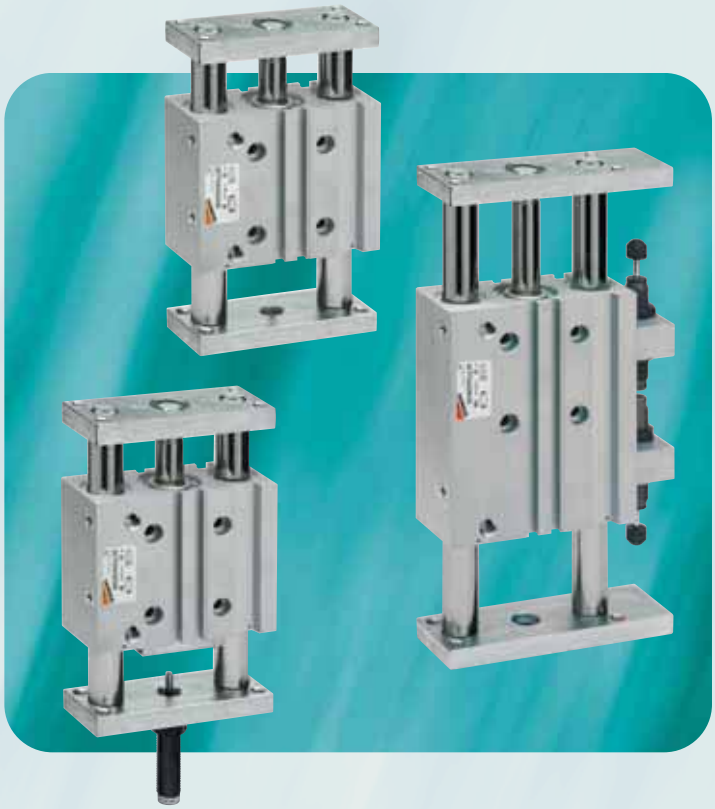
Cylinders with integrated guide
Series QCTF - QCBF

Double -acting , magnetic piston, with double bearings and flanges
ø20 - 25 - 32 - 40.

The Slide Units Series QCTF - QCBF are available in four different sizes and have been designed to be used in applications where space is limited and when the load must be guided.
Regarding the bearings, the Slide Units are available in two versions, one with double sintered bronze bushes (Mod. QCTF) and the other with double linear ball bearings (Mod. QCBF).
The QCTF version would normally be selected when the side loads applied to the slide unit are high.
Model QCBF slide units are suitable for fast cycles (less side load) and higher precision.
Regarding the end cushion: The Slide Units Series QCTF - QCBF are available in three different variants:
A. fixed mechanical cushion (standard),
B. with two shock absorbers located on the body and
C. with one shock absorber located central on the rear flange.
Accordingly, the variant B and C are suitable for handling of higher mass forces and / or when it's necessary to adjust the stroke.
The design of the Slide Unit body allows the mounting of the Slide Unit using either top, bottom or side faces.
Several "T" shaped grooves in two faces allow magnetic sensors Mod. CST to be fitted in a number of positions.

For sensors, see page 1.24



- Movement and guidance in one unit
- Heavy duty

GENERAL DATA

Type of construction	compact guided with extended guide rods and double bearings/flanges
	QCTF = sintered bronze bushes
	QCBF = linear ball bearings
Operation	double acting
Materials	anodized aliminium body - flanges in zinc-plated steel - piston rod in rolled stainless steel AISI
	rolled stainless steel 420B columns (QCT) - hardened steel C50 columns (QCB)
Mounting	threaded and non threaded holes in the body
Strokes	standard (see table)
Operating temperature	0°C a +80°C (with dry air -20°C)
Speed	50 ÷ 500 mm/s
Stroke end cushioning Type A	extended stroke - fixed mechanical cushioning*
	retracted stroke - fixed mechanical cushioning*
Stroke end cushioning Type B	extended stroke - shock absorber
	retracted stroke - shock absorber
Stroke end cushioning Type C	extended stroke - shock absorber
	retracted stroke - fixed mechanical cushioning*

* we recommend preventing the piston from striking against the end covers.

PNEUMATIC DATA

Operating pressure	1 - 10 bar
Fluid	Clean air, non lubricated*

*If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

CODING OF CYLINDERS SERIES QCTF AND QCTBF

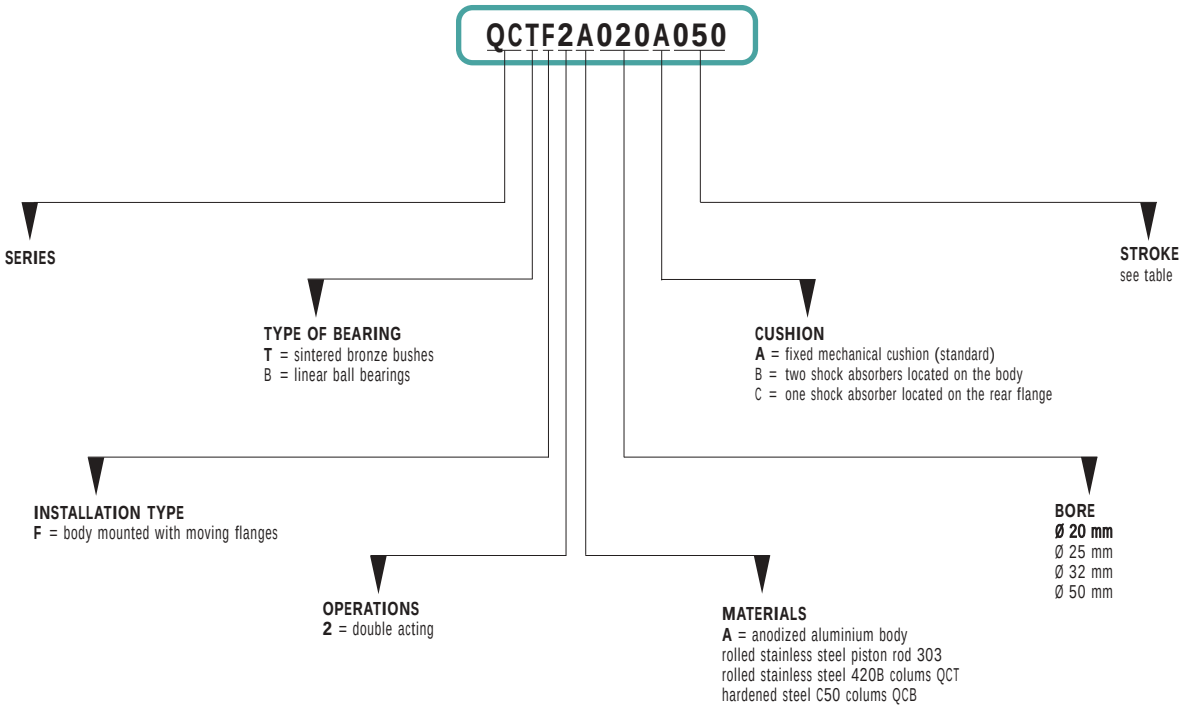


TABLE SHOWING STANDARD STROKES FOR SERIES QCTF AND QCBF

■ Type A and C
✖ Type B

		standard strokes										
Series	ø	20	25	30	40	50	75	100	125	150	175	200
QCTF-QCBF	20	■		■	■	■	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖
QCTF-QCBF	25	■		■	■	■	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖
QCTF-QCBF	32		■			■	■	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖
QCTF-QCBF	40		■			■	■	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖

For the regulation of the stroke, see dimensional tables.

TABLE OF PERMISSABLE LOADS (F1) FROM ONE FLANGE - FOR SINTERED BRONZE BUSHES (QCTF) - FOR LINEAR BALL BEARINGS (QCBF)

F1 (N) 1N = 0.102kgf

		STROKE (mm)										
ø	**Mod.**	**20**	**25**	**30**	**40**	**50**	**75**	**100**	**125**	**150**	**175**	**200**
20	**QCTF**	136		124	124	123	122	122	121	121	120	120
	QCBF	146		142	140	139	137	136	134	94	70	53
25	**QCTF**	181		167	165	164	163	162	161	160	159	158
	QCBF	171		167	165	163	161	160	160	159	142	109
32	**QCTF**		174			166	162	160	158	156	155	153
	QCBF		220			214	211	211	210	210	209	209
40	**QCTF**		189			175	168	164	161	159	157	155
	QCBF		228			219	214	214	212	212	211	210

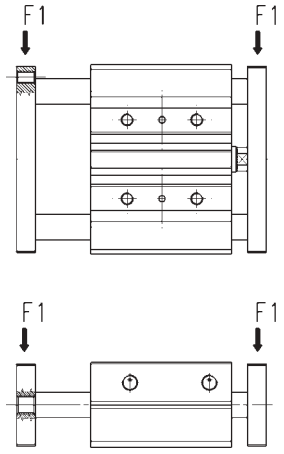
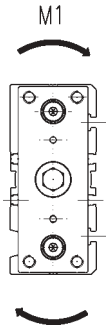


TABLE OF PERMISSABLE MOMENTS (M1) FROM ONE FLANGE - FOR SINTERED BRONZE BUSHES (QCTF) - FOR LINEAR BALL BEARINGS (QCBF)

M1 (N*m) 1N*m = 0,102kgf*m

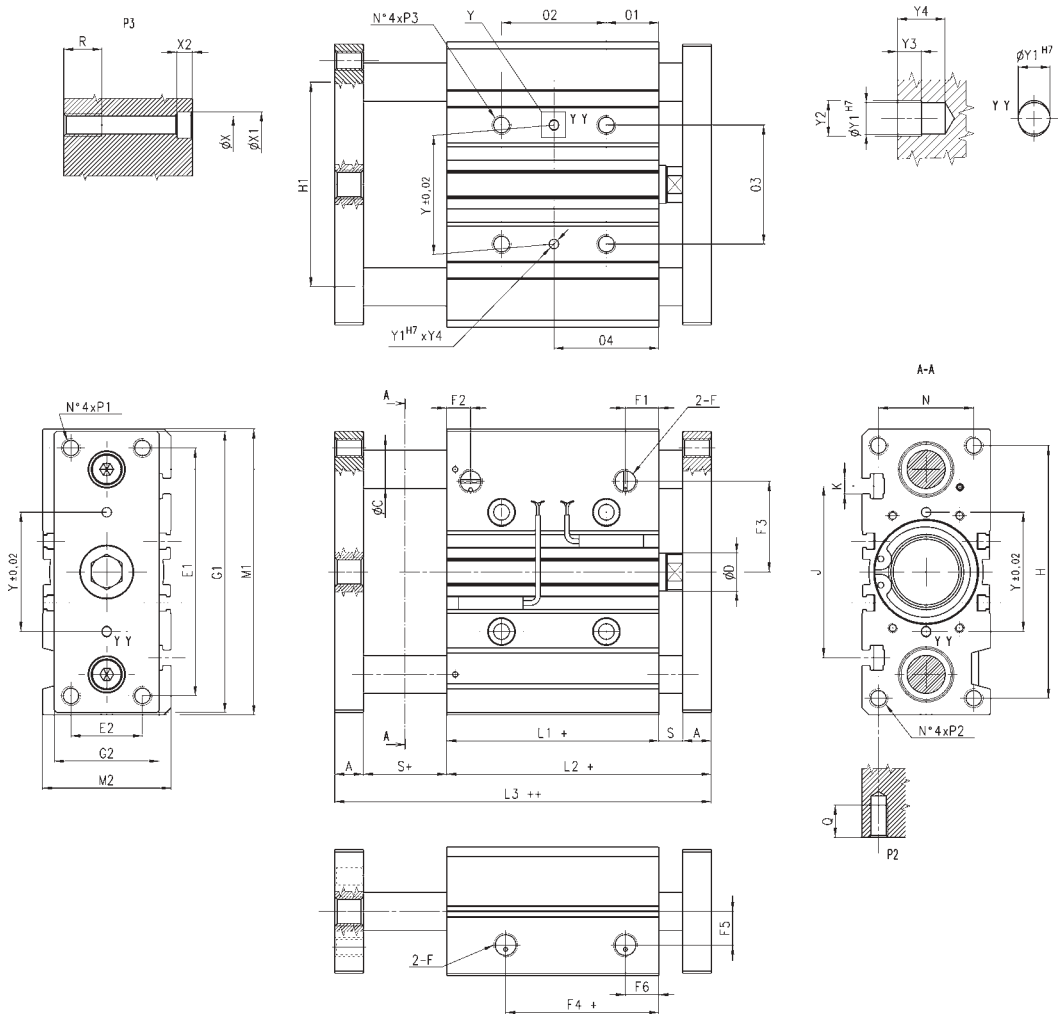
		STROKE (mm)										
ø	**Mod.**	**20**	**25**	**30**	**40**	**50**	**75**	**100**	**125**	**150**	**175**	**200**
20	**QCTF**	3,6		3,3	3,3	3,3	3,2	3,2	3,2	3,2	3,2	3,2
	QCBF	3,9		3,7	3,7	3,7	3,6	3,6	3,6	2,5	1,89	1,4
25	**QCTF**	5,7		5,2	5,2	5,2	5,2	5,1	5,1	5,1	5	5
	QCBF	5,4		5,2	5,2	5,2	5,1	5,1	5,1	5	4,5	3,4
32	**QCTF**		6,7			6,4	6,3	6,2	6,1	6	6	5,9
	QCBF		8,5			8,3	8,2	8,2	8,1	8,1	8,1	8,1
40	**QCTF**		8,1			7,5	7,2	7	6,9	6,8	6,7	6,6
	QCBF		9,8			9,4	9,2	9,2	9,1	9,1	9	9



VALUES FOR DIMENSIONS 02 AND 04 SERIES QCTF AND QCBF

ø	02 for strokes			04 for strokes			ØC for bore **QCBF**		ØC for bore **QCTF**	
	20-30	**40-100**	**125-200**	**20-30**	**40-100**	**125-200**	**ø**	**øC**	**ø**	**øC**
20	24	44	120	29	39	77	20	10	20	10
25	24	44	120	29	39	77	25	12	25	12
32	24	48	124	33	45	83	32	16	32	20
40	24	48	124	34	46	84	40	16	40	20

Mod. QCTF and QCBF type "A"



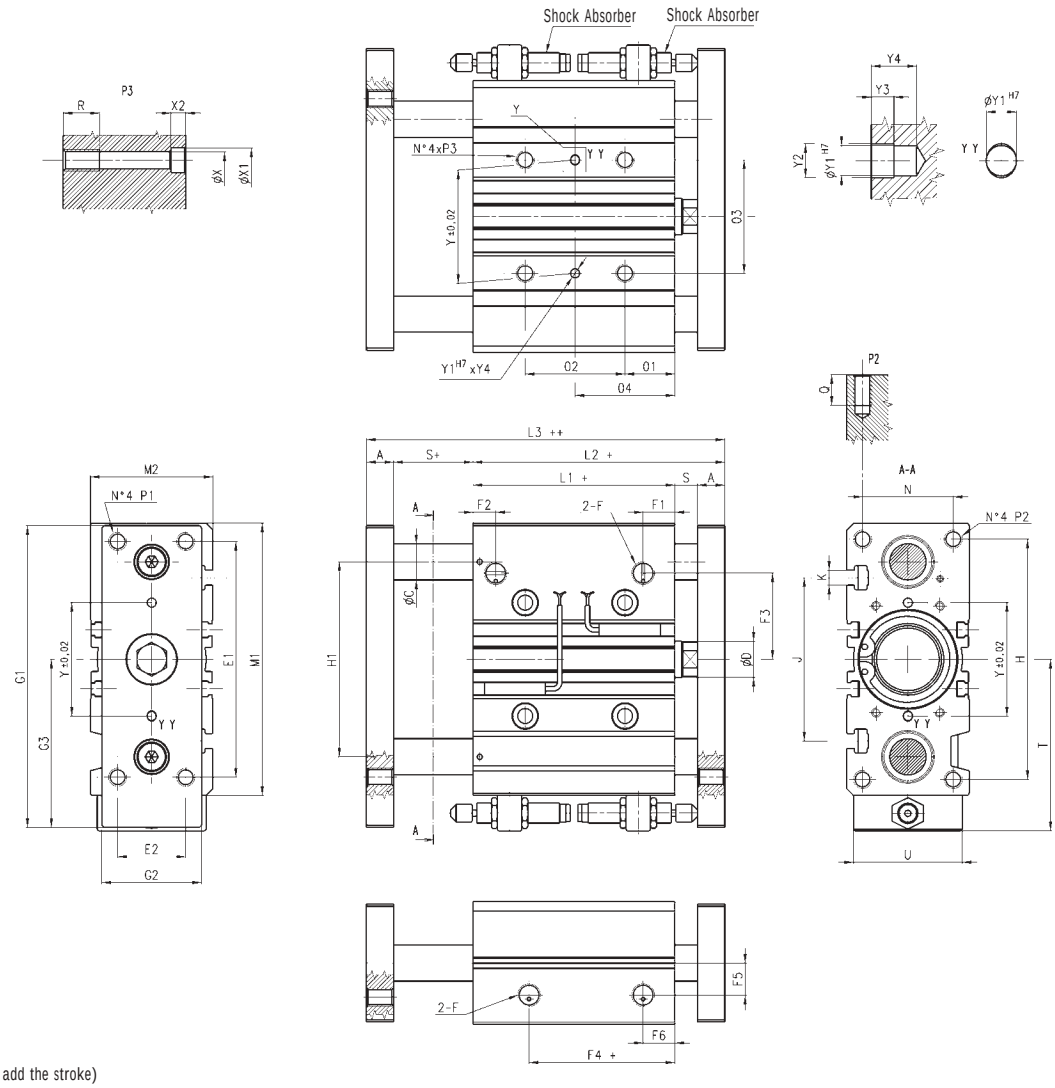
(+ add the stroke)

DIMENSIONS

ø	A	øD	E1	E2	F	F1	F2	F3	F4	F5	F6	G1	G2	H	H1	L1	L2	L3	M1	M2
20	10	10	70	18	1/8	10,5	10,5	25	12,5	11,5	10,5	81	30	72	54	37	53	69	83	36
25	10	12	78	26	1/8	11,5	8	28,5	12,5	13,5	11,5	91	40	82	64	37,5	53,5	69,5	93	42
32	12	16	96	30	1/8	12,5	9,5	34	7	15	12,5	110	45	98	78	37,5	59,5	81,5	112	48
40	12	16	104	30	1/8	13	12	38	13	18	13	118	45	106	86	44	66	88	120	54

ø	N	O1	O3	P1/P2	P3	Q	R	S	Y	Y1	Y2	Y3	Y4	X	X1	X2	J	K
20	24	17	28	M5x0,8	M6x1	13	12	6	28	3	3,5	3	6	5,5	9,5	5,5	44	M5
25	30	17	34	M6x1		15	12	6	34	4	4,5	3	6	5,5	9,5	5,5	50	M5
32	34	21	42	M8x1,25		20	16	10	42	4	4,5	3	6	6,5	11	7,5	63	M6
40	40	22	50	M8x1,25		20	16	10	50	4	4,5	3	6	6,5	11	7,5	72	M6

Mod. QCTF and QCBF type "B"



(+ add the stroke)

Technical characteristics of the adjustment mechanism of the cylinder's stroke				
Cylinder's diameter	ø20	ø25	ø32	ø40
Shock Absorber	SA-1007	SA-1007	SA-1412	SA-1412
Maximum energy absorbed by cycle (mm)	0 ÷ 15	0 ÷ 15	0 ÷ 20	0 ÷ 20
Adjustment range cylinder's stroke (mm)	+0 ÷ +12	+0 ÷ +8	+0 ÷ +10	+0 ÷ +11

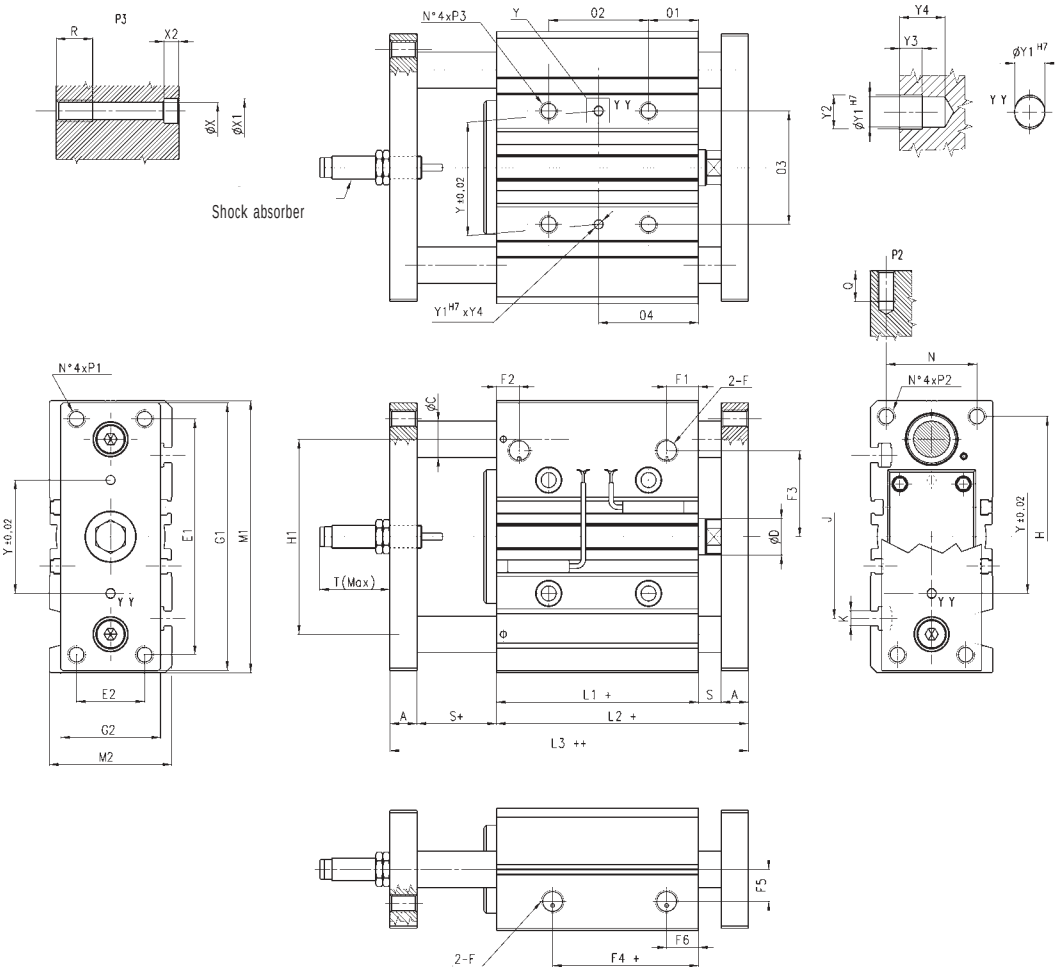
NOTE:
Make sure that the mounted shock absorber is suitable for the requested application (see general catalogue and examples in the section shock absorbers Series SA). If necessary, use the inserts and stroke adjustment Mod. SA-10SC and SA-14SC (see optional accessories in the section shock absorbers Series SA).

DIMENSIONS

ø	A	øD	E1	E2	F	F1	F2	F3	F4	F5	F6	G1	G2	G3	H	H1	L1	L2	L3	M1	M2	N
20	10	10	70	18	1/8	10,5	10,5	25	12,5	11,5	10,5	97	30	56,5	72	54	37	53	69	83	36	24
25	10	12	78	26	1/8	11,5	8	28,5	12,5	13,5	11,5	107	40	61,5	82	64	37,5	53,5	69,5	93	42	30
32	12	16	96	30	1/8	12,5	9,5	34	7	15	12,5	134	45	79	98	78	37,5	59,5	81,5	112	48	34
40	12	16	104	30	1/8	13	12	38	13	18	13	141	45	82	106	86	44	66	88	120	54	40

ø	O1	O3	P1/P2	P3	Q	R	S	T	U	Y	Y1	Y2	Y3	Y4	X	X1	X2	J	K	shock absorber
20	17	28	M5x0,8	M6x1	13	12	6	57,5	32	28	3	3,5	3	6	5,5	9,5	5,5	44	M5	SA-1007
25	17	34	M6x1		15	12	6	62,5	38	34	4	4,5	3	6	5,5	9,5	5,5	50	M5	SA-1007
32	21	42	M8x1,25		20	16	10	81	44	42	4	4,5	3	6	6,5	11	7,5	63	M6	SA-1412
40	22	50	M8x1,25		20	16	10	85	44	50	4	4,5	3	6	6,5	11	7,5	72	M6	SA-1412

Mod. QCTF and QCBF type "C"



(+ add the stroke)

Technical characteristics of the adjustment mechanism of the cylinder's stroke				
Cylinder's diameter	ø20	ø25	ø32	ø40
Shock Absorber	SA-1007-W	SA-1007-W	SA-1412-W	SA-1412-W
Maximum energy absorbed by cycle (mm)	0 ÷ 25	0 ÷ 25	0 ÷ 35	0 ÷ 35
Adjustment range cylinder's stroke (mm)	-15 ÷ -25	-15 ÷ -25	-18 ÷ -35	-18 ÷ -35

NOTE: Make sure that the mounted shock absorber is suitable for the requested application (see general catalogue and examples in the section shock absorbers Series SA). If necessary, use the stop collar for stroke regulation Mod. SA-10SC and SA-14SC (see optional accessories in the section shock absorbers Series SA). The negative values show the stroke reduction when the stop collar is mounted.

DIMENSIONS

ø	A	øD	E1	E2	F	F1	F2	F3	F4	F5	F6	G1	G2	H	H1	L1	L2	L3	M1	M2	N
20	10	10	70	18	1/8	10,5	10,5	25	12,5	11,5	10,5	81	30	72	54	37	53	69	83	36	24
25	10	12	78	26	1/8	11,5	8	28,5	12,5	13,5	11,5	91	40	82	64	37,5	53,5	69,5	93	42	30
32	12	16	96	30	1/8	12,5	9,5	34	7	15	12,5	110	45	98	78	37,5	59,5	81,5	112	48	34
40	12	16	104	30	1/8	13	12	38	13	18	13	118	45	106	86	44	66	88	120	54	40

ø	O1	O3	P1/P2	P3	Q	R	S	T(max)	Y	Y1	Y2	Y3	Y4	X	X1	X2	J	K	shock absorber
20	17	28	M5x0,8	M6x1	13	12	6	37	28	3	3,5	3	6	5,5	9,5	5,5	44	M5	SA-1007 W
25	17	34	M6x1		15	12	6	37	34	4	4,5	3	6	5,5	9,5	5,5	50	M5	SA-1007 W
32	21	42	M8x1,25		20	16	10	55	42	4	4,5	3	6	6,5	11	7,5	63	M6	SA-1412 W
40	22	50	M8x1,25		20	16	10	55	50	4	4,5	3	6	6,5	11	7,5	72	M6	SA-1412 W