



## Air bearing cylinder "AC" series

### ■ Features

- Air bearing is adopted for rod guide part.
- Since the rod and the guide are not in contact with each other, there is no frictional resistance and super precise control is possible. Also, there is no wear and dust generation.



### ■ Applications

- Precision pressure control not possible with conventional cylinders.
- Precision tension control of printing machines and plastic production equipment etc.

### ■ Specification

Operating Style	Single action (Push) / Double action
Cylinder Diameter (mm[in.])	10 ~ 100[0.39 ~ 3.93]
Stroke (mm[in.])	20 ~ 160[0.79 ~ 6.30]
Working Fluid	Clean compressed air (No lubricator)
Working Pressure Range (MPa[psi])	0.01~0.6 (※1) [1.5~87.0]
Working Temperature (°C[° F])	0~60[32~140]
Bearing type	Metal sintered body

\*1The supply pressure to the air bearing should be at least +50kPa[7.25] working pressure.

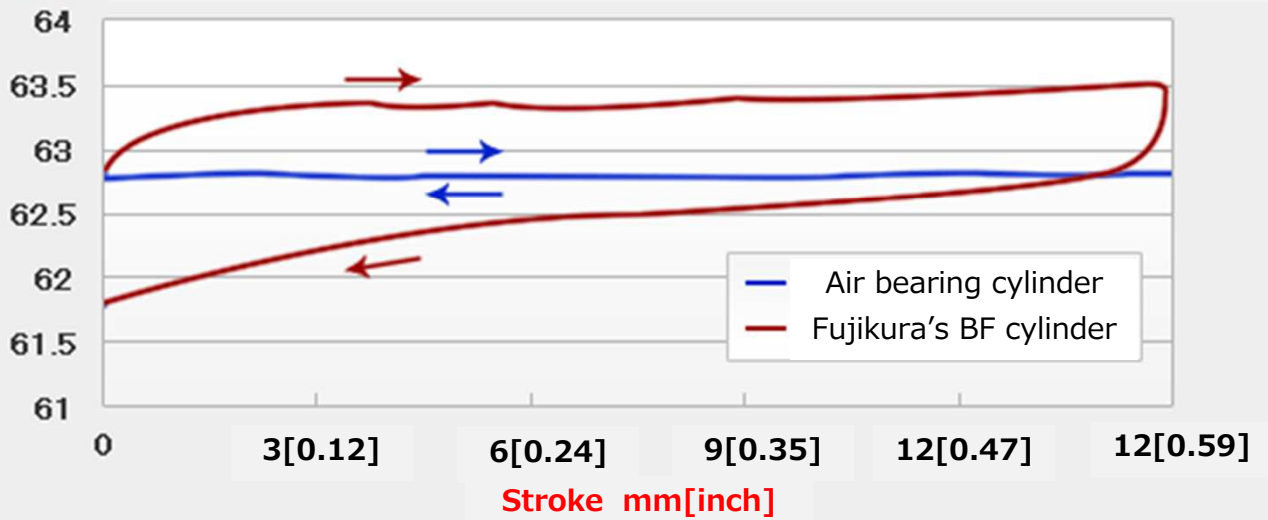


## ■ Compare with BF cylinder

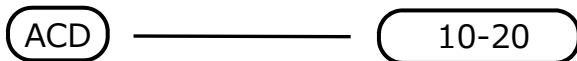
### Compare hysteresis of cylinder's thrust

(Supply pressure:0.2Mpa[2.90psi] Bearing pressure:0.5Mpa[7.25psi])

Cylinder thrust



## ■ Model designation



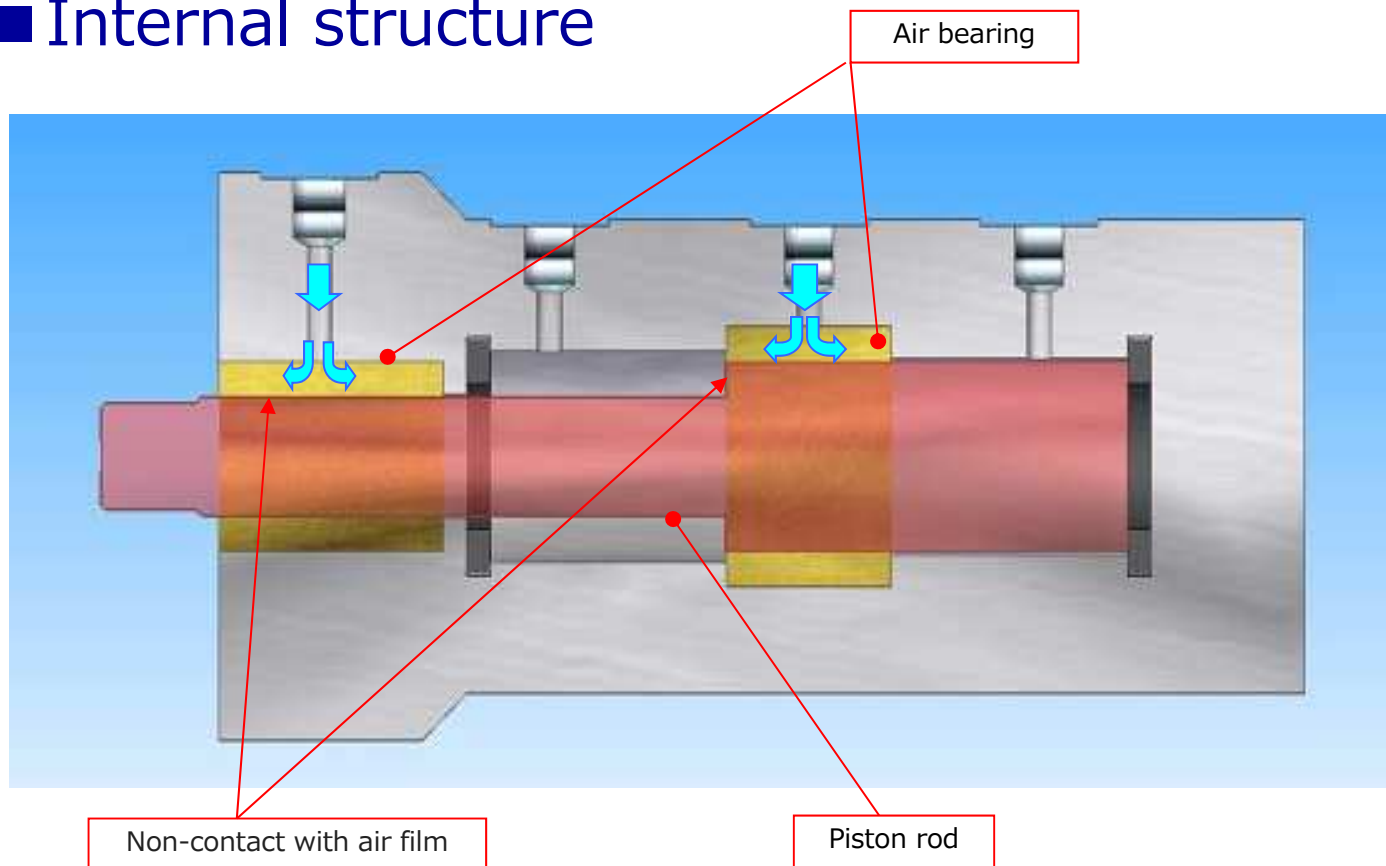
Operation style	
ACS	Single Action (push)
ACD	Double Action

Cylinder Diameter – Stroke	
mm	inch
10-20	0.39-0.79
12-20	0.47-0.79
16-20	0.63-0.79
20-30	0.79-1.18
30-40	1.18-1.57
40-60	1.57-2.36
50-70	1.97-2.76
63-80	2.48-3.15
80-120	3.15-4.72
100-160	3.93-6.30



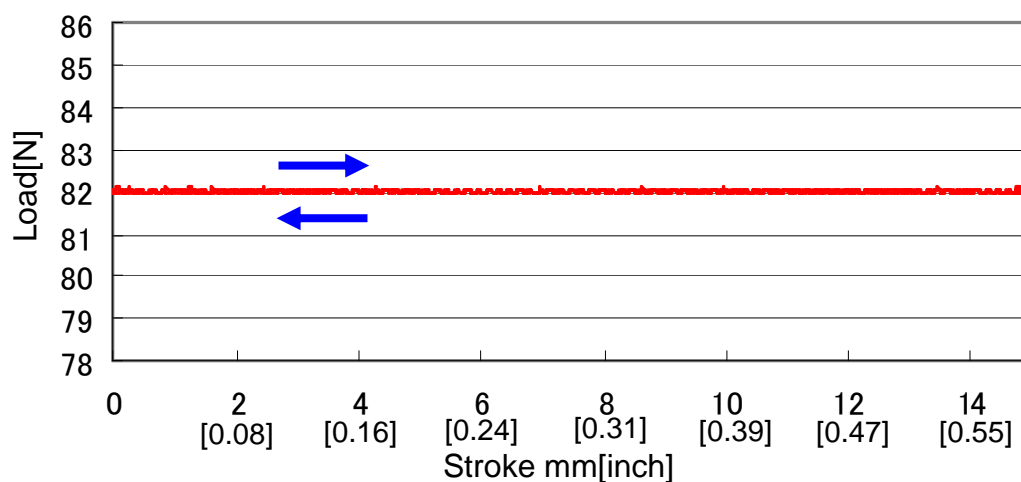
# FUJIKURA COMPOSITES

## Internal structure



## Hysteresis Characteristic

Model ACS-16-20

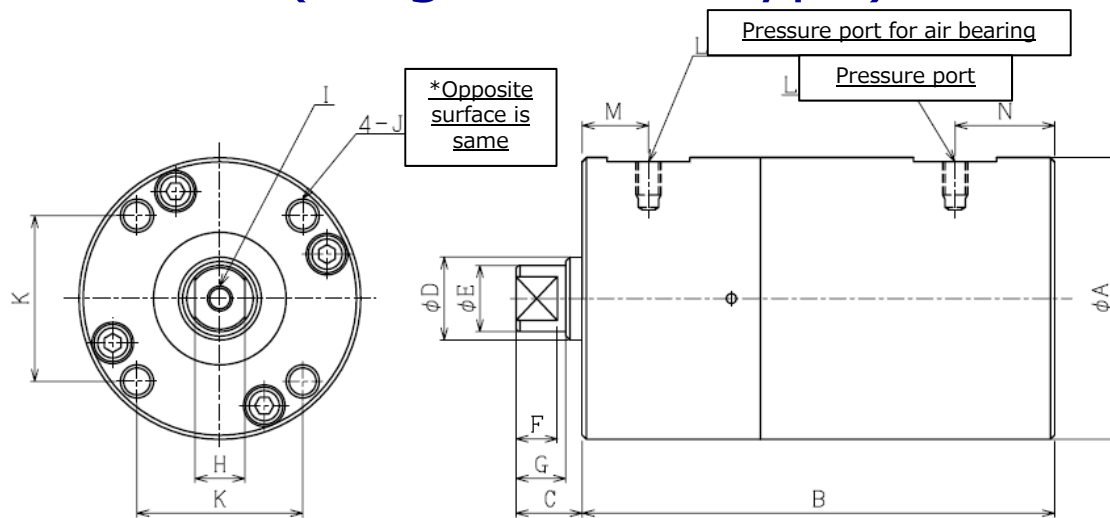


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# FUJIKURA COMPOSITES

## ■ Cylinder size(Single action type)



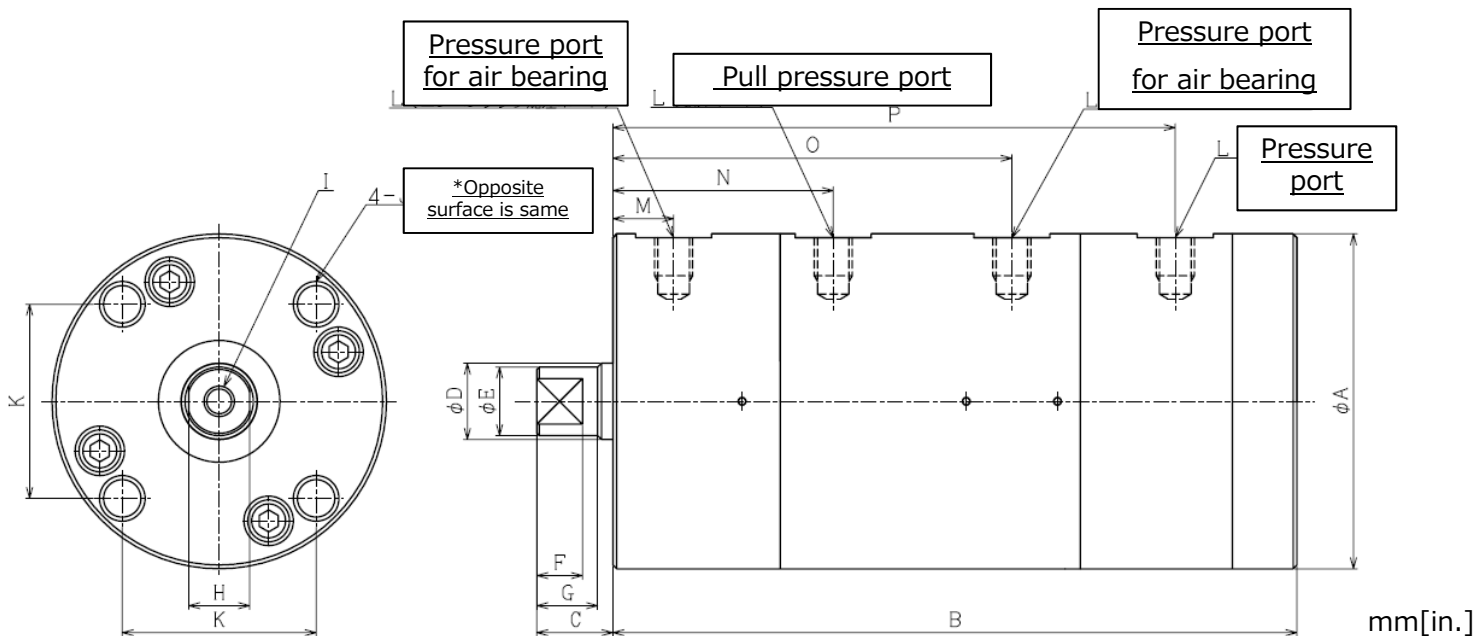
mm[in.]

Cylinder Diameter-Stroke	A	B	C	D	E	F	G	H (Two side width)	I	J	K	L	M	N
10-20 [0.39-0.79]	34 [1.34]	57 [2.24]	8 [0.31]	10 [0.39]	8 [0.31]	5 [0.20]	6 [0.24]	6 [0.24]	M3 Depth6 [0.24]	M4 Depth7 [0.28]	20 [0.79]	M3 Depth4 [0.16]	8 [0.31]	12 [0.47]
12-20 [0.47-0.79]	34 [1.34]	57 [2.24]	8 [0.31]	12 [0.47]	10 [0.39]	5 [0.20]	6 [0.24]	8 [0.31]	M3 Depth6 [0.24]	M4 Depth7 [0.28]	20 [0.79]	M3 Depth4 [0.16]	8 [0.31]	12 [0.47]
16-20 [0.63-0.79]	44 [1.73]	65 [2.56]	10 [0.39]	16 [0.63]	14 [0.55]	5 [0.20]	6 [0.24]	12 [0.47]	M4 Depth8 [0.31]	M6 Depth10 [0.39]	25.5 [1.00]	M5 Depth5 [0.20]	12 [0.47]	12 [0.47]
20-30 [0.79-1.18]	47 [1.85]	76.5 [3.01]	10 [0.39]	20 [0.59]	18 [0.71]	5 [0.20]	6 [0.24]	17 [0.67]	M5 Depth10 [0.39]	M6 Depth10 [0.39]	28 [1.10]	M5 Depth5 [0.20]	12.5 [0.49]	13 [0.51]
30-40 [1.18-1.57]	62 [2.44]	93 [3.66]	12 [0.47]	30 [1.18]	28 [1.10]	5 [0.20]	8 [0.31]	24 [0.94]	M8 Depth12 [0.47]	M6 Depth10 [0.39]	38 [1.50]	M5 Depth5 [0.20]	15 [0.47]	13 [0.51]
40-60 [1.57-2.36]	74 [2.91]	123 [4.84]	12 [0.47]	40 [1.57]	38 [1.50]	5 [0.20]	8 [0.31]	36 [1.42]	M8 Depth12 [0.47]	M6 Depth10 [0.39]	45 [1.81]	M5 Depth5 [0.20]	20 [0.79]	13 [0.51]
50-70 [1.97-2.76]	85 [3.35]	145 [5.71]	15 [0.59]	50 [1.97]	48 [1.89]	8 [0.31]	10 [0.39]	46 [1.81]	M10 Depth12 [0.47]	M6 Depth10 [0.39]	54 [2.13]	M5d Epth5 [0.20]	25 [0.98]	13 [0.51]
63-80 [2.48-3.15]	102 [4.02]	167 [6.57]	20 [0.79]	63 [2.48]	61 [2.40]	10 [0.39]	12 [0.47]	58 [2.28]	M12 Depth15 [0.47]	M6 Depth10 [0.39]	65 [2.56]	M5 Depth5 [0.20]	30 [1.18]	13 [0.51]
80-120 [3.15-4.72]	122 [4.80]	220 [8.66]	20 [0.79]	80 [3.15]	78 [3.07]	10 [0.39]	12 [0.47]	75 [2.95]	M12 Depth15 [0.47]	M8 Depth12 [0.47]	78 [3.07]	Rc1/4	35 [1.38]	16.5 [0.65]
100-160 [3.93-6.30]	146 [5.75]	272 [10.71]	25 [0.98]	100 [3.94]	98 [3.86]	13 [0.51]	15 [0.47]	94 [3.70]	M12 Depth15 [0.47]	M10 depth15 [0.47]	94 [3.70]	Rc1/4	40 [1.57]	16.5 [0.65]



# FUJIKURA COMPOSITES

## ■ Cylinder size(Double action type)



Cylinder Diameter-Stroke	A	B	C	D	E	F	G	H (Two side width)	I	J	K	L	M	N	O	P
16-20 [0.63-0.79]	44 [1.73]	90 [3.54]	10 [0.39]	10 [0.39]	9 [0.35]	6 [0.24]	8 [0.31]	8 [0.31]	M4 Depth8 [0.31]	M6 Depth10 [0.39]	25.5 [1.00]	M5 Depth5 [0.20]	8 [0.31]	29 [1.14]	52.5 [2.67]	74 [2.91]
20-30 [0.79-1.18]	47 [1.85]	114 [4.49]	10 [0.39]	10 [0.39]	9 [0.35]	6 [0.24]	8 [0.31]	8 [0.31]	M5 Depth10 [0.39]	M6 Depth10 [0.39]	28 [1.10]	M5 Depth5 [0.20]	8 [0.31]	29 [1.14]	62.5 [2.46]	95 [3.74]
30-40 [1.18-1.57]	62 [2.44]	139 [5.47]	10 [0.39]	10 [0.39]	9 [0.35]	6 [0.24]	8 [0.31]	8 [0.31]	M5 Depth10 [0.39]	M6 Depth10 [0.39]	38 [1.50]	M5 Depth5 [0.20]	8 [0.31]	29 [1.14]	75 [2.95]	120 [4.72]
40-60 [1.57-2.36]	74 [2.91]	185 [7.28]	10 [0.39]	12 [0.47]	11 [0.43]	6 [0.24]	8 [0.31]	8 [0.31]	M5 Depth10 [0.39]	M6 Depth10 [0.39]	45 [1.77]	M5 Depth5 [0.20]	8 [0.31]	29 [1.14]	97.5 [3.84]	165 [6.50]
50-70 [1.97-2.76]	85 [3.35]	218 [8.58]	15 [0.59]	16 [0.63]	15 [0.59]	6 [0.24]	8 [0.31]	12 [0.47]	M5 Depth10 [0.39]	M6 Depth10 [0.39]	54 [2.13]	M5 Depth5 [0.20]	12 [0.47]	37 [1.45]	118 [4.65]	198 [7.80]
63-80 [2.48-3.15]	102 [4.02]	243 [9.57]	15 [0.59]	16 [0.63]	15 [0.59]	6 [0.24]	8 [0.31]	12 [0.47]	M5 Depth10 [0.39]	M6 Depth10 [0.39]	65 [2.56]	M5 Depth5 [0.20]	12 [0.47]	37 [1.45]	130.5 [5.14]	223 [8.78]
80-120 [3.15-4.72]	122 [4.80]	334 [13.15]	15 [0.59]	20 [0.79]	19 [0.75]	6 [0.24]	8 [0.31]	17 [0.67]	M6 Depth12 [0.47]	M8 Depth12 [0.47]	78 [3.07]	Rc1/4	12.5 [0.49]	42 [1.65]	176.5 [6.95]	312 [12.28]
100-160 [3.93-6.30]	146 [5.75]	420 [16.54]	20 [0.79]	20 [0.79]	19 [0.75]	6 [0.24]	8 [0.31]	17 [0.67]	M6 Depth12 [0.47]	M10 Depth15 [0.59]	94 [3.70]	Rc1/4	12.5 [0.49]	42 [1.65]	219 [8.62]	397 [15.63]