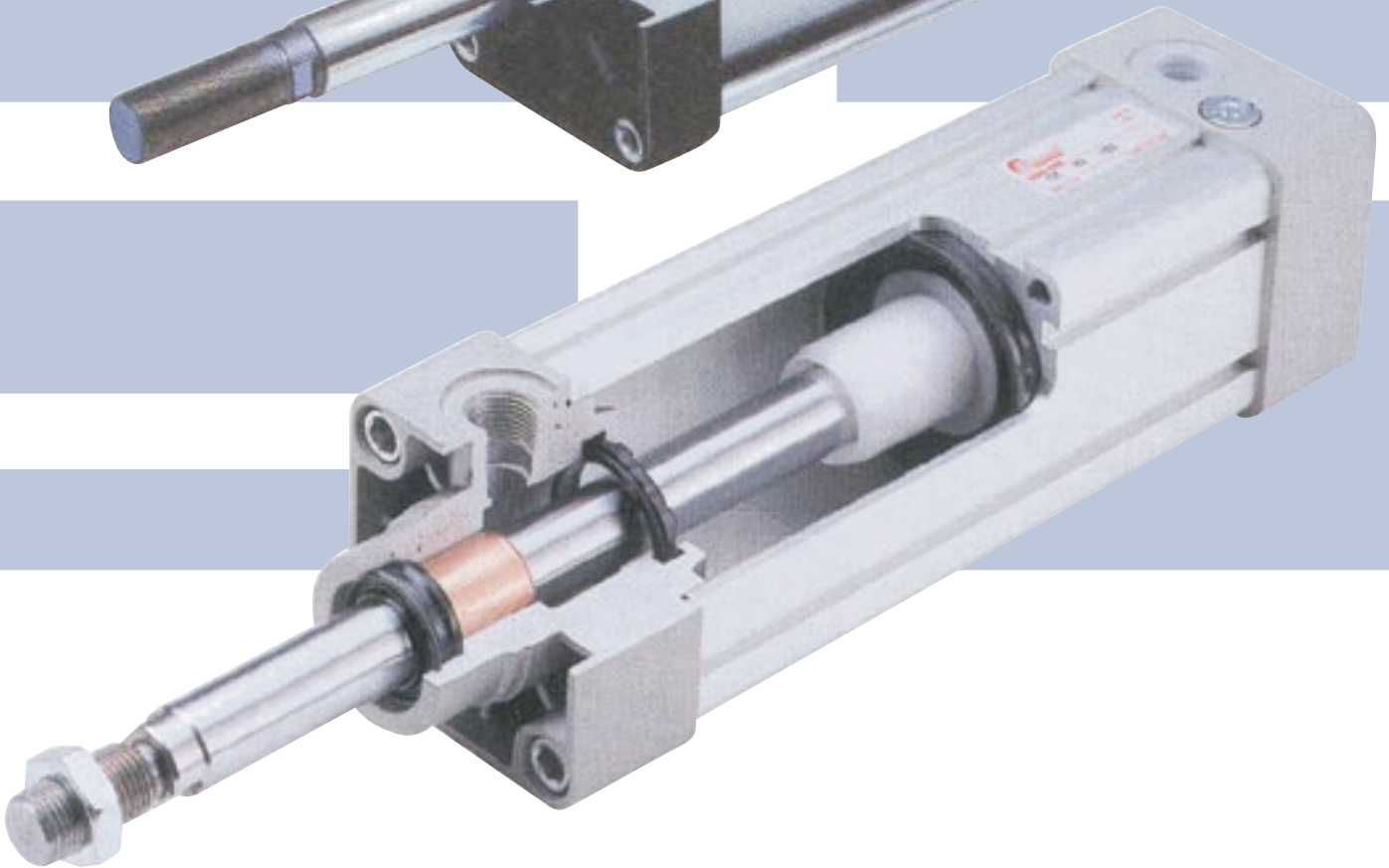
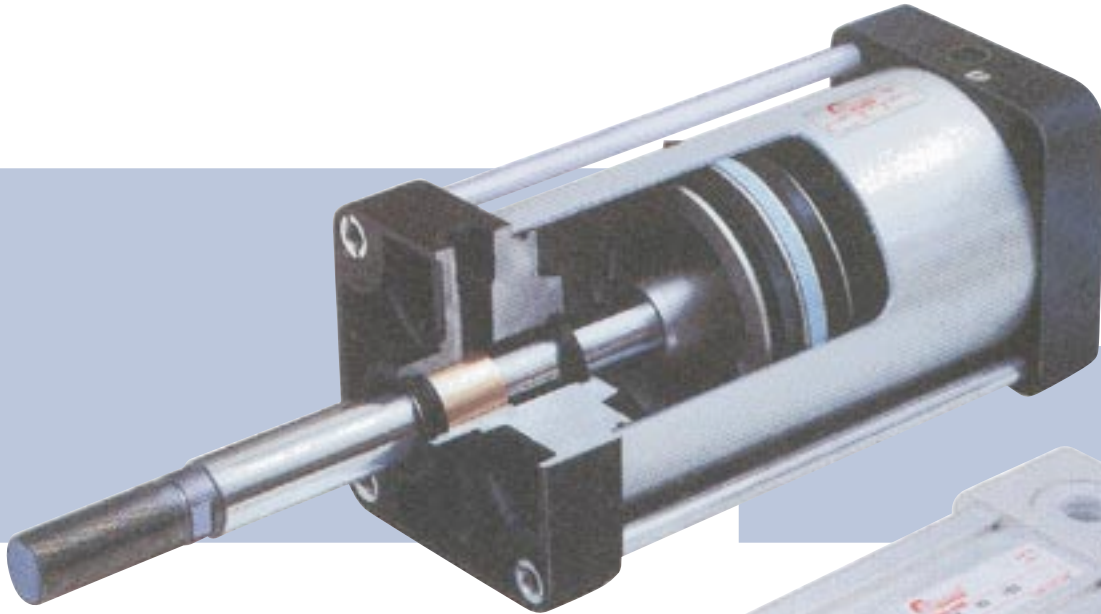




# Pneumatic Cylinders

ISO 6431 VDMA 24562

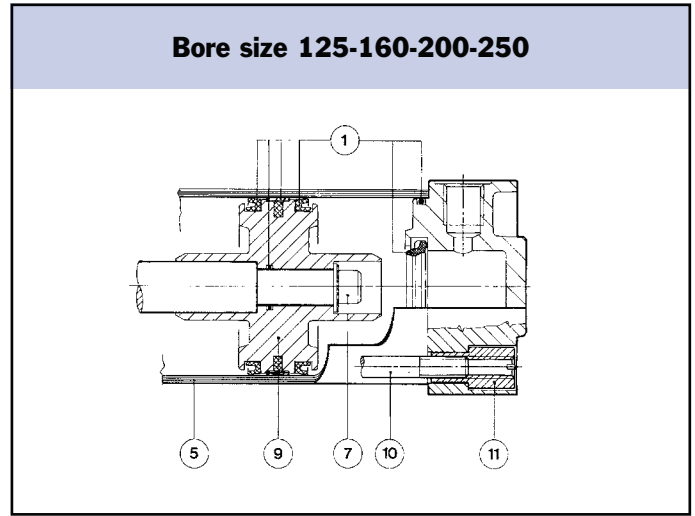
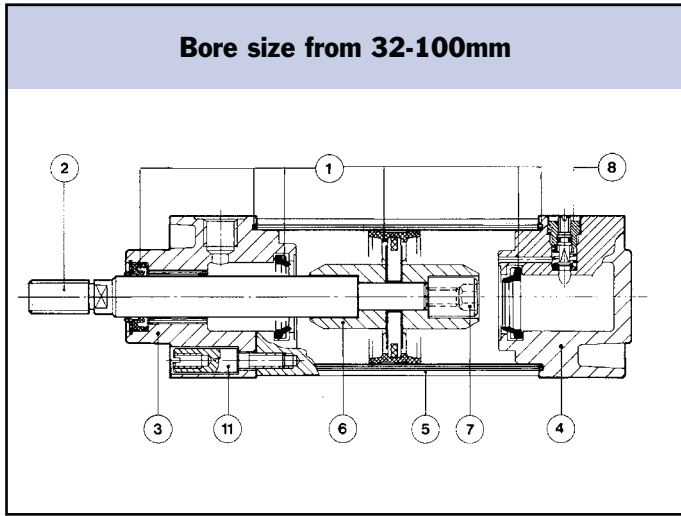


Supplied by  
**FINNCO FLUID POWER.**

21 Waters Street, Rotorua  
Ph: (07) 347 4446 Fax: (07) 347 4449

# Technical Data

**Medium:** Compressed Air, Filtered, Lubricated & Non-Lubricated.  
**Pressure:** 1 – 10 bar.  
**Ambient Temperature:** -20 deg C to + 70 deg C. High Temperature Option Available to 180 deg C.



1. Seals, low friction NBR material ensures long life, high temperature option (HT)
2. Piston Rod, hard chrome steel is standard, stainless steel option (SS)
3. Front End Cap, aluminium black anodized

4. Rear End Cap, aluminium black anodized
5. Barrel, profile style, ground & anodized
6. Cushion Boss
7. Ring Nut

8. Micrometer Cushion Screw for unique cushioning capability
9. Piston, magnetic option for reed switch (M)
10. Tie rod
11. Screw, female thread for mounting

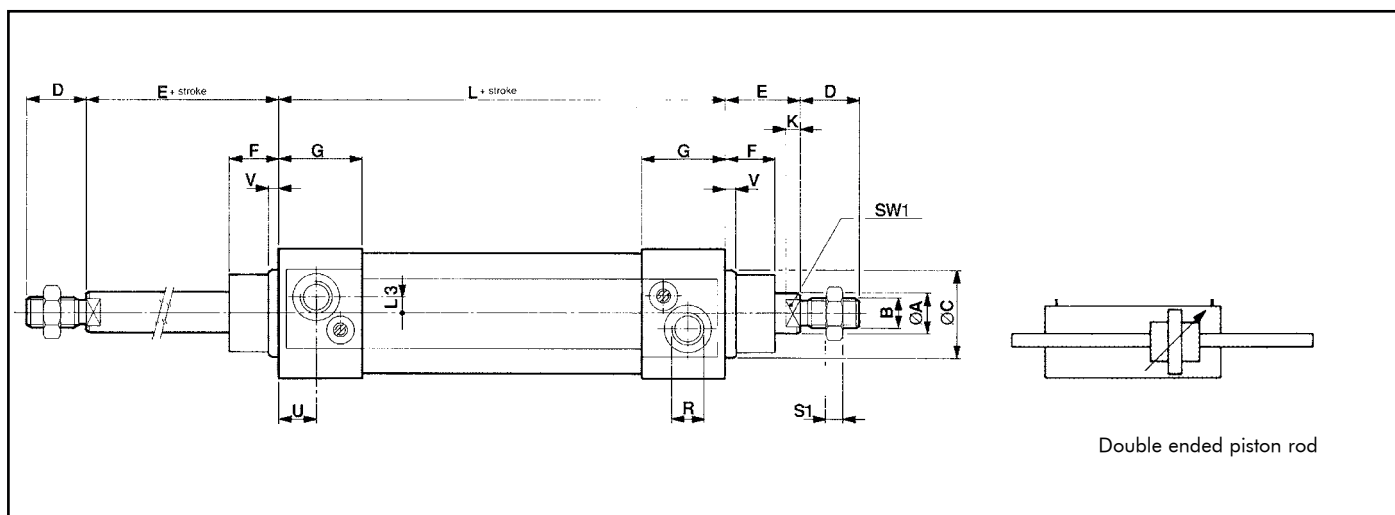
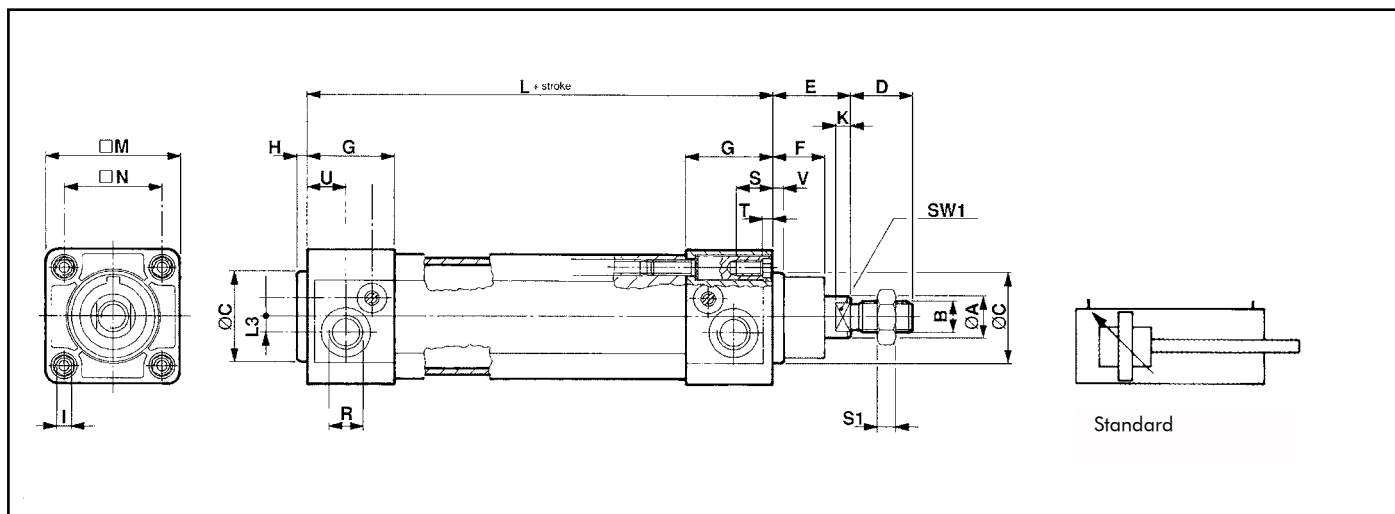
## Main Specifications

	Cyl.Ø	32	40	50	63	80	100	125	160	200	250
Area on push side	cm <sup>2</sup>	8.0	12.5	19.5	31	50	78.5	123	201	314.1	491
Area on pull side	cm <sup>2</sup>	6.9	10.6	16.5	28.0	45.3	73.6	114.6	188.4	301.4	471
Push force at 6 bar	N	482	754	1178	1870	3015	4712	7363	12064	18849	29460
Pull force at 6 bar	N	415	633	989	1681	2721	4416	6876	11304	18084	28260
Cushioning length	mm	18	23	27	33	33	33	33	37	37	42
Piston rod Ø	mm	12	16	20	20	25	25	32	40	40	50
Weight 25mm stroke	kg	0.6	0.9	1.4	1.8	3.2	3.9	5.8	11.2	15.3	33.5
Weight/100mm	kg	0.23	0.32	0.47	0.52	0.80	0.90	1.4	1.8	2.2	8.2
Port size		G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G1/2"	G3/4"	G3/4"	G1"

## Standard Strokes (Non-standard strokes up to 2500mm available by request)

Bore size	Stroke																	
	25	50	75	80	100	125	150	160	200	250	320	350	400	500	600	700	800	1000
32	●	●	●	●	●	●	●	●	●	●	●							
40	●	●	●	●	●	●	●	●	●	●	●	●	●					
50	●	●	●	●	●	●	●	●	●	●	●	●	●					
63	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
80	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
100		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
125		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
160		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
200		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
250		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

# Dimensional Features



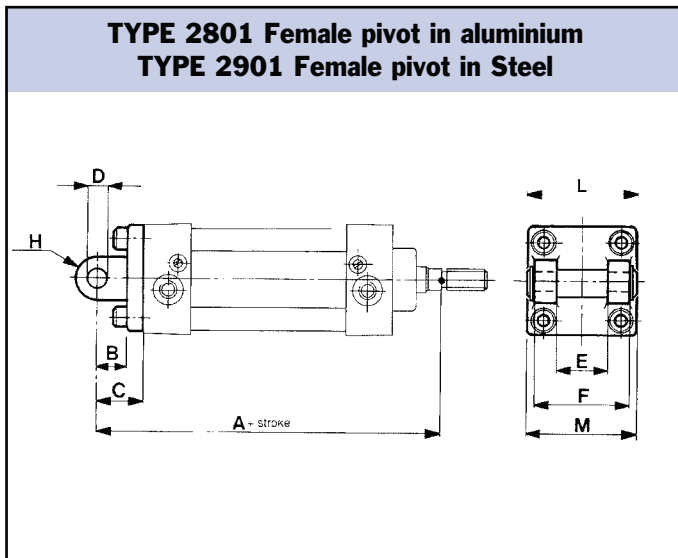
## Dimensional Features

For electrical and dimensional features of magnetic sensors used on cylinders series CXM, see page 8.

Bore	A	B	C	D	E	F	G	H	I	K	L	M	N	R	S	T	U	V	L3	SW1	S1
32	12	M10x1.25	30	22	26	16	33	4	M6	6	94	47	32.5	G1/8	16	5	14	4	5	10	5
40	16	M12x1.25	35	24	30	20	33.5	4	M6	6.5	105	52	38	G1/4	16	5	15	4	6	13	6
50	20	M16x1.5	40	32	37	25	34	4	M8	8	106	65	46.5	G1/4	16	6	15	4	6	16	8
63	20	M16x1.5	45	32	37	25	38	4	M8	8	121	75	56.5	G3/8	16	6	20	4	9.5	16	8
80	25	M20x1.5	45	40	46	30	41.5	4	M10	10	128	95	72	G3/8	16	6	20	4	9.5	21	10
100	25	M20x1.5	55	40	51	35	41.5	4	M10	10	138	115	89	G1/2	16	6	25	4	12	21	10
125	32	M27x2	60	54	65	40	45	5	M12	13	160	140	110	G1/2	20	8	30	5	12	27	13.5
160	40	M36x2	65	72	80	50	47.5	8	M16	16	180	180	140	G3/4	21	-	27.5	50	15	36	18
200	40	M36x2	75	72	95	65	47.5	8	M16	16	180	220	175	G3/4	21	-	27.5	25	15	36	18
250	50	M42x2	90	84	105	75	55	8	M20	20	200	270	220	G1	30	-	31	25	-	46	21

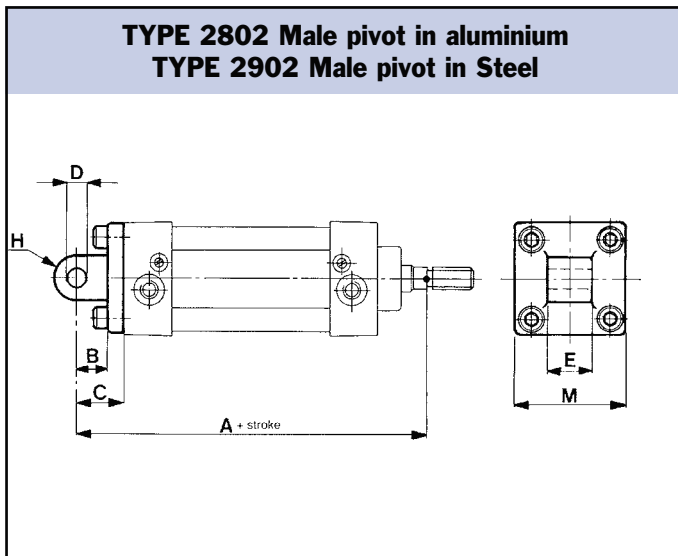
# Accessories

All accessories are provided with screws for the assembly of cylinders.



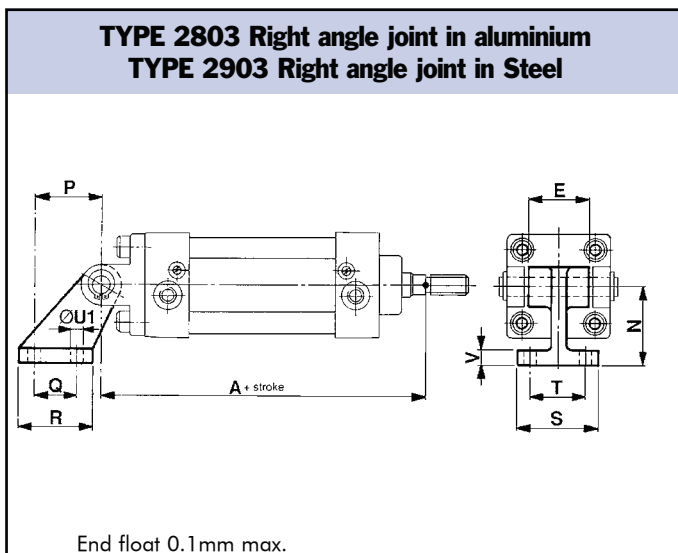
Bore size mm	A	B	C ± 0.2	D H9	E H14	F h14	H	L Pin length	M	Fixing screw UNI 593
32	142	13	22	10	26	45	10	52	45	M6x18
40	160	16	25	12	28	52	12	59	52	M6x18
50	170	16	27	12	32	60	12	67	65	M8x20
63	190	21	32	16	40	70	16	77	75	M8x20
80	210	22	36	16	50	90	16	97	95	M10x25
100	230	27	41	20	60	110	20	118	115	M10x25
125	275	30	50	25	70	130	25	138	140	M12x30
160	315	35	55	30	90	170	30	180	180	M16x30
200	335	35	60	30	90	170	30	180	220	M16x30
250	375	45	70	40	110	200	40	210	270	M20x30

Mounting comes complete with Pin & Circlips



Bore size mm	A	B	C ± 0.2	D H9	E -0.2 -0.6	H	M	Fixing screw UNI5931
32	142	13	22	10	26	10	45	M6x18
40	160	16	25	12	28	12	52	M6x18
50	170	16	27	12	32	12	65	M8x20
63	190	21	32	16	40	16	75	M8x20
80	210	22	36	16	50	16	95	M10x25
100	230	27	41	20	60	20	115	M10x25
125	275	30	50	25	70	25	140	M12x30
160	315	35	55	30	90	30	180	M16x30
200	335	35	60	30	90	30	220	M16x30
250	375	45	70	40	110	40	270	M20x30

Bore 125 - 250. E = -0.5 to -1.2

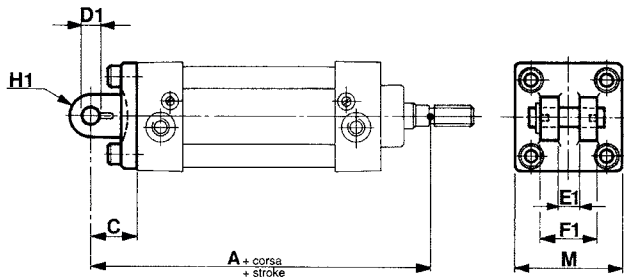


Bore size mm	A	W	N Js15	P Js15	Q Js14	R	S	T Js14	U1	V
32	142	26	32	21	18	31	51	38	6.5	8
40	160	28	36	24	22	35	54	41	6.5	10
50	170	32	45	33	30	45	65	50	9	12
63	190	40	50	37	35	50	67	52	9	12
80	210	50	63	47	40	60	86	66	11	14
100	230	60	71	55	50	70	96	76	11	15

End float 0.1mm max.

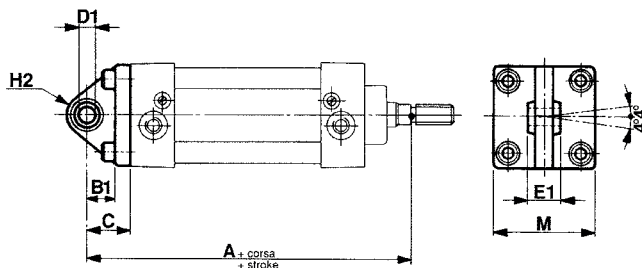


### TYPE 2904 Fork pivot in Steel



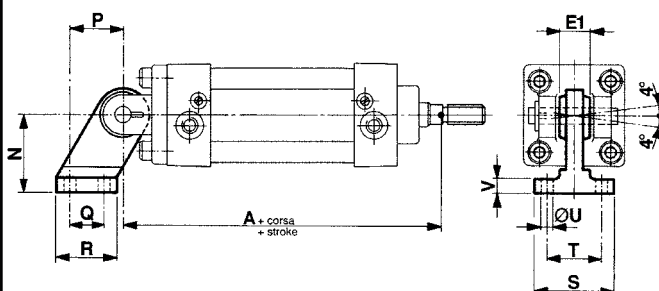
Bore size mm	A	C	D1	E1	F1	H1	M	Fixing screw UNI 5931
		$\pm 0.2$	F7	H14	d12	max		
32	142	22	10	14	34	11	45	M6x18
40	160	25	12	16	40	13	55	M6x18
50	170	27	16	21	45	18	65	M8x20
63	190	32	16	21	51	18	75	M8x20
80	210	36	20	25	65	22	95	M10x25
100	230	41	20	25	75	22	115	M10x25

### TYPE 2905 Male pivot in Steel with ball joint pin 648K



Bore size mm	A	B1	C	D1	E1	H2	M	Fixing screw UNI5931
			$\pm 0.2$	H7	-0.1	max		
32	142	12	22	10	14	15	45	M6x18
40	160	15	25	12	16	18	52	M6x18
50	170	17	27	16	21	20	65	M8x20
63	190	20	32	16	21	23	75	M8x20
80	210	20	36	20	25	27	95	M10x25
100	230	25	41	20	25	30	115	M10x25

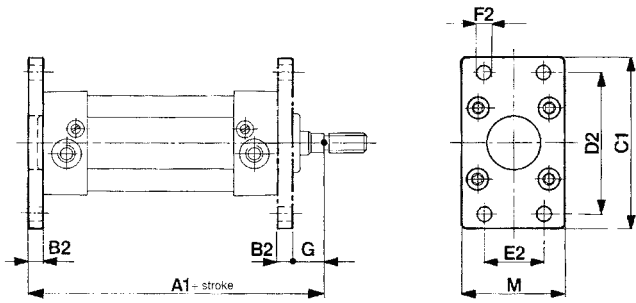
### TYPE 2906 Right angle pivot with ball joint 648K



Bore size mm	A	E1	N	P	Q	R	S	T	U	V
		-0.1	Js15	Js15	Js14			Js14		
32	142	14	32	21	18	31	51	38	6.5	8
40	160	16	36	24	22	35	54	41	6.5	10
50	170	21	45	33	30	45	65	50	8.5	12
63	190	21	50	37	35	50	67	52	8.5	12
80	210	25	63	47	40	60	86	66	10.5	14
100	230	25	71	55	50	70	96	76	10.5	15

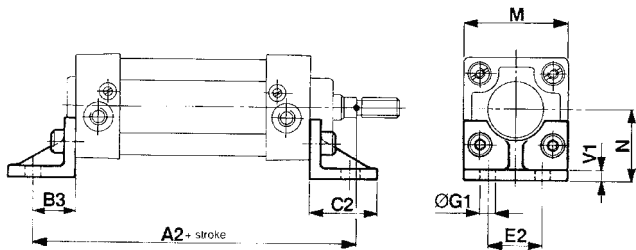
# Accessories

**TYPE 2907 Front/Rear flange in zinc-plated steel**



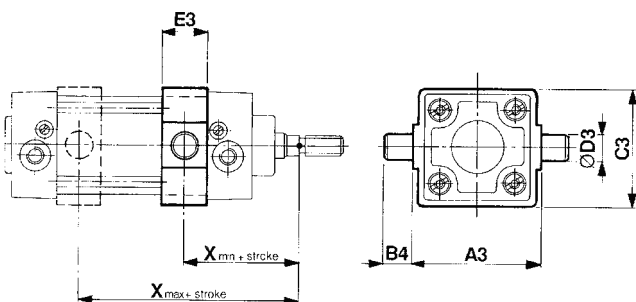
Bore size mm	A1	B2	C1	D2	E2	F2	G	M	Fixing screw
	Js14			Js14	Js14	H13			UNI5931
32	130	10	80	64	32	7	16	45	M6x18
40	145	10	90	72	36	9	20	52	M6x18
50	155	12	110	90	45	9	25	65	M8x20
63	170	12	120	100	50	9	25	75	M8x20
80	190	16	150	126	63	12	30	95	M10x20
100	205	16	170	150	75	14	35	115	M10x20
125	245	20	205	180	90	16	45	140	M12x30
160	280	20	260	230	115	18	60	180	M16x30
200	300	25	310	270	135	22	70	220	M16x30
250	330	25	380	330	165	26	80	270	M20x30

**TYPE 2908 Foot mounting in zinc-plated steel**



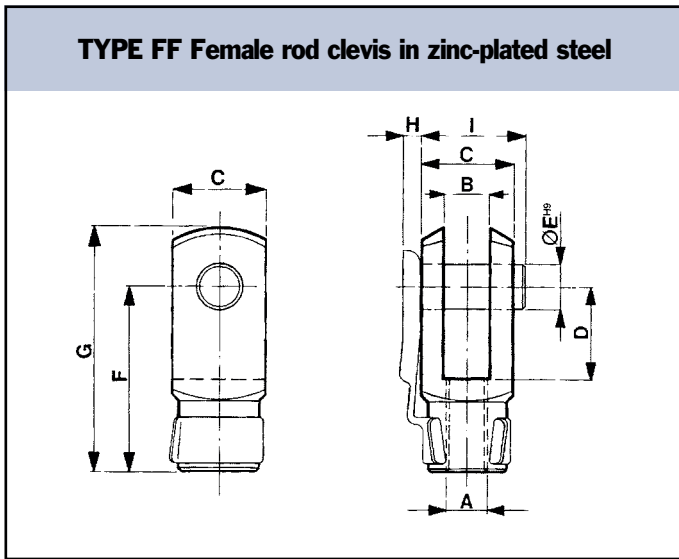
Bore size mm	A2	B3	C2	E2	G1	M	N	V1	Fixing screw
	±0.2			Js14	H13		Js15		UNI5931
32	144	24	35	32	7	45	32	3.5	M6x18
40	163	28	36	36	9	52	36	3.5	M6x18
50	175	32	45	45	9	65	45	3.5	M8x20
63	190	32	45	50	9	75	50	4.5	M8x20
80	215	41	55	63	12	95	63	5	M10x20
100	230	41	56	75	14	115	71	5	M10x20
125	270	45	68	90	16	140	90	9	M12x30
160	320	60	80	115	18	180	115	12	M16x30
200	345	70	85	135	22	220	135	12	M16x30
250	380	75	100	165	26	270	165	20	M20x40

**TYPE 2909 Intermediate pivot in cast iron or zinc-plated steel (round cylinder tube)**

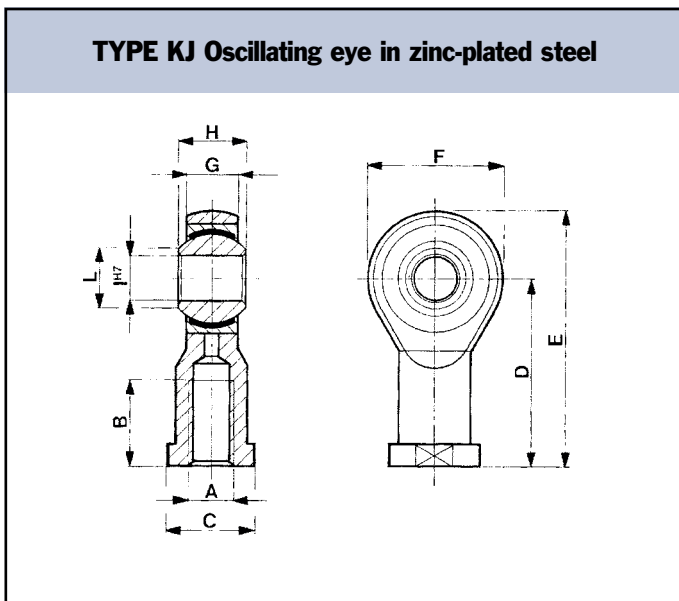


Bore size mm	A3	B4	C3	D3	E3	X	X
	h14	h14		e9		min	max
32	50	12	57	12	25	71.5	74.5
40	63	16	59	16	30	78.5	86.5
50	75	16	71	16	30	86	94
63	90	20	86	20	35	92.5	102.5
80	110	20	106	20	40	107.5	112.5
100	132	25	128	25	45	115	125
125	160	25	155	25	50	124	155
160	200	32	190	32	50	152.5	187.5
200	250	32	240	32	50	167.5	202.5
250	320	40	300	40	60	190	220

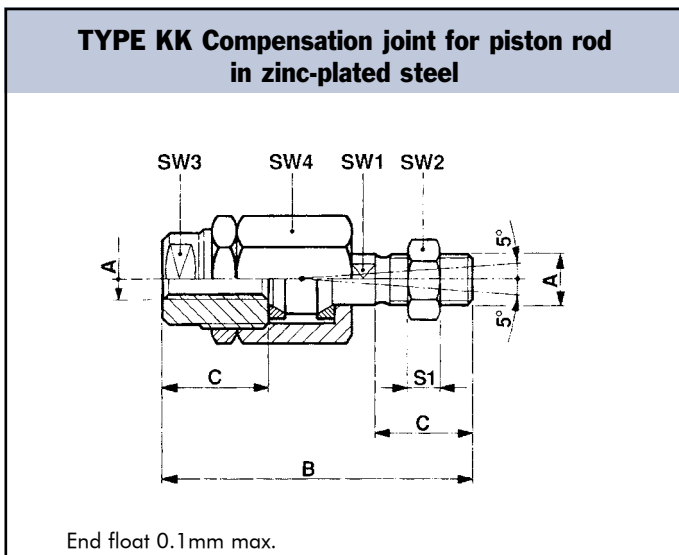
X dimension to be specified on order



Bore size mm	A	B	C	D	E	F	G	H	I
32	M10x1.25	10	20	20	10	40	52	3	23
40	M12x1.25	12	24	24	12	48	62	4	28
50	M16x1.5	16	32	32	16	64	83	4	36
63	M16x1.5	16	32	32	16	64	83	4	36
80	M20x1.5	20	40	40	20	80	105	4	44
100	M20x1.5	20	40	40	20	80	105	4	44
125	M27x2	30	55	54	30	110	148	-	65
160	M36x2	35	70	72	35	144	188	-	84
200	M36x2	35	70	72	35	144	188	-	84
250	M42x2	40	85	84	40	168	232	-	96



Bore size mm	A	B	C	D	E	F	G	H	I	L
32	M10x1.25	20	17	43	57	28	10.5	14	10	12.9
40	M12x1.25	22	19	50	66	32	12	16	12	15.4
50	M16x1.5	28	22	64	85	42	15	21	16	19.3
63	M16x1.5	28	22	64	85	42	15	21	16	19.3
80	M20x1.5	33	30	77	102	50	18	25	20	24.3
100	M20x1.5	33	30	77	102	50	18	25	20	24.3
125	M27x2	51	41	110	145	70	25	37	30	34.8
160	M36x2	56	50	125	165	80	28	43	35	37.7
200	M36x2	56	50	125	165	80	28	43	35	37.7
250	M42x2	60	55	142	187	90	33	49	40	45.2

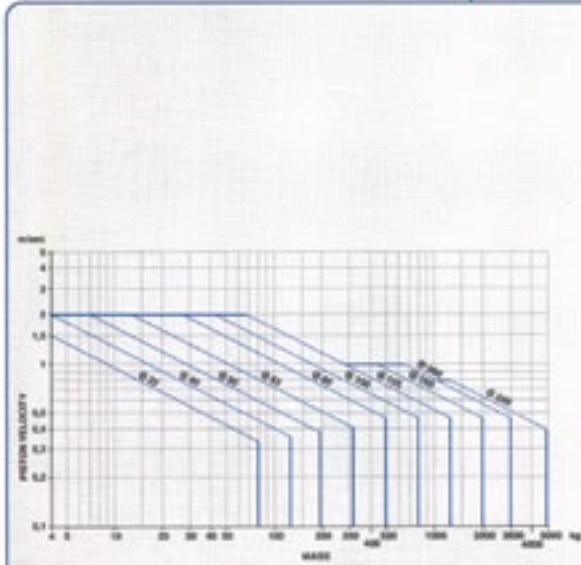
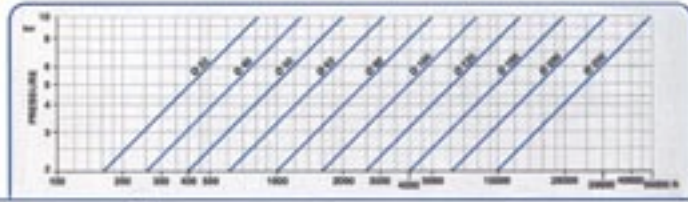


Bore size mm	A	B	C	S1	SW1	SW2	SW3	SW4
32	M10x1.25	71	20	5	12	17	19	30
40	M12x1.25	75	24	6	12	19	19	30
50	M16x1.5	103	32	8	20	24	30	42
63	M16x1.5	103	32	8	20	24	30	42
80	M20x1.5	119	40	10	20	30	30	42
100	M20x1.5	119	40	10	20	30	30	42
125	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-

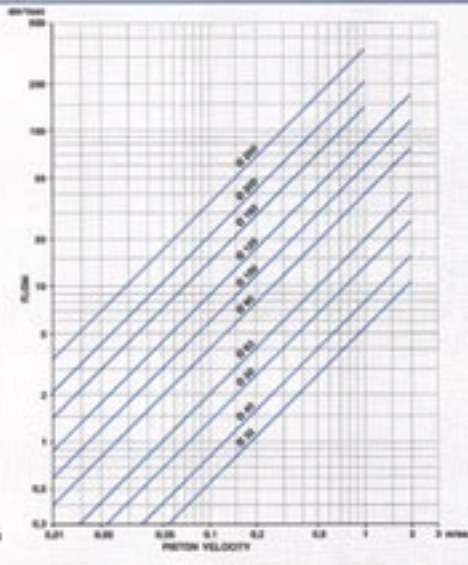
# Technical Data

## TECHNICAL DATA

Min. pressure: 1 bar  
 Max. pressure: 10 bar  
 Power fluid: filtered air with or without lubrication.  
 Temperature range: from -20°C to +70°C.



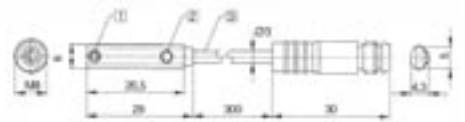
The graph shows max dampening load as a function of piston speed with feeding air at 6 bar.



The graph shows the rate of flow as a function of piston speed. Feeding air at 6 bar.

## Magneto-resistive Switch

Part Number	No. cond.	Circuit diagram	Voltage	Current	Length
BR-SMTA2C	2		3-30V AC/DC	0.1A	0.3m
BR-SMTA1C	2		10-230V AC/DC	0.1A	
BR-SMTA3D	3		24V AC/DC	0.25A	
BR-SETA3C	3		6-30V DC	0.2A	



Switch fits BCX square tube cylinders as on the front cover. BCD cylinders require an additional mounting bracket.

## Cylinder Ordering Codes

	B-CX	N	P	050	0160
Standard cylinder ISO-VDMA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-magnetic cylinder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Double ended piston rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder bore size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stroke	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- SS Stainless Steel Piston Rod
- HT High Temperature Seals to 180 deg C
- DB Dust Boot
- Mounts

## Accessories Ordering Code (If ordered individually)

	BCX	050	2801
For cylinders ISO-VDMA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder bore size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Female pivot in aluminium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NB: Magnetic cylinders are standard