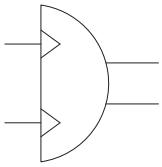
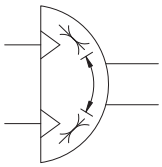
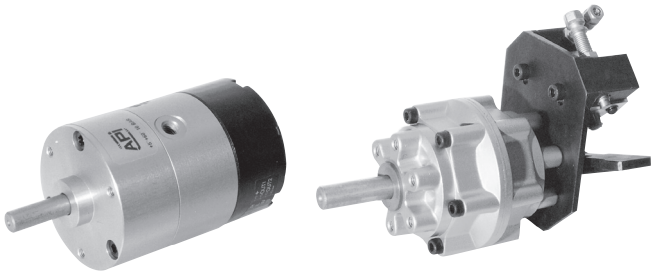
Hi-Rotor Cylinders

Sizes: 1, 3, 10, 20, 30, 50, 150, 300, 800 *Double acting*

Standard executions		
Version	Symbol	Type
Single vane Fixed rotation angle		P
Double vane Fixed rotation angle		P1
Single vane Adjustable rotation angle		PR
Double vane Adjustable rotation angle		P1R

Options	Suffix
Magnetic with two sensors. For the complete pre-mounted kit see page 1.50.15.	M
Special versions on request	/ S

The options can be combined (when this is possible).



Series of Hi-rotor cylinders with fixed and adjustable rotation angles and reduced overall dimensions.
They are provided with elastic dampers to relieve the impacts of the vanes, which are available in the single and double (on some types) versions to get a higher torque.
For mounting accessories see from page 1.50.10.

How to order: 20/90° P

20	/	90°	P	
Size	/	Rotation angle*	Type	Option

* Were the model adjustable, you should indicate the maximum rotation angle.

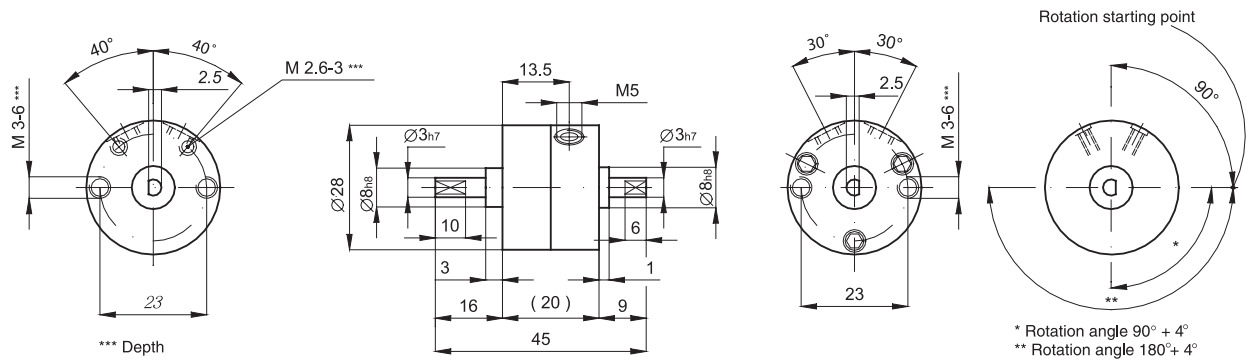
Technical data	
Fluid	Compressed filtered air with or without lubrication. Lubrication, if be used, must be continous.
Pressure range	2 ÷ 10 bar - Models 1P-3P-3PR: 3 ÷ 7 bar - Models 10P-20P-10PR: 2 ÷ 7 bar
Temperature range	+5 °C ÷ + 60°C
Materials	Body: Die-cast aluminium Shaft: Steel Bearing: Sintered bronze Seals: Nitrile rubber (NBR)

Type	Standard rotation angles	Maximum rotation angle	Rotation angle tolerance	Moment (Nm) 3 bar	6 bar	9 bar	Possible rotation angles
1P	90°, 180°, 270°	270°	from 0° to +4°	0,076	0,156	-	90° and 180°
3P				0,16	0,38	-	
10P				0,56	1,2	-	
20P				0,95	2,1	3,26	
30P			from 0° to +3°	1,8	4,1	6,5	90°,180° and 270°
50P				2,59	5,9	9,5	
150P				8,5	18	27,3	
300P				16,5	34,5	51,8	
800P				59,1	123	186	
30P1				4,4	9,5	14,8	90°
50P1				5,79	12,8	20,1	
150P1				19	41,5	62	
300P1				39	83	124	
800P1				120	247	371	
3PR			from 0° to +3°	0,162	0,324	-	Adjustable from 30° ÷ 180°
10PR			from 0° to +3°	0,46	1,06	-	
20PR				0,8	1,95	3,1	
30PR			da 0° a +3°	1,8	4,1	6,5	Adjustable from 30° ÷ 270°
30P1R				4,4	9,5	14,8	Adjustable from 30° ÷ 90°

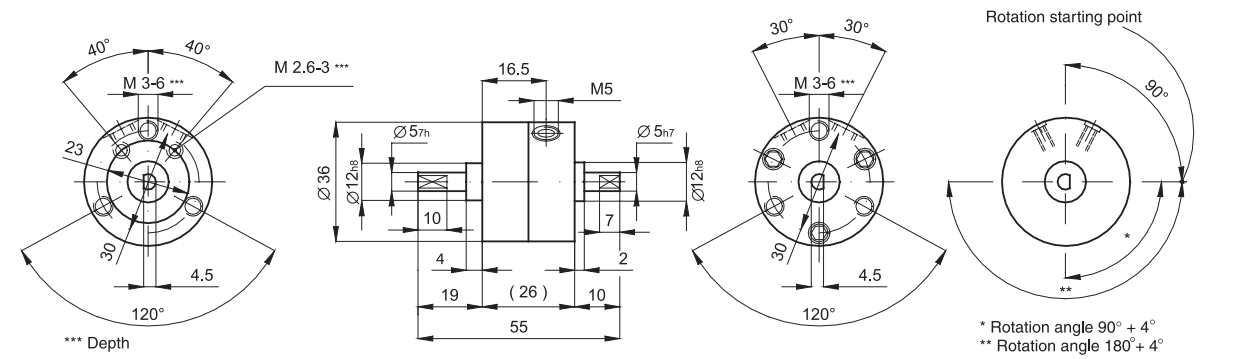
Seal kits not available for these cylinders.

Dimensions and oscillating points

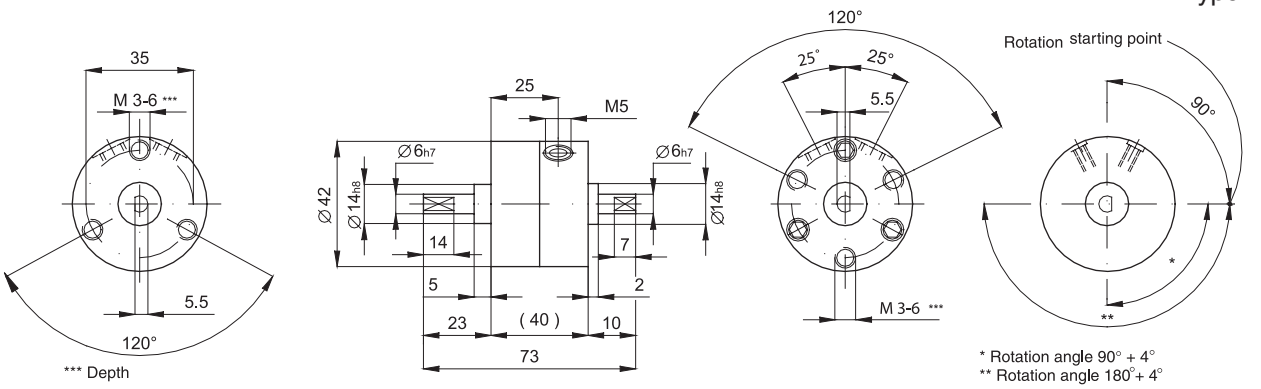
Type: **1P**



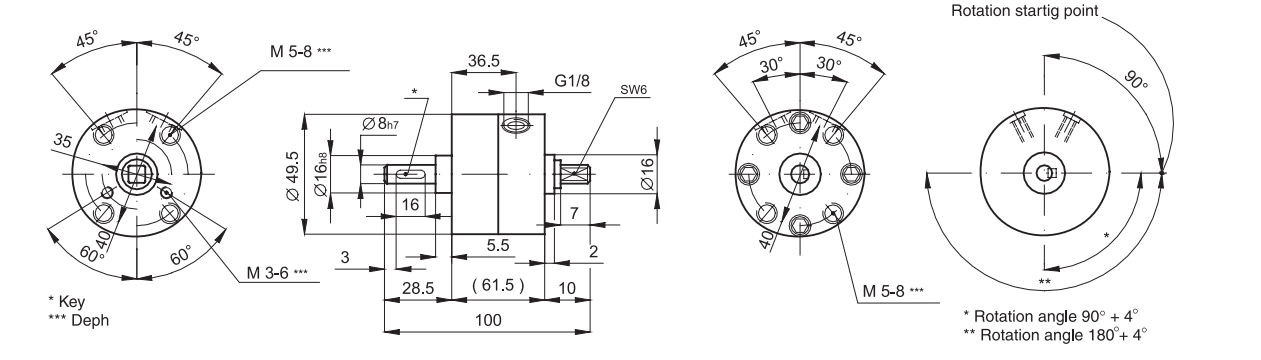
Type: **3P**



Type: **10P**

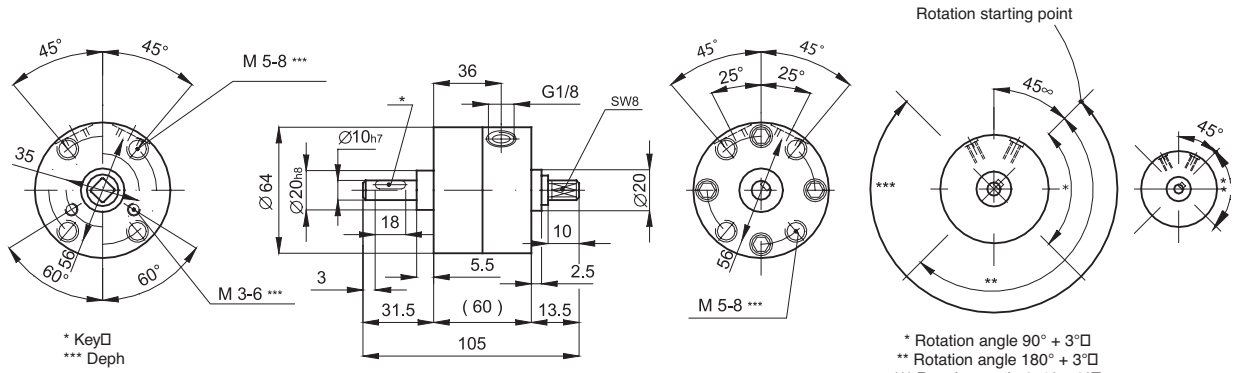


Type: **20P**

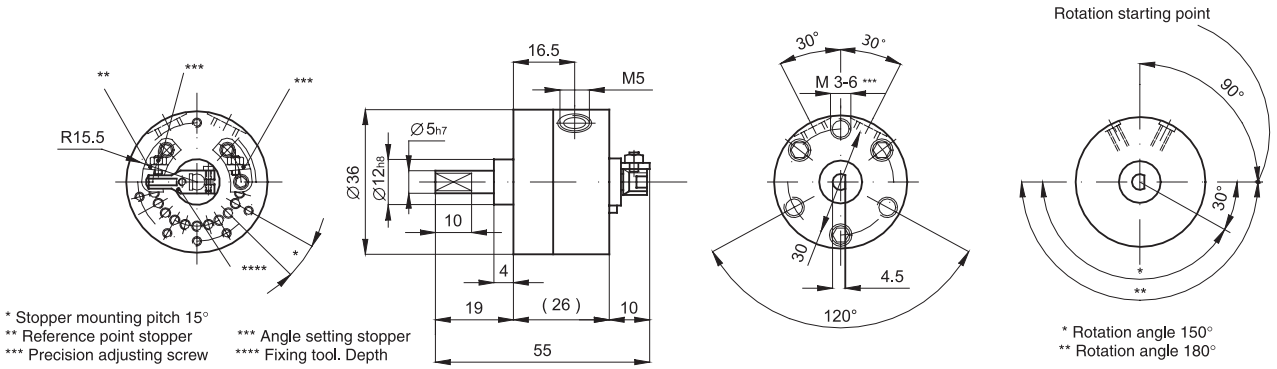


Dimensions and oscillating points

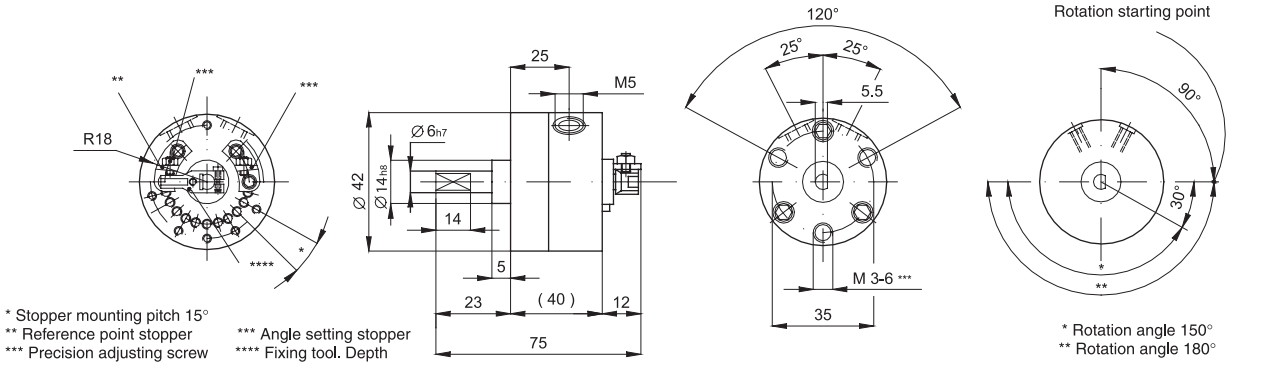
Type: **30P - 30P1**



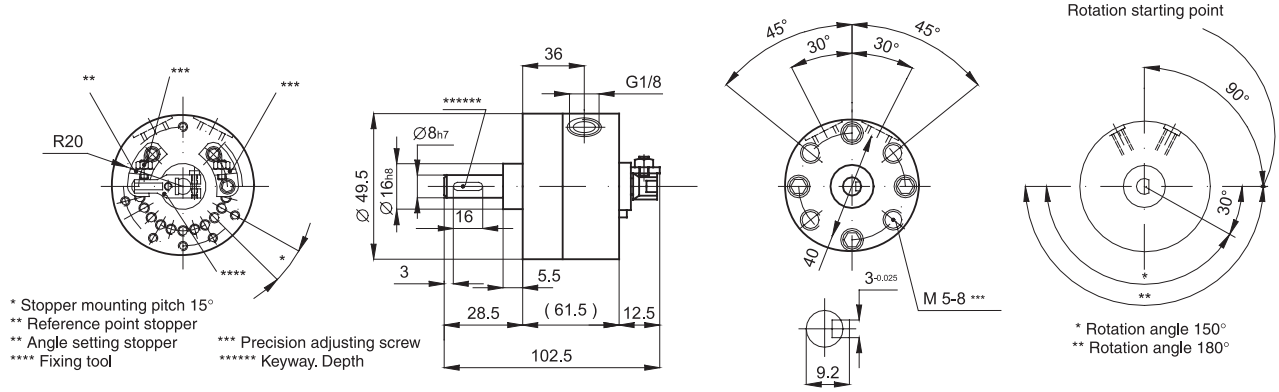
Type: **3PR**



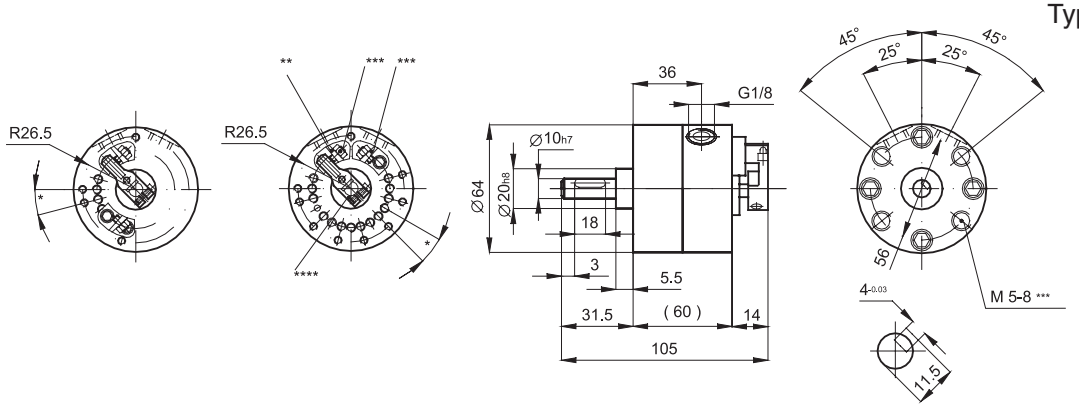
Type: **10PR**

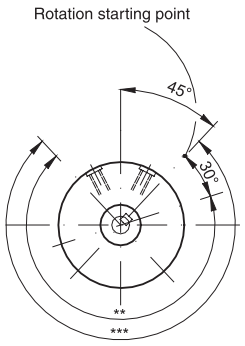


Type: **20PR**

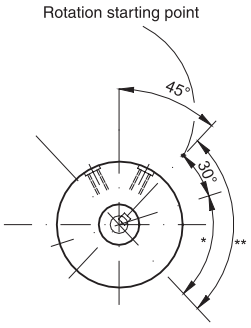


Type: **30PR - 30P1R**



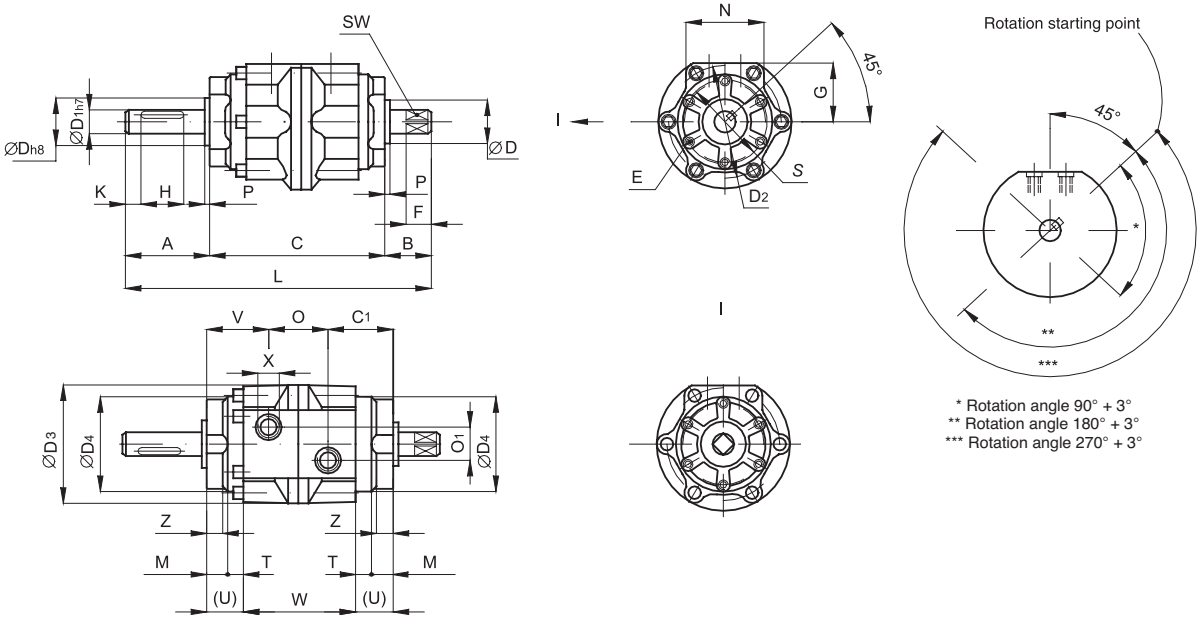


** Setting field of rotation angle 270°
*** Totation angle 270°



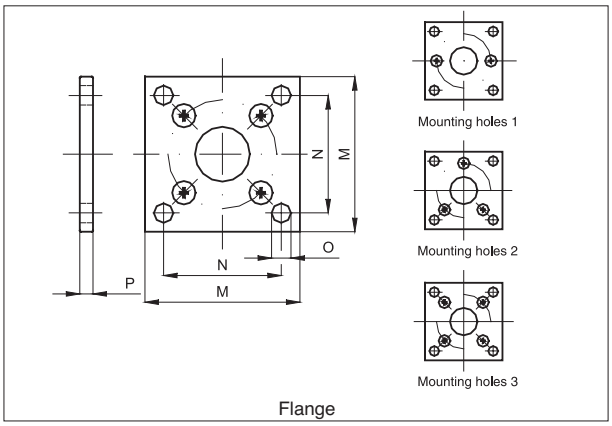
** Setting field of rotation angle 60°
*** Totation angle 270°

Type: **50, 150, 300, 800 / P, P1**



* Rotation angle 90° + 3°
** Rotation angle 180° + 3°
*** Rotation angle 270° + 3°

Size	A	B	C	C_1	D	D_1	D_2	D_3	D_4	E	F	G	H	K	L	M	N	O	O_1	P	S	T	U	V	W	X	Z	SW	Kg
50	39,5	19,5	86	29	25	12	68	79	58	M6x9	13	36	20	5	145	14	44	28	16	2,5	45	6	20	29	46	1/8”	11	10	0,82
150	53,5	23,5	103	34,5	30	17	97	110	85,5	M8x12	16	51	36	5	180	15,5	61	34	24	3	70	8	23,5	34,5	56	1/4”	10,5	13	2
300	65	30	125	41,5	45	25	125	141,5	110	M10x15	22	66	40	5	220	17,5	78	42	32	3,5	80	10	27,5	41,5	70	3/8”	13	19	4,3
800	69,5	44,5	171	53,5	70	40	173	196	152	M12x18	25	90	40	10	285	21	110	64	44	4,5	120	11,5	32,5	53,5	106	1/2”	14,5	32	12,7

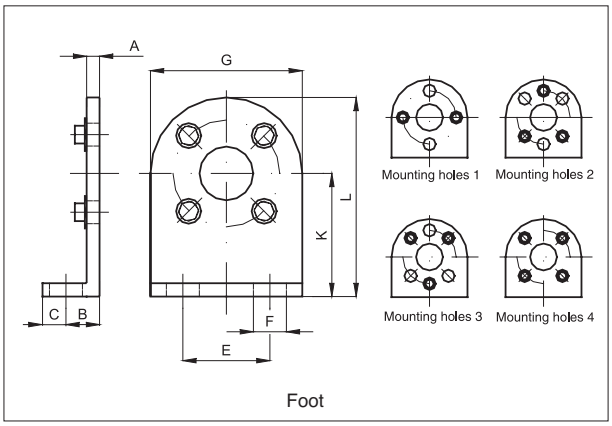


Flange

Type: **FP**

Code	Item	Size	M	N	O	P	Mounting holes	Rotation angles*	Kg
040901	FP001	1	30	24	3,4	2	1	180°	0,04
040902	FP003	3	27	30	3,4	2,5	2	120°	0,07
040903	FP010	10	42	34	3,5	3	2	120°	0,14
040904	FP020	20	50	41	5,5	3,5	3	90°	0,36
040905	FP030	30	64	52	5,5	3,5	3	90°	0,47

* The mounting can be rotated through the indicated angle.

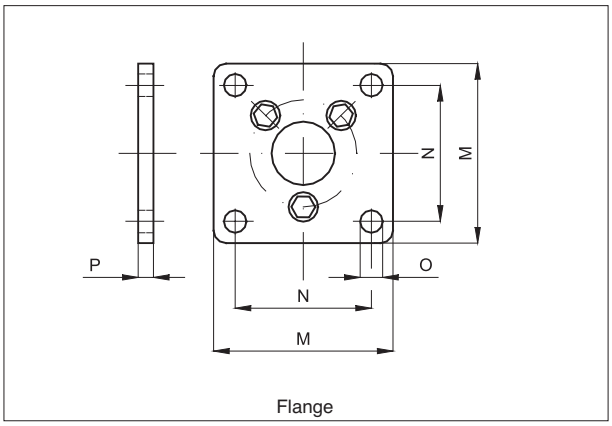


Foot

Type: **PP**

Code	Item	Size	A	B	C	E	F	G	K	L	Mount. Holes*	Rot. ang.*	Kg
040910	PP001	1	2	10	5	20	4,8	30	22	37	1	90°	0,04
040911	PP003	3	2,5	11	7	26	4,8	36	25	43	2	60°	0,05
040912	PP010	10	2,3	12	8	30	5,8	42	30	51	3	60°	0,09
040913	PP020	20	3,5	15	10	36	7	49	34	58,5	4	90°	0,20
040914	PP030	30	4,5	18	12	48	6,5	66	42	75	4	90°	0,20

* The mounting can be rotated trough the indicated angle.

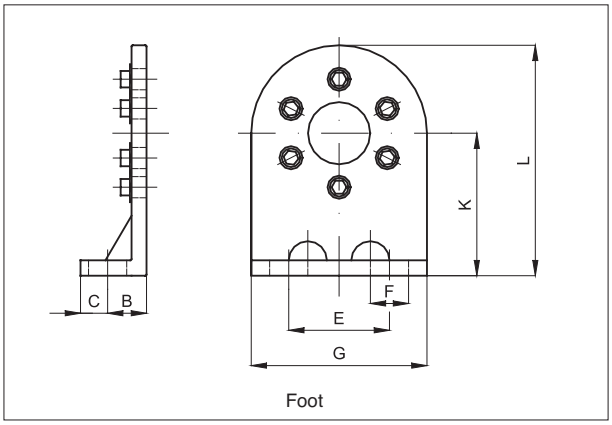


Flange

Type: **FP**

Code	Item	Size	M	N	O	P	Rotation angles*	Kg
040920	FP050	50	80	64	7	35	60°	0,20
040921	FP150	150	110	88	9	47,5	60°	0,51

* The mounting can be rotated through the indicated angle.



Foot

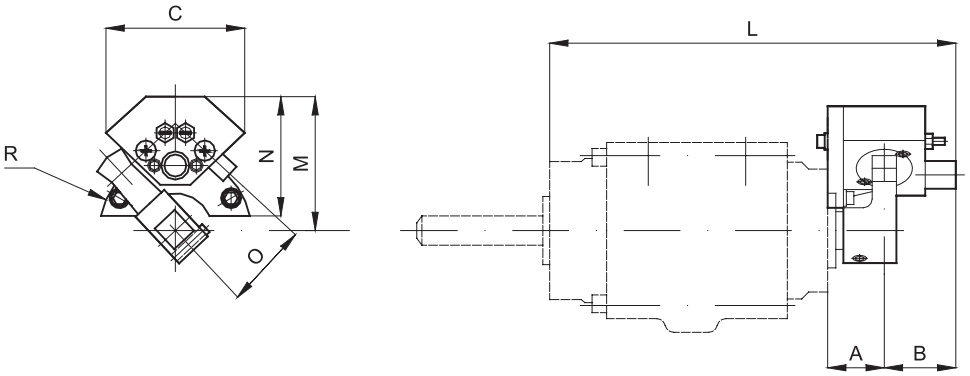
Type: **PP**

Code	Item	Size	A	B	C	E	F	G	K	L	Rotation angles*	Kg
040925	PP050	50	4,5	25	10	55	11	75	45	82,5	60°	0,26
040926	PP150	150	10	28	12	80	13	110	65	115	60°	1,14
040927	PP300	300	12	32	13	100	15	140	80	135	60°	1,24
040928	PP800	800	15	35	15	140	15	200	110	185	60°	4,45

* The mounting can be rotated trough the indicated angle.

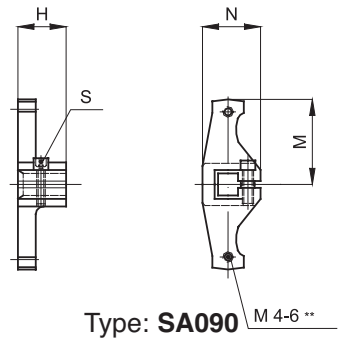
Hydro-cushion kit

Type: **KA**

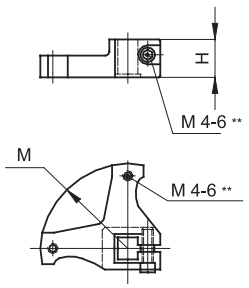


Code	Item	Size	A	B	C	L	M	N	O	R
040930	KA050	50	20,5	30	56	136,5	54	50	34	38
040931	KA150	150	22,5	34	80	159,5	71,5	62	46	51
040932	KA300	300	25,5	37	95	187,5	95	87	62	68

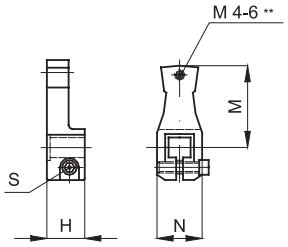
Bracket for hydraulic cushion



Type: **SA090**



Type: **SA180**



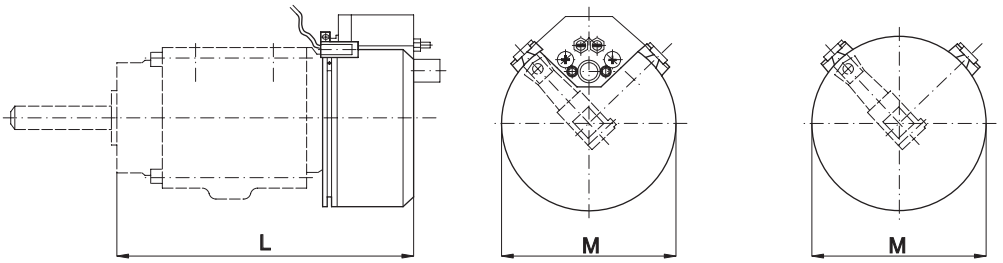
Type: **SA270**

** Depth

Code	Item	Code	Item	Code	Item	Size	H	M	N	S
040935	SA090050	040940	SA180050	040945	SA270050	50	18	38	23	4
040936	SA090150	040941	SA180150	040946	SA270150	150	20	51	28	5
040937	SA090300	040942	SA180300	040947	SA270300	300	23,5	68	40	6

Kit for the mounting of the sensors (with one sensor), option M.....

L	M
123	85
143	111
169	145



The kit is to be ordered together with the cylinder.

Options and technical data of the magnetic reed switches				
Option	Nominal voltage (V)	Rating current range (mA)	LED	Varistor
MA1	AC 100 / DC 24	5 ~ 45	•	
MD1	DC 24	25 ~ 65	•	
MA2L	AC 100 / 110	5 ~ 150	•	•
MA2H	AC 200 / 220	5 ~ 150	•	•
MD3	DC 5,6	≤ 50 (inductive load) ≤300 (resistive load)	•	
MR	AC / DC 5 ~ 100	≤ 50 (inductive load) ≤300 (resistive load)		