

2 position pneumatic swivelling units (series R)

- Hannover IF Design Award 1999 winner.
- Modular with Gimapick system.
- Suitable for 90° or 180° rotation angles.
- Shock-absorbers.
- Ball bearings.
- Integrated rotating distributor of compressed air.
- Air feeding possible directly from the fixing plate.
- Optional magnetic sensors.



	R20		R32		R63	
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	2 ÷ 8 bar					
Temperature range	5° ÷ 60°C.					
Swivelling angle	90°	180°	90°	180°	90°	180*
Air consumption	8 cm ³	14 cm ³	16 cm ³	28 cm ³	115 cm ³	174 cm ³
Swivelling time without load	0.09 s	0.17 s	0.08 s	0.15 s	0.2 s	0.3 s
Maximum working frequency	1 Hz		0.5 Hz		0.5 Hz	
Theoretical torque at 6 bar	1131 Nmm		4343 Nmm		22444 Nmm	
180° angle adjustment	± 8°		± 8°		± 8°	
Repetition accuracy	0.02°		0.02°		0.02°	
Weight	400 g		1000 g		3400 g	

Rotation angle

The units R20, R32 and R63 are supplied with one end-stroke block (F) in the seat (D).

In this configuration they get a 180° rotation angle.

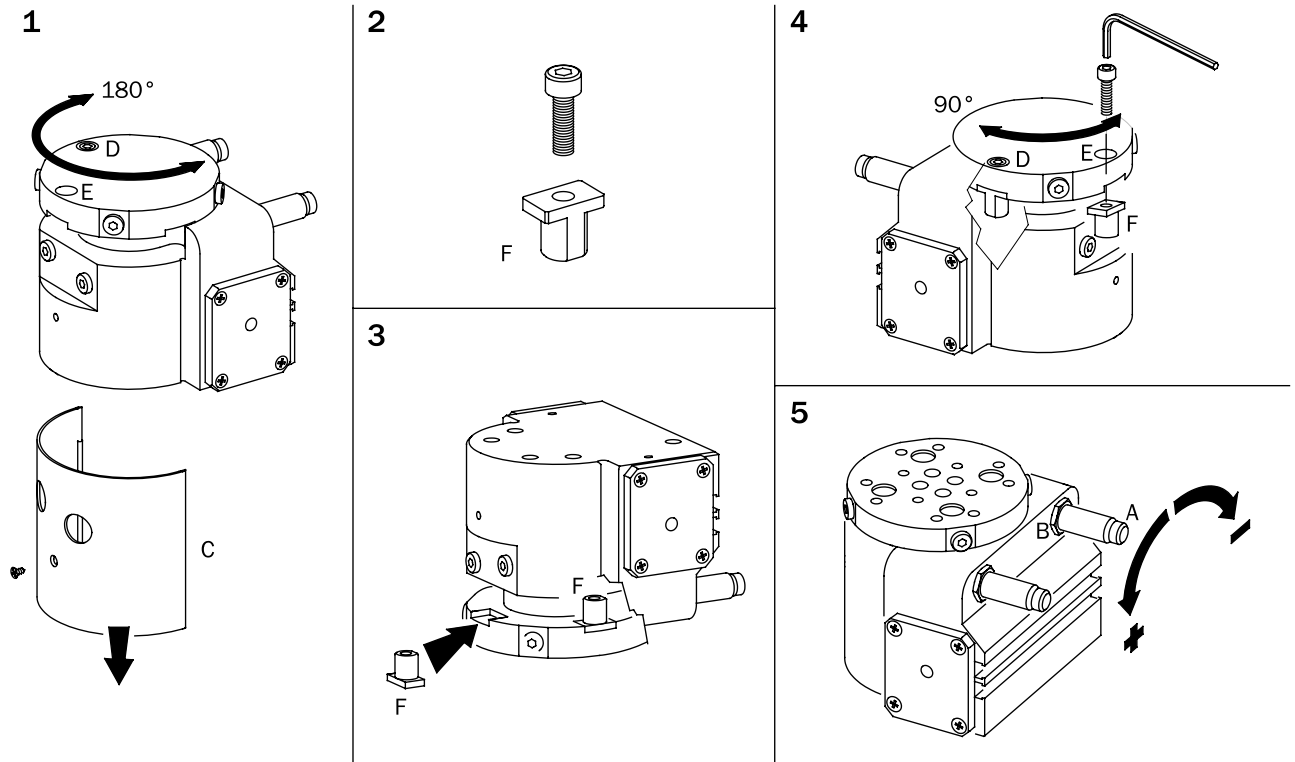
However a second block is supplied in the product packaging: mounting it in the seat (E), it reduces the stroke at 90°.

It is necessary to remove the protection (C), before mounting the second block.

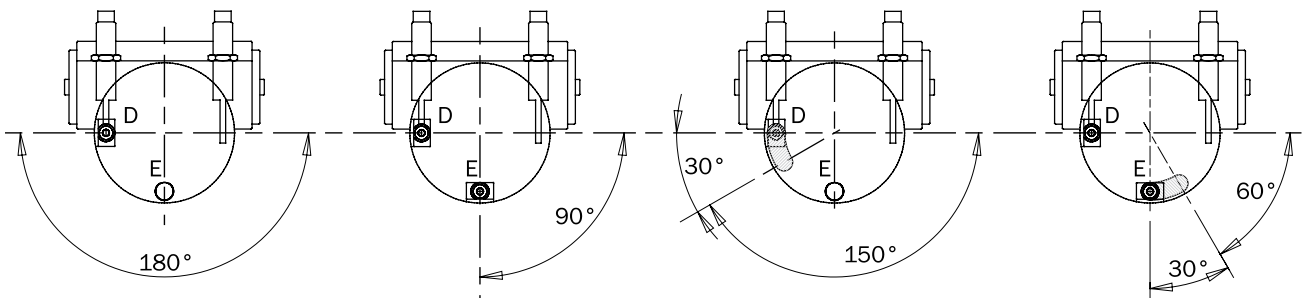
Glue the screw of the second block by an anaerobic adhesive (medium resistance).

At the end the rotation angle can be furthermore adjusted changing the position of the shock-absorbers (A), after loosening the nuts (B).

Each shock-absorber can change the end-stroke position of about ±4°.



To get other angles, it is necessary to build end-stroke blocks (not supplied) with a proper shape.



3 position pneumatic swivelling units (series R)

- Hannover IF Design Award 1999 winner.
- Modular with Gimapick system.
- Suitable for 90° and 180° rotation angles.
- Damped end-stroke in every position.
- Ball bearings.
- Compact design.
- Air feeding possible directly from the fixing plate.
- Optional magnetic sensors.



	R21		R33		R64	
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	3 ÷ 8 bar					
Temperature range	5° ÷ 60°C.					
Swivelling angle	90°	180°	90°	180°	90°	180*
Air consumption	8 cm ³	14 cm ³	16 cm ³	28 cm ³	115 cm ³	174 cm ³
Swivelling time without load	0.09 s	0.17 s	0.08 s	0.15 s	0.2 s	0.3 s
Maximum working frequency	2 Hz		1 Hz		0.5 Hz	
Theoretical torque at 6 bar	1131 Nmm		4343 Nmm		22444 Nmm	
180° angle adjustment	± 8°		± 8°		± 8°	
Repetition accuracy	0.02°		0.02°		0.02°	
Weight	500 g		1200 g		3200 g	

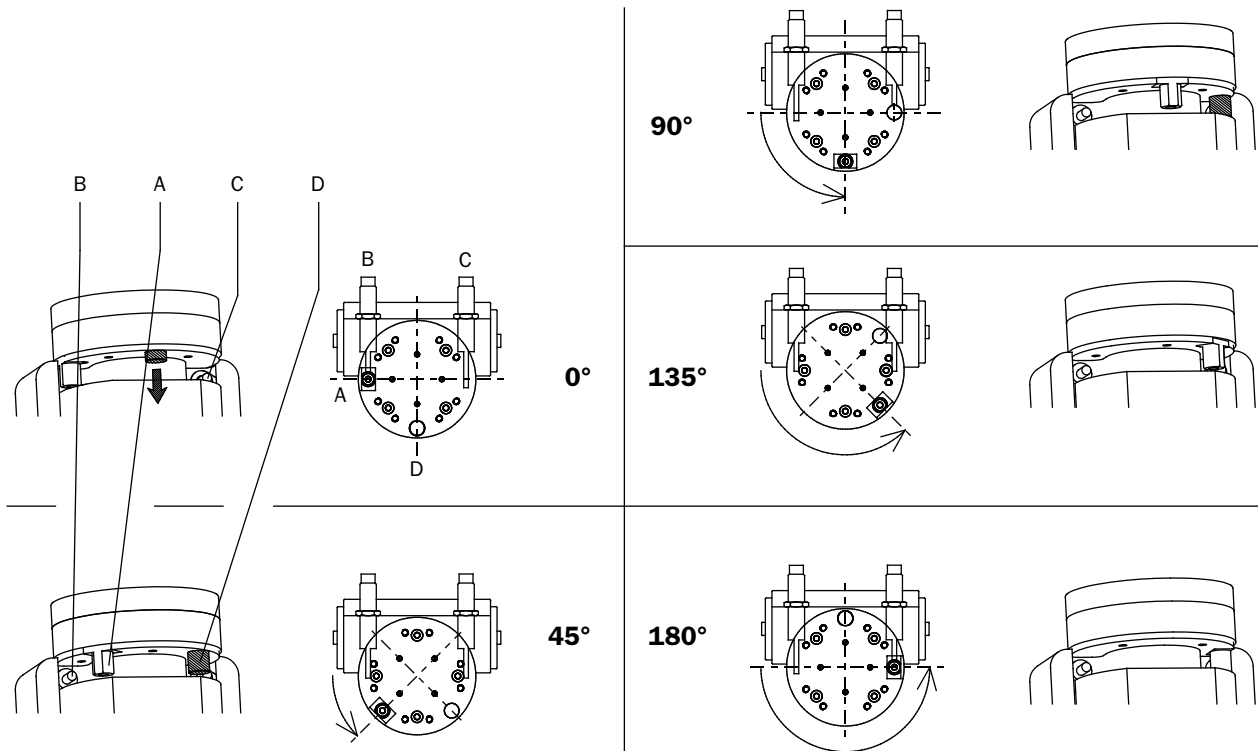
Rotation angle

R21, R33 and R64 are swivelling units with three positions: 0°, 90° and 180°.

These movements are possible:

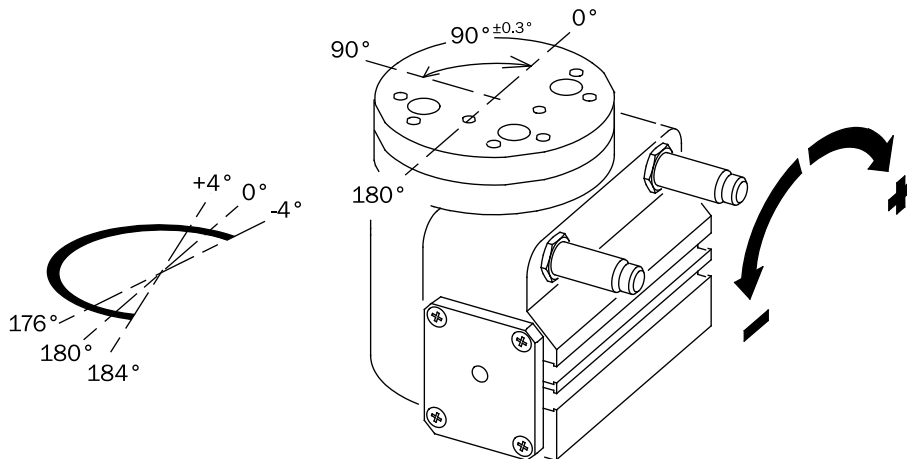
- From 0° to 180°.
- From 180° to 0°.
- From 0° to 90°.
- From 90° to 0°.
- From 90° to 180°, before to retract the moving block (D), the pressure must be balanced on both sides of the piston. The direct rotation from 180° to 90° is not possible.

The fixed block (A) gives the end-stroke at 0° against the shock-absorber (B) and at 180° against the shock-absorber (C), the moving block (D) at 90° against the shock-absorber (C). The moving block (D) can't be put out between 70° to 180°.

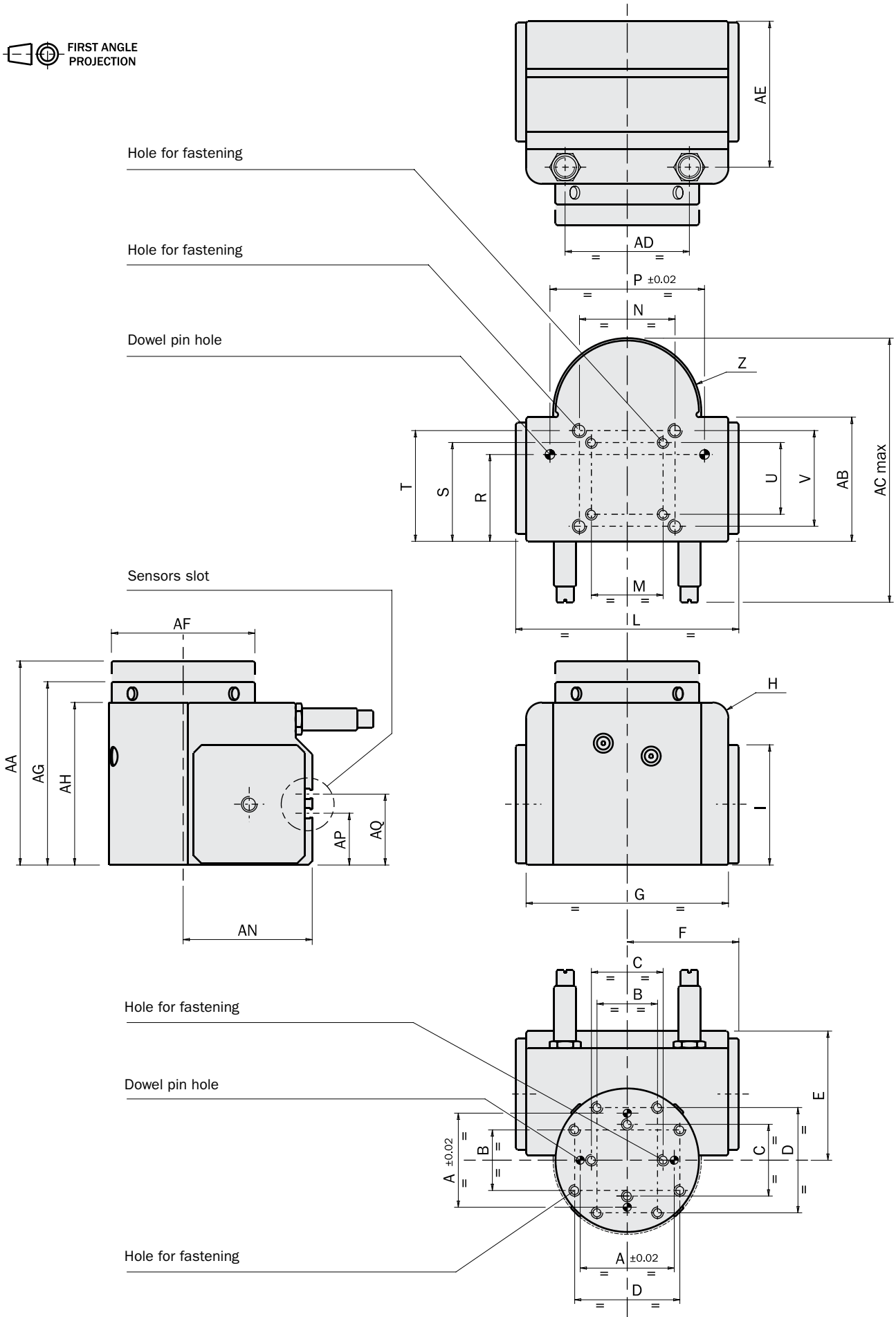


You can adjust of about ±4° on both sides the 180° angle, by the shock-absorbers.

It is not possible to adjust the 90° (tolerance ±0.3°) angle.



Dimensions (mm)



Hole for fastening

Hole for fastening

Dowel pin hole

Sensors slot

Hole for fastening

Dowel pin hole

Hole for fastening

Dimensions (mm)

	R20	R21	R32	R33	R63	R64
A	30.4	30.4	30.4	30.4	59	59
B	21	21	27	27	38	38
C	-	-	-	-	45	45
D	37	37	48	48	66	66
E	32	32	47	47	81	81
F	35	35	49	49	70	70
G	64.5	64.5	90	90	127	127
H	R 5	R 5	R 8	R 8	R 10	R 10
I	36	36	44.5	44.5	75.4	75.4
L	70	70	98	98	140	140
M	-	-	-	-	45	45
N	34	34	45	45	60	60
P	30.4	30.4	30.4	30.4	97	97
R	32	32	47	47	54.5	54.5
S	-	-	-	-	62	62
T	40.5	40.5	52.5	52.5	69.5	69.5
U	-	-	-	-	45	45
V	34	34	45	45	60	60
Z	R 26	R 26	R 36	R 36	R 46.5	R 46.5
AA	-	71	-	92	-	134
AB	30.4	30.4	45	45	77.9	77.9
AC	75	75	105	105	170	170
AD	42	42	60	60	78	78
AE	43	43	59	59	91.5	91.5
AF	Ø50	Ø50	Ø70	Ø72	Ø90	Ø90
AG	59	-	78	-	115	-
AH	51	51	67.5	67.5	102	102
AI	-	-	-	-	M6x12 mm	M6x12 mm
AN	32	32	47	47	81	81
AP	14	14	20.5	20.5	40	40
AQ	23	23	29.5	29.5	-	-
AR	-	-	-	-	M6x10 mm	M6x10 mm
AS	M4x8 mm	M4x8 mm	M6x10 mm	M6x10 mm	M8x14 mm	M8x14 mm
AT	Ø3 H8x6 mm	Ø3 H8x6 mm	Ø3 H8x6 mm	Ø3 H8x6 mm	Ø6 H8x8 mm	Ø6 H8x8 mm
AV	Ø3 H8x6 mm	Ø3 H8x6 mm	Ø3 H8x6 mm	Ø3 H8x6 mm	Ø5 H8x8 mm	Ø5 H8x8 mm
AZ	M3x6 mm	M3x6 mm	M4x10 mm	M4x10 mm	M6x12 mm	M6x12 mm

Rotary Units

Quick Changer

Profiles and Brackets

Grippers

Linear Actuators

Suspensions

Nippers

Robot Kit

Options

Sensors

Dimensions (mm)



Rotary Units

Quick Changer

Profiles and Brackets

Grippers

Linear Actuators

Suspensions

Nippers

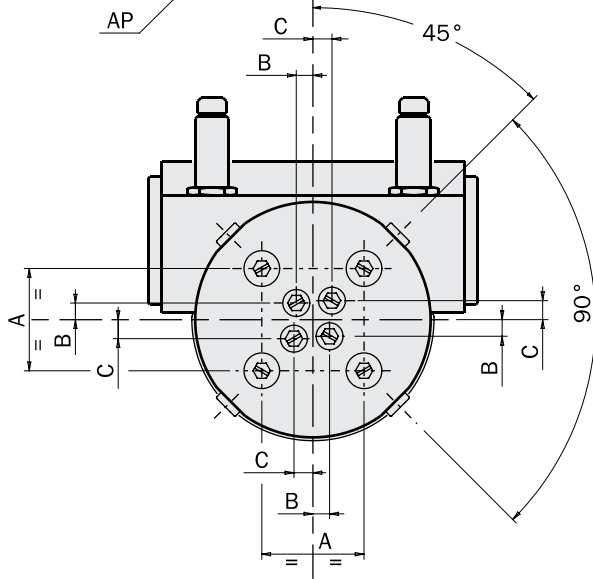
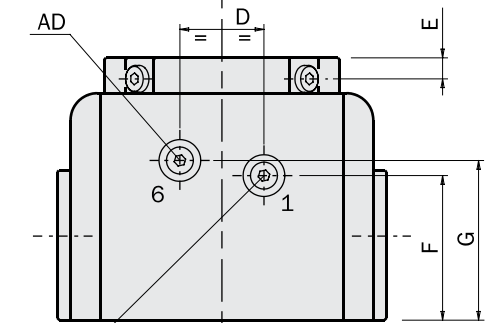
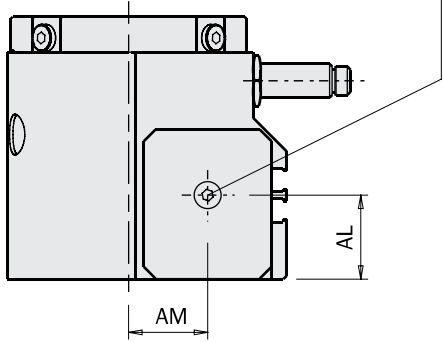
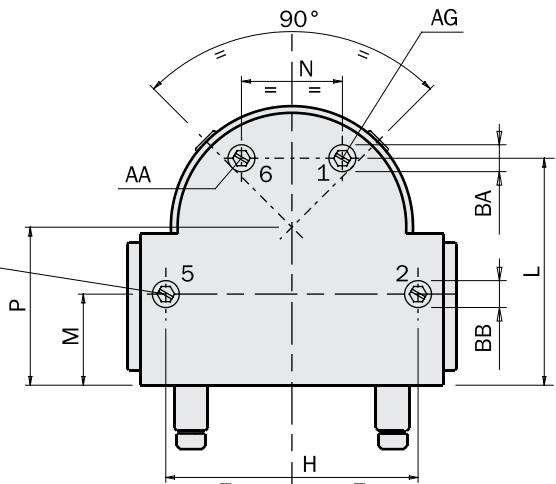
Robot Kit

Options

Sensors

N° 2 AB (5 - 2)

N° 2 AU (5 - 2)



Outlet of direct feeding

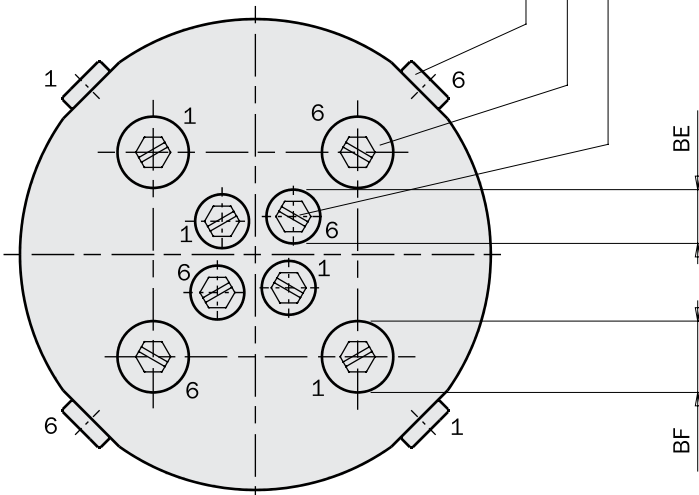
N° 4 AE (1 - 6)

Outlet of direct feeding

N° 4 AF (1 - 6)

Outlet of direct feeding

N° 4 AC (1 - 6)



The air ports identified with the same number are communicating

Dimensions (mm)

	R20	R21	R32	R33	R63	R64
A	24	-	30.4	-	48	-
B	2.7	-	4.9	-	6.2	-
C	3.4	-	5.7	-	7.25	-
D	13	13	25	25	30	30
E	4.5	-	6.25	-	7.5	-
F	32	32	43	43	68.35	68.35
G	37.7	-	47.5	-	76.45	-
H	52	52	75	75	109	109
L	46	46	67.5	67.5	103.5	103.5
M	17	17	27.1	27.1	39.5	39.5
N	13	13	30	30	30	30
P	32	32	47	47	81	81
AA	M3	-	M3	-	M5	-
AB	M3	M3	Ø2	Ø2	M3	M3
AC	M3	-	M5	-	M5	-
AD	M3	-	M5	-	M5	-
AE	M3	-	M3	-	M3	-
AF	M3	-	M3	-	M3	-
AG	M3	M3	M3	M3	M5	M5
AL	18.5	18.5	25	25	38.15	38.15
AM	15	15	23.5	23.5	41.5	41.5
AP	M3	M3	M5	M5	M5	M5
AU	M5	M5	M5	M5	G 1/8	G 1/8
BA	Ø6	Ø6	Ø6	Ø6	Ø9	Ø9
BB	Ø6	Ø6	-	-	Ø6	Ø6
BE	Ø5.5	-	Ø6	-	Ø6	-
BF	Ø9.4x1.3mm	-	Ø9.4x1.3mm	-	Ø9.4x1.3mm	-

Warning

The direct feeding of the rotary units R32 and R33 from the bottom air ports (AB) is possible only removing the plugs (Z) placed behind the covers (T). Reassembling the covers pay attention to the correct position of the gaskets (V), before placing the screws (S).

