

RP-200

55.51.5. Rotary Unit, Pneumatic



Ordering information

Type	A		B		C		D		E	
Size	55.	51.	5.							
Rotation angle - 90°			0,0,9,0.							
- 180°			0,1,8,0.							
Version - Standard					100.					
Fixings for proximity switch			Ø M 12		06					
with holders and activator flags			Ø M 18		07					
Ordering example	55.	51.	5.	0180.	100.	06				
Special rotation angles available upon request										

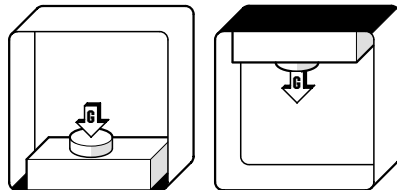
Technical data

Nominal rotation angle	90°	180°
Other rotation angles	available upon request	
Rotation angle setting range	±2,5°	
Nominal operating pressure	6 bar	
Approved operating pressure	min. 4,5 bar	max. 10 bar
Stroke volume/rotation angle	0,5 dm ³	1,0 dm ³
Nominal torque	200 Nm	
Repeat accuracy	±0,05°	
Unladen weight	30 kg	30 kg

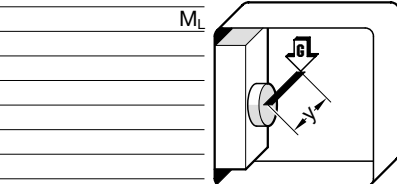
Carried load

Load moment of inertia – max. 6,0 kgm²

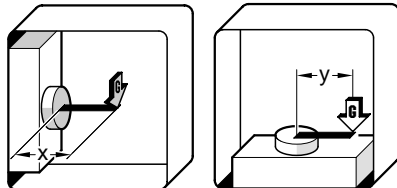
Axial load **G**
Vertical rotary axis
G max 120 kg



Load moment **M_L**
Horizontal rotary axis
ML max. 100 Nm

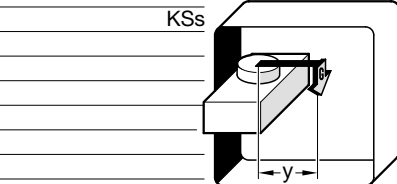


Tilting moment **KG**
when fixed to base surface
KG max. 750 Nm



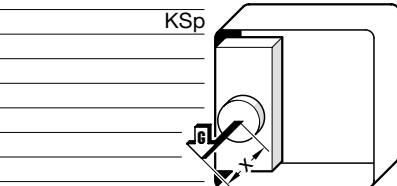
Tilting moment when fixed to side surface, perpendicular to fixing surface **KSS**

KSS max. 280 Nm



Tilting moment when fixed to side surface, parallel to fixing surface **KSp**

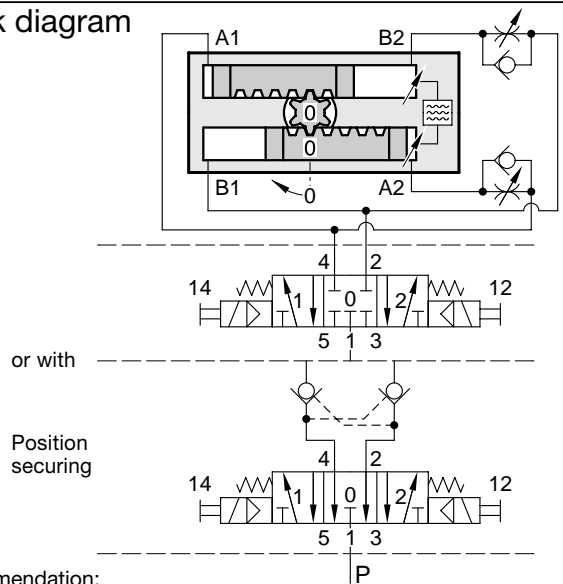
KSp max. 460 Nm



x = distance of centre of gravity from surface
y = distance of centre of gravity from centre of rotary axis

Specific static moments are max permissible
See page 56 for determination of the mass moment of inertia

Block diagram



Recommendation:
Nominal flow rate through valve 800 l_N/min.

Swivel times at 6 bar

Rotating mass kgm ²	ts	tv	tg
	s	s	s
3,0	1,00	0,30	1,30
4,7	1,20	0,30	1,50
6,0	1,40	0,30	1,70

Load moment Nm	rotating mass kgm ²			
	1,05	0,90	0,30	
38	1,05	0,90	0,30	1,20
52	1,47	1,20*	0,40*	1,60*
81	2,33	1,60*	0,60*	2,20*
100	3,00	1,00*	1,00*	2,80*

ts = swivel time through 180°
tv = pressure build-up time
tg = swivel time, total

* shorter swivel times to order



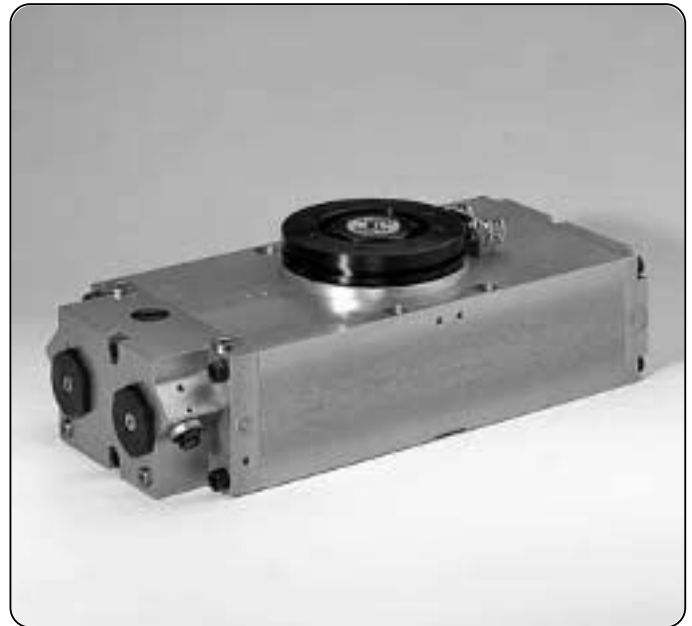
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Rotary Unit
Pneumatic

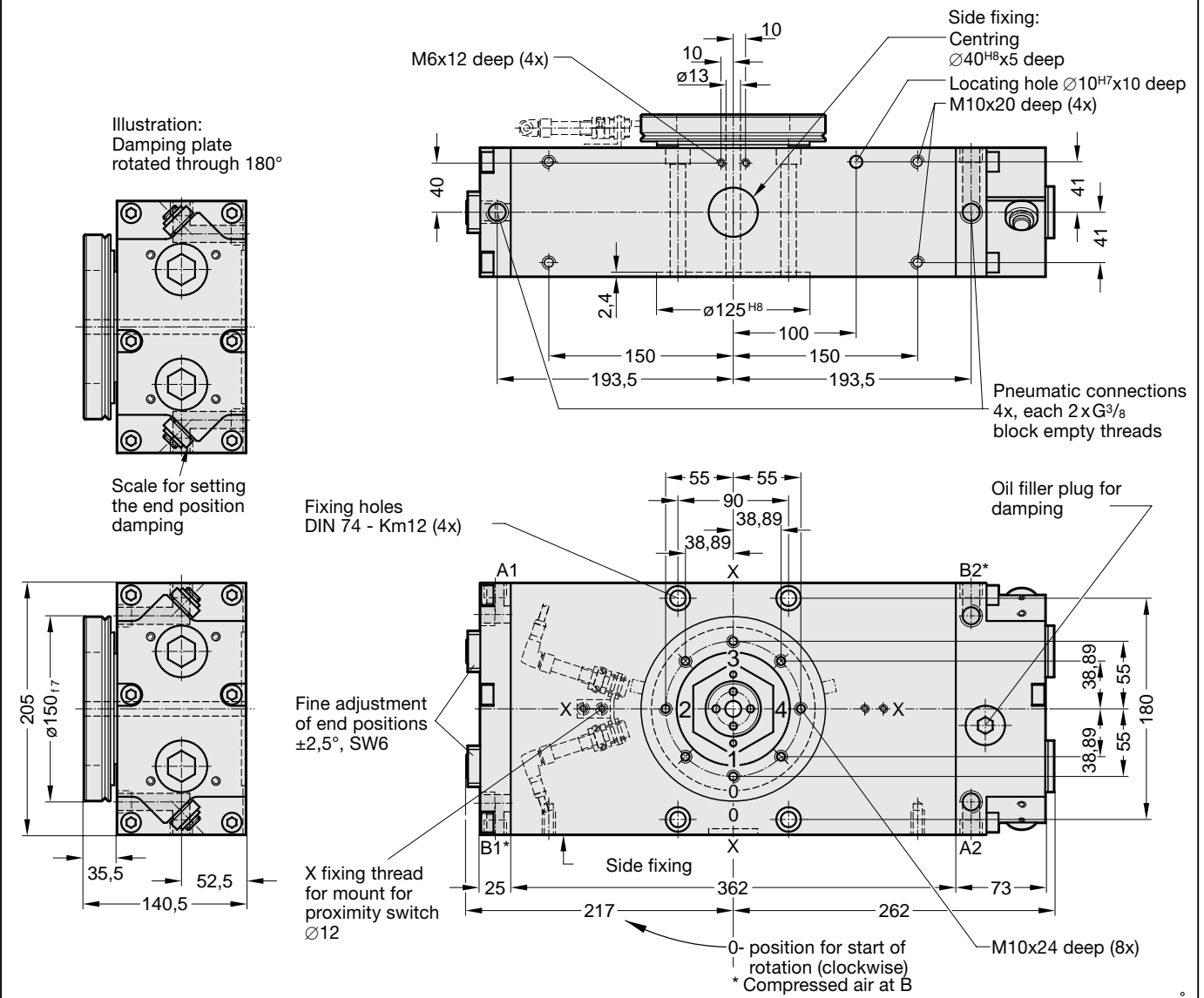
55.51.5.

Technical description

Size	5
Rotation angle	90°, 180°
Drive unit	pneumatic, can be operated with deoiled air
Nominal operating pressure	6 bar
Approved operating pressure	min. 4,5, max. 10 bar
Working principle	double-piston rack and pinion rotary actuator end position backlash-free
Piston	double-acting
Bearings	2 of large roller bearings
Lubrication	life-lubricated
Damping	adjustable, pressure controlled with oil balance reservoir
Velocity control	external, by restricting exhaust air
End position limitation	adjustable fixed stops
Installation position	any
Basic housing	aluminium
Rotary table, rack, pinion	steel
Functions monitored by inductive proximity switches	



Dimensions



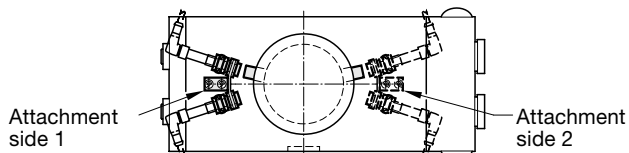
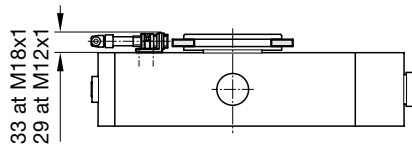
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55.51.5. Rotary Unit Pneumatic



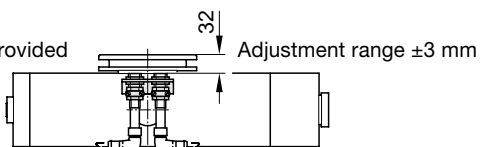
Proximity switch – mounting

Attachment:
Standard

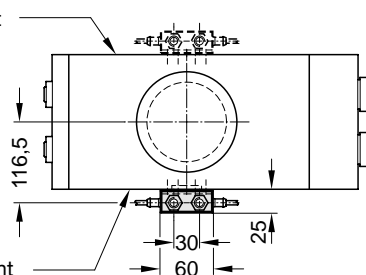


Attachment:
On side

Activator flags provided
by customer



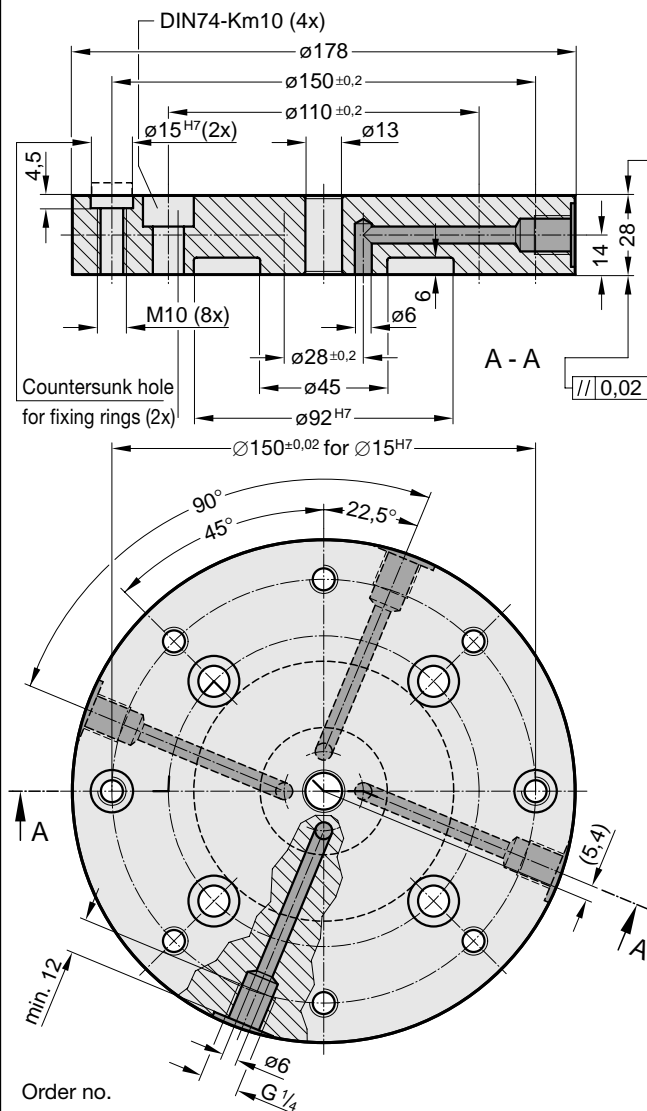
Attachment
side 4



Attachment
side 3

Standard attachment	Side attachment
Fixings for proximity switch with activator flags	Fixings for proximity switch without activator flags
M12 proximity switch	M18 proximity switch
Attachment side	Order no.
1	1.211.01666
2	01666
3	01458
4	01458
	Order no.
	1.211.01667
	01667
	not defined
	not defined

Distributor table



Order no.
Distribution table, 4 x including centring ring and screws
1.048.02800

Notes:

CAD:

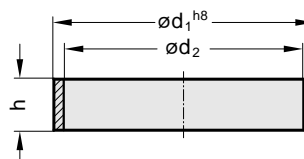
- We shall be pleased to send you, upon request, the CAD dataset for designing the rotary unit. Please specify whether you would like the data on diskette, CD or by e-mail in DXF or IGES format.

Special swivel angle:

- Rotary unit with any swivel angle between 15° and 180° available upon request

Rotary transmission leadthrough 6 x – to order

Centring rings Fixing ring



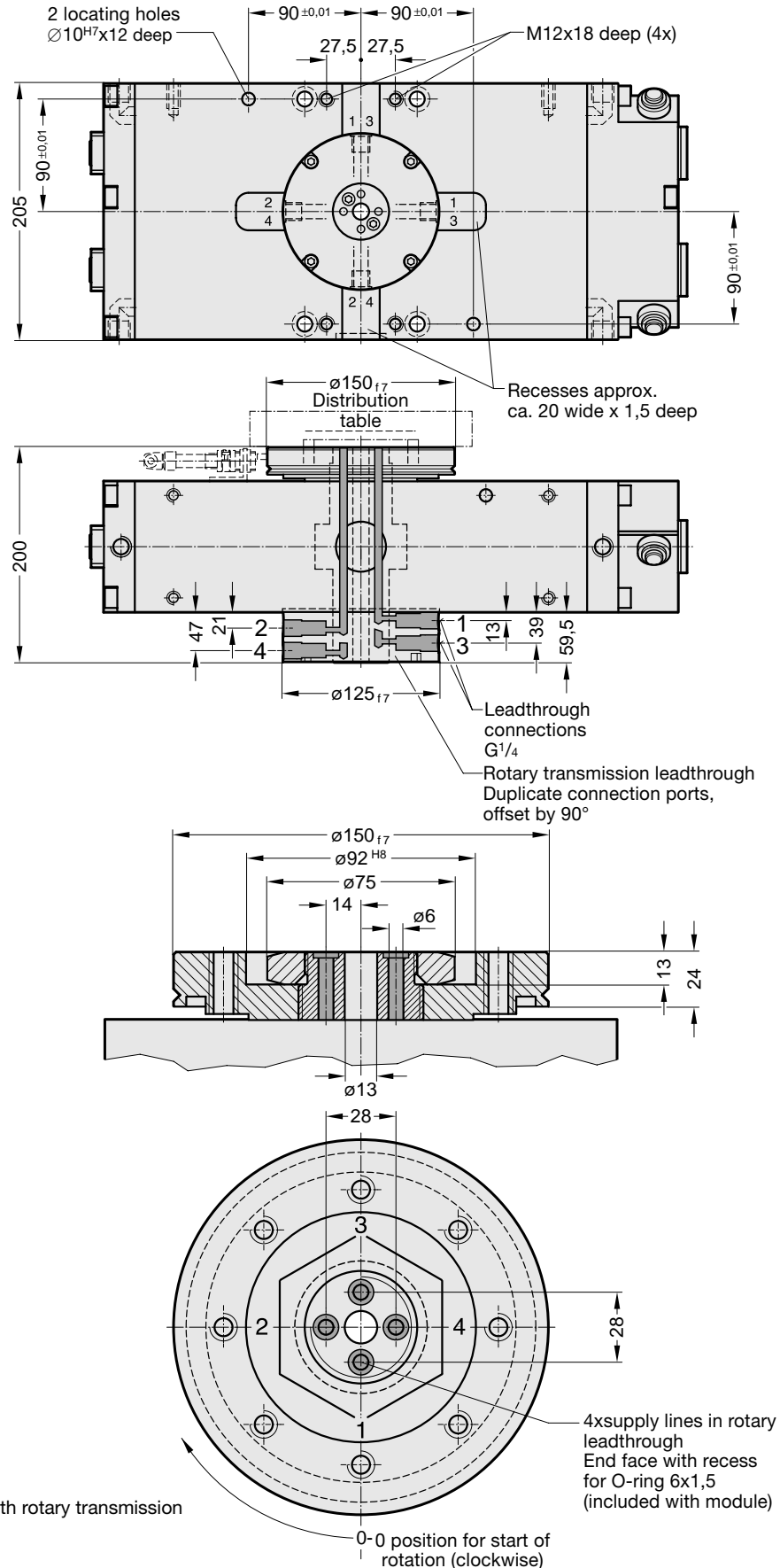
Order no.	d ₁	d ₂	h
Centring rings			
0.181.01024	40	30	8
01549	92	85	18
Fixing ring			
0.181.01601	15	10,5	8



Rotary Unit Pneumatic

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With rotary transmission leadthrough



Order no.

Pneumatic rotary unit with rotary transmission
leadthrough, 4 x

55.51.5. .104.