

# ROTARY CYLINDERS

## SERIES PRN

### ▶ PRODUCT ADVANTAGES



#### “The economical”

##### ▶ Concentration on the essentials

The most economic type of swivelling reduces your production costs










##### ▶ Dampened end position

Using the hydraulic brake allows you to move up to the end positions gently, increasing the process reliability and durability of your application

##### ▶ Forged drive shaft

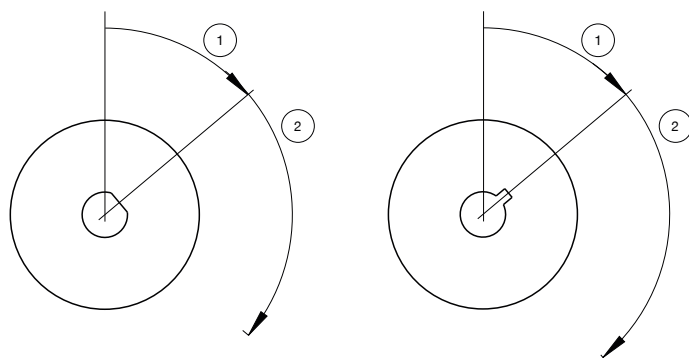
This shaft is not only robust, but can be individually adjusted

### ▶ SERIES CHARACTERISTICS

| Installation size  |  | Version |      |      |      |      |
|--|--|---------|------|------|------|------|
| LIXX   |  | -90     | -100 | -180 | -270 | -280 |
|  1.5 million maintenance-free cycles (max.) |  | •       | •    | •    | •    | •    |
|  IP54                                       |  | •       | •    | •    | •    | •    |
|  Inductive sensor                           |  | •       | •    | •    | •    | •    |
|  Positionability - 2 positions              |  | •       | •    | •    | •    | •    |
|  Rotation angle 90°                         |  | •       |      |      |      |      |
|  Rotation angle 100°                        |  |         | •    |      |      |      |
|  Rotation angle 180°                        |  |         |      | •    |      |      |
|  Rotation angle 270°                        |  |         |      |      | •    |      |
|  Rotation angle 280°                        |  |         |      |      |      | •    |



## ▶ STARTING ANGLE



- ① Starting angle
- ② Swivel angle



### Installation size

|       |        |
|-------|--------|
| PRN1  | PRN20  |
| PRN3  | PRN30  |
| PRN10 | PRN50  |
|       | PRN150 |
|       | PRN300 |
|       | PRN800 |

## ▶ TECHNICAL DATA

| Installation size | Swivel angle<br>[°] | Torque<br>[Nm] | Weight<br>[kg] | IP class |
|-------------------|---------------------|----------------|----------------|----------|
| PRN1              | 90 - 270            | 0,15           | 0,04           | IP54     |
| PRN3              | 90 - 270            | 0,38           | 0,07           | IP54     |
| PRN10             | 90 - 270            | 1,2            | 0,14           | IP54     |
| PRN20             | 90 - 270            | 2,1            | 0,25           | IP54     |
| PRN30             | 90 - 270            | 4,1            | 0,5            | IP54     |
| PRN50             | 90 - 270            | 5,9 - 12,8     | 0,75 - 0,8     | IP54     |
| PRN150            | 90 - 270            | 18 - 41,5      | 1,6 - 1,9      | IP54     |
| PRN300            | 90 - 270            | 34,5 - 83      | 3,6 - 4,1      | IP54     |
| PRN800            | 90 - 270            | 123 - 247      | 11 - 12,5      | IP54     |

## ▶ FURTHER INFORMATION IS AVAILABLE ONLINE



All information just a click away at: [www.zimmer-group.com](http://www.zimmer-group.com). Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

# ROTARY CYLINDERS

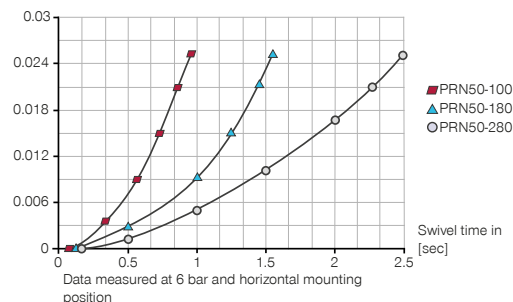
## INSTALLATION SIZE PRN50

### ▶ PRODUCT SPECIFICATIONS



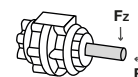
#### ▶ Moment of inertia

[kg m<sup>2</sup>] Shows the expected swivel time vs the calculated moment of inertia



#### ▶ Forces and moments

Shows the maximum static shaft load.



|        |     |
|--------|-----|
| FY [N] | 44  |
| FZ [N] | 580 |

### ▶ RECOMMENDED ACCESSORIES



#### ENERGY SUPPLY



**GV1-8X8**  
Straight Fittings - Quick Connect Style



**DRV1-8X6**  
Flow Control Valves - with Swivel joint



**DSV1-8**  
Pressure safety valve



**DSV1-8E**  
Pressure safety valve with quick exhaust



#### CONNECTIONS / OTHER



**F50-P**  
Flange



**F50-LB**  
Angle flange



**DB50**  
Rotation limiter



**CRN50**  
Oil damper  
see page PL

### ▶ RECOMMENDED ACCESSORY ROTATION LIMITER



**AI-M8X1-38**  
Stop Stroke Adjustment Screws



**NJ12-E2S**  
Inductive proximity switch - Connector M8



**NJ12-E2**  
Inductive proximity switch - Cable 5 m



**KAW500**  
Plug-in connector Angled Cable 5m - Socket M8 (female)

### ▶ RECOMMENDED ACCESSORY OIL DAMPER



**A50-90-B**  
Stop Lever 90° / Starting Angle 45°



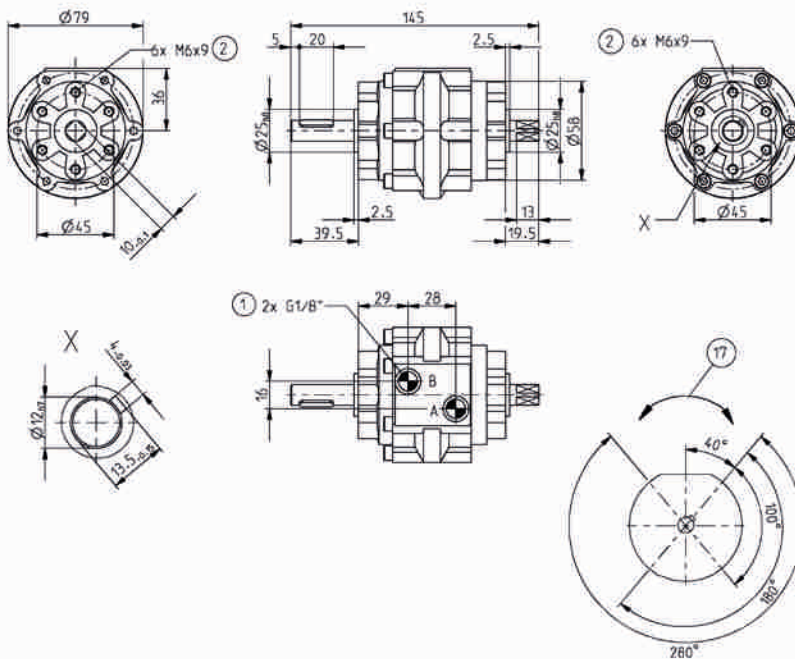
**A50-270**  
Stop Lever 270° / Starting Angle 45°



**A50-180-B**  
Stop Lever 180° / Starting Angle 45°

| Order no.                        | ► Technical data |             |           |
|----------------------------------|------------------|-------------|-----------|
|                                  | PRN50-90         | PRN50-180-B | PRN50-270 |
| Swivel angle [°]                 | 90               | 180         | 270       |
| Tolerance swivel angle [°]       | 0° / +3°         | 0° / +3°    | 0° / +3°  |
| Starting Angle [°]               | 45               | 45          | 45        |
| Torque [Nm]                      | 12.8             | 5.9         | 5.9       |
| Swivel time [s]                  | 0.17             | 0.33        | 0.5       |
| Operating pressure min. [bar]    | 2                | 2           | 2         |
| Operating pressure max. [bar]    | 10               | 10          | 10        |
| Nominal operating pressure [bar] | 6                | 6           | 6         |
| Operating temperature min. [°C]  | 5                | 5           | 5         |
| Operating temperature max. [°C]  | +60              | +60         | +60       |
| Air volume per cycle [cm³]       | 86               | 102         | 124       |
| Weight [kg]                      | 0.8              | 0.75        | 0.75      |

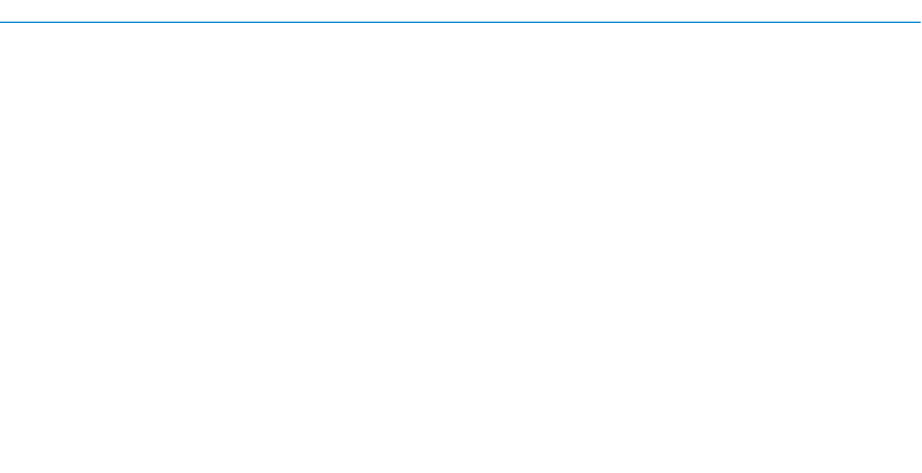
- ① Energy supply
- ② Fixing Rotor
- Ⓑ Air connection (90°/180°/270°-0°)
- Ⓐ Air connection (0°-90°/180°/270°)



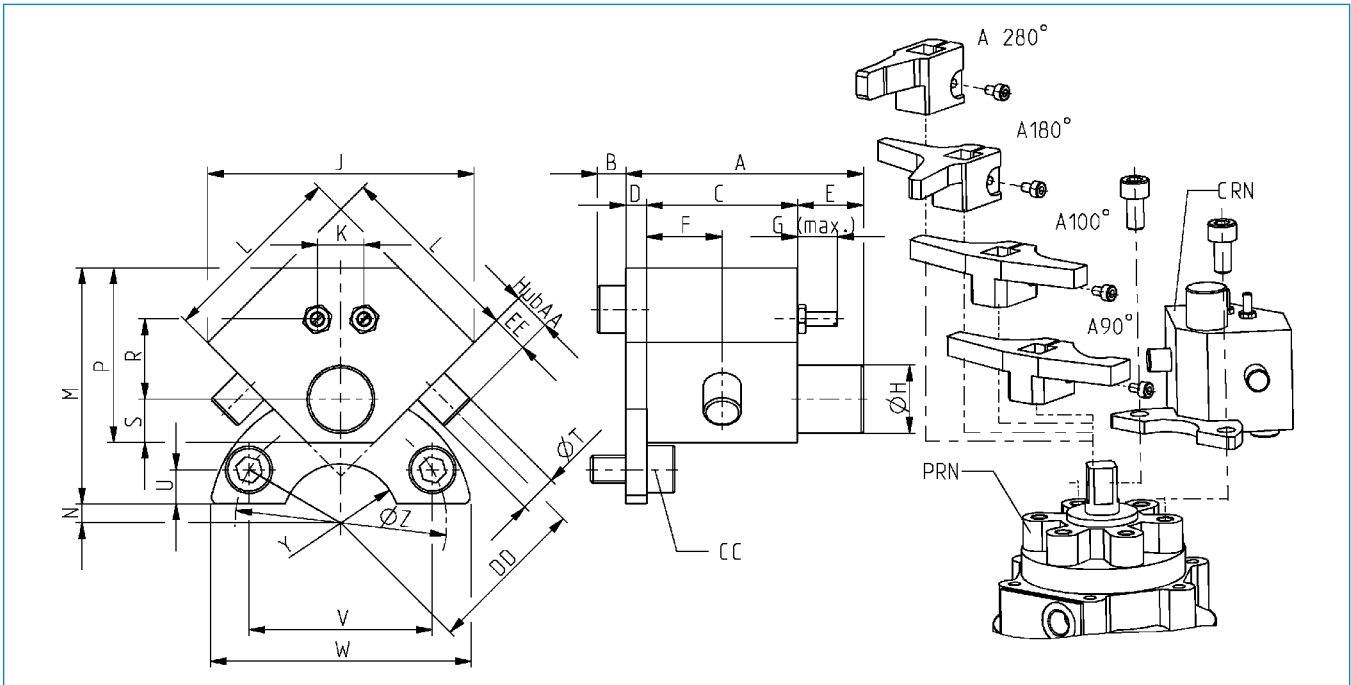
# ROTARY CYLINDERS

## ACCESSORIES SERIES PRN

### ► OIL DAMPER FOR PNEUMATIC ROTOR

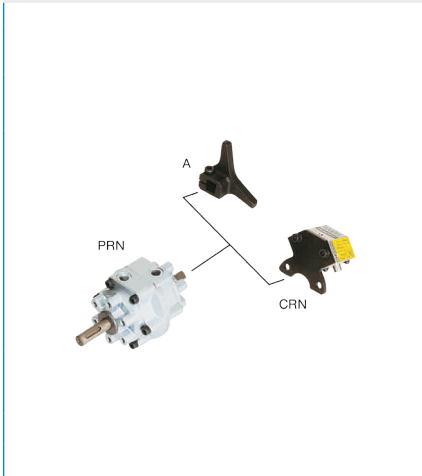


| Order no.                                | ► Technical data |        |        |
|--|------------------|--------|--------|
|  | CRN50            | CRN150 | CRN300 |
| suitable for                             | PRN50            | PRN150 | PRN300 |
| Brake angle [°]                          | 11               | 12     | 14     |
| Energy absorption per stroke max. [Nm]   | 3                | 10     | 20     |
| Energy absorption per stroke max. [Nm/h] | 12000            | 43200  | 84000  |
| Operating temperature min. [°C]          | 5                | 5      | 5      |
| Operating temperature max. [°C]          | 50               | 50     | 50     |
| Weight [g]                               | 240              | 420    | 780    |



| Order no.     | A    | B    | C    | D    | E    | F    | G    | H     | J    | K    | L    | M    | N    | P    | R    | S    | T    | U    | V    | W    | Y     | Z    | AA   | CC         | DD   | EE   |
|---------------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------------|------|------|
|               | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm]  | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm]  | [mm] | [mm] | [mm]       | [mm] | [mm] |
| <b>CRN50</b>  | 50.6 | 6.0  | 3.2  | 4.5  | 14   | 16   | 8.5  | Ø14,4 | 56.6 | 9.9  | 40   | 50   | 4.0  | 37   | 17.0 | 9.2  | Ø8   | 7.2  | 39.0 | 56   | R12,5 | Ø45  | 6.5  | M6x1x12    | 34   | 8    |
| <b>CRN150</b> | 56.5 | 7.2  | 3.6  | 4.5  | 16   | 18   | 8.5  | Ø18,4 | 70.7 | 11.3 | 50   | 62   | 9.5  | 49   | 25.5 | 11.4 | Ø10  | 8.0  | 60.6 | 80   | R15,0 | Ø70  | 10.0 | M8x1,25x16 | 46   | 12   |
| <b>CRN300</b> | 62.5 | 7.2  | 4.2  | 4.5  | 16   | 21   | 12.0 | Ø22,5 | 91.9 | 12.7 | 65   | 87   | 8.0  | 61   | 33.2 | 14.1 | Ø12  | 12.0 | 69.2 | 95   | R22,5 | Ø80  | 15.0 | M10x1,5x20 | 62   | 18   |

## ▶ STOP LEVER FOR OIL DAMPER



## ▶ STOP LEVER PRN50

### ▶ Technical data

| Order no.        | A50-90-B | A50-180-B | A50-270 |
|------------------|----------|-----------|---------|
| Swivel angle [°] | 90       | 180       | 270     |

## ▶ STOP LEVER PRN150

### ▶ Technical data

| Order no.        | A150-90-B | A150-180-B | A150-270 |
|------------------|-----------|------------|----------|
| Swivel angle [°] | 90        | 180        | 270      |

## ▶ STOP LEVER PRN300

### ▶ Technical data

| Order no.        | A300-90-B | A300-180-B | A300-270 |
|------------------|-----------|------------|----------|
| Swivel angle [°] | 90        | 180        | 270      |