

# 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.

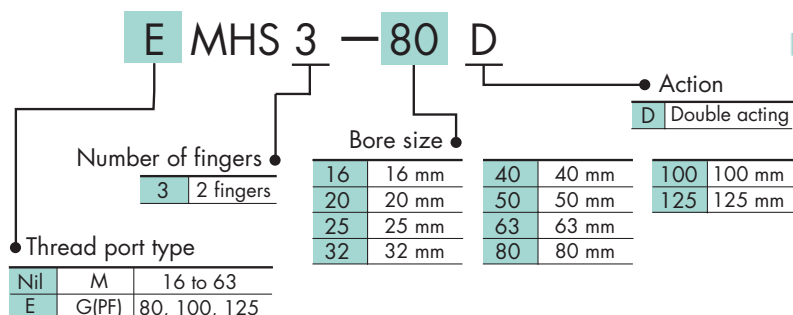
### Model/Specifications

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 <sup>(1)</sup>	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.

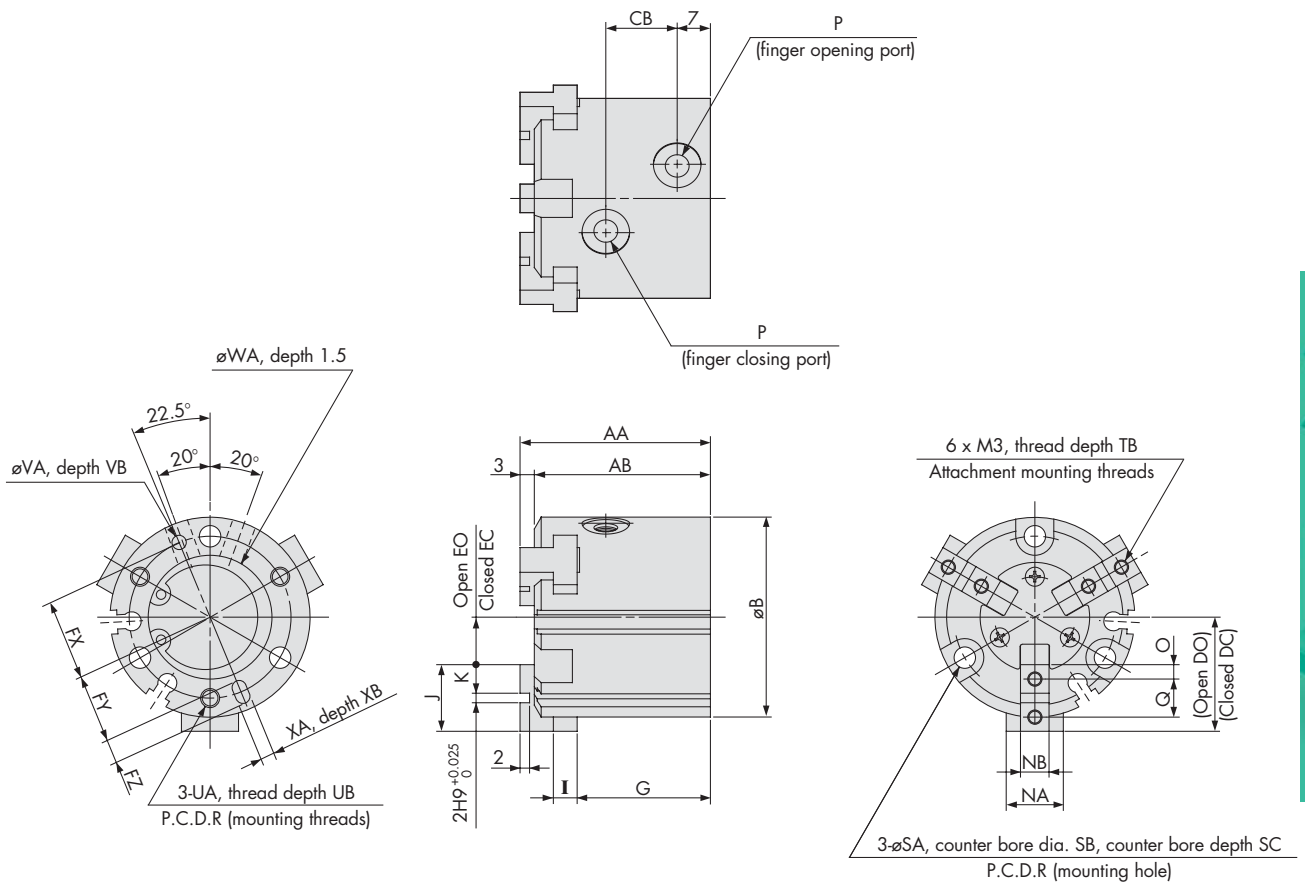
### How to Order



### Auto Switch Specifications

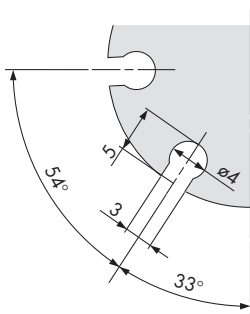
Refer to switch section.

## Dimensions: MHS3-16D to 25D

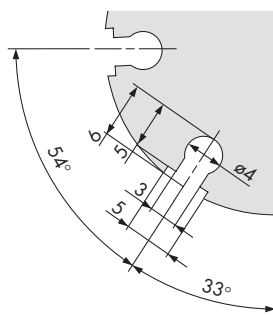


Auto switch mounting groove positions (2 locations)

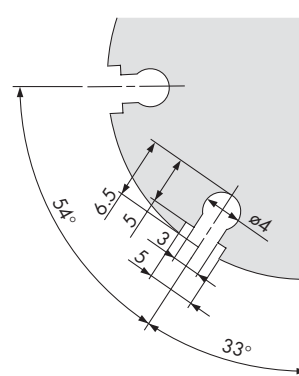
MHS3-16D



MHS3-20D



MHS3-25D

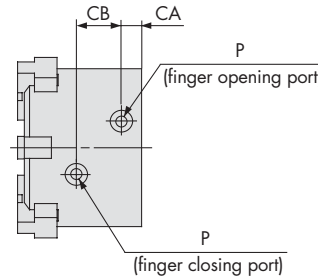
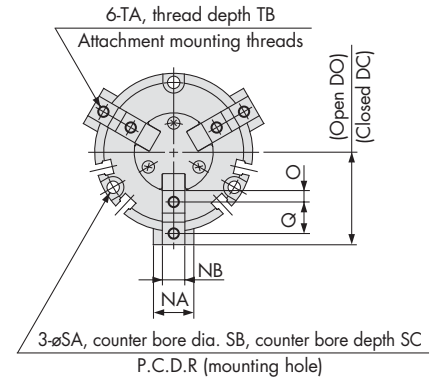
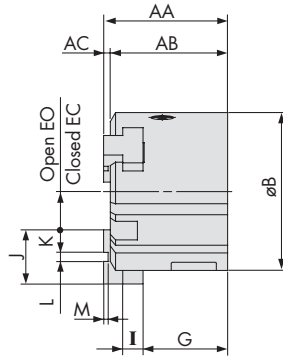
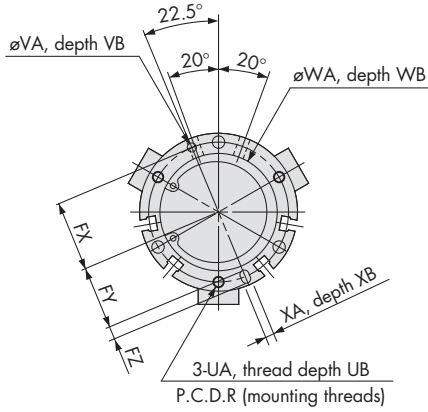


Model	AA	AB	B	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	NA	NB	O	P	Q	R
MHS3-16D	35	32	30	11	15	17	5	7	12.5	11	3	25	4	10	4	8	$5h9^{+0.030}_0$	2	M3	6	25
MHS3-20D	38	35	36	13	18	20	6	8	14.5	13	3	27	5	12	5	10	$6h9^{+0.030}_0$	2.5	M5	7	29
MHS3-25D	40	37	42	15	21	24	7	10	17	14.5	5	28	5	14	6	12	$6h9^{+0.030}_0$	3	M5	8	34

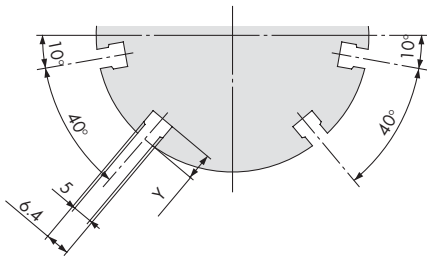
  

Model	SA	SB	SC	TB	UA	UB	VA	VB	WA	XA	XB
MHS3-16D	3.4	6.5	8	5	M3	4.5	$2H9^{+0.025}_0$	2	$17H9^{+0.043}_0$	$2H9^{+0.025}_0$	2
MHS3-20D	3.4	6.5	9.5	6	M3	6	$2H9^{+0.025}_0$	2	$21H9^{+0.052}_0$	$2H9^{+0.025}_0$	2
MHS3-25D	4.5	8	10	6	M4	6	$3H9^{+0.025}_0$	3	$26H9^{+0.052}_0$	$3H9^{+0.025}_0$	3

Dimensions: MHS3-32D to 80D



Auto switch mounting groove positions (4 locations)

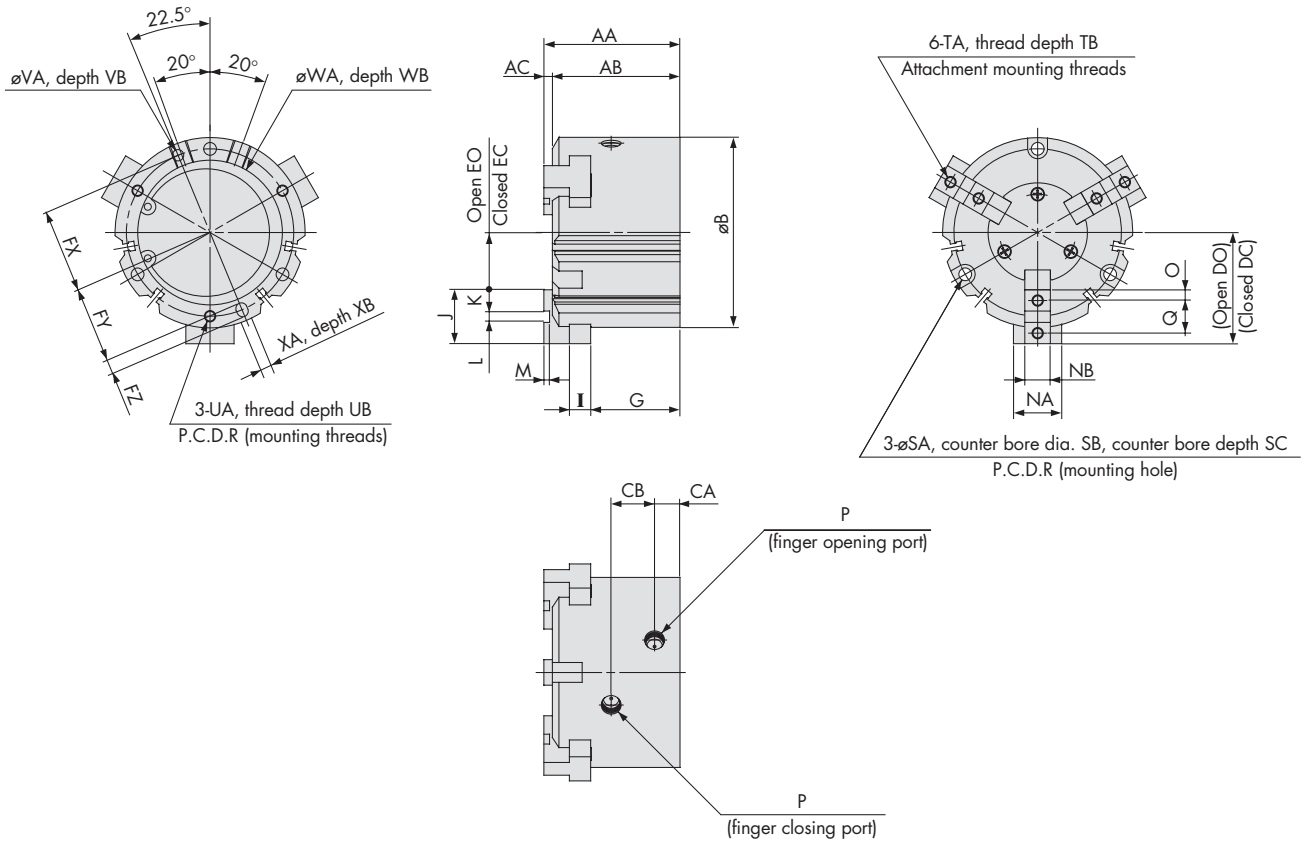


(mm)

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 <sup>+0.025</sup> <sub>0</sub>	2	14	8h9 <sup>0</sup> <sub>-0.036</sub>
MHS3-40D	47	44	3	62	9	17	31	35	10	14	26.5	23.5	6	32	7	21	9	3H9 <sup>+0.025</sup> <sub>0</sub>	2	16	8h9 <sup>0</sup> <sub>-0.036</sub>
MHS3-50D	55	52	3	70	9	20	35	41	11	17	31	28	6	37.5	9	24	10	4H9 <sup>+0.030</sup> <sub>0</sub>	2	18	10h9 <sup>0</sup> <sub>-0.036</sub>
MHS3-63D	66	62	4	86	12	22	43	51	15	23	38	34.5	7	44	11	28	11	6H9 <sup>+0.030</sup> <sub>0</sub>	3	24	12h9 <sup>0</sup> <sub>-0.043</sub>
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 <sup>+0.036</sup> <sub>0</sub>	4	28	14h9 <sup>0</sup> <sub>-0.043</sub>

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 <sup>+0.025</sup> <sub>0</sub>	3	34H9 <sup>+0.062</sup> <sub>0</sub>	2	3H9 <sup>+0.025</sup> <sub>0</sub>	3	6
MHS3-40D	4.5	M5	12	53	5.5	9.5	9	M4 x 0.7	8	M5	7.5	4H9 <sup>+0.030</sup> <sub>0</sub>	4	42H9 <sup>+0.062</sup> <sub>0</sub>	2	4H9 <sup>+0.030</sup> <sub>0</sub>	4	8
MHS3-50D	5	M5	14	62	5.5	9.5	12	M5 x 0.8	10	M5	10	4H9 <sup>+0.030</sup> <sub>0</sub>	4	52H9 <sup>+0.074</sup> <sub>0</sub>	2	4H9 <sup>+0.030</sup> <sub>0</sub>	4	7
MHS3-63D	5.5	M5	17	76	6.6	11	14	M5 x 0.8	10	M6	9	5H9 <sup>+0.030</sup> <sub>0</sub>	5	65H9 <sup>+0.074</sup> <sub>0</sub>	2.5	5H9 <sup>+0.030</sup> <sub>0</sub>	5	7.5
MHS3-80D	6	1/8	20	95	6.6	11	19	M6 x 1	12	M6	12	6H9 <sup>+0.030</sup> <sub>0</sub>	6	82H9 <sup>+0.087</sup> <sub>0</sub>	3	6H9 <sup>+0.030</sup> <sub>0</sub>	6	8

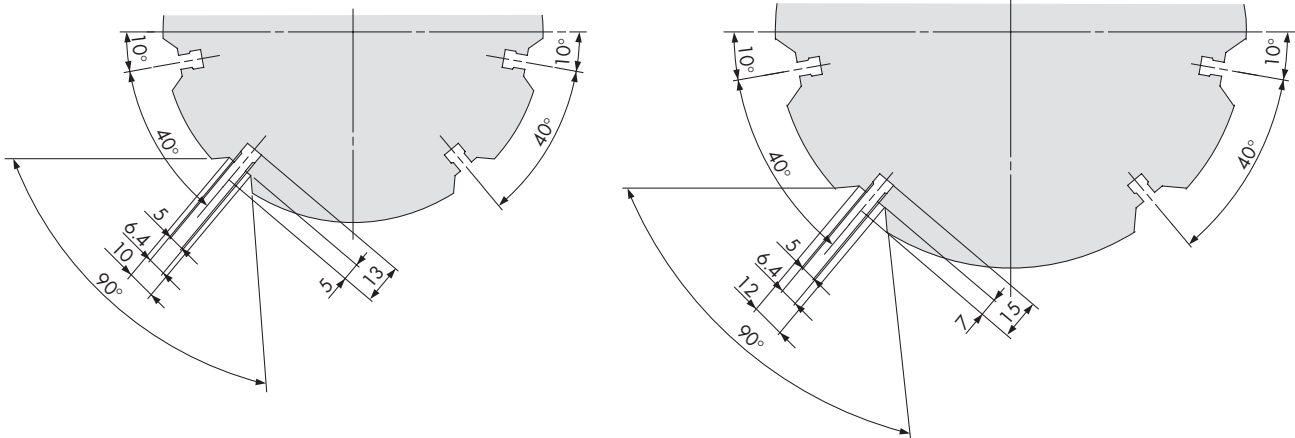
## Dimensions: MHS3-100D, 125D



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 <sup>+0.036</sup> <sub>0</sub>	4	34	18h9 <sup>0</sup> <sub>0.043</sub>
MHS3-125D	122	114	8	166	23.5	38	82	98	30	46	74	68	12	84	18	52	21	10H9 <sup>+0.036</sup> <sub>0</sub>	6	40	22h9 <sup>0</sup> <sub>0.052</sub>
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 <sup>+0.036</sup> <sub>0</sub>	6	102H9 <sup>+0.087</sup> <sub>0</sub>	4	8H9 <sup>+0.036</sup> <sub>0</sub>	6				
MHS3-125D	10.5	3/8	31	148	11	17.5	34	M10	20	M10	20	10H9 <sup>+0.036</sup> <sub>0</sub>	8	130H9 <sup>+0.100</sup> <sub>0</sub>	6	10H9 <sup>+0.036</sup> <sub>0</sub>	8				



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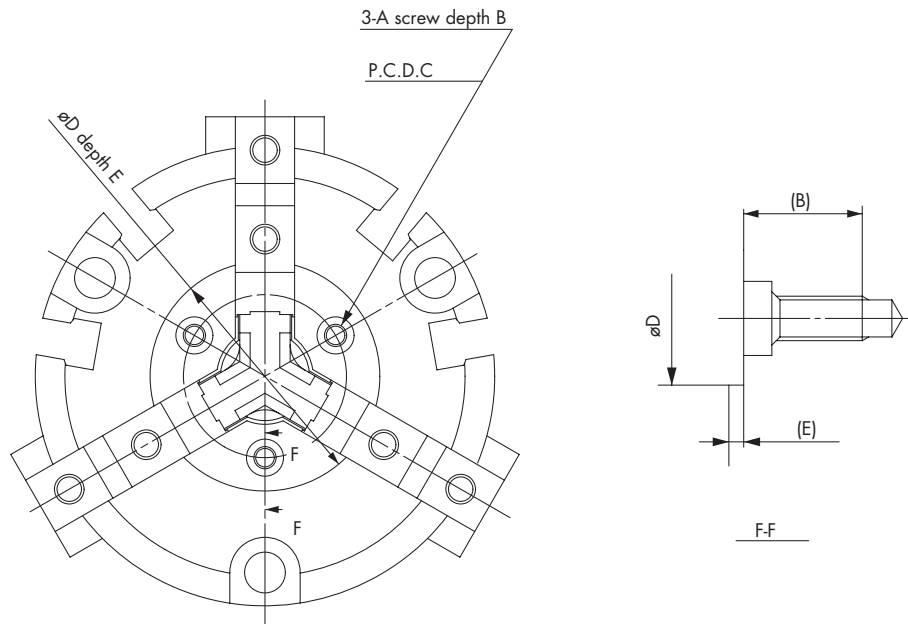


CATALOGUE ES20-104F AVAILABLE



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Dimensions: Detailed Dimensions of Mounting Portion of End Plate



(mm)

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

# 4 Finger Parallel Style Air Gripper

## Series **MHS4**

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



### Features

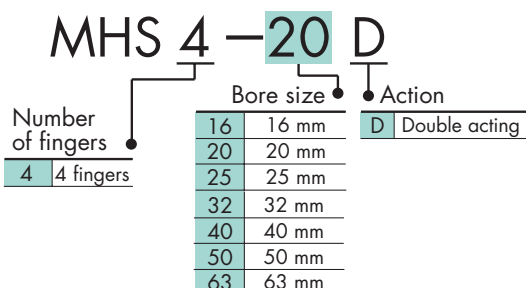
- ➔ Vertically compact due to its wedge-shape cam construction. Optimally holds rectangular workpieces for locating operations.
- ➔ Autoswitches can be added.
- ➔ Simple to mount body.

### 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 <sup>(1)</sup>	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.

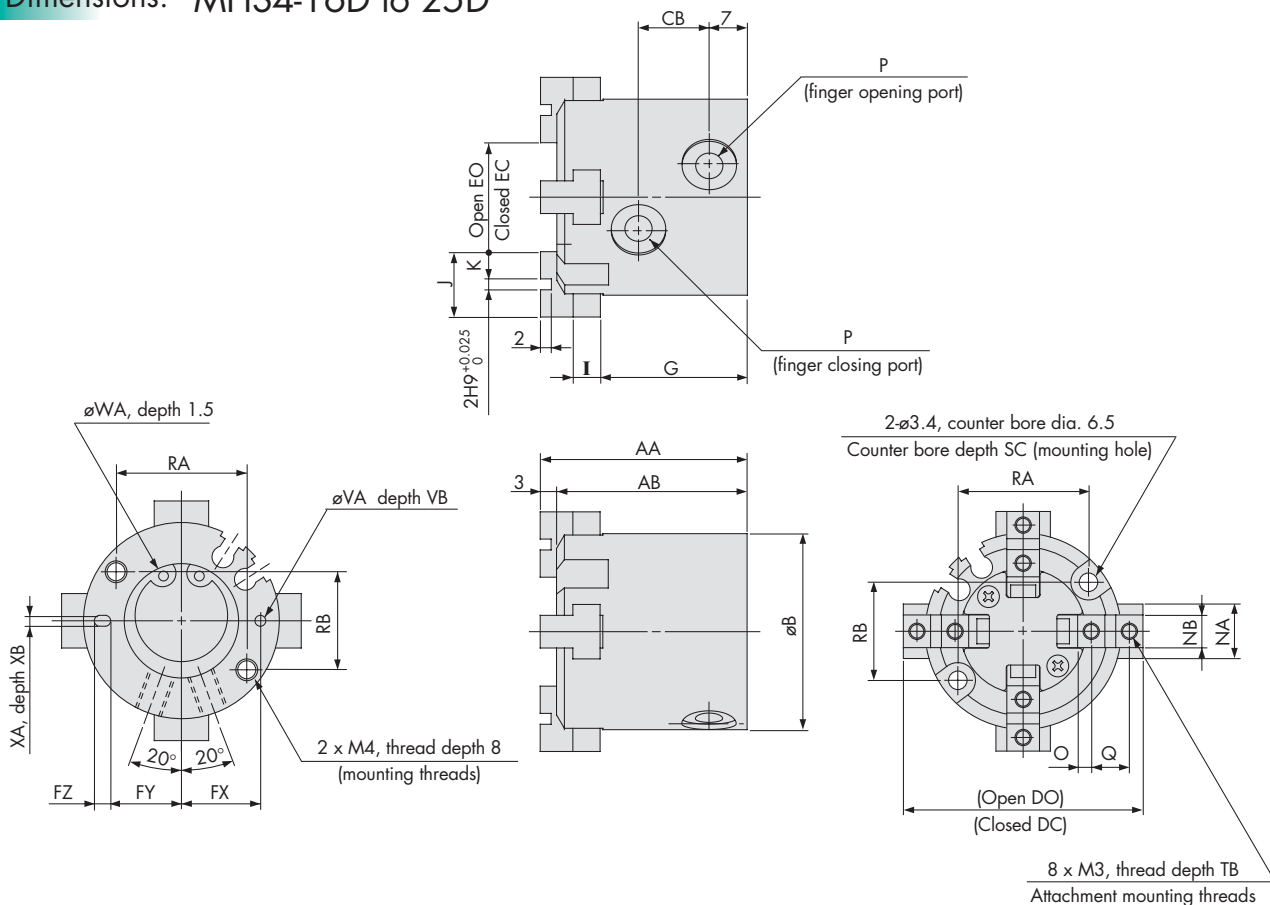
### How to Order



➔ Auto Switch Specifications  
Refer to switch section.

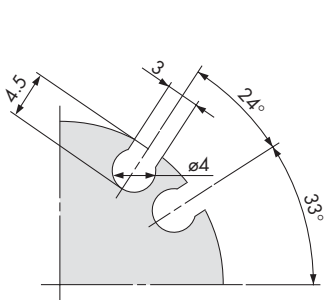


Dimensions: MHS4-16D to 25D

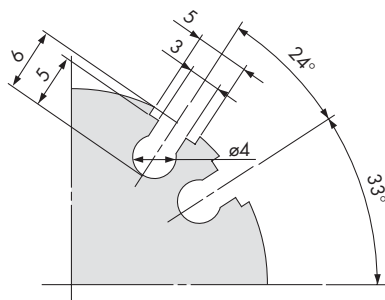


Auto switch mounting groove positions (2 locations)

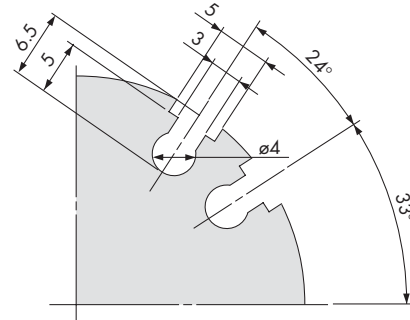
MHS4-16D



MHS4-20D



MHS4-25D

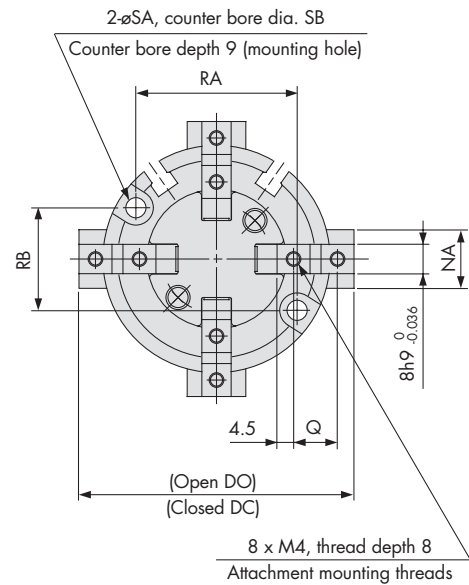
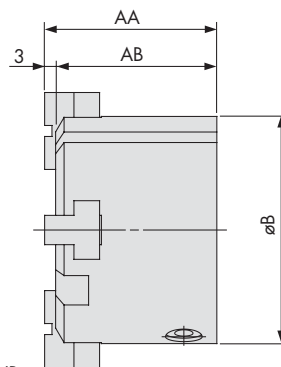
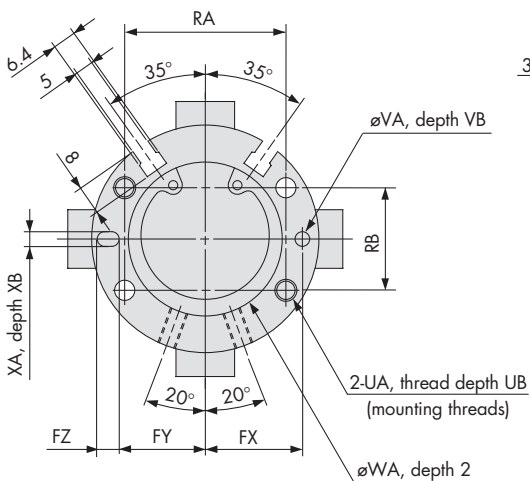
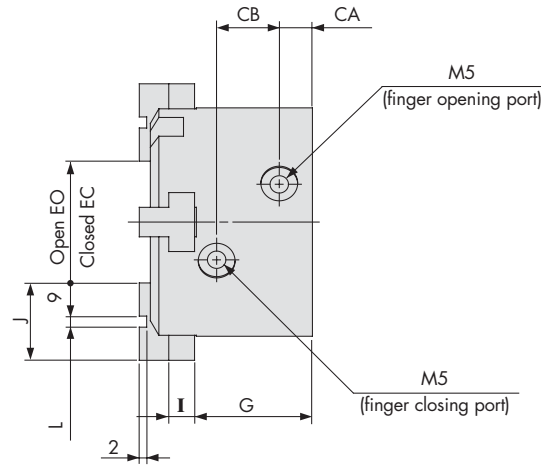


Model	AA	AB	B	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	NA	NB	O	P	Q
MHS4-16D	35	32	30	11	33	37	13	17	12.5	11	3	25	4	10	4	8	5h9 <sub>0</sub> <sup>0</sup> <sub>0.030</sub>	2	M3	6
MHS4-20D	38	35	36	13	39	43	15	19	14.5	13	3	27	5	12	5	10	6h9 <sub>0</sub> <sup>0</sup> <sub>0.030</sub>	2.5	M5	7
MHS4-25D	40	37	42	15	48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

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

Dimensions: MHS4-32D, 40D



(mm)

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 <sup>+0.025</sup> <sub>0</sub>	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 <sup>+0.025</sup> <sub>0</sub>	16	12	44	28	5.5

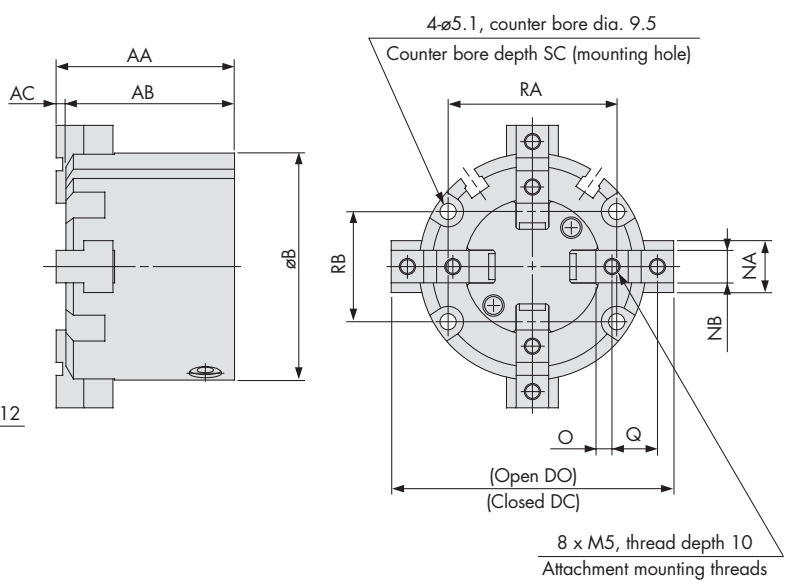
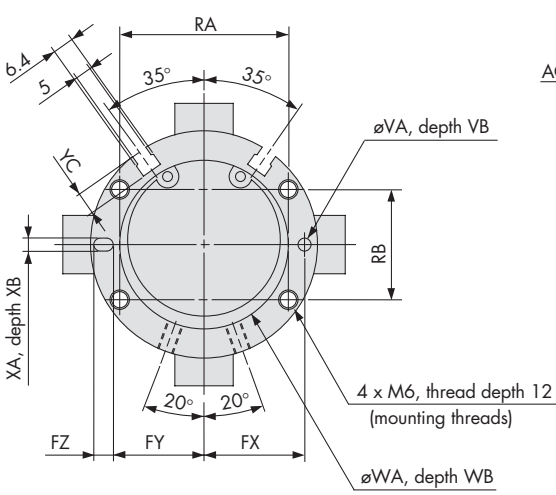
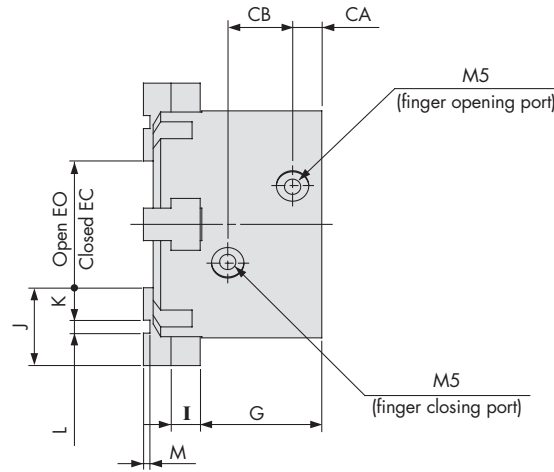
  

Model	SB	UA	UB	VA	VB	WA	XA	XB
MHS4-32D	8	M5	10	3H9 <sup>+0.025</sup> <sub>0</sub>	3	34H9 <sup>+0.062</sup> <sub>0</sub>	3H9 <sup>+0.025</sup> <sub>0</sub>	3
MHS4-40D	9.5	M6	12	4H9 <sup>+0.030</sup> <sub>0</sub>	4	42H9 <sup>+0.062</sup> <sub>0</sub>	4H9 <sup>+0.030</sup> <sub>0</sub>	4





Dimensions: MHS4-50D, 63D



(mm)

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 <sup>+0.030</sup> <sub>0</sub>	2	18	10h9 <sup>0</sup> <sub>-0.036</sub>
MHS4-63D	66	62	4	86	12	22	91	107	35	51	38	34.5	7	44	11	28	11	6H9 <sup>+0.030</sup> <sub>0</sub>	3	24	12h9 <sup>0</sup> <sub>-0.043</sub>

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