RBD  elastic couplings
SRBD  single pump drive
PF   pto
RBD COUPLINGS

DESCRIPTION

The RBD drives are designed for use with industrial engines in stationary applications such as generators, pumps and compressor sets, and in mobile applications like fork lift trucks and earth moving equipment. RBD drives have many advantages: ease of assembly, weight and size, small axial profile and competitive price. Drives are supplied with standard SAE flanges for ease of installation.

CONFIGURATION
- with or without hub
- with spline or keyway (min. qty required)
- with conical locking coupling (standard)
- with housing for hydrostatic drives

TECHNICAL FEATURES

The drive principle uses internal and external teeth; the difference is that the external teeth are blocks of special rubber molded compound.

By changing the rubber compound, various torques can be transmitted.

The external aluminum ring has a profile corresponding to the rubber molded compound and can be directly mounted on the output flange of the prime mover, allowing it to absorb small angular and radial misalignments.

SELECTION

TKN > T LN • St (T LN = load torque; St = 1.3)
TKmax > T LS (T LS = load peak torque)
TKNAtex > T LN • StAtex (T LN = load torque; StAtex = 1.56)

1) For torsional vibration calculation, contact TRANSFLUID.

On request other rubber blocks with elastic features and hardness different from the standard are available. For details please contact TRANSFLUID.

RBD COUPLINGS

<table>
<thead>
<tr>
<th>Size</th>
<th>Max. rpm</th>
<th>Torque - Nm (70° shore)</th>
<th>Nominal Torque</th>
<th>Max. Torque</th>
<th>Continuous vibratory torque (10 Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TKN</td>
<td>Tmx</td>
<td>TKNAtex</td>
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<tr>
<td>6S-7S-8S</td>
<td>12</td>
<td>4500</td>
<td>310</td>
<td>710</td>
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<td>10S-10SS</td>
<td>16</td>
<td>4000</td>
<td>560</td>
<td>1370</td>
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<td>20</td>
<td>3500</td>
<td>860</td>
<td>2150</td>
<td>430</td>
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<td>11D</td>
<td>20</td>
<td>3300</td>
<td>2060</td>
<td>6630</td>
<td>1030</td>
</tr>
<tr>
<td>14S</td>
<td>28</td>
<td>2800</td>
<td>1690</td>
<td>4220</td>
<td>845</td>
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<tr>
<td>14D</td>
<td>28</td>
<td>2600</td>
<td>3490</td>
<td>11040</td>
<td>1745</td>
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<tr>
<td>18D</td>
<td>32</td>
<td>2400</td>
<td>5300</td>
<td>16720</td>
<td>2650</td>
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Ambient temperature: -40°C ÷ +120°C

2) For other frequency: TKW • \sqrt{fx}

<table>
<thead>
<tr>
<th>Size</th>
<th>CT</th>
<th>CTDyn</th>
<th>J (kgm²)</th>
<th>Weight (kg)</th>
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<td>Drive</td>
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<td>Driven</td>
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<td>Driver+Driven</td>
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<td>6S</td>
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<td>7S</td>
<td>20000</td>
<td>30000</td>
<td>0.008</td>
<td>0.005</td>
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<tr>
<td>8S</td>
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<td>30000</td>
<td>0.011</td>
<td>0.005</td>
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<tr>
<td>10S</td>
<td>48000</td>
<td>72000</td>
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<td>10SS</td>
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<td>14S</td>
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<td>2827000</td>
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<td>0.177</td>
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Relative damping \( \psi = 0.7263 \)
Resonance factor \( VR = 8.65 \)
Elastic couplings - 1907

**RBD COUPLINGS WITH QD**

**RBD-QD WITH SINGLE RUBBER BLOCKS**

**RBD-QD WITH DOUBLE RUBBER BLOCKS**

Maximum parallel and angular misalignment 0.7 mm (T.I.R.)

The hub with conical locking coupling (QD) allows:
- ease of assembly
- high torque transmission
- quick disassembly without using special tools
- positive contact between locking hub and shaft eliminates contact fretting

The Single pump drive is a whole kit that includes all the components to connect a Diesel engine to a pump.

Components are:
- RBD coupling
- QD bushing (machined)
- SAE housing with inch threaded holes

**SRBD SINGLE PUMP DRIVES**

**SRBD Single pump drive**

**SRBD SINGLE RUBBER BLOCKS WITH HOUSING**

**SRBD DOUBLE RUBBER BLOCKS WITH HOUSING AND SPACER**

**SRBD QD WITH SINGLE RUBBER BLOCKS RBD-QD WITH DOUBLE RUBBER BLOCKS**

**Dimensions are subject to change without notice**

<table>
<thead>
<tr>
<th>Size</th>
<th>Bush</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>P</th>
<th>R</th>
<th>S</th>
<th>T</th>
<th>U</th>
<th>Bolt Material &amp; Size</th>
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<tr>
<td>6S-QD</td>
<td>SH</td>
<td>215.9</td>
<td>200</td>
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<td>64.3</td>
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<tr>
<td>7S-QD</td>
<td>241.3</td>
<td>222.2</td>
<td>8</td>
<td>11</td>
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<td>9</td>
<td>202</td>
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<td>42</td>
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<td>46.5</td>
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<tr>
<td>8S-QD</td>
<td>263.525</td>
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<td>202</td>
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<td>35</td>
<td>38</td>
<td>42</td>
<td>64.3</td>
<td>46.5</td>
</tr>
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<td>10S-QD</td>
<td>314.325</td>
<td>295.3</td>
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<td>11</td>
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<td>35</td>
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<tr>
<td>11S-QD</td>
<td>314.325</td>
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<td>202</td>
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</tr>
<tr>
<td>11D-QD</td>
<td>352.42 n</td>
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<td>42</td>
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<tr>
<td>14S-QD</td>
<td>466.725</td>
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<td>35</td>
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<tr>
<td>14D-QD</td>
<td>466.725</td>
<td>438.2</td>
<td>6</td>
<td>13.5</td>
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<td>9</td>
<td>202</td>
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<td>38</td>
<td>42</td>
<td>64.3</td>
<td>46.5</td>
</tr>
<tr>
<td>18S-QD</td>
<td>571.5</td>
<td>542.9</td>
<td>6</td>
<td>17</td>
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<td>9</td>
<td>202</td>
<td>10</td>
<td>35</td>
<td>38</td>
<td>42</td>
<td>64.3</td>
<td>46.5</td>
</tr>
</tbody>
</table>

* max with keyway ISO 773
** max with reduced keyway DIN 6885/2
*** max without keyway

**Drive with us**

- Possible with version of 16 bolts; 8 shrouded and 8 exposed
- Dimensions are subject to change without notice
### SRBD SINGLE PUMP DRIVES

#### Elastic couplings

**Elastic couplings - 1907**

**SAE housings**

- 2-4 bolts supplied with 6 hole with six plastic industrial plugs.

---

### SAE SINGLE PUMP DRIVE ASSEMBLY (ELASTIC COUPLING+MACHINED QD BUSHING+HOUSING+SPACER)

<table>
<thead>
<tr>
<th>Engine Housing SAE J617 &amp; Flywheel SAE J620</th>
<th>Pump SAE J744</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE A 6T 1632 2-4 bolts B.O.M</td>
<td>ALA3636ABC ALA3636ABD ALB3637ABC ALB3637ABD</td>
</tr>
<tr>
<td>SAE B 13T 1632 2-4 bolts B.O.M</td>
<td>ALA3636ACE ALA3636ACF ALB3637ACE ALB3637ACF</td>
</tr>
<tr>
<td>SAE C 14T 1234 2-4 bolts B.O.M</td>
<td>ALC3638ADG ALC3638AGD ALC3638ADB ALC3638ADB</td>
</tr>
<tr>
<td>SAE D 13T 11 ½ 2-4 bolts B.O.M</td>
<td>ALF3641BEE ALF3641BEF ALF3641BEK ALF3641BEL</td>
</tr>
<tr>
<td>SAE E 13T 11 ½ 2-4 bolts B.O.M</td>
<td>ALF3641BEE ALF3641BEF ALF3641BEK ALF3641BEL</td>
</tr>
</tbody>
</table>

---

### SINGLE PUMP DRIVE WITH DIN 5480 SPLINE ASSEMBLY (ELASTIC COUPLING+MACHINED QD BUSHING+HOUSING+SPACER)

<table>
<thead>
<tr>
<th>Engine Housing SAE J617 &amp; Flywheel SAE J620</th>
<th>Pump DIN 5480 spline shaft</th>
</tr>
</thead>
<tbody>
<tr>
<td>N30x2x14x9H SAE C 2-4 bolts</td>
<td>B.O.M</td>
</tr>
<tr>
<td>N35x2x16x9H SAE C 2-4 bolts</td>
<td>B.O.M</td>
</tr>
<tr>
<td>N35x2x16x9H SAE D 2-4 bolts</td>
<td>B.O.M</td>
</tr>
<tr>
<td>N40x2x18x9H SAE C 2-4 bolts</td>
<td>B.O.M</td>
</tr>
<tr>
<td>N40x2x18x9H SAE C 2-4 bolts</td>
<td>B.O.M</td>
</tr>
<tr>
<td>N45x2x21x9H SAE D 2-4 bolts</td>
<td>B.O.M</td>
</tr>
<tr>
<td>N50x2x24x9H SAE D 2-4 bolts</td>
<td>B.O.M</td>
</tr>
<tr>
<td>N50x2x24x9H SAE D 2-4 bolts</td>
<td>B.O.M</td>
</tr>
<tr>
<td>N55x2x28x9H SAE E 2-4 bolts</td>
<td>B.O.M</td>
</tr>
</tbody>
</table>

---

**SAE housings 2-4 bolts supplied with 6 hole with six plastic industrial plugs.**

---
**RBD POWER TAKE OFF**

The PT-PTO is suitable for both in line and radial load applications. The output shaft is supported by a heavy bearing designed to absorb the high shock loads generated by the transmitted power.

For permissible radial loads apply Transfluid.

**PF10SS - PF11S - PF14S**

Support plate not mandatory for PF11S-PF14A, see TF6229-D

For PF10SS-PF11S special square key 15.88x15.88x76.2

For PF14S key as per ANSI B92.1 USAS square

**PF14D**

Support plate, see TF6229-D

**PF18D**

Support plate, see TF6229-C

**APPLICATIONS**

PF...WITH PULLEY or CARDAN SHAFT

PF...FLUID COUPLINGS KRG/D/U or KSD

---

**DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE**

**APPLICATIONS**

PF...WITH PULLEY or CARDAN SHAFT

PF...FLUID COUPLINGS KRG/D/U or KSD
ATEX VERSIONS

It is possible to get a Transfluid RBD, SRBD, PF certified as equipment for intended use in hazardous zones according to directive 94/9/EC (Atex).

The selection must consider, in addition to the service factor $S_t$, a safety factor (Atex factor) $A_f = 1.2$ to obtain the selection torque.

With reference to selection table in pag. 1, nominal torque $T_{new}$ has to be higher than load torque $x S_t x A_f$:

$$T_{new} > T_L x S_t x A_f = T_L x S_tAtex$$

Certification can be provided for the following categories:

- **ATEX**
  - $\varepsilon x II 3 G/D c T4$ Surface (Non-mining) application
  - $\varepsilon x II 2 G/D c T4$ Surface (Non-mining) application
  - $\varepsilon x I M2 c T4$ Mining application

In case of inquiry for Atex products, you have to apply providing the application form TF6830 duly filled up.

APPLICATION DATA SHEET

Company:  
Address:  
Project:  

PRIME MOVER

Diesel engine  
N° of cylinder:  
in line  
V

Installed power:  
km  

MAX torque:  
Nm  

APPLICATION DATA

Flywheel size:  
Housing size:

RBD/SRBD  
for pumps / compressor  
for generators:

Shaft end  
Spline dimension:  
Keyway dimension:

PF  
with fluid cplg  
with pulley  
with cardan shaft  
with flex cplg

Dp:  
mm  
N° and type of grooves

cardan type:

Weight of pump/s  
kg  

Center of gravity, distance from flange (SRBD):  
mm

Inertia:  
kgm²  

Absorbed power:  
km  

speed  

AMBIENT CONDITIONS

Ambient type:  

Indoor  
Outdoor  
Marine

Sea level:  
m  

Min temperature:  
°C  
Max temperature:  
°C

Dust level:  

low  
medium  
High

Aggressive agents (please list if any):

Explosive ambient in conformity with:

- ATEX $\varepsilon x II 3 G/D c T4$
- ATEX $\varepsilon x II 2 G/D c T4$
- ATEX $\varepsilon x I M2 c T4$

Group II - Surface (Non-mining)  
Category 3  
Temperature T4 (135°C)

Group II - Surface (Non-mining)  
Category 2  
Temperature T4 (135°C)

Group I - mining  
Category M2  
Temperature T4 (135°C)
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