

Head Rectangular Flange (NFPA Type MF1)

PART NUMBER	ROD BORE	DIA.	B	C	E	F	FB	LG**	R	TF	UF	W	WF	ZJ**
E-71-1.5	1.5	5/8	1 1/8	3/8	2	3/8	1/4	4 3/8	1.43	2 3/4	3 3/8	5/8	1	4 5/8
E-71-2	2	5/8	1 1/8	3/8	2 1/2	3/8	5/16	4 3/8	1.84	3 3/8	4 1/8	5/8	1	4 5/8
EP-71-2	1	1 1/2	5/8	2 1/2	3/8	5/16	4 3/8	1.84	3 3/8	4 1/8	1	1 3/8	5	
E-71-2.5	2.5	5/8	1 1/8	3/8	3	3/8	5/16	4 1/2	2.19	3 7/8	4 5/8	5/8	1	4 3/4
EP-71-2.5	1	1 1/2	5/8	3	3/8	5/16	4 1/2	2.19	3 7/8	4 5/8	1	1 3/8	5 1/8	
E-71-3.25	3.25	1	1 1/2	5/8	3 3/4	5/8	3/8	4 7/8	2.76	4 11/16	5 1/2	3/4	1 3/8	5 7/8
EP-71-3.25	1 3/8	2	7/8	3 3/4	5/8	3/8	4 7/8	2.76	4 11/16	5 1/2	1	1 5/8	5 7/8	
EP-71-4	4	1	1 1/2	7/8	4 1/2	5/8	3/8	4 7/8	3.32	5 7/16	6 1/4	3/4	1 3/8	5 5/8
EP-71-4	1 3/8	2	1 1/8	4 1/2	5/8	3/8	4 7/8	3.32	5 7/16	6 1/4	1	1 5/8	5 7/8	
E-71-5	5	1	1 1/2	7/8	5 1/2	5/8	1/2	5 1/8	4.10	6 5/8	7 5/8	3/4	1 3/8	5 7/8
EP-71-5	1 3/8	2	1 1/8	5 1/2	5/8	1/2	5 1/8	4.10	6 5/8	7 5/8	1	1 5/8	6 1/8	

Cap Rectangular Flange (NFPA Type MF2)

PART NUMBER	ROD BORE	DIA.	E	F	FB	R	TF	UF	ZF	ZJ**	ZF	ZJ**
D-71-1.5	1.5	5/8	2	3/8	1/4	1.43	2 3/4	3 3/8	5	4 5/8	5	4 5/8
D-71-2	2	5/8	2 1/2	3/8	5/16	1.84	3 3/8	4 1/8	5	4 5/8	5	4 5/8
D-71-2.5	2.5	5/8	3	3/8	5/16	2.19	3 7/8	4 5/8	5 1/8	4 3/4	5 1/8	4 3/4
D-71-3.25	3.25	1	3 3/4	5/8	3/8	2.76	4 11/16	5 1/2	6 1/4	5 5/8	6 1/4	5 5/8
D-71-4	4	1	4 1/2	5/8	3/8	3.32	5 7/16	6 1/4	6 1/4	5 5/8	6 1/4	5 5/8
D-71-4	1 3/8	4 1/2	5/8	3/8	3.32	5 7/16	6 1/4	6 1/2	5 7/8	6 1/2	5 7/8	
D-71-5	5	1	5 1/2	5/8	1/2	4.10	6 5/8	7 5/8	6 1/2	5 7/8	6 1/2	5 7/8
D-71-5	1 3/8	5 1/2	5/8	1/2	4.10	6 5/8	7 5/8	6 3/4	6 1/8	6 3/4	6 1/8	

Camozzi spa
Via Eritrea, 20/1
25126 Brescia
Italy
Tel: int+39+30+37921
Fax: int+39+30+2400464
E-mail: info@camozzi.com
http://www.camozzi.com

Camozzi GmbH Pneumatic
Maffenstrasse 1
73035 Goppingen
Germany
Tel: int+49+7161+910100
Fax: int+49+7161+28467
E-mail: info@camozzi.de

Camozzi Pneumatics Ltd.
Thomas Industrial Park
Watling Street
Nuneaton - Warwickshire - CV 11 6BQ
Great Britain
Tel: int+44+24+76374114
Fax: int+44+24+76347520
E-mail: sales@camozzi.co.uk
http://www.camozzi.co.uk

Camozzi Pneumatik AB
Box 9214
Bronsvägen 7
20039 Malmö
Sweden
Tel: int+46+40+222580
Fax: int+46+40+940850
E-mail: info@camozzi.se

Camozzi Pneumatic Ltd.
Floor 10, Leningradskaya Street, 1-A
Himki, Moscow Region,
141400 Moscow
Russian Federation
Tel: int+7+095+5754564
Fax: int+7+095+5754564
E-mail: camozzi-moscow@mtu-net.ru

Camozzi-Pneumatic
95018 Simferopol
38 Larianova St.
Ukraine
Tel: int+380+652+518198
Fax: int+380+652+515700
E-mail: camozzi@pop.cris.net

Camozzi Pneumatik AG
Carrera 34 no. 22 D-02
Santa Fe De Bogota
Colombia
Tel: int+57+1+5706820
Fax: int+57+1+5706828
E-mail: camozzi@latino.net.co

Camozzi Iran Co. Ltd.
Motahari Ave. No. 243
Teheran
Iran
Tel: int+9821-8736469/9821-87321
Fax: int+9821-8738552
E-mail: camir@neda.net

Shanghai Camozzi Pneumatic
Control Components Co. Ltd.
415, Ren De Road
200434 Shanghai
China
Tel: int+86+21+65363650
Fax: int+86+21+65360613
E-mail: ynxie@public1.sta.net.cn

Camozzi Pneumatics S.A. (Pty) Ltd.
PO. Box 6044 - 68 Gale Street
4001 Durban
Republic of South Africa
Tel: int+27+31+3056104-5-6-7
Fax: int+27+31+3072219
E-mail: camozzi@space.co.za

Camozzi Pneumatics Inc.
2160 Redbud Blvd., Suite 101
McKinney, Texas 75069
U.S.A.
Tel: int+1+972+548-8885
Fax: int+1+972+548-2110
E-mail: office@camozzi-usa.com

Camozzi Neumatica S.A. de C.V.
16 de Septiembre N° 5719 Col. el Cerillo
C.P. 72440 Puebla
Mexico
Tel: int+52+22+409092
Fax: int+52+22+438962
E-mail: camozzi@rpc.com.mx

Camozzi do Brasil Ltda.
Rua Estácio de Sá 530
Campinas - Sao Paulo
CEP 13080-010
Brasil
Tel: int+55-11-3208-3844
Fax: int+55-11-3208-3844
E-mail: camozzi@camozzi.com.br

Camozzi Argentina S.A.
Prof.Dr. Pedro Chutro 3048
1437 Buenos Aires
Argentina
Tel: int+54+11+49124191
Fax: int+54+11+49124191
E-mail: info@camozzi.com.ar

Camozzi Venezuela
Av. Santa Rita entre calles 82B y 83
Edif. Santa Rita, Planta Baja,
Locales 1, 2, 3, 4
Maracaibo - Venezuela
Tel: int+58+61+984337738
Fax: int+58+61+975674
E-mail: venezuela@camozzi.com

Camozzi Benelux B.V.
De Vijf Boeken 1 G
2911 BL Nieuwerkerk a/d IJssel
The Netherlands
Tel: int+31+180+316677
Fax: int+31+180+316616
E-mail: info@camozzi.nl

Camozzi Colombia, Ltda
Carrera 34 no. 22 D-02
Santa Fe De Bogota
Colombia
Tel: int+57+1+5706820
Fax: int+57+1+5706828
E-mail: camozzi@latino.net.co

Camozzi Iran Co. Ltd.
Motahari Ave. No. 243
Teheran
Iran
Tel: int+9821-8736469/9821-87321
Fax: int+9821-8738552
E-mail: camir@neda.net

Shanghai Camozzi Pneumatic
Control Components Co. Ltd.
415, Ren De Road
200434 Shanghai
China
Tel: int+86+21+65363650
Fax: int+86+21+65360613
E-mail: ynxie@public1.sta.net.cn

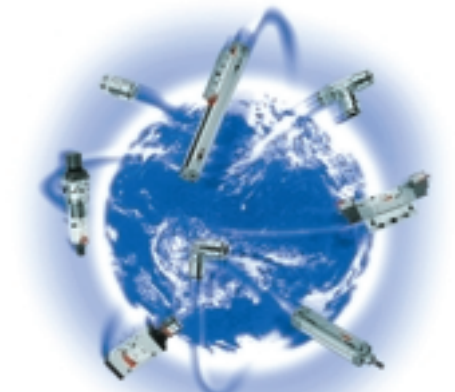
Camozzi Pneumatics S.A. (Pty) Ltd.
PO. Box 6044 - 68 Gale Street
4001 Durban
Republic of South Africa
Tel: int+27+31+3056104-5-6-7
Fax: int+27+31+3072219
E-mail: camozzi@space.co.za

For more information, please call us toll free at:
(866) 676-0600

For latest updates to this brochure, visit our website at:
www.camozzi-usa.com



- On-Line Cylinder Configurator automatically provides:**
- Appropriate proximity switches and brackets
 - 2D and 3D drawings
 - Free fittings and assembly (CPI)
 - Request for Quotation



93-1005-USA001-01/02

NFPA Cylinders



- 24 Hour Production on Standard Product
- Free Fittings and Free Assembly - Superior **Pro-Fit**® Design
- Camozzi Product Integration (CPI) - Free Assembly of Flow Control Valves, Brackets, Mounting Accessories, etc.
- Stainless-Steel Piston Rods Standard
- On-Line Cylinder Configurator with 2D and 3D Drawings
- Visit www.camozzi-usa.com

Cylinders Series 70/71 (NFPA Interchangeable)

Bore Sizes: 1.5", 2", 2.5", 3.25", 4", 5"
Rod Diameters: 5/8", 1", 1-3/8"
Stainless Steel Piston Rod
Removable Rod Bushing
Low Breakaway Force
Wash-Down Design, No Exposed Tie-Rods/Nuts



General data	
type of construction	round tube with tie-rods/profile with tie rods
operation	double-acting
materials	anodized aluminum end-blocks, other parts see coding
type of mounting	standard NFPA mounting styles
bore	ø 1.5, 2, 2.5, 3.25, 4, 5 inch
stroke	(up to 130" standard: rounded to 1/16")
operating pressure	min. pressure: less than 5 psi max. pressure: 250 psi
operating temperature	0 + 80°C (with dry air -20°C) 32°F - 175°F (Dry air -4°F)
fluid	clean air, with or without lubrication
speed	minimum = 10 mm/sec (NO LOAD) maximum = 1000 mm/sec (NO LOAD)
special designs	for use in damp, dusty and aggressive environments

* For special design requests, contact factory for exact code.

Cylinder coding

70 M A 2 L 250 A 016 E 1 US0...

- Series**
70 = round aluminum tube
71 = extruded aluminum profile tube
- Piston**
M = magnetic (standard)
N = non-magnetic
- Rod Diameter and Rod End**
A = standard rod dia., SM small male Style 1
B = standard rod dia., IM intermediate male Style 2
C = standard rod dia., SF short female Style 3
P = oversized rod dia., SM small male Style 1
Q = oversized rod dia., IM intermediate male Style 2
R = oversized rod dia., SF short female Style 3
- Cylinder Operation**
2 = double-acting (front and rear cushions)
3 = double-acting (no cushions)
4 = double-acting (rear cushion)
5 = double-acting (front cushion)
6 = double-acting (double-rod with front and rear cushions)
- Materials**
L = rolled stainless steel rod (AISI 420B) - anodized aluminum tube
- NBR seals - zinc-plated steel nuts and tie-rods (standard)
T = rolled stainless steel rod (AISI 420B) - anodized aluminum tube
- NBR seals - stainless steel nuts and tie-rods (AISI 420B)
- Bore in inches**
150 = 1.50 inches 325 = 3.25 inches
200 = 2.00 inches 400 = 4.00 inches
250 = 2.50 inches 500 = 5.00 inches
- Stroke in fractional inches**
A = 0' G = 3/8" N = 3/4"
B = 1/16" H = 7/16" P = 13/16"
C = 1/8" J = 1/2" R = 7/8"
D = 3/16" K = 9/16" S = 15/16"
E = 1/4" L = 5/8"
- Stroke in whole inches**
016 = 16 inches
- Mounting Types**
A = MX0: no mount
XB = MX1: tie rods extended both ends
XC = MX2: tie rods extended cap end
XH = MX3: tie rods extended head end
B = MS1: angle mount
BL = MS2: side lug
ST = MS4: side tap
BE = MS7: side end lug
E = MF1: head rectangular flange
D = MF2: cap rectangular flange
ES = MF5: head square flange
DS = MF6: cap square flange
CF = MP1: cap fixed clevis
CD = MP2: cap detachable clevis
L = MP4: cap detachable eye
TH = MT1: head trunnion
TC = MT2: cap trunnion
F = MT4: intermediate trunnion
- Special: specified by Camozzi**
- Port Positions - Head & Cap**
1 = position 1 3 = position 3
2 = position 2 4 = position 4

- The series 70/71 cylinders with diameters 1.5, 2, 2.5, 3.25, 4, 5, have been designed to comply with standard NFPA dimensions. A permanent magnet is mounted on the piston in these cylinders. The position of the cylinder is obtained by the magnetic proximity switches mounted on the cylinders. This cylinder series is normally equipped with adjustable end-stroke cushioning. These cylinders are equipped with piston bumpers to reduce impact and minimize noise.
- **Part Number Example:** 70MA2L250A016E1 - NFPA type round tube, exposed tie-rods, standard magnetic piston, standard rod diameter (SM small male thread, Style 1), double-acting with front and rear adjustable cushions, stainless steel rod, anodized aluminum round tube, NBR seals, zinc-plated tie-rods and nuts, 2 1/2" bore, basic cylinder no mounting, 16 1/4" stroke, head and cap ports position 1.
- **When choosing the magnetic proximity switches, please see Camozzi Master Catalog Page 1.18-001 or Cylinder Configurator at www.camozzi-usa.com.**
- For additional options or special requests, please contact factory for part number and pricing. • Note: Accessories are mounted on the cylinders.

Series 70 Design Features

Tie Rod Nuts
Tie rod nuts are ID hexed and ID threaded providing a flush face and ability to assemble and disassemble mounting brackets without loosening Head.

Heads and Caps
Heads and Caps are lightweight aluminum that have been precision machined and hard anodized.

Piston Bumpers
Shock absorbing bumpers reduce noise and piston wear. **Standard.**

Piston
Aluminum, two-piece design allows for a solid magnet ensuring consistent switch sensing. Extra wide nylon wear ring, (cut-away in view), increases piston support while reducing wear and friction. **Magnet standard**

Cushion Seal Design
Precision-machined piston spears combined with floating cushion collar allow for a smooth deceleration at end of stroke. Cushion collar is specifically designed for rapid low-pressure breakaway when stroke reverses. **Standard**

Tube End Seals
Captured seal made from Teflon® offering a wide range of temperature applications and positive sealing. **Standard**

Cylinder Tube
Hard Anodized Aluminum tube that provides superior seal life and wear resistance.

Tie Rods
Zinc plated steel, rolled threads for added strength.

Piston Seals
Rounded lip u-cup seal reduces friction; specifically designed for lube or non-lube service. Maintains factory prelude against the cylinder wall.

Cushion Adjustment
Recessed and captive cushion adjustment screws. Fine thread adjustment for greater repeatability and accuracy. **Standard**

Rod and Wiper Seal
Piston rod lip seal and wiper combination. A compact design, allowing for greater bushing support without sacrificing sealing ability.

Key Flat
Hydraulically pressed key flat.

Rod Threads
Threads are rolled Stainless Steel for greater strength.

Piston Rod
All stainless steel ground and polished rods, burnished for improved seal life and reduced wear. **Standard.**

Rod Gland
Flush mount, precision threaded gland design, easily removable using common tools and without cylinder disassembly. Hard Anodized Aluminum body and integrated design includes rod bearing and rod lip/wiper seal. **Rod Bearing** is oil impregnated, sintered bronze containing graphite for high speed and heavy load applications.

Rod Nut
Rod Nut included on all cylinders. **Standard.**

Female Rod Clevis (Mates w/Male Eye Bracket)
Use "S" Pivot Pin

PART NUMBER	ROD DIAMETER	BORE SIZES	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
G-7/16-20	0.625	1.5, 2, 2.5	3/4	3/4	1/2	1 1/2	1	1/2	7/16-20																			
G-3/4-16	1.0	2, 2.5, 3.25, 4, 5	1 1/8	1 1/4	3/4	2 3/8	1 1/4	5/8	3/4-16																			
G-1-14	1.375	3.25, 4, 5	1 5/8	1 1/2	1	3 1/8	1 1/2	3/4	1-14																			
G-1-1/4-12	1.375	3.25, 4, 5	2	2	1 3/8	4 1/8	2	1	1-1/4-12																			

Rod Eye (Mates w/Clevis Bracket)
Use "S" Pivot Pin

PART NUMBER	ROD DIAMETER	BORE SIZES	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
GE-7/16-20	0.625	1.5, 2, 2.5	3/4	1 1/2	3/4	1/2	5/8	7/16-20																				
GE-3/4-16	1.0	2, 2.5, 3.25, 4, 5	1 1/8	2 1/16	1 1/4	3/4	7/8	3/4-16																				
GE-1-14	1.375	3.25, 4, 5	1 5/8	2 13/16	1 1/2	1	1 3/16	1-14																				
GE-1-1/4-12	1.375	3.25, 4, 5	2	3 7/16	2	1 3/8	1 9/16	1-1/4-12																				

Rod End Alignment Coupler

PART NUMBER	THREAD SIZE	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
GW-7/16-20	7/16-20	1 1/4	2	1/2	3/4	5/8	9/16	1 1/8	10,000 psi																		
GW-1/2-20	1/2-20	1 1/4	2	1/2	3/4	5/8	9/16	1 1/8	14,000 psi																		
GW-7/8-14	7/8-14	1 3/4	2 5/16	5/16	1 1/8	31/32	7/8	1 1/2	34,000 psi																		
GW-3/4-16	3/4-16	1 3/4	2 5/16	5/16	1 1/8	31/32	7/8	1 1/2	34,000 psi																		
GW-1-14	1-14	2 1/2	2 15/16	1/2	1 5/8	1 3/8	1 1/4	2 1/4	64,000 psi																		
GW-1-1/4-12	1 1/4-12	2 1/2	2 15/16	1/2	1 5/8	1 3/8	1 1/4	2 1/4	64,000 psi																		

Spherical Rod Eye (Mates w/Spherical Clevis Bracket)
Use "SM" Pivot Pin

PART NUMBER	ROD DIAMETER	BORE SIZES	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
GM-7/16-20	0.625	1.5, 2, 2.5	1 1/16	500	7/8	7/8	7/16	7/16-20	3/4	7/8																		
GM-3/4-16	1.0	2, 2.5, 3.25, 4, 5	1	750	1 1/4	1 1/4	21/32	3/4-16	1 1/16	1 5/16																		
GM-1-14	1.375	3.25, 4, 5	1 1/2	1,000	1 7/8	1 3/8	7/8	1-14	1 7/16	1 1/2																		

Male Eye Bracket (Mates w/Female Rod Clevis)
Use "S" Pivot Pin

PART NUMBER	CB	CD	DD	E	F	FL	LR	M	MR	R
LE-7/16-20	3/4	1/2	13/32	2 1/2	3/8	1 1/8	3/4	1/2	9/16	1.63
LE-3/4-16	1 1/4	3/4	17/32	3 1/2	5/8	1 7/8	1 1/4	3/4	7/8	2.56
LE-1-14	1 1/2	1	21/32	4 1/2	7/8	2 3/8	1 1/2	1	1 1/4	3.25
LE-1-1/4-12	2	1 3/8	21/32	5	7/8	3	2 1/8	1 3/8	1 5/8	3.81

Clevis Bracket (Mates w/Rod Eye)
Use "S" Pivot Pin

PART NUMBER	AA	BA	CB	CD	CW	DD	E	F	FL	LR	M	MR
CE-7/16-20	2.3	1 5/8	.765	1/2	1/2	3/8	2 1/2	3/8	1 1/8	1/2	1/2	9/16
CE-3/4-16	2.9	2 1/16	1.265	3/4	5/8	1/2	3	5/8	1 7/8	1	3/4	1 1/16
CE-1-14	4.6	3 1/4	1.515	1	3/4	5/8	4 1/2	3/4	2 1/4	1 1/4	1	1 1/8
CE-1-1/4-12	5.4	3 13/16	2.032	1 3/8	1	5/8	5	7/8	3	1 7/8	1 3/8	1 3/4

"S" Pivot Pin

PART NUMBER	BORE SIZES	CD	CL	CM
S-1/2	1.5, 2, 2.5	1/2	1-7/8	2
S-3/4	2, 2.5, 3.25, 4, 5	3/4	2-5/8	2-7/8
S-1	3.25, 4, 5	1	3-1/8	3-3/8
S-1-3/8	5	1-3/8	4-3/16	4-31/64

Snap-rings included with pivot pin

Spherical Clevis Bracket and "SM" Pivot Pin (Mates w/Spherical Rod Eye)
Use "SM" Pivot Pin

PART NUMBER	CD	CL
SM-7/16-20	.4997-.0004	1 9/16
SM-3/4-16	.7497-.0005	2 1/32
SM-1-14	.9997-.0005	2 1/2

PART NUMBER	E	F	M	R	CD	CF	CW	DD	FL	LR	MR
CM-7/16-20	3	.50	.50	2.05	1/2	.44	1/2	.41	1 1/2	.94	.62
CM-3/4-16	3 3/4	.62	.88	2.76	3/4	.66	5/8	.53	2	1.38	1.00
CM-1-14	5 1/2	.75	1.00	4.10	1	.88	3/4	.53	2	1.69	1.19

Note: Each Sold Separately