

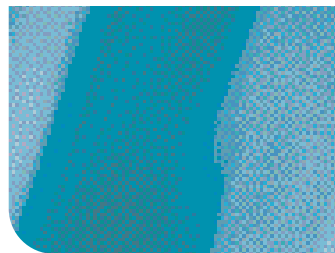
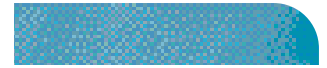


## Short-stroke cylinders Series QP - QPR

Single and double-acting, magnetic (QP)  
 Double-acting magnetic, non-rotating (QPR)  
 ø12, 16, 20, 25, 32, 40, 50, 63, 80, 100

The Series QP and QPR short-stroke cylinders are available in 10 different bore sizes, from ø12 to ø100. Their compact dimension allows the installation in small spaces. Because of their particular construction, these cylinders can be mounted by means of feet or trunnion.

The guides are manufactured in the external profile parallel to the sliding axis on three sides. These guides are used to locate the switches that sense the piston position.



*Sensors and relative supports on page 1.25.*

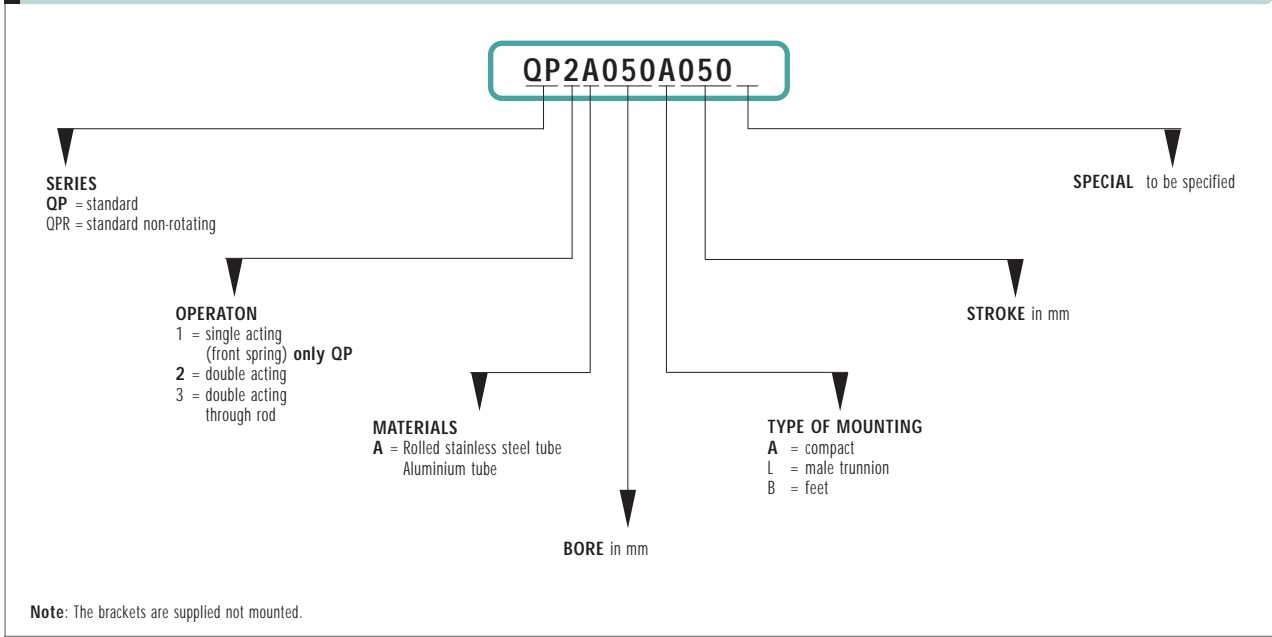
### GENERAL DATA

Type of construction	compact profile (QP), compact with non rotating guides (QPR)
Operation	QP single and double acting, QPR double-acting
Materials	aluminium body (anodized) - rolled stainless steel rod - NBR seals
Operating temperature	0° ÷ 80°C with dry air -20°C
Assembly	by means of screws

### PNEUMATIC DATA

Operating pressure	P min. 1 bar (double-acting); P max. 10 bar / P min. 2 bar ( single-acting) ÷ 10 bar
Fluid	clean air with or without lubrication
Stroke	standard (see table)
	min - max: Series QP: ø12 ÷ ø25: 10- 150 / ø32 ÷ ø100: 10-200
	Series QPR: ø12: 10-50 / ø16: 10-75 / ø20 ÷ ø100: 10-100
Bore	standard (see table)

**EXAMPLE OF CYLINDER CODING SERIES QP AND QPR**



**TABLE SHOWING THE OUTPUT FORCE OF SHORT-STROKE CYLINDERS SERIES QP AND QPR**

ø cyl. in mm	ø rod in mm	Working area in cm <sup>2</sup> .	Operating pressure in bar										
			1	2	3	4	5	6	7	8	9	10	
			Output force in N (efficiency factor = 0,9)										
12	6	Thrust side	1,13	10	20	30	40	50	60	70	80	90	100
		Traction side	0,85	7	15	22	30	38	45	52	60	67	75
16	8	Thrust side	2,00	18	35	53	71	88	106	123	141	159	176
		Traction side	1,50	13	26	40	53	66	79	92	106	120	132
20	10	Thrust side	3,14	28	55	83	111	138	166	194	222	250	277
		Traction side	2,36	21	42	62	83	104	125	146	167	187	208
25	10	Thrust side	4,90	43	86	130	173	216	260	302	346	389	432
		Traction side	4,12	36	73	109	145	181	218	254	291	327	363
32	12	Thrust side	8,03	70	140	210	283	354	425	494	595	635	706
		Traction side	6,90	60	120	180	243	305	365	426	487	548	608
40	16	Thrust side	12,56	110	220	330	443	554	664	775	886	998	1108
		Traction side	10,56	93	186	280	373	465	559	652	745	838	931
50	16	Thrust side	19,62	173	346	519	692	865	1037	1210	1383	1556	1729
		Traction side	17,62	155	311	467	622	777	932	1088	1243	1400	1555
63	20	Thrust side	31,15	275	550	824	1098	1373	1650	1923	2198	2472	2747
		Traction side	28,00	247	494	740	988	1235	1480	1729	1976	2222	2470
80	25	Thrust side	50,25	443	886	1330	1772	2216	2660	3100	3545	3990	4432
		Traction side	45,35	400	800	1200	1600	2000	2400	2800	3200	3600	4000
100	25	Thrust side	78,50	692	1385	2077	2770	3460	4154	4847	5540	6320	6923
		Traction side	73,60	650	1300	1948	2608	3245	3895	4544	5193	5842	6492

**TABLE SHOWING THE OUTPUT FORCE OF SINGLE-ACTING CYLINDERS SERIES QP**

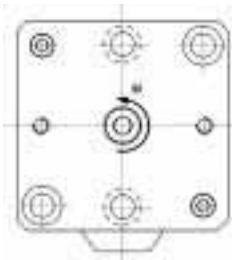
ø Cylinders	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Stroke	10	10	10	10	25	25	25	25	25	25
Force of spring at rest (N)	5,2	5,2	8	9,1	9	16,2	32,4	34,3	49	85
Force of compressed spring (N)	13,2	13,2	18	22	39	48,8	60	86,7	124	163

TABLE SHOWING THE STANDARD STROKES FOR SERIES QP CYLINDERS

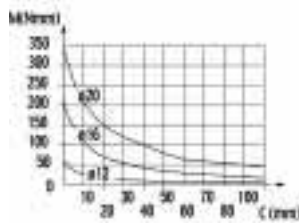
- Double-acting
- × Single-acting
- Non-rotating

Series	ø	Standard cylinder strokes													
		5	10	15	20	25	30	35	40	50	60	75	80	100	
QP	12	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■	■	■					
QP	16	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■ ●	■	■	■				
QP	20	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■ ●	■	■ ●	■ ●				
QP	25	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■ ●	■	■ ●	■ ●				
QP	32	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■ ●	■	■ ●	■ ●	■		■	
QP	40	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■ ●	■	■ ●	■ ●	■	■	■	
QP	50	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■ ●	■	■ ●	■ ●	■	■ ●	■ ●	
QP	63	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■ ●	■	■ ●	■ ●	■	■ ●	■ ●	
QP	80	■ ×	■ × ●	■ × ●	■ × ●	■ × ●	■ × ●	■ ●	■	■ ●	■ ●	■	■ ●	■ ●	
QP	100	■ ×	■ ×	■ ×	■ ×	■ ×	■	■	■	■ ●	■ ●	■	■ ●	■ ●	

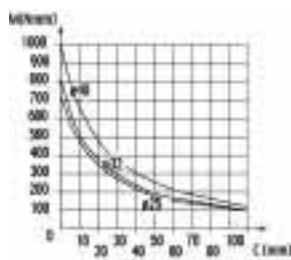
MAX DEFLECTION FORCE ACCORDING TO STROKE



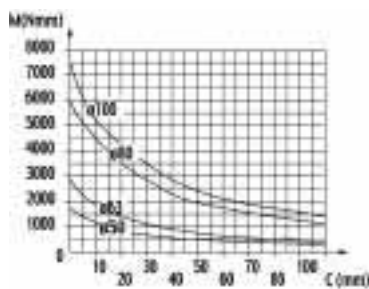
ø12-16-20



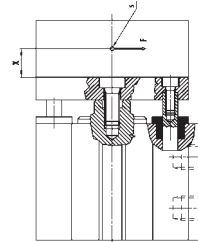
ø25-32-40



ø50-63-80-100

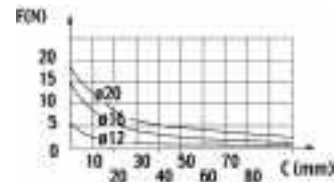


TRANSVERSAL LOAD ACCORDING TO STROKE

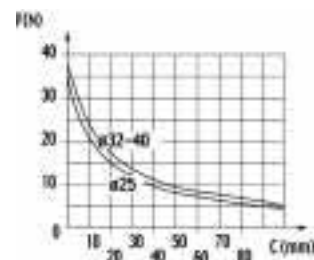


x = distance from useful load baricenter  
 S = baricenter of useful load  
 F = transversal force

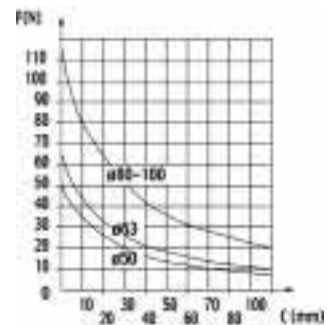
X=0 mm ø12-16-20



X=0 mm ø25-32-40

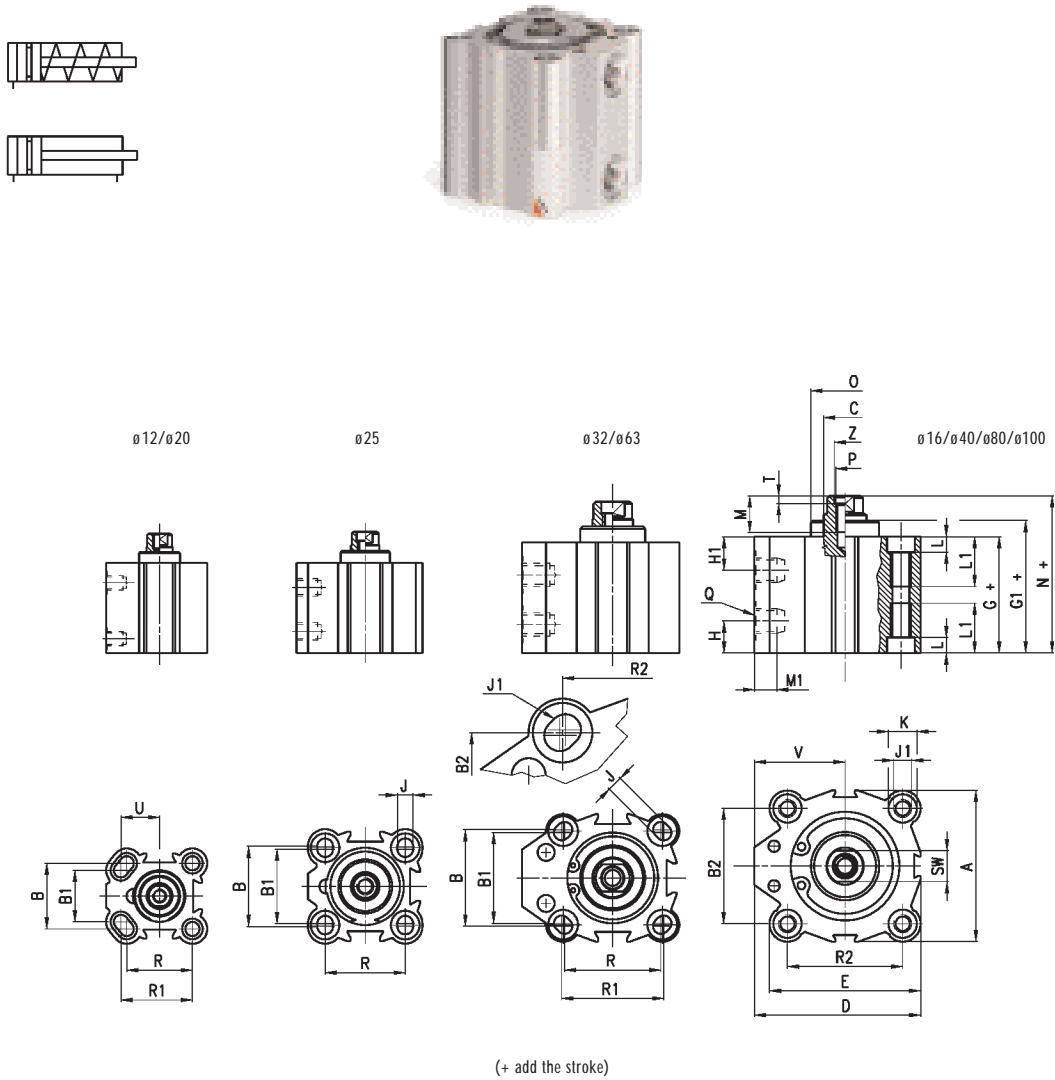


X=0 mm ø50-63-80-100



**Short stroke cylinders Series QP**

**Note:** The cylinder's end stop must be provided externally.  
For single-acting  $\varnothing$  12, 16, 20 and 25  
add 5 mm to size G+, G1+ and N+

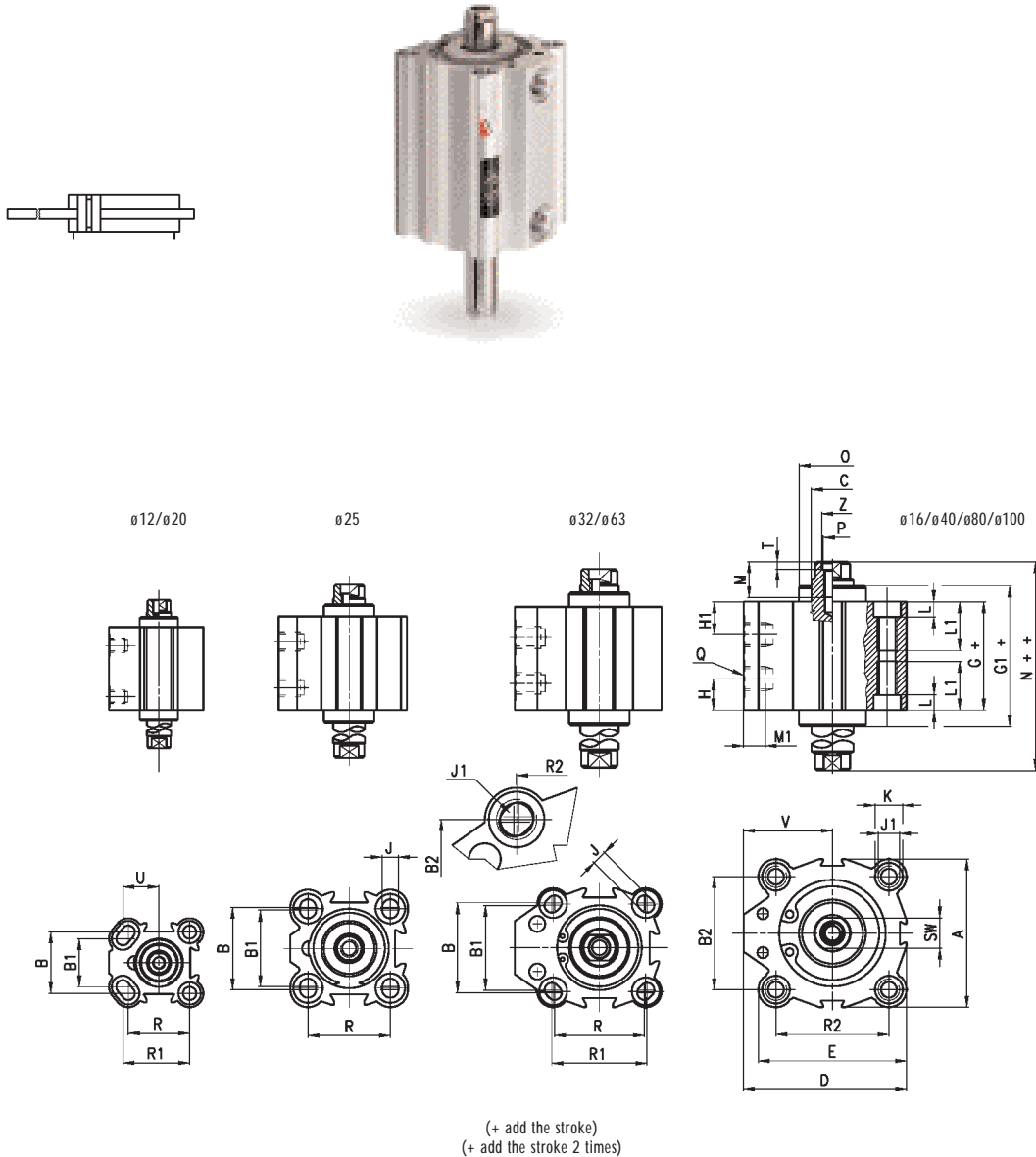


DIMENSIONS																															
Series	$\varnothing$ cyl.	A	B	B1	B2	$\varnothing$ C h 8	D	E	G+	G1+*	H1	H	J	J1	K	L	L1	M	M1	N+	$\varnothing$ O	P	Q	R	R1	R2	SW	T	U	V	Z+0.10
QP	12	23,8	15,5	13	-	6	25	25	29,6	-	12,3	7,8	3,5	-	5,8	3	-	5,5	4,5	32,9	-	M3	M5	15,5	16,75	-	5	-	9	13,15	-
QP	16	29	20	-	-	8	29	29	32	32,4	10,9	8,7	3,5	-	5,8	3	-	8	4,5	36,4	16,6	M4	M5	20	-	-	6	-	-	14,5	-
QP	20	37	25,5	20	-	10	39,25	39,25	31,2	31,7	9,8	9,8	5,5	-	9	6	-	8	4,5	36	19,5	M6	M5	25,5	27,75	-	8	-	15	20,75	-
QP	25	40	28	26	-	10	40	40	32,1	33,5	8	6,9	5,5	-	10	5,5	-	8	4,5	37,5	22	M6	M5	28	-	-	8	-	-	20	-
QP	32	45	34	32	33	12	55,5	47	39,5	-	9,5	9,5	5,5	M8	10,5	6	21	10	7,5	44	-	M6	G1/8	34	36	35	10	2,5	-	32	7
QP	40	52	-	-	40	16	57	52	42,4	43,4	10,7	10,7	5,5	M8	9	6	21	13,5	7,5	47,9	29,6	M8	G1/8	-	-	40	13	3,5	-	31	8,5
QP	50	64	-	-	50	16	72	64	42,2	44	11,2	11,2	6,5	M8	10,5	6	21	13,5	9	48,4	37,5	M8	G1/4	-	-	50	13	3,5	-	40	8,5
QP	63	80	62	60	61	20	88	80	49,5	-	13	13	8,5	M12	15	8,5	31,5	13,5	9	54	-	M8	G1/4	60	62	61	17	4	-	48	8,5
QP	80	98	-	-	77	25	104	98	57,5	-	16,2	16,2	10,5	M12	17	10,5	31,5	15	10,5	63,5	-	M16	G3/8	-	-	77	22	4	-	55	16,5
QP	100	117	-	-	94	25	123,5	117	68,5	-	20,3	20,3	10,5	M12	17	10,5	31,5	15	10,5	74,5	-	M16	G3/8	-	-	94	22	4	-	65	16,5

\* if the size is not shown size G+ is bigger than size G1+.

**Short stroke cylinder Series QP**

**Note:** The cylinder's end stop must be provided externally.  
The through-rod cylinders are not available from stock.



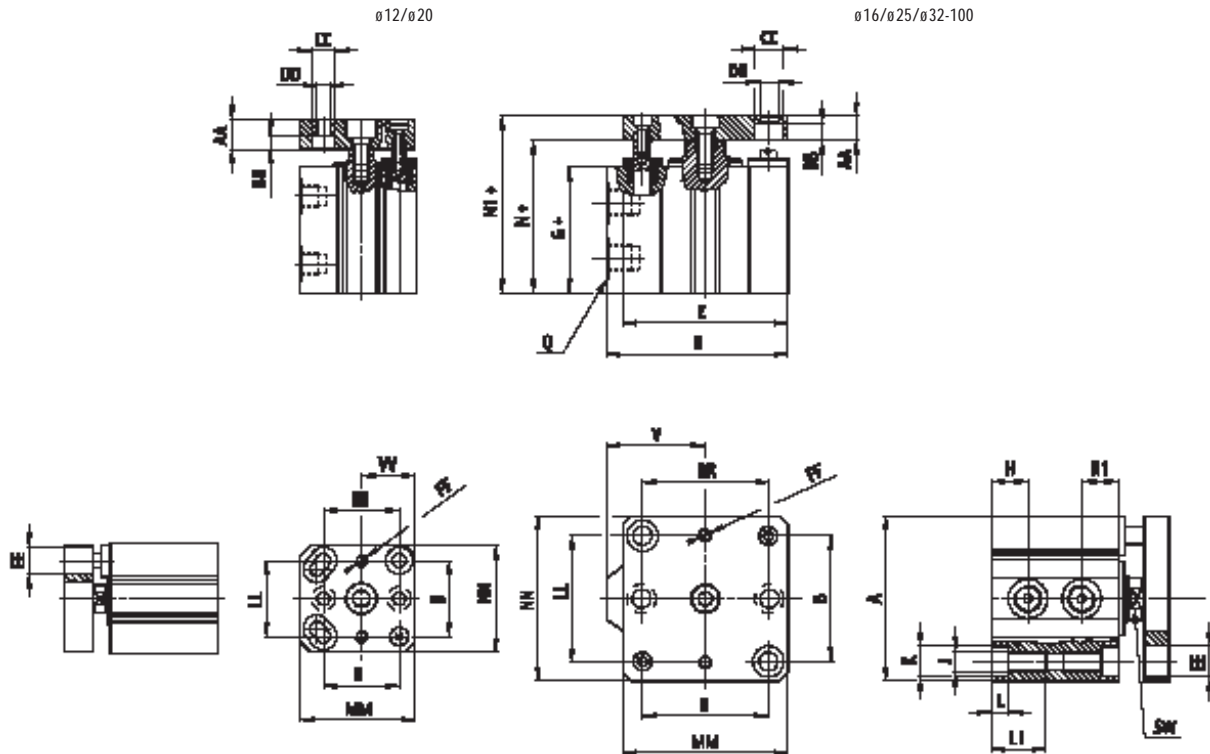
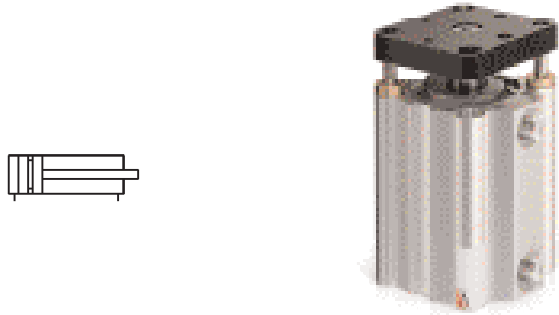
**DIMENSIONS**

Series	ø cyl.	A	B	B1	B2	øC h8	D	E	G+	G1+*	H1	H	J	J1	K	L	L1	M	M1	N++	ø0	P	Q	R	R1	R2	SW	T	U	V	Z+0.1
QP	12	23,8	15,5	13	-	6	25	25	37,3	-	12,3	12,3	3,5	-	5,8	3	-	5,5	4,5	43,9	-	M3	M5	15,5	16,75	-	5	-	9	13,15	-
QP	16	29	20	-	-	8	29	29	38	38,8	10,9	10,9	3,5	-	5,8	3	-	8	4,5	46,4	16,6	M4	M5	20	-	-	6	-	-	14,5	-
QP	20	37	25,5	20	-	10	39,25	39,25	38,1	39,1	9,8	9,8	5,5	-	9	6	-	8	4,5	47,7	19,5	M6	M5	25,5	27,75	-	8	-	15	20,75	-
QP	25	40	28	26	-	10	40	40	36,3	39,1	8	8	5,5	-	10	5,5	-	8	4,5	47,1	22	M6	M5	28	-	-	8	-	-	20	-
QP	32	45	34	32	33	12	55,5	47	39,5	-	9,5	9,5	5,5	M8	10,5	6	21	10	7,5	48,5	-	M6	G1/8	34	36	35	10	2,5	-	32	7
QP	40	52	-	-	40	16	57	52	42,4	44,4	10,7	10,7	5,5	M8	9	6	21	13,5	7,5	53,4	29,6	M8	G1/8	-	-	40	13	3,5	-	31	8,5
QP	50	64	-	-	50	16	72	64	42,2	45,8	11,2	11,2	6,5	M8	10,5	6	21	13,5	9	54,8	37,5	M8	G1/4	-	-	50	13	3,5	-	40	8,5
QP	63	80	62	60	61	20	88	80	49,5	-	13	13	8,5	M12	15	8,5	31,5	13,5	9	58,5	-	M8	G1/4	60	62	61	17	4	-	48	8,5
QP	80	98	-	-	77	25	104	98	57,5	-	16,2	16,2	10,5	M12	17	10,5	31,5	15	10,5	69,5	-	M16	G3/8	-	-	77	22	4	-	55	16,5
QP	100	117	-	-	94	25	123,5	117	68,5	-	20,3	20,3	10,5	M12	17	10,5	31,5	15	10,5	80,5	-	M16	G3/8	-	-	94	22	4	-	65	16,5

\* if the size is not shown size G+ is bigger than size G1+.

**Short stroke cylinder Series QPR**

Note: The cylinder's end stop must be provided externally.



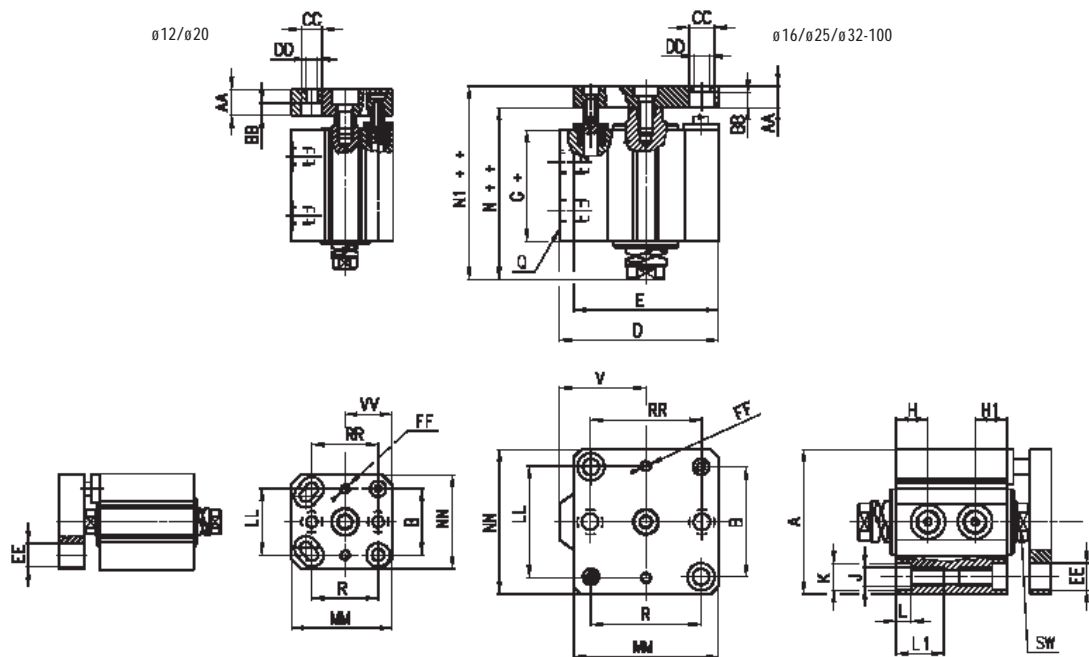
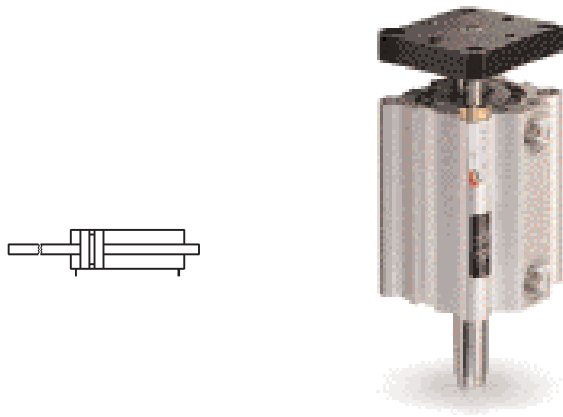
(+ add the stroke)

DIMENSIONS																													
Series	ø cyl.	A	B	D	E	G+	H1	H	J	K	L	L1	N+	N1+	Q	R	SW	V	AA	BB	øCC	øDD	EE	FF	LL	MM	NN	RR	VV
QPR	12*	23,8	15,5	25	25	29,6	12,3	7,8	3,5	5,8	3	-	32,9	37,9	M5	15,5	5	13,15	5	3,5	6,2	3,2	5,8	M3	15,5	25	24	15,5	12
QPR	16	29	20	29	29	32	10,9	8,7	3,5	5,8	3	-	36,4	41,4	M5	20	6	14,5	5	3,5	6,2	3,2	6,5	M3	20	28	28	20	-
QPR	20*	37	25,5	39,25	39,25	31,2	9,8	9,8	5,5	9	6	-	36	46	M5	25,5	8	20,75	10	4,6	8	4,2	9	M4	25,5	38,5	36	25,5	18
QPR	25	40	28	40	40	32,1	8	6,9	5,5	10	5,5	-	37,5	47,5	M5	28	8	20	10	4,6	8	4,2	10	M4	27	40	40	28	-
QPR	32	45	33	55,5	47	39,5	9,5	9,5	M8	10,5	6	21	44	54	G1/8	35	10	32	10	6	9	5,5	9	M5	32	47	45	36	-
QPR	40	52	40	57	52	42,4	10,7	10,7	M8	9	6	21	47,9	57,9	G1/8	40	13	31	10	6	9	5,5	9	M5	40	52	50	40	-
QPR	50	64	50	72	64	42,2	11,2	11,2	M8	10,5	6	21	48,4	60,4	G1/4	50	13	40	12	6,8	10,5	6,5	10	M6	50	65	65	50	-
QPR	63	80	61	88	80	49,5	13	13	M12	15	8,5	31,5	54	66	G1/4	61	17	48	12	8,5	14	9	15	M6	62	80	80	62	-
QPR	80	98	77	104	98	57,5	16,2	16,2	M12	17	10,5	31,5	63,5	78,5	G3/8	77	22	55	15	10	16,5	11	17	M8	77	100	100	77	-
QPR	100	117	94	123,5	117	68,5	20,3	20,3	M12	17	10,5	31,5	74,5	89,5	G3/8	94	22	65	15	10	16,5	11	17	M8	94	115	115	94	-

\* Cylinders with only one guide.

**Short stroke cylinder Series QPR**

**Note:** The cylinder's end stop must be provided externally.



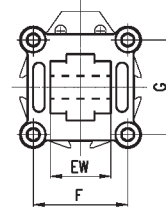
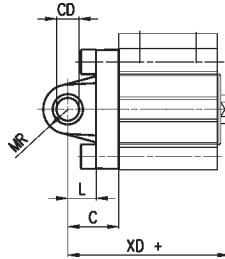
(+ add the stroke)

DIMENSIONS																													
Series	øcyl.	A	B	D	E	G+	H1	H	J	K	L	L1	N++	N1++	Q	R	SW	V	AA	BB	øCC	øDD	EE	FF	LL	MM	NN	RR	WV
QPR	12*	23,8	15,5	25	25	37,3	12,3	12,3	3,5	5,8	3	-	43,9	48,9	M5	15,5	5	13,15	5	3,5	6,2	3,2	5,8	M3	15,5	25	24	15,5	12
QPR	16	29	20	29	29	38	10,9	10,9	3,5	5,8	3	-	46,4	51,4	M5	20	6	14,5	5	3,5	6,2	3,2	6,5	M3	20	28	28	20	-
QPR	20*	37	25,5	39,25	39,25	38,1	9,8	9,8	5,5	9	6	-	47,7	57,5	M5	25,5	8	20,75	10	4,6	8	4,2	9	M4	25,5	38,5	36	25,5	18
QPR	25	40	28	40	40	36,3	8	8	5,5	10	5,5	-	47,1	57,1	M5	28	8	20	10	4,6	8	4,2	10	M4	27	40	40	28	-
QPR	32	45	33	55,5	47	39,5	9,5	9,5	M8	10,5	6	21	48,5	58,5	G1/8	35	10	32	10	6	9	5,5	9	M5	32	47	45	36	-
QPR	40	52	40	57	52	42,4	10,7	10,7	M8	9	6	21	53,4	63,4	G1/8	40	13	31	10	6	9	5,5	9	M5	40	52	50	40	-
QPR	50	64	50	72	64	42,2	11,2	11,2	M8	10,5	6	21	54,8	66,8	G1/4	50	13	40	12	6,8	10,5	6,5	10	M6	50	65	65	50	-
QPR	63	80	61	88	80	49,5	13	13	M12	15	8,5	31,5	58,5	70,5	G1/4	61	17	48	12	8,5	14	9	15	M6	62	80	80	62	-
QPR	80	98	77	104	98	57,5	16,2	16,2	M12	17	10,5	31,5	69,5	84,5	G3/8	77	22	55	15	10	16,5	11	17	M8	77	100	100	77	-
QPR	100	117	94	123,5	117	68,5	20,3	20,3	M12	17	10,5	31,5	80,5	95,5	G3/8	94	22	65	15	10	16,5	11	17	M8	94	115	115	94	-

\* Cylinders with only one guide.

**Male trunnion bracket Mod. L...**

Material: aluminium.



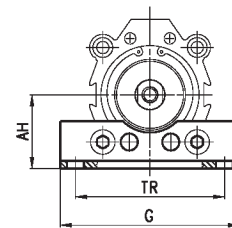
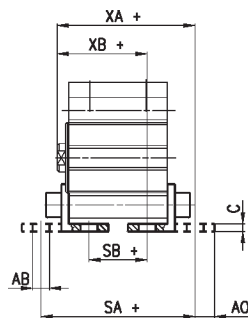
(+ add the stroke)

**DIMENSIONS**

Mod.	øcyl.	DC H9	MR	L	C	XD	F	G	EW
<b>L-QP-32</b>	32	10	9	12	22	66	33	35	26
<b>L-QP-40</b>	40	12	13	15	25	73	40	40	28
<b>L-QP-50</b>	50	12	13	15	27	75,5	50	50	32
<b>L-QP-63</b>	63	16	15	20	32	86	61	61	40
<b>L-QP-80</b>	80	16	15	24	36	99,5	77	77	50
<b>L-QP-100</b>	100	20	18	29	41	115,5	94	94	60

**Feet bracket Mod. B...**

Material: zinc-plated steel



(+ add the stroke)

**DIMENSIONS**

Mod.	øcyl.	C	SA	XA	SB	XB	TR	G	AB	AH	AO
<b>B-QP-32</b>	32	3	61,9	55,2	23,1	35,8	57	71	6,6	30	8,8
<b>B-QP-40</b>	40	3	64,8	59,1	26	39,7	64	78	6,6	33	8,8
<b>B-QP-50</b>	50	4	71,6	63,1	20,8	37,7	79	95	9	39	10,3
<b>B-QP-63</b>	63	4	81,9	70,2	25,1	41,8	95	113	11	46	13,8
<b>B-QP-80</b>	80	6	96,5	83	28,5	49	118	140	13	59	10,5
<b>B-QP-100</b>	100	6	114,5	97,5	22,5	51,5	137	162	13	71	17