

## ROTAFRIX®

# Friction Wheels, Friction Rings and Guide Pulleys

## Properties

ROTAFRIX® products have properties which, in combination, often permit particularly eco-nomical drive solutions and are therefore instrumental in ensuring the use of rubber rolling contact drives, drum drives and hoisting systems.

### High Transmission Performance

The high-quality rubber compound ensures high power transmission thanks to its high co-efficient of friction and, where appropriate, excellent bond to the metal.

### High Efficiency

The rubber compound high coefficient of friction guarantees low slip / slippage and thus high (energy) efficiency.

### Long Service Life

The wear-resistant rubber compound which can withstand high dynamic loads permits long service life.

### Low-Noise Operation

The soft, damping elastomer lining prevents annoying operating noise.

### Compact Space Requirement

The compact design of friction wheels, friction rings and guide pulleys permits drives with small volumes and low weights.

### Trouble-Free Installation

The design and fitting of ROTAFRIX® products are straightforward and make no special demands.

### Easy Fitting

The tapered base design of friction rings and guide pulleys enables straightforward, trouble-free fitting on site.

### Maintenance-Free Operation

All ROTAFRIX® products are maintenance-free.

### Low Bearing Load

The application of the proportional contact pressure principle results in lower shaft and bearing loads.

# ROTAFRIX®

## Friction Rings and Guide Pulleys

### Construction

ROTAFRIX® friction rings and guide pulleys consist of

- Contact face
- Base layer
- Strength member

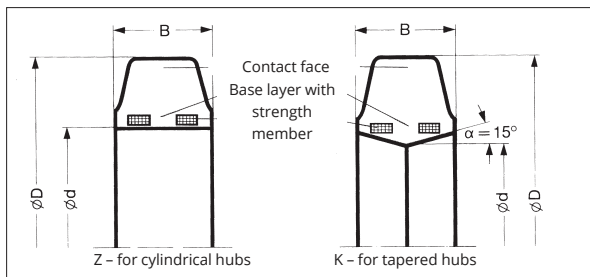


Fig. 2

ROTAFRIX® friction rings

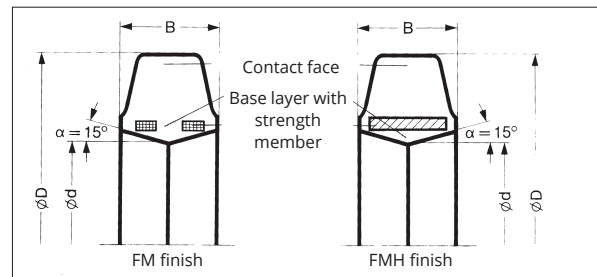


Fig. 3

ROTAFRIX® guide pulleys

### Contact Face

The properties of the surface layer are matched to the special requirements imposed on it. A choice of two abrasion-resistant compounds of each is therefore available:

#### Friction rings

##### RM

Natural rubber basis  
 Hardness 73 Shore A Permissible ambient temperature  
 -30 to +70°C, from 30°C with reduced contact force

**RS** Polychloroprene rubber basis Hardness 83 Shore A Permissible ambient temperature  
 -30 to +90°C, from 50°C with reduced contact force  
 Largely resistant to many technical oils and greases

#### Guide pulleys

##### FM

Natural rubber basis Hardness 67 Shore A  
 Suitable for speeds up to 14 m/s (50 km/h) FMH

Natural rubber basis Hardness 67 Shore A  
 Suitable for speeds up to 20 m/s (72 km/h) This version has been tested by Versuchsgrubengesellschaft mbH, Tremoniastr. 13, D-44137 Dortmund and rated as "recommended" (test report dated Sept. 9, 1976 La/sf).

### Base Layer

The base layer consists of a special hard elastomer material. It is firmly bonded to the contact face by means of vulcanization and contains the strength member.

The base layer is manufactured for both cylindrical and tapered hub finishes (code for cylindrical base design z, code for tapered base design k).

### Strength Member

#### Friction rings

The strength member consists of steel reinforcing wires.

These keep the friction ring under constant tension and ensure a particularly firm fit on the hub.

#### Guide pulleys

The strength member keeps the guide pulley under constant tension and ensures a particularly firm fit on the hub. In the FM finish the strength member consists of steel reinforcing wires, and in the FMH finish the strength member is a steel ring.

### Tolerances

The elastomer hardness tolerance is  $\pm 5$  Shore A.

The dimensional tolerances for the friction ring and guide pulley external diameter D are  $\pm 1.5\%$  and for the friction ring and guide pulley width B  $\pm 4\%$ .

ROTAFRIX® friction rings and guide pulleys can be worn down to a residual cushion depth of 80% of the original figure.

The hub tolerances are specified in the "Hub" section on p.14.

### Product Range

The range of ROTAFRIX® friction rings and guide pulleys manufactured is adapted to market requirements. The available sizes of friction rings are listed in Table 2, and the available sizes of guide pulleys in Table 3. Special finishes on request.

The table lists the friction ring designations and the corresponding hub dimensions for cylindrical and tapered hubs.

- The hubs are not standard supplied by Phoenix Vibration Controls.