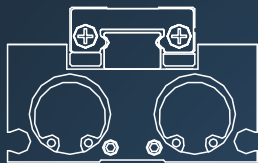
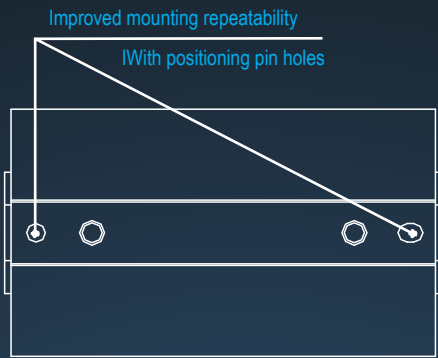
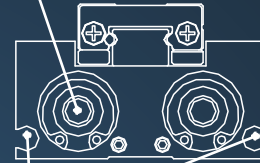


Low Profile Air Gripper

AHF2 Series (ø8~ø20)

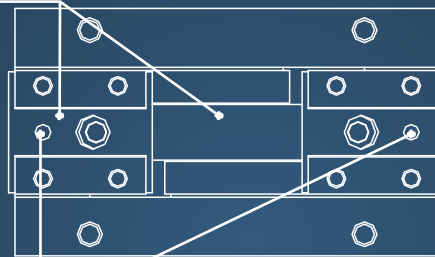


Piping is available from 2 directions.



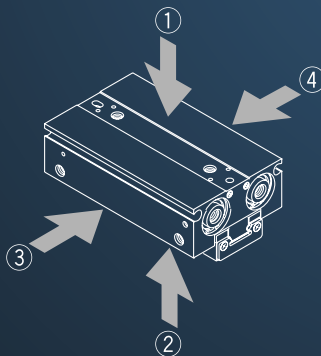
Auto switches can be mounted on both sides.

High precision and high rigidity with martensitic stainless steel.



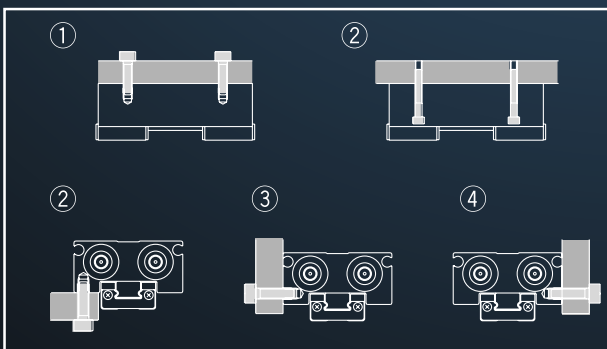
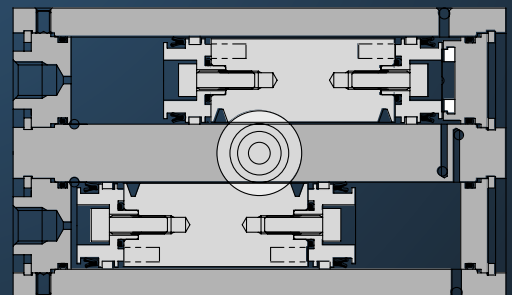
Easy positioning for mounting attachments
With positioning pin holes

High degree of mounting flexibility. As no brackets are required, mounting height can be minimized.



Mounting is possible from 4 directions.

Double piston construction achieves compact design with strong gripping force.



Model	Bore size(mm)	Gripping force(N)
AHF2-8D □	8	19
AHZ2-10D □	10	11
AHF2-12D □	12	48
AHZ2-20D □	20	42
AHF2-16D □	16	90
AHZ2-25D □	25	65
AHF2-20D □	20	141
AHZ2-32D □	32	158

Low Profile Air Gripper

AHF2 Series (ø8~ø20)

Height is approximately 1/3 the size of an equivalent AHZ2 series.

The low profile design saves space and reduces bending moments.

3 standard stroke lengths are available for each bore size.

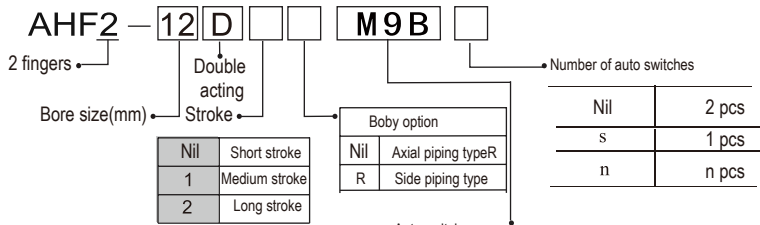


Specifications

Bore size(mm)	8	12	16	20
Action				
Fluid				
Operating pressure range(MPa)	0.15~0.7	0.1~0.7		
Ambient and fluid temperature	-10~60° C (with no condensation)			
Repeatability(mm)	±0.05*			
Max. operating frequency(c.p.m)	Short stroke:120 c.p.m. Long stroke: 60 c.p.m.			
Auto switch	2-wire	M9B		
	3-wire NPN	M9N		

Note) This is value when no offset load is applied to the finger. When an offset load is applied to the finger, the max. value is ±0.15mm due to the influence of backlash of the rack and pinion.

How to Order



Nil	Without auto switch
M9B	2-wire
M9N	3-wire

Lead wire length symbols:
1m..... Nil (Example) M9B
3m..... L (Example) M9BL

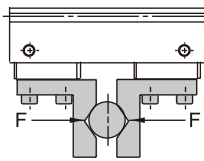
How to order

- 1) Need bore size 8mm. Model No. AHF2-8D
- 2) Need bore size 16mm and auto switches. Model No. SW-M9BL One cylinder with 2 auto switches.

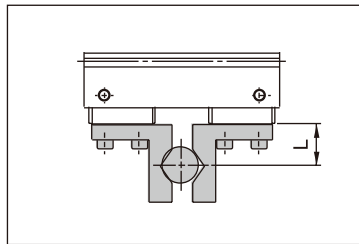
Action	model	Bore size (mm)	Gripping force* Effective gripping force per finger (N)	Opening/closing stroke(both sides) (mm)	weight (g)	Unobstructed capacity (cm ³)	
						Finger open side	Finger close side
Double acting	AHF2-8D	8	19	8	65	0.7	0.6
	AHF2-8D1			16	85	1.1	1.0
	AHF2-8D2			32	120	2.0	1.9
	AHF2-12D	12	48	12	155	1.9	1.6
	AHF2-12D1			24	190	3.3	3.0
	AHF2-12D2			48	275	6.1	5.8
	AHF2-16D	16	90	16	350	4.9	4.1
	AHF2-16D1			32	445	8.2	7.4
	AHF2-16D2			64	650	14.9	14.0
	AHF2-20D	20	141	20	645	8.7	7.3
	AHF2-20D1			40	850	15.1	13.7
	AHF2-20D2			80	1,225	28.0	26.6

Note) At the pressure of 0.5MPa, when gripping point L is 20mm.

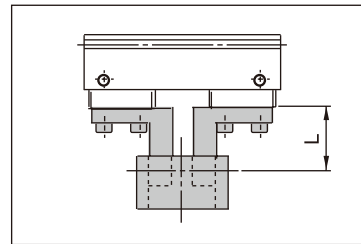
Effective gripping force



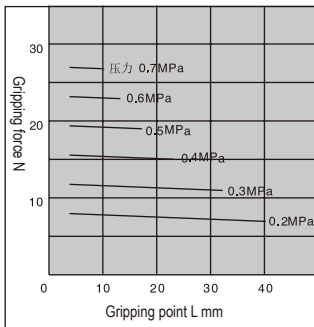
External grip



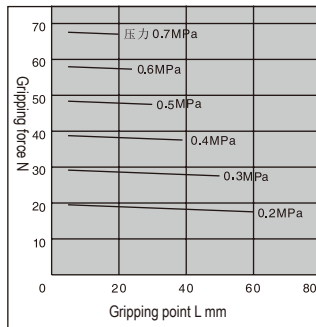
Internal grip



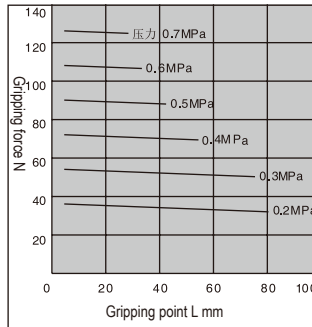
AHF2-8D □



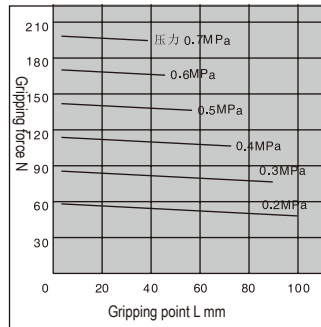
AHF2-12D □



AHF2-16D □



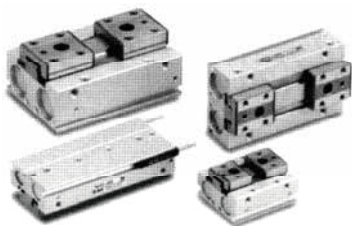
AHF2-20D □



Specifications/ Model

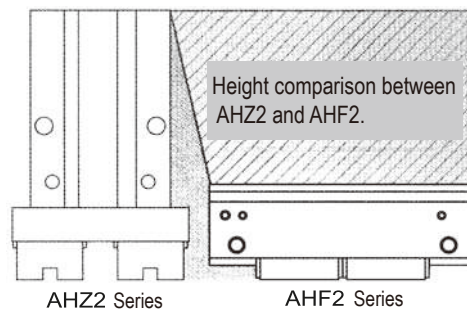
Specifications	Bore size (mm)	Action	Fluid	Operating pressure range MPa	Ambient and fluid temperature °C	Repeatability mm	Max. operating frequency c.p.m	Gripping force N	Opening/Closing stroke mm	Auto switch model
AHF2-8D	8	Double acting	Air	0.15 ~ 0.7	-10 ~ 60 (with no condensation)	±0.05	120	19	8	SW-M9B SW-M9N
AHF2-8D1							120		16	
AHF2-8D2							60		32	
AHF2-12D	12			120			48	12		
AHF2-12D1				120				24		
AHF2-12D2				60				48		
AHF2-16D	16			120			90	16		
AHF2-16D1				120				32		
AHF2-16D2				60				64		
AHF2-20D	20			120			141	20		
AHF2-20D1				120				40		
AHF2-20D2				60				80		

Note)At the pressure of 0.5MPa when gripping point L is 10mm.

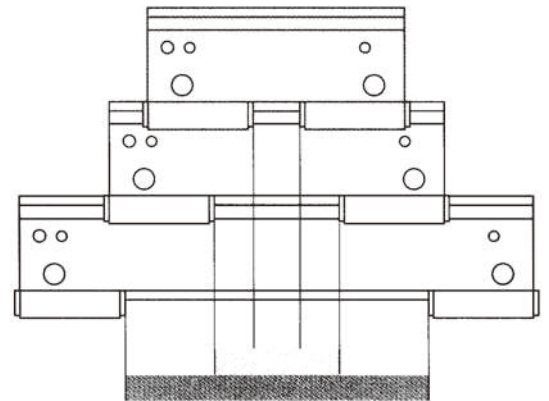


- Space-saving design.
- Strong gripping force.
- Centralized wiring and piping.
- Three standard stroke lengths: short/medium/long.

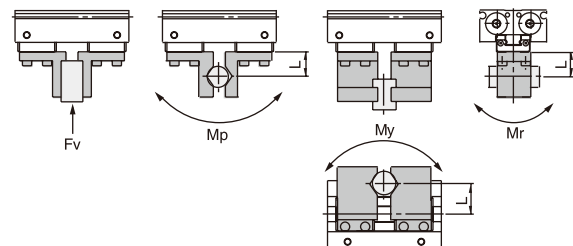
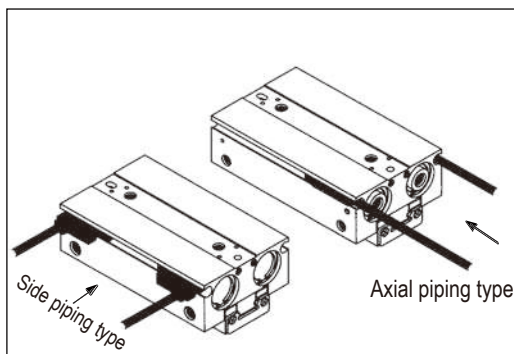
■ Much shorter than AHZ2 series.



■ standard stroke lengths for each bore size. Stroke can be selected to suit the workpiece.

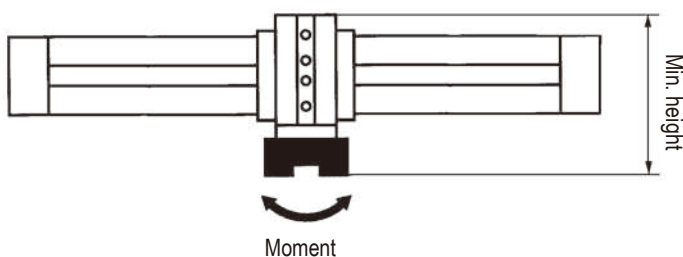


■ Centralized wiring and piping are possible.



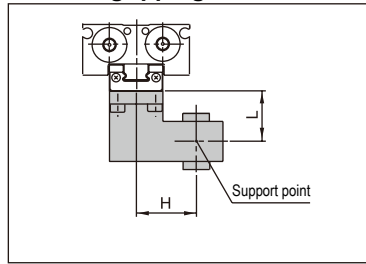
Model	Allowable vertical load Fv (N)	Max. allowable moment		
		Pitch moment Mp (N·m)	Yaw moment My (N·m)	Roll moment Mr (N·m)
AHF2-8D □	58	0.26	0.26	0.53
AHF2-12D □	98	0.68	0.68	1.4
AHF2-16D □	176	1.4	1.4	2.8
AHF2-20D □	294	2	2	4

■ Reduce moment and vibration

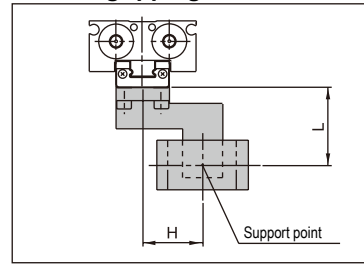


Effective gripping force

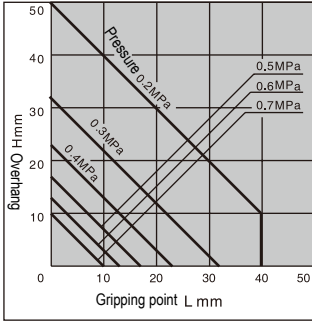
External gripping



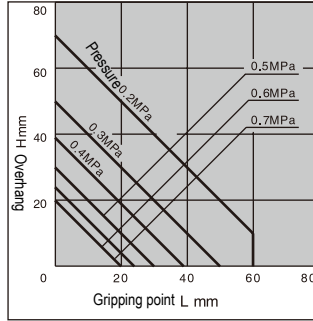
Internal gripping



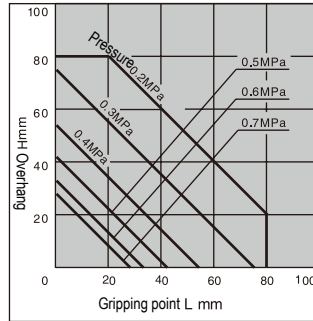
AHF2-8D □



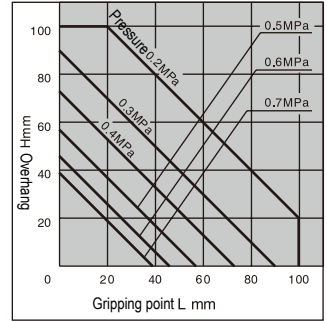
AHF2-12D □



AHF2-16D □

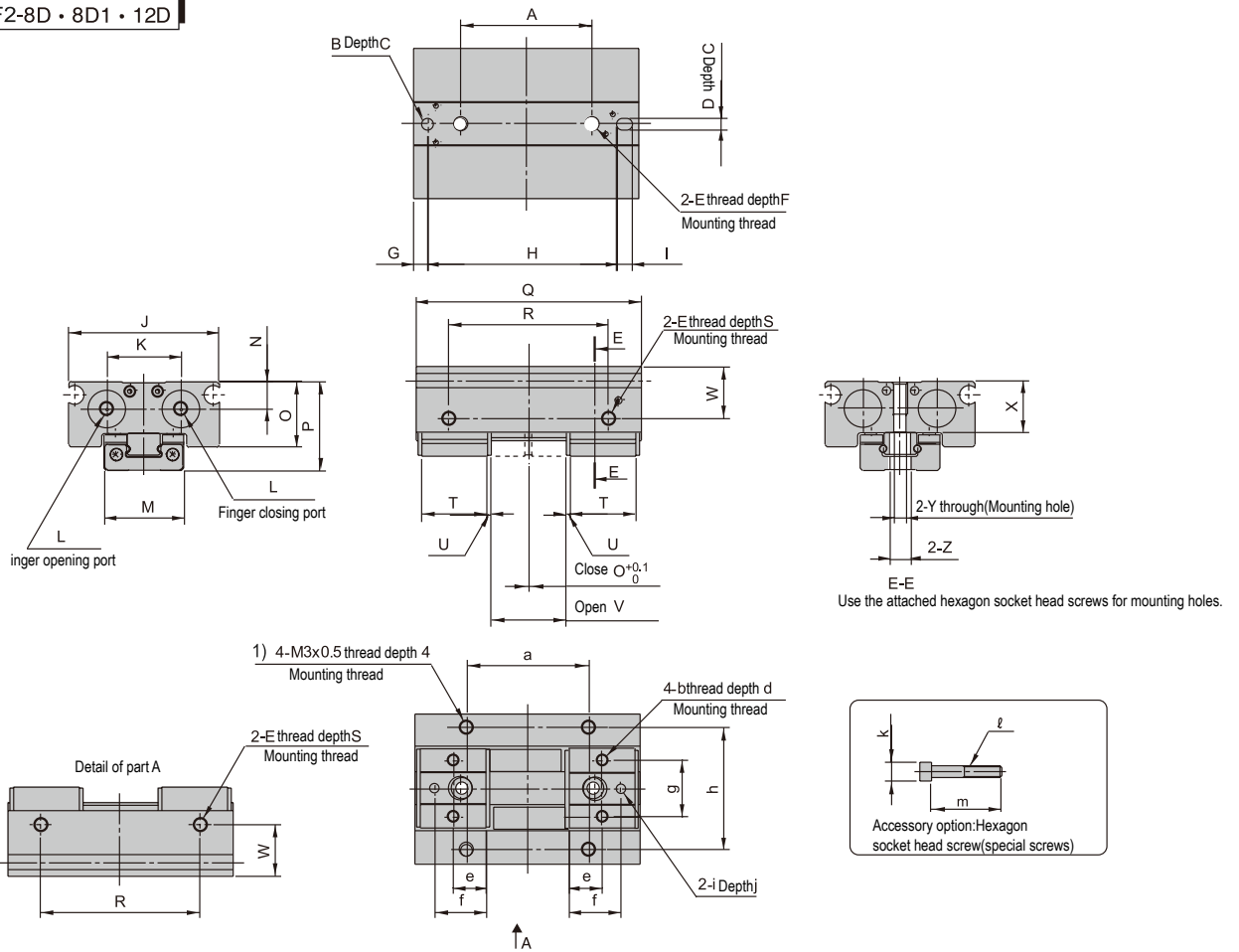


AHF2-20D □



Outline drawing(mm)

AHF2-8D • 8D1 • 12D

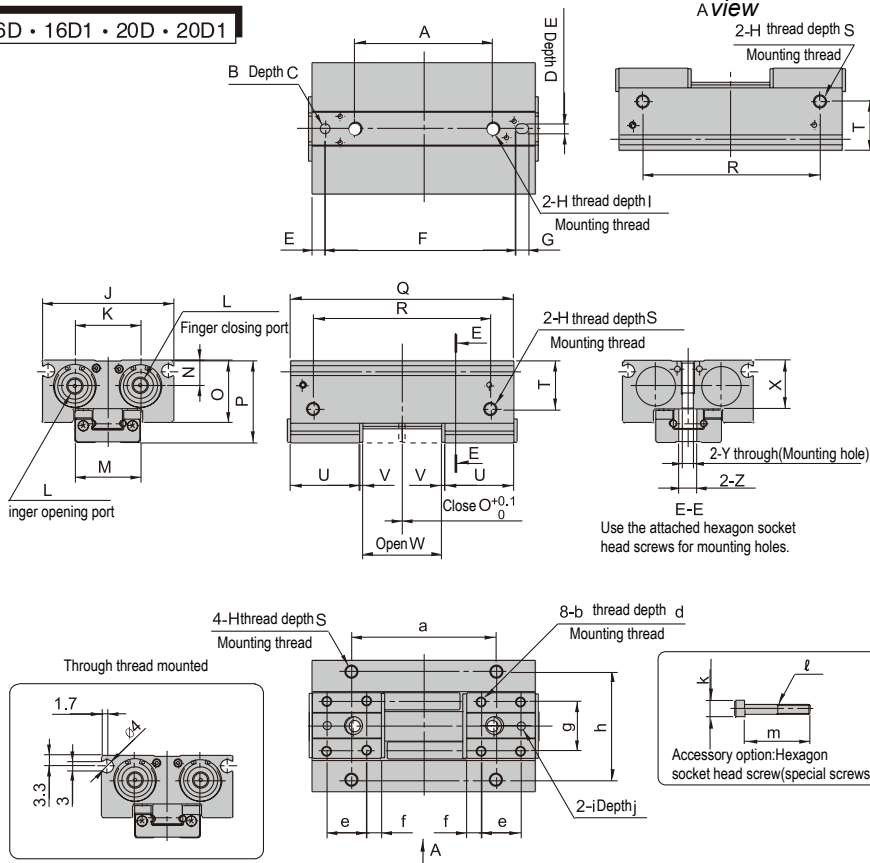


Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	l	m
AHF2-8D	16	∅2.5 ^{+0.025} ₀	2.5	∅2.5 ^{+0.025} ₀	M3 x 0.5	7	3	28.3	3.4	32	15.8	M3 x 0.5	17 ⁰ _{-0.1}	5.9	14	19	36	22	4	12	0.8	8 ^{±1}	11	11	∅2.6	∅4.5	14	M2.5 x 0.45	3	6	10	12	26	∅2 ^{+0.025} ₀	2	∅4	M2.5 x 0.45	15	
AHF2-8D1	28	∅2.5 ^{+0.025} ₀	2.5	∅2.5 ^{+0.025} ₀	M3 x 0.5	7	3	40.3	3.4	32	15.8	M3 x 0.5	17 ⁰ _{-0.1}	5.9	14	19	48	34	4	14	0.8	16 ^{±1}	11	11	∅2.6	∅4.5	26	M2.5 x 0.45	3	7	11	12	26	∅2 ^{+0.025} ₀	2	∅4	M2.5 x 0.45	15	
AHF2-12D	26	∅3 ^{+0.030} ₀	3	∅3 ^{+0.025} ₀	M4 x 0.7	10	4	42	4	40	20	M5 x 0.8	20 ⁰ _{-0.1}	7.7	19	25	52	38	5	18	1	12 ^{±1}	15	14.8	∅3.4	∅5.5	28	M3 x 0.5	4	9	14	15	33	∅2.5 ^{+0.025} ₀	2.5	∅5	M3 x 0.5	20	

Note) AHF2-12D uses mounting thread M4x0.7 and the depth is 5mm.

Effective gripping force

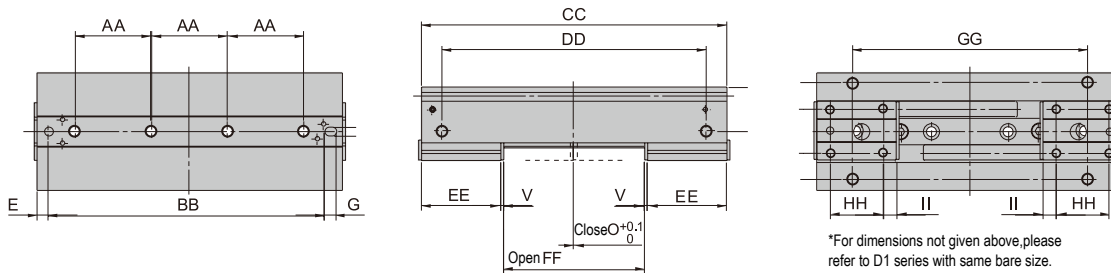
AHF2-12D1 · 16D · 16D1 · 20D · 20D1



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
AHF2-12D1	42	∅3H9 ^{+0.030} / ₀	3	∅3H9 ^{+0.025} / ₀	4	58	4	M4 x 0.7	10	40	20	M5x0.8	20 ⁰ / _{-0.1}	7.7	19	25	68	54	5	15	21	1
AHF2-16D	38	∅4H9 ^{+0.030} / ₀	3	∅4H9 ^{+0.030} / ₀	6	57.5	5	M5 x 0.8	12	50	26	M5x0.8	27 ⁰ / _{-0.1}	10.6	24	33	72	52	5.5	20	25	1.2
AHF2-16D1	60	∅4H9 ^{+0.030} / ₀	3	∅4H9 ^{+0.030} / ₀	3	79.5	5	M5 x 0.8	12	50	26	M5x0.8	27 ⁰ / _{-0.1}	10.6	24	33	94	74	5.5	20	29	1.2
AHF2-20D	38	∅5H9 ^{+0.030} / ₀	4	∅5H9 ^{+0.030} / ₀	4	71	6	M6 x 1	15	62	33	M5x0.8	32 ⁰ / _{-0.1}	13	30	41	86	56	6	25	31	1.2
AHF2-20D1	66	∅5H9 ^{+0.030} / ₀	4	∅5H9 ^{+0.030} / ₀	6	99	6	M6 x 1	15	62	33	M5x0.8	32 ⁰ / _{-0.1}	13	30	41	114	84	6	25	36	1.2

Model	W	X	Y	Z	a	b	d	e	f	g	h	i	j	k	ℓ	m
AHF2-12D1	24 ^{±1}	14.8	∅3.4	∅5.5	44	M3 x 0.5	4	12	4.5	15	33	∅2.5H9 ^{+0.025} / ₀	2.5	∅5	M3 x 0.5	20
AHF2-16D	16 ^{±1}	20	∅4.3	∅7.5	36	M4 x 0.7	4	15	5	20	43	∅3H9 ^{+0.025} / ₀	3	—	—	—
AHF2-16D1	32 ^{±1}	20	∅4.3	∅7.5	58	M4 x 0.7	4	18	5.5	20	43	∅3H9 ^{+0.025} / ₀	3	—	—	—
AHF2-20D	20 ^{±1}	25	∅5.2	∅10	40	M4 x 0.7	4	16	7.5	24	52	∅3H9 ^{+0.025} / ₀	3	—	—	—
AHF2-20D1	40 ^{±1}	25	∅5.2	∅10	68	M4 x 0.7	4	20	8	24	52	∅3H9 ^{+0.025} / ₀	3	—	—	—

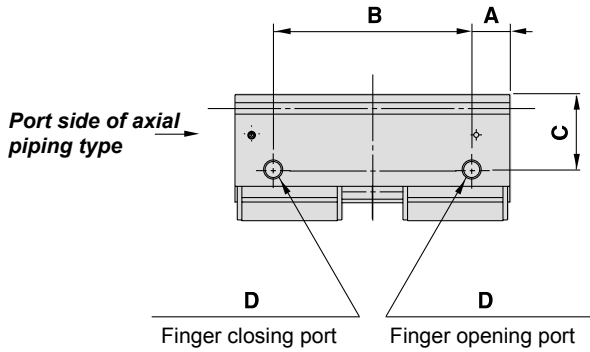
AHF2-8D2 · 12D2 · 16D2 · 20D2



Model	AA	BB	CC	DD	EE	FF	GG	HH	II
AHF2-8D2	17	64.3	72	58	18	32 ^{±1}	50	8	5
AHF2-12D2	26	94	104	90	27	48 ^{±1}	80	18	4.5
AHF2-16D2	36	127.5	142	122	37	64 ^{±1}	106	26	5.5
AHF2-20D2	42	159	174	144	46	80 ^{±1}	128	30	8

Body Option: Side Piping type

AHF2-□D□R



*For dimensions not given above,
please refer to the table of dimensions above.

Body Option Dimension

(mm)

Model	A	B	C	D
AHF2-8DR	5.5	25	11	M3 x 0.5
AHF2-8D1R		37		
AHF2-8D2R		61		
AHF2-12DR	7	38	14.8	M5 x 0.8
AHF2-12D1R		54		
AHF2-12D2R		90		
AHF2-16DR	9	54	19	M5 x 0.8
AHF2-16D1R		76		
AHF2-16D2R		124		
AHF2-20DR	10	66	23	M5 x 0.8
AHF2-20D1R		94		
AHF2-20D2R		154		