

# Rotary cylinders

## Series 69

Magnetic, cushioned

ø32, 40, 50, 63, 80, 100, 125

Rotational angles: 90°, 180°, 270° and 360°

1

MOVEMENT

- » Male or female version
- » Clean design



The rotary cylinders of the 69 Series are available in 7 different bores (from 32 to 125 mm) and can satisfy a large range of operational requirements. As a result of their design and the materials used, these cylinders can be used in extreme conditions with optimum results.

Through an adjustment screw it is possible to recover part of the play between pinion and rack. On the heads there is a screw which allows rotation to be adjusted by  $\pm 5^\circ$ .

### GENERAL DATA

<b>Type of construction</b>	with internal tie-rods
<b>Operation</b>	double-acting
<b>Materials</b>	end blocks / tube / body = AL rack = steel - rack guide shoe = acetal resin - pinion = hardened steel seals = NBR
<b>Type of mounting</b>	threaded holes in the central body by means of Series 60 brackets
<b>Bore</b>	ø 32, 40, 50, 63, 80, 100, 125
<b>Operating temperature</b>	0°C ÷ 80°C (with dry air - 20°C)
<b>Standard rotation angles</b>	90°, 180°, 270°, 360° (others on request)
<b>Bearings</b>	Ball bearings (ø 32 mm teflon bronze guide)
<b>Operating pressure</b>	1 ÷ 10 bar
<b>Fluid</b>	clean air, without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted

**TABLE OF TORQUE FORCE IN Nm (THEORETICAL)**

∅	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar
<b>32</b>	1,2	2,4	3,6	4,8	6	7,2	8,4	9,6	10,8	12
<b>40</b>	2,25	4,5	6,75	9	11,25	13,5	15,75	18	20,25	22,5
<b>50</b>	3,9	7,8	11,7	15,6	19,5	23,4	27,3	31,2	35,1	39
<b>63</b>	7,3	14,6	21,9	29,2	36,5	43,8	51,1	58,4	65,7	73
<b>80</b>	15,7	31,4	47,1	62,8	78,5	94,2	109,9	125,6	141,3	157
<b>100</b>	26,35	52,7	79,05	105,4	131,75	158,1	184,45	210,8	237,15	263,5
<b>125</b>	51	102	153	204	255	306	357	408	459	510

**CODING EXAMPLE**

<b>69</b>	-	<b>050</b>	/	<b>090</b>	-	<b>F</b>	
<b>69</b>	SERIES			PNEUMATIC SYMBOL CD18			
<b>050</b>	BORE 032 = 32 mm 040 = 40 mm 050 = 50 mm 063 = 63 mm 080 = 80 mm 100 = 100 mm 125 = 125 mm						
<b>090</b>	ROTATIONAL ANGLES 090 = 90° 180 = 180° 270 = 270° 360 = 360°						
<b>F</b>	PINION F = Female M = Male						

**PNEUMATIC SYMBOLS**

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.



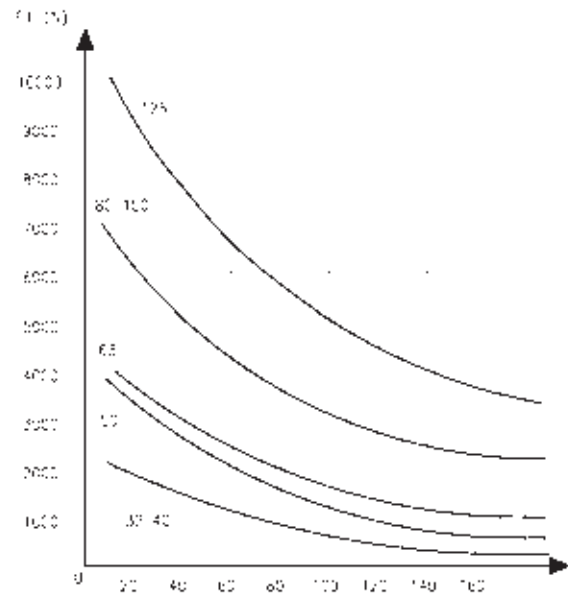
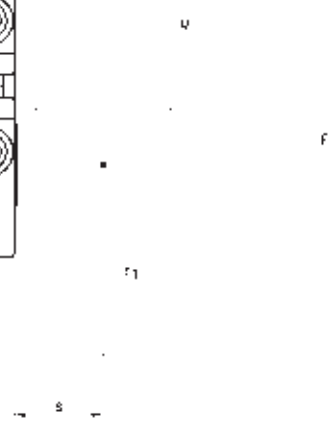
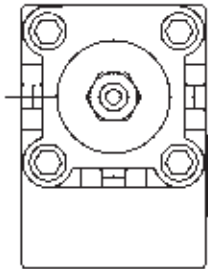
### AXIAL LOAD

Max. axial load F with  $F_1 = 0$

Table of loads

$\varnothing$	32	40	50	63	80	100	125
Force F	100 N	100 N	120 N	120 N	200 N	250 N	300 N

### RADIAL LOAD



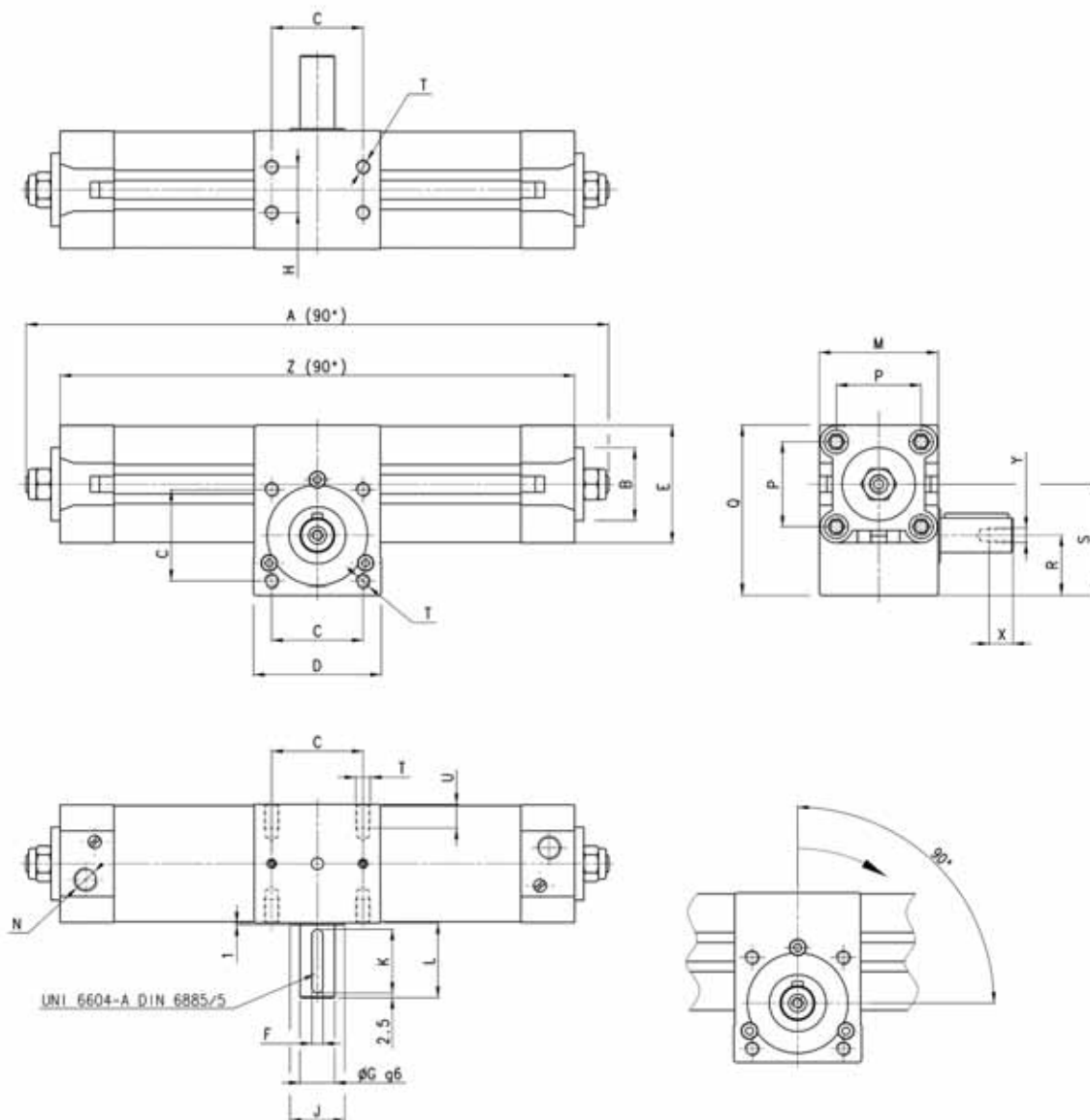
M = Barycenter of the applied theoretical load.

Max. radial load  $F_1$  with  $F = 0$

## Cylinders Series 69 - male pinion



\* increase in "A" and "Z" for each 90° of rotation



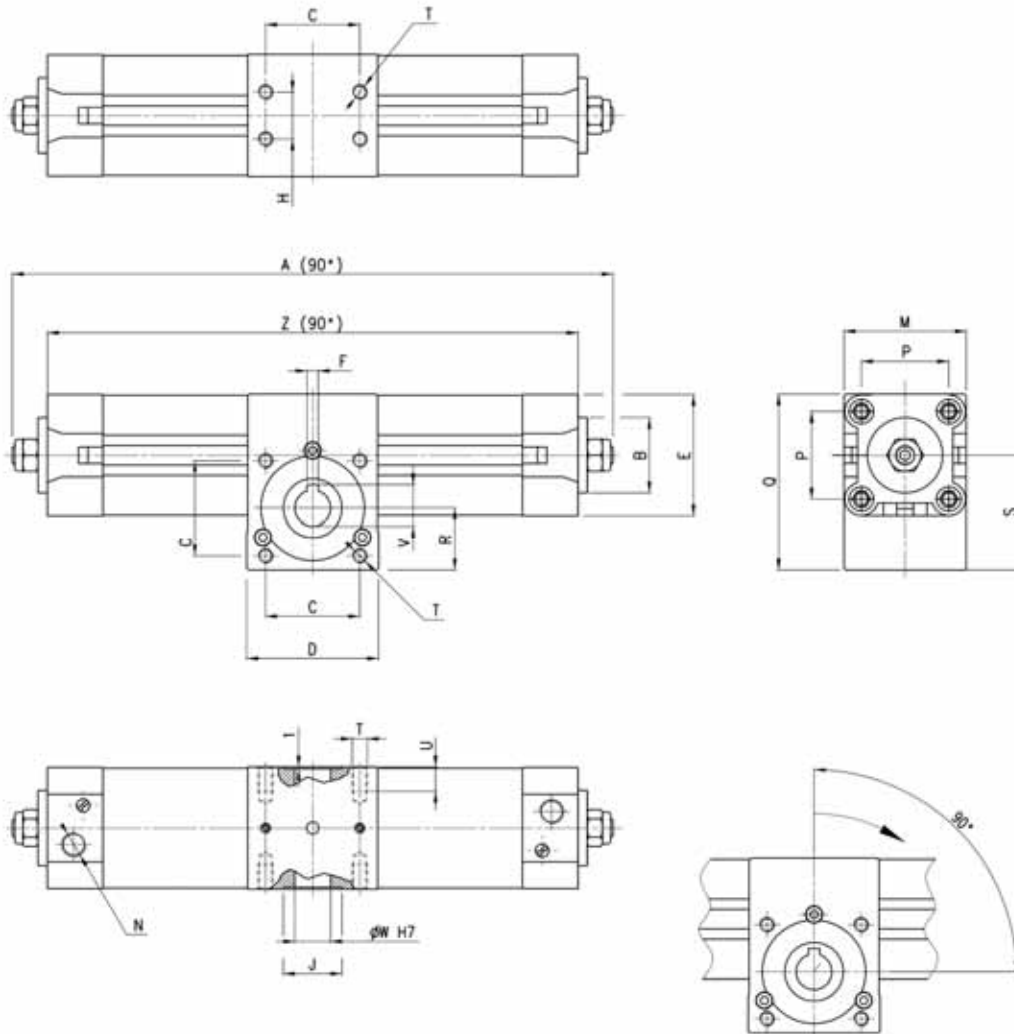
## DIMENSIONS

Ø	A	B	*	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	Y	X	Z
32	249	30	47	33	50	46	5	14	18	25	25	31	50	G1/8	32,5	71,5	25	46,5	M6	10	M5	12,5	219
40	295	35	56,5	40	60	55	5	14	22	25	25	31	60	G1/4	38	82	30	54,5	M6	10	M5	12,5	263
50	316	40	63	50	70	64,5	6	19	25	30	35	41	65	G1/4	46,5	94	32,5	60,5	M8	13	M6	16	282
63	357	45	74,5	60	75	75	8	24	35	30	35	41	75	G3/8	56,5	110	37	70,8	M8	13	M8	19	325
80	443	45	99	80	99	93	8	28	50	45	45	51	99	G3/8	72	142	50	93,5	M10	16	M8	19	404
100	472	55	107	80	115	110	10	38	60	50	45	51	115	G1/2	89	156,5	54	99	M10	16	M10	22	434
125	549	60	132	90	125	135	10	38	70	60	45	51	140	G1/2	110	188	60	118	M12	20	M10	22	505

Cylinders Series 69 - female pinion



\* increase in "A" and "Z" for each 90° of rotation



DIMENSIONS

Ø	A	B	*	C	D	E	F	H	J	M	N	P	Q	R	S	T	U	V	W	Z
32	249	30	47	33	50	46	5	18	25	50	G1/8	32,5	71,5	25	46,5	M6	10	16,3	14	219
40	295	35	56,5	40	60	55	5	22	25	60	G1/4	38	82	30	54,5	M6	10	16,3	14	263
50	316	40	63	50	70	64,5	6	25	30	65	G1/4	46,5	94	32,5	60,5	M8	13	21,8	19	282
63	357	45	74,5	60	75	75	6	35	30	75	G3/8	56,5	110	37	70,8	M8	13	21,8	19	325
80	443	45	99	80	99	93	8	50	45	99	G3/8	72	142	50	93,5	M10	16	27,3	24	404
100	472	55	107	80	115	110	8	60	50	115	G1/2	89	156,5	54	99	M10	16	31,3	28	434
125	549	60	132	90	125	135	8	70	60	140	G1/2	110	188	60	118	M12	16	31,3	28	505