

Pneumatic swivelling units series RT

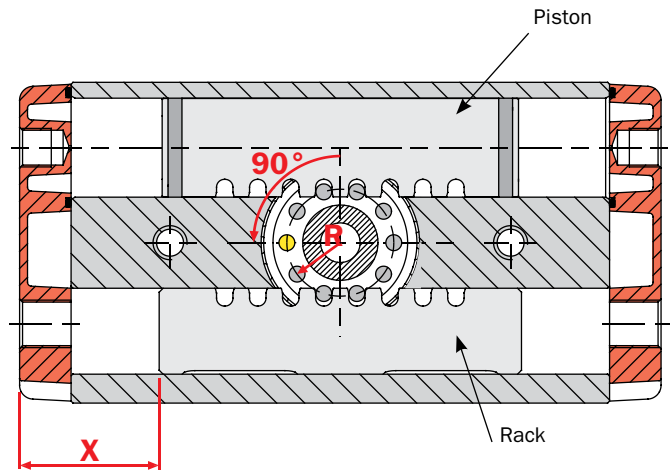
- Rack and pinion movement.
- Continuously adjustable stroke.
- Large ball bearings on the shaft.
- Through hole in the pinion.
- Optional rubber bumpers (FGD) or hydraulic shock-absorber.
- Optional intermediate stopper (RTD).
- Optional proximity magnetic sensors.



	RT-10	RT-12	RT-20	RT-25	RT-35	RT-45	RT-63
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]						
Pressure range	1.5 ÷ 8 bar						
Temperature range	5° ÷ 60°C.						
Maximum swivelling angle	190°						
Theoretical torque at 6 bar	28 Ncm	56 Ncm	198 Ncm	397 Ncm	779 Ncm	1669 Ncm	3926 Ncm
Maximum working frequency	3 Hz	3 Hz	2 Hz	2 Hz	2 Hz	2 Hz	1 Hz
Swivelling time without load	0.05 s	0.06 s	0.11 s	0.19 s	0.08 s	0.16 s	0.23 s
Cycle air consumption	3.3 cm ³	6.3 cm ³	23 cm ³	45 cm ³	92 cm ³	230 cm ³	520 cm ³
Max repeatability tolerance with shock-absorber	0.02°	0.02°	0.02°	0.02°	0.02°	0.02°	0.02°
Weight	235 g	560 g	965 g	1680 g	2475 g	5250 g	8185 g

End stroke accessories

For the stroke adjustment you can use hydraulic shock-absorbers, rubber bumpers (FGD) or only grub screws according to the kinetic energy the unit has to bear.
NEVER USE THE SWIVELLING UNIT WITHOUT STROKE ADJUSTERS.



The table shows the codes of the suitable shock-absorbers. The bumpers (FGD) are Gimatic products.

		RT-10	RT-12	RT-20	RT-25	RT-35	RT-45	RT-63
		M8x1	M10x1	M12x1	M12x1	M14x1.5	M20x1.5	M25x1.5
Shock-absorbers for heavy loads	ACE ENIDINE	MC10MH -	- TK10M-1-SP18482	MC75M3-NB-111 PM15MF-3-SP33881	MC75M3-NB-111 PM15MF-3-SP33881	MC150MH2 PM25MC-3-SP34780	MC225MH2 PM50MC-2	MC600MH2 PM100MF-3-SP37330
Shock-absorbers for light loads	ACE ENIDINE	MC10ML PMX8MC-3	MC25M-NB TK10M-4	MC75M2-NB ECO15MF-2	MC75M3-NB ECO15MF-2	-	-	-
Rubber bumpers		FGD0830 (L=30 mm)	FGD1030 (L=30 mm)	FGD1235 (L=35 mm)	-	-	-	-
		6	8.25	10.5	13.5	13.5	17.5	21
		18.5	24	27.5	35.5	37	53.5	60
		0.1047	0.1417	0.1802	0.2317	0.2296	0.2976	0.3571

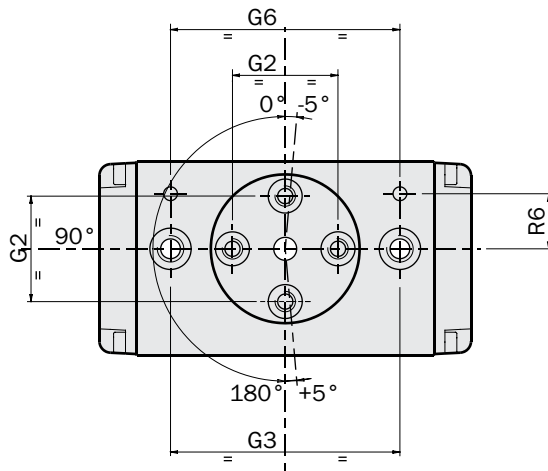
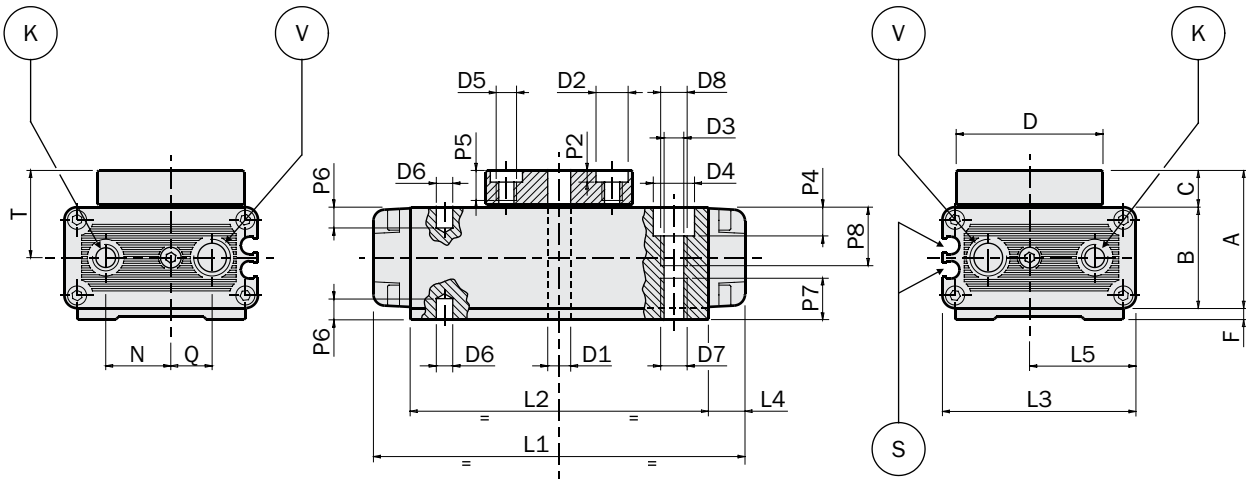
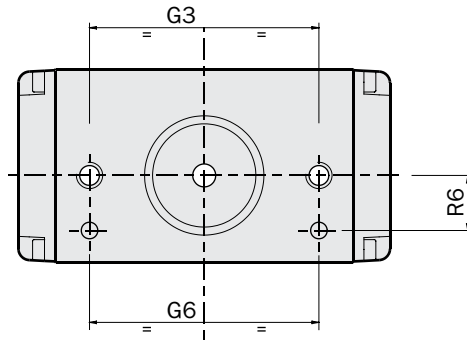
Where:
 R is the pinion radius;
 X_{90° is the minimum length of the end-stroke device to reduce the unit stroke to 90°;
 $\Delta X \nabla 1^\circ$ is the rack stroke each one degree pinion rotation.

By the accessories in the previous table, it is possible to reduce the unit stroke to 90°.
 If a larger stroke reduction is requested, it is necessary to check if a longer end-stroke device must be used.
 Example:
 If a 70° rotation angle is requested by RT-63, the dimension X will have to be: $60+(20 \times 0.3571)=67.1\text{mm}$.



Dimensions (mm)

FIRST ANGLE PROJECTION



D1 Through hole

K Threaded hole for air connection

V Threaded hole for stroke adjuster

S SS and SN series sensor groove

D2 Hole for centering sleeve

D3 Through hole for the unit fastening

D5 Threaded hole for fastening

D6 Dowel pin hole

D7 Threaded hole for the unit fastening

Dimensions (mm)

	RT-10	RT-12	RT-20	RT-25	RT-35	RT-45	RT-63
A	29.75	42	49	59	71	90.5	108.5
B	21.75	32	39	45	57	72	90
C	8	10	10	14	14	18.5	18.5
D	Ø32	Ø45	Ø45	Ø65	Ø65	Ø100	Ø100
D1	Ø5	Ø6	Ø8	Ø10	Ø12	Ø18	Ø20
D2	Ø7 H8	Ø7 H8	Ø7 H8	Ø9 H8	Ø9 H8	Ø15 H8	Ø15 H8
D3	Ø4.3	Ø5.2	Ø5.2	Ø6.8	Ø6.8	Ø10.5	Ø10.5
D4	Ø9	Ø11	Ø11	Ø15	Ø15	Ø19	Ø19
D5	M4	M4	M4	M5	M5	M8	M8
D6	Ø3 H8	Ø4 H8	Ø4 H8	Ø6 H8	Ø6 H8	Ø8 H8	Ø8 H8
D7	M5	M6	M6	M8	M8	M12	M12
D8	M5	M6	M6	M8	M8	M12	M12
F	2.75	-	-	-	-	-	-
G2	23 ±0.02	31.5 ±0.02	31.5 ±0.02	50 ±0.02	50 ±0.02	76 ±0.02	76 ±0.02
G3	50	59	72	86	86	140	140
G6	50 ±0.02	59 ±0.02	72 ±0.02	86 ±0.02	86 ±0.02	140 ±0.02	140 ±0.02
K	M5	M5	M5	1/8	1/8	1/4	1/4
L1	81	108	130	162	170	230	265
L2	65	88	110	136	140	180	215
L3	38	50	65	81	100	120	150
L4	8	10	10	13	15	25	25
L5	19	25	32.5	40.5	53	64	87
N	10	13	16	24	28.5	37	48.5
P2	2.5	2.5	2.5	3	3	3.5	3.5
P4	6	6	6	10	10	13	13
P5	6.5	8	8	12	12	16	16
P6	3	4	4	6	6	8	8
P7	24.5	12	12	14	18	24	24
P8	24.5	12	12	14	18	24	24
Q	9	13	16	20.5	22	26	27
R6	12 ±0.02	13 ±0.02	13 ±0.02	25 ±0.02	25 ±0.02	30 ±0.02	30 ±0.02
V	M8x1	M10x1	M12x1	M12x1	M14x1.5	M20x1.5	M25x1.5
T	19	26	29.5	36.5	42.5	54.5	63.5