

# Datasheet

Angular gearboxes with bevel and flange are suitable for transmitting the rotary motion between two shafts at right angles.

In combination with a mechanical position indicator type **OP2**, manual adjustment and direct reading of a measured value of angular or linear movements is possible - even if the shaft is in an uncomfortable position.

- Several orientations and connection possibilities
- Available with 1:1 ratio (standard)
- Movements on ball-bearings, minimal angular and axial clearance, water-proof



## Technical characteristics

Dimensions	overall, see section: versions and dimensions	
Diameter	Ø8 mm	
Shaft, Hollow shaft		
Length Hollow shaft	12 mm	
Shaft	55 mm (standard), 35 mm with rotary knob	
Material		
Hollow shaft, shaft	Stainless steel (AISI 303)	
Housing	Die-cast aluminium housing, black anodized (standard)	
Bevel gear	Steel, hardened (Pronox)	
Bearing	Ball-bearings	
Weight	80 g	
Reduction ratio	1:1 (standard)	
Output torque	max. 2.5 Nm	
Axle load	Radial load	7.5 kg
	Axial load	0.7 kg (see Fig. 7)
Gearbox		
Straight bevel gears	Straight gearing (standard)	

## Applications

The angular gearboxes are suited for industrial use and can be universally used for spindle drives in any mounting position.

- Compact and modular designs, adaptable, easy assembly. The favourable price-performance ratio and small installation space enable a cost-effective system solution.
- Manual or motorised adjustments with matching flange, adapter, flexible shafts and couplings or motor, optionally with position indicators and clamping elements, complete a sensible assembly group in machine and plant construction.

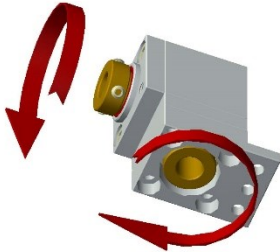
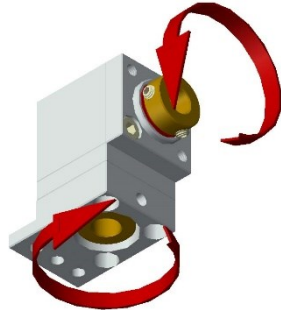
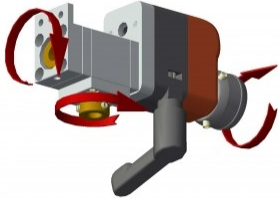



### RINV-OP62 Gearbox with mechanical position indicator type OP2



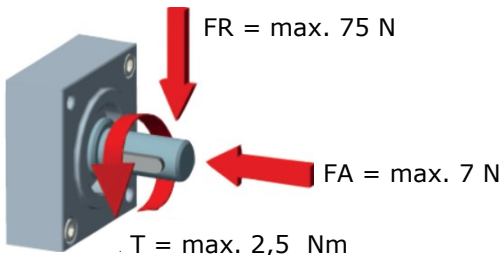
Transmitting the rotary motion on linear guide

# Datasheet

## Mounting positions Version examples

RINV-OP62			
<b>Fig. 1</b> 		<b>Fig. 2</b> 	
<b>Fig. 3</b> 	<b>Fig. 4</b> 	<b>Fig. 5</b> 	<b>Fig. 6</b> 

## Radial and axial load

RINV-OP62	
<p>The loads on the gearbox must be considered as a whole and in relation to the superstructure, such as structural misalignments, vibrations, acceleration or deceleration, shocks, vibration, etc.</p> <p>Two types of shaft loads must be considered:</p> <p>radial FR (radial force) and axial FA (axial force) loads (Fig. 7).</p>	
<b>Fig. 7</b> 	<p>FR = radial load, FA = axial load</p> <p>The radial load acts in a perpendicular direction to the shaft/axis.</p> <p>The axial load acts in the same direction of the shaft/axis; when ordering please take into account, whether it is pull or push type.</p> <p>T = torque</p>

## Mounting

The RINV-OP is supplied in the version (standard) as shown in the dimension drawing.

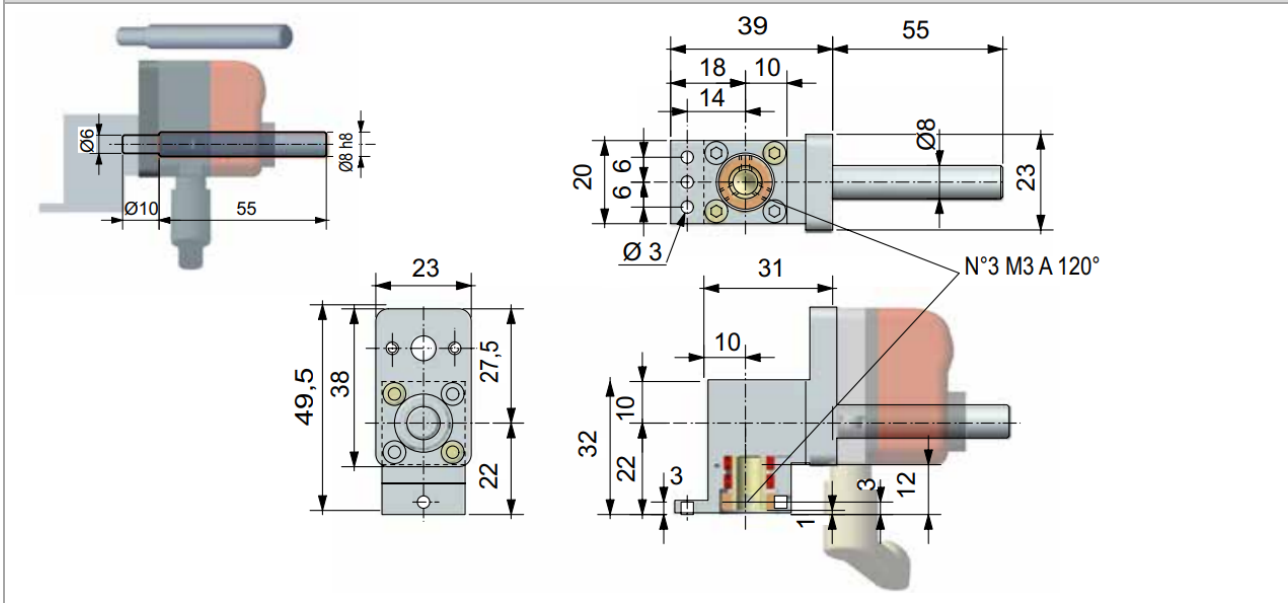
To change the mounting position of the two flanges (flange on OP side and fixing flange for RINV-OP on machine side), remove the two fixing screws, turn the two flanges to the desired position and retighten the fixing screws.

To fix the machine side, insert the shaft into the hollow shaft RINV-OP, fix the flange to the fixed part of the machine and tighten the set screws through the flange bores.

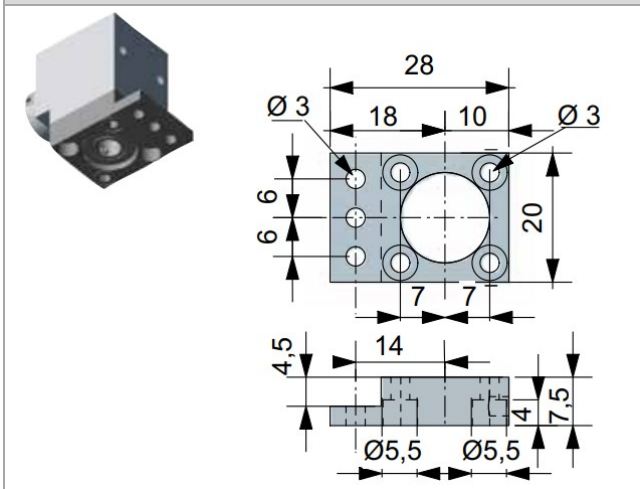
# Datasheet

## Version with dimension drawings

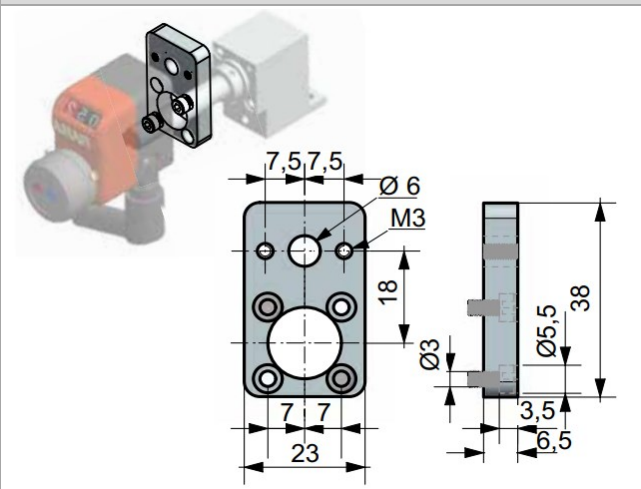
### RINV-OP62 Gearbox with mechanical position indicator type OP2



### Fixing flange for RINV-OP on machine side



### OP-Flange for position indicator type OP2



All dimensions in mm

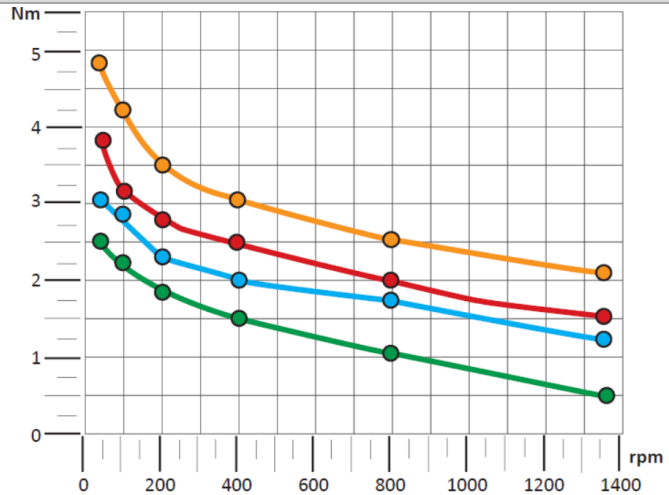
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## Efficiency diagrams and tables

### Output torque with ratio 1 (1:1)

OUTPUT TORQUE WITH RATIO 1/1 - DREHMOMENT MIT ÜBERSETZUNG 1/1				
● TM dc	● TR dc	● TM dsp	● TR dsp	rpm
3,8	2,5	4,9	3,2	50
3,3	2,2	4,3	2,9	100
2,7	1,8	3,5	2,3	200
2,4	1,6	3,1	2,1	400
2	1,3	2,6	1,7	800
1,6	1,1	2,1	1,4	1400

Efficiency - Leistung = 90%



### Glossary

F <sub>R</sub>	Radial load
F <sub>A</sub>	Axial load
R	Force
T	Torque
T <sub>M</sub>	Maximum torque
T <sub>R</sub>	Recommended torque
T <sub>A</sub>	Actual torque
T <sub>O</sub>	Output torque
T <sub>I</sub>	Input torque
P <sub>n</sub>	Power
N	Newton
Nm	Newton meter
fu	Factor of use
i	Gear ratio
rpm	Revolutions per minute (rpm)
n1	Entry shaft
n2	Outlet shaft
dc	Straight bevel gears
dsp	Spiral bevel gears
M	Solid shaft
F	Hollow shaft
D	Through hollow shaft

## Areas of application

Packaging, food, pharmaceutical, plastic, wood, sheet metal, glass, winding, construction road machines, also on traditional machines and special applications in metal construction, lifting technology, conveyor technology, linear technology, special plant engineering, etc.



Further accessories can be found in the Mechanics catalogue. Please contact our service department for further information or questions.

# Datasheet

## Ordering example

**Type** **RINV-OP62** - **1:1** -

### Reduction ratio

**1:1** = 1:1 (standard)

### Length shaft <sup>1)</sup>

35 = with rotary knob (optional)



<sup>1)</sup> Specify length only if it differs from the standard. Further lengths are available on request.

**Manufacturer:**



The manufacturer reserves the right to make changes to the products that it deems necessary for their improvement without prior notice.