

# Complete Freewheels FGR ... R A3A4

**RINGSPANN®**

with lever arm  
with rollers



34-1

## Application as

### ▶ Backstop

for applications with low to medium speeds in freewheeling operation.

## Features

Complete Freewheels FGR ... R A3A4 with lever arm are sealed roller freewheels with ball bearings. They are oil lubricated.

The freewheels FGR ... R A3A4 have an end cover and are fitted to shaft ends.

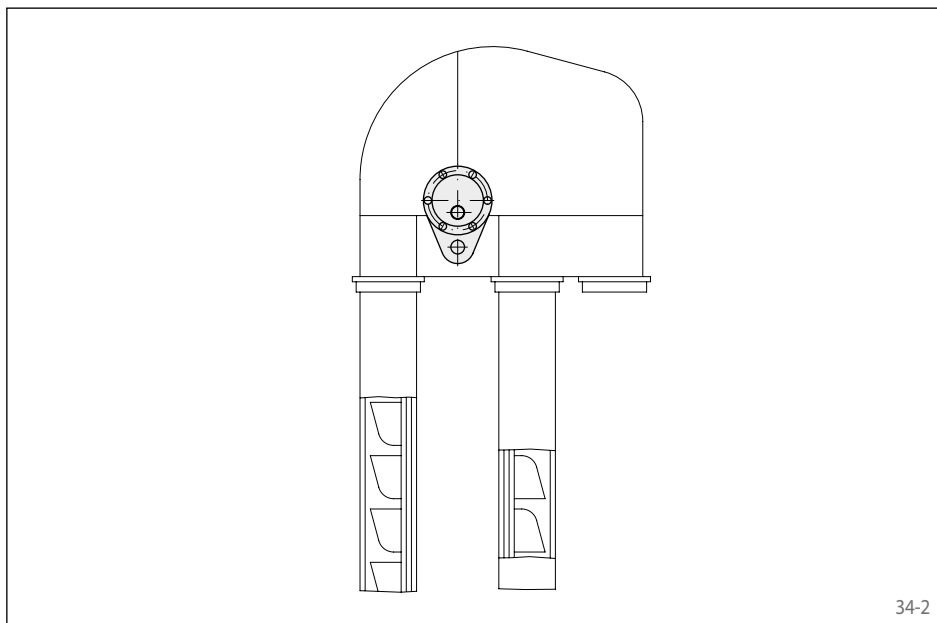
The oil filling is carried out after the freewheel has been installed.

Nominal torques up to 68 000 Nm.

Bores up to 150 mm.

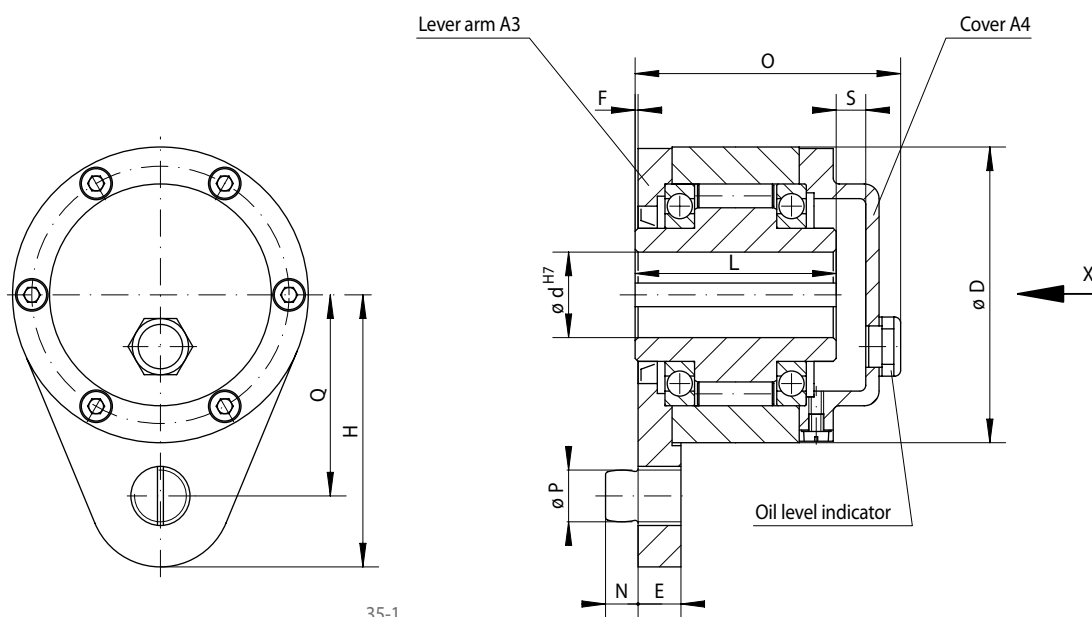
## Application example

Complete Freewheel FGR 45 R A3A4 as a backstop on the opposite ends of the drive shaft of a bucket conveyor. In the case of a motor stop, the bucket conveyor must be held securely so that the conveyor goods do not pull the belt backwards and, in doing so, drive the motor quickly. The backdriving torque is supported by the lever arm with holding pin on the housing. If the holding pin is removed, the belt shaft can be turned in both directions.



34-2

with lever arm  
with rollers



35-1

35-2

|                |      | Standard type<br>For universal use |                               | Dimensions                                                  |                   |         |         |         |         |         |         |         |         |         |         |              |
|----------------|------|------------------------------------|-------------------------------|-------------------------------------------------------------|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------|
|                |      |                                    |                               |                                                             |                   |         |         |         |         |         |         |         |         |         |         |              |
| Freewheel Size | Type | Lever arm and cover combination    | Nominal torque<br>$M_N$<br>Nm | Max. speed<br>Inner ring<br>freewheels<br>$\text{min}^{-1}$ | Bore<br>$d$<br>mm | D<br>mm | E<br>mm | F<br>mm | H<br>mm | L<br>mm | N<br>mm | O<br>mm | P<br>mm | Q<br>mm | S<br>mm | Weight<br>kg |
| FGR 12         | R    | A3A4                               | 55                            | 2500                                                        | 12                | 62      | 13      | 1       | 51      | 42      | 10      | 64      | 10      | 44      | 12      | 1,4          |
| FGR 15         | R    | A3A4                               | 130                           | 2200                                                        | 15                | 68      | 13      | 1       | 62      | 52      | 10      | 78      | 10      | 47      | 12      | 1,8          |
| FGR 20         | R    | A3A4                               | 180                           | 1900                                                        | 20                | 75      | 15      | 1       | 72      | 57      | 11      | 82      | 12      | 54      | 12      | 2,3          |
| FGR 25         | R    | A3A4                               | 290                           | 1550                                                        | 25                | 90      | 17      | 1       | 84      | 60      | 14      | 85      | 16      | 62      | 12      | 3,4          |
| FGR 30         | R    | A3A4                               | 500                           | 1400                                                        | 30                | 100     | 17      | 1       | 92      | 68      | 14      | 95      | 16      | 68      | 12      | 4,5          |
| FGR 35         | R    | A3A4                               | 730                           | 1300                                                        | 35                | 110     | 22      | 1       | 102     | 74      | 18      | 102     | 20      | 76      | 12      | 5,6          |
| FGR 40         | R    | A3A4                               | 1000                          | 1150                                                        | 40                | 125     | 22      | 1       | 112     | 86      | 18      | 115     | 20      | 85      | 13      | 8,5          |
| FGR 45         | R    | A3A4                               | 1150                          | 1100                                                        | 45                | 130     | 26      | 1       | 120     | 86      | 22      | 115     | 25      | 90      | 14      | 8,9          |
| FGR 50         | R    | A3A4                               | 2100                          | 950                                                         | 50                | 150     | 26      | 1       | 135     | 94      | 22      | 123     | 25      | 102     | 15      | 12,8         |
| FGR 55         | R    | A3A4                               | 2600                          | 900                                                         | 55                | 160     | 30      | 1       | 142     | 104     | 25      | 138     | 32      | 108     | 18      | 16,2         |
| FGR 60         | R    | A3A4                               | 3500                          | 800                                                         | 60                | 170     | 30      | 1       | 145     | 114     | 25      | 147     | 32      | 112     | 18      | 19,3         |
| FGR 70         | R    | A3A4                               | 6000                          | 700                                                         | 70                | 190     | 35      | 1       | 175     | 134     | 30      | 168     | 38      | 135     | 17      | 23,5         |
| FGR 80         | R    | A3A4                               | 6800                          | 600                                                         | 80                | 210     | 35      | 1       | 185     | 144     | 30      | 178     | 38      | 145     | 17      | 32,0         |
| FGR 90         | R    | A3A4                               | 11000                         | 500                                                         | 90                | 230     | 45      | 1       | 205     | 158     | 40      | 192     | 50      | 155     | 17      | 47,2         |
| FGR 100        | R    | A3A4                               | 20000                         | 350                                                         | 100               | 270     | 45      | 1       | 230     | 182     | 40      | 217     | 50      | 180     | 17      | 76,0         |
| FGR 130        | R    | A3A4                               | 31000                         | 250                                                         | 130               | 310     | 60      | 1       | 268     | 212     | 55      | 250     | 68      | 205     | 18      | 110,0        |
| FGR 150        | R    | A3A4                               | 68000                         | 200                                                         | 150               | 400     | 60      | 1       | 325     | 246     | 55      | 286     | 68      | 255     | 20      | 214,0        |

The maximum transmissible torque is 2 times the specified nominal torque. See page 14 for determination of selection torque.

Keyway according to DIN 6885, page 1 • Tolerance of keyway width JS10.

## Mounting

The backdriving torque is supported by the lever arm with holding pin. The holding pin engages in a slot or bore in the frame of the machine. It must have 0.5 to 2 mm play in the axial and radial directions. If the holding pin is removed, the shaft can be turned in both directions.

The tolerance of the shaft must be ISO h6 or j6. For freewheels FGR ... R A3A4, the inner ring must be secured axially with the supplied retainer plate. Prior to commissioning, the freewheel must be filled with oil of the specified quality.

## Example for ordering

Basic Freewheel, lever arm, cover, seals and screws are supplied loose provided nothing else is stated in the order.

Freewheel size FGR 25, standard type with lever arm A3 and cover A4:

- FGR 25 R A3A4