



# TORSIONALLY STIFF DISC PACK COUPLINGS

## 350 – 24,000 Nm



DISC PACK COUPLINGS  
LP

### GENERAL INFORMATION ABOUT R+W DISC PACK COUPLINGS:



#### SERVICE LIFE

R+W disc pack couplings are fatigue resistant and wear free for an infinite service life, as long as the technical limits are not exceeded.

#### FIT CLEARANCE

Overall shaft / hub clearance of 0.01 - 0.05 mm

#### TEMPERATURE RANGE

-30 to +280° C

#### ROTATIONAL SPEED

see table

#### DELIVERY







LP couplings are delivered with the disc packs pre-assembled. They need only to be mounted to the hubs.

#### ATEX (Optional)

For use in hazardous areas available upon request.



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MODEL		FEATURES	
<b>LP1</b>		<b>with keyway mounting from 350 - 24,000 Nm</b> <ul style="list-style-type: none"><li>▶ very high torsional stiffness</li><li>▶ single flex design</li><li>▶ compact layout</li><li>▶ compensates for axial and angular misalignment</li></ul>	Page 68-69
<b>LP2</b>		<b>with keyway mounting from 350 - 24,000 Nm</b> <ul style="list-style-type: none"><li>▶ high torsional stiffness</li><li>▶ double flex design</li><li>▶ customer specified length available</li><li>▶ compensates for axial, angular, and lateral misalignment</li></ul>	Page 70-71
<b>LPA</b>		<b>with keyway mounting for API 610 pump systems from 500 - 24,000 Nm</b> <ul style="list-style-type: none"><li>▶ API 610 / 671</li><li>▶ intermediate cartridge for lateral mounting</li><li>▶ safety catch for in case of disc pack rupture</li><li>▶ metric or imperial dimensions available</li></ul>	Page 72-73
<b>LPAI</b>			
<b>LP3</b>		<b>with conical clamping ring from 500 - 24,000 Nm</b> <ul style="list-style-type: none"><li>▶ high torsional stiffness</li><li>▶ high clamping pressure</li><li>▶ backlash free torque transmission</li><li>▶ good for high speed, reversing and intermittent loading</li></ul>	Page 74
<b>LP4</b>		<b>with conical clamping ring from 500 - 24,000 Nm</b> <ul style="list-style-type: none"><li>▶ very high torsional stiffness</li><li>▶ single flex design</li><li>▶ compact layout</li><li>▶ compensates for axial and angular misalignment</li></ul>	Page 75
<b>LPZ</b>		<b>intermediate flange from 500 - 24,000 Nm</b> <ul style="list-style-type: none"><li>▶ very high torsional stiffness</li><li>▶ double flex design</li><li>▶ for use with various end hubs</li></ul>	Page 76
<b>LP</b>		<b>Options / Special Solutions</b>	Page 77

# DESIGN

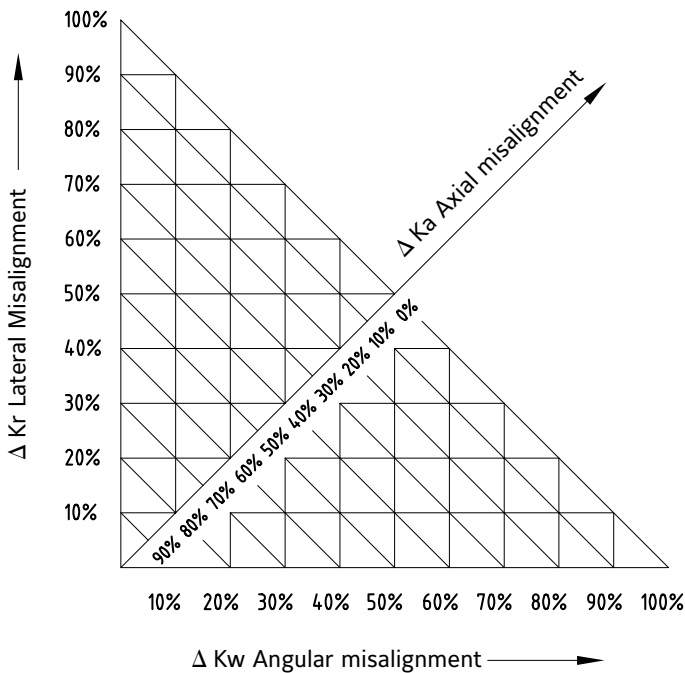
## DISC PACK COUPLINGS

R+W disc pack couplings transmit torque across the disc pack assemblies purely by friction, thus avoiding stress concentration, backlash, and micro-movements resulting from transmitting torque across shoulder bolts. This aids in approaching infinite life in addition to making the complete coupling assembly more torsionally stiff.

R+W disc pack couplings are shipped as individual components. Assembly is required.



### MISALIGNMENT COMPENSATION



$$\Delta K_{total} = \Delta K_r + \Delta K_w + \Delta K_a \leq 100\%$$

These couplings compensate for varying combinations of shaft misalignment types as percentages of the total allowable misalignment values listed in the data tables. The total sum of the three misalignment percentages must not exceed 100%.

**Example: pump skid**

- axial misalignment: 20%
- lateral misalignment: 40%
- angular misalignment: 40%

$$\Delta K_{total} = 20\% + 40\% + 40\% \leq 100\%$$

➔ coupling is fatigue resistant