / ₀	2	17H9 ^{+0.043} / ₀	2H9 ^{+0.025} / ₀	2
MHS4-20D	24	18	9.5	6	2H9 ^{+0.025} / ₀	2	21H9 ^{+0.052} / ₀	2H9 ^{+0.025} / ₀	2
MHS4-25D	26	22	10	6	3H9 ^{+0.025} / ₀	3	26H9 ^{+0.052} / ₀	3H9 ^{+0.025} / ₀	3

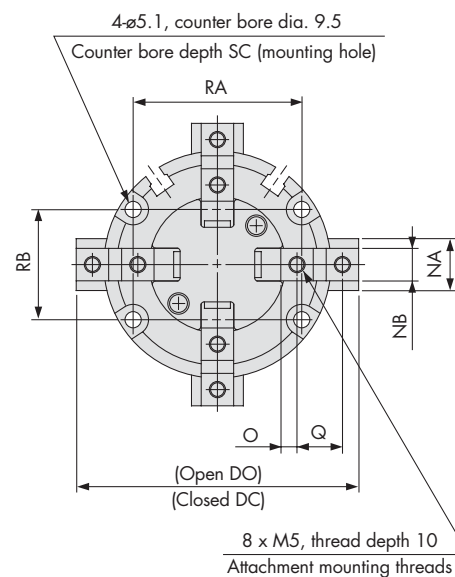
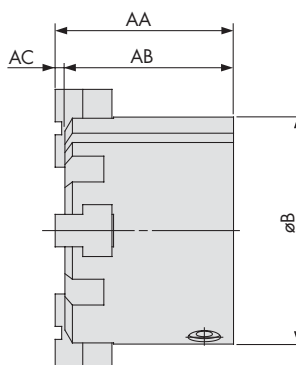
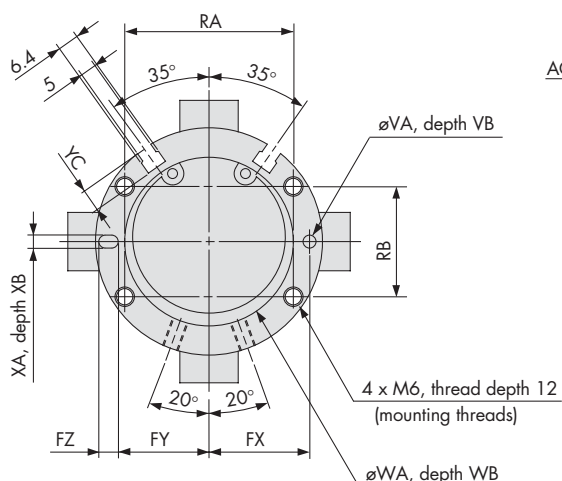
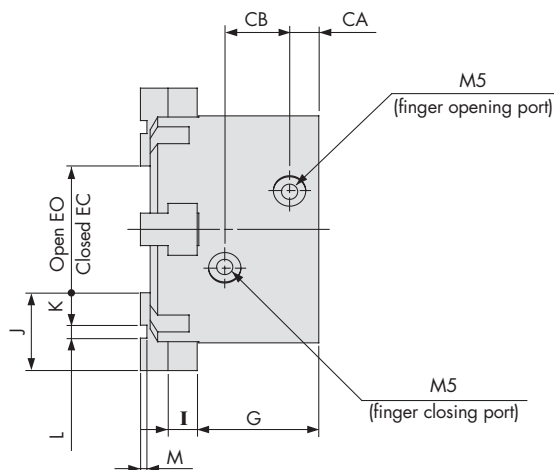
Dimensions: MHS4-32D, 40D



Model	AA	AB	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	L	NA	Q	RA	RB	SA
MHS4-32D	44	41	56	8	16	60	68	20	28	23	20.5	5	30.5	6	20	2H9 ^{+0.025} ₀	14	11	38	25	4.5
MHS4-40D	47	44	62	9	17	66	74	24	32	26.5	23.5	6	32	7	21	3H9 ^{+0.025} ₀	16	12	44	28	5.5

Model	SB	UA	UB	VA	VB	WA	XA	XB
MHS4-32D	8	M5	10	3H9 ^{+0.025} ₀	3	34H9 ^{+0.062} ₀	3H9 ^{+0.025} ₀	3
MHS4-40D	9.5	M6	12	4H9 ^{+0.030} ₀	4	42H9 ^{+0.062} ₀	4H9 ^{+0.030} ₀	4

Dimensions: MHS4-50D, 63D



Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB
MHS4-50D	55	52	3	70	9	20	74	86	26	38	31	28	6	37.5	9	24	10	4H9 ⁰ ₀ ^{+0.030}	2	18	10h9 ⁰ ₀ ^{-0.036}
MHS4-63D	66	62	4	86	12	22	91	107	35	51	38	34.5	7	44	11	28	11	6H9 ⁰ ₀ ^{+0.030}	3	24	12h9 ⁰ ₀ ^{-0.043}

Model	O	Q	RA	RB	SC	VA	VB	WA	WB	XA	XB	YC
MHS4-50D	5	14	52	34	12	4H9 ⁰ ₀ ^{+0.030}	4	52H9 ⁰ ₀ ^{+0.074}	2	4H9 ⁰ ₀ ^{+0.030}	4	7
MHS4-63D	5.5	17	66	38	14	5H9 ⁰ ₀ ^{+0.030}	5	65H9 ⁰ ₀ ^{+0.074}	2.5	5H9 ⁰ ₀ ^{+0.030}	5	7.5

(mm)