The ideal flexible drive unit from 10 up to 1000 HP
Python-Drive features:

- Double ended Constant-Velocity drive shaft suitable for both Pleasure and High Performance applications
- Eliminates the need for exact alignment of prop shaft to gearbox
- Maintenance free thrust bearings

Advantages of fitting a Python-Drive:

- The Constant-Velocity drive shaft guarantees a constant prop shaft speed, even when angles are unequal
- Propulsion thrust is isolated from the gearbox by being absorbed by the rubber mounting blocks
- Not only is the Python-Drive robustly constructed, it is available in both Imperial and Metric dimensions, covering prop shafts from ¼” (19.05 mm) up to (4”) 100 mm.
- The thrust bearing units can be used as stand alone units, on request they can be machined to suit universal (cardan) shafts.
- Available for both imperial and metric shaft diameters and on special request also for conical shaft connections
- Python-Drive Constant Velocity drive shafts are able to take torques of up to 1,500 Kgm (appr. 14.7 kNm)
- Drive Shafts are available in different lengths and can be made to suit individual sizes
- Supplied complete with all necessary studs, bolts, washers, gearbox flange and accompanied by an easily understood installation manual

Use one of the following formulas to calculate the ideal Python-Drive unit for your installation:

\[
\left( \frac{\text{Max. rating of the engine in kW}}{\text{Max. rpm of the engine (n)}} \right) \times 9680 \times \text{Ratio of the gearbox} = \text{Shaft torque (A in Nm)}
\]

Or:

\[
( \frac{\text{HP}}{\text{n}} ) \times 726 \times \text{Ratio of the gearbox} = \text{Shaft torque (A in Kgm)}
\]

Example: \((135 \text{ HP} : 2500 \text{ rpm}) \times 726 \times 2 \text{ (Ratio gearbox)} = 78,4 \text{ Kgm (prop shaft torque)}\)

Furthermore the maximum thrust from the propeller should not exceed the ratings stated underneath.

Units: 1 Kgm = 9,807 Nm, 1 HP = 0,736 kW, 1 kg = 9,807 N, 1 kN = 1,000 N, 1 lbf = 4,448 N, 1 lbft = 0.1383 Kgm.
Python-Drive

### Type P30-R
- **Maximum shaft torque**: 30 kgm
- **Propeller shaft diam.**: 19 - 30 mm
- **Maximum prop. thrust**: 4.3 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 50 HP / 3000 rpm
- **CV drive shaft optional lengths**: 145, 165 or 195 mm.

### Type P60-B
- **Maximum shaft torque**: 60 kgm
- **Propeller shaft diam.**: 1.25" - 40 mm
- **Maximum prop. thrust**: 5.7 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 70 HP / 2600 rpm
- **CV drive shaft optional lengths**: 145, 165 or 195 mm.

### Type P60-K
- **Maximum shaft torque**: 60 kgm
- **Propeller shaft diam.**: 30 - 40 mm
- **Maximum prop. thrust**: 5.7 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 70 HP / 2600 rpm
- **CV drive shaft optional lengths**: 145, 165 or 195 mm.

### Type P80-M
- **Maximum shaft torque**: 80 kgm
- **Propeller shaft diam.**: 30 - 45 mm
- **Maximum prop. thrust**: 8 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 105 HP / 3000 rpm
- **CV drive shaft optional lengths**: 145, 165 or 195 mm.

### Type P80-S
- **Maximum shaft torque**: 80 kgm
- **Propeller shaft diam.**: 30 - 45 mm
- **Maximum prop. thrust**: 12 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 135 HP / 2500 rpm
- **CV drive shaft optional lengths**: 145, 165 or 195 mm.
<table>
<thead>
<tr>
<th>Type</th>
<th>P110-S</th>
<th>P110-T</th>
<th>P140-T</th>
<th>P200-T</th>
<th>P200-Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum shaft torque</td>
<td>110 kgm</td>
<td>110 kgm</td>
<td>140 kgm</td>
<td>200 kgm</td>
<td>200 kgm</td>
</tr>
<tr>
<td>Propeller shaft diam.</td>
<td>35 - 45 mm</td>
<td>35 - 50 mm (2&quot;)</td>
<td>40 - 55 mm</td>
<td>40 - 60 mm</td>
<td>45 - 60 mm</td>
</tr>
<tr>
<td>Maximum prop. thrust</td>
<td>12 kN</td>
<td>18 kN</td>
<td>18 kN</td>
<td>18 kN</td>
<td>22 kN</td>
</tr>
<tr>
<td>Shaft connection</td>
<td>Clamp</td>
<td>Clamp</td>
<td>Clamp</td>
<td>Clamp</td>
<td>Clamp</td>
</tr>
<tr>
<td>Example use with diesel engine</td>
<td>135 HP / 2800 rpm 3:1 gearbox</td>
<td>175 HP / 2400 rpm 2:1 gearbox</td>
<td>160 HP / 2500 rpm 3:1 gearbox</td>
<td>250 HP / 2400 rpm 2.5:1 gearbox</td>
<td>200 HP / 2200 rpm 3:1 gearbox</td>
</tr>
<tr>
<td>CV drive shaft optional lengths</td>
<td>180 or 225 mm.</td>
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<td>180 or 225 mm.</td>
<td>180 or 225 mm.</td>
</tr>
</tbody>
</table>

**Example use with diesel engine**
- **P110-S**: 135 HP / 2800 rpm, 3:1 gearbox
- **P110-T**: 175 HP / 2400 rpm, 2:1 gearbox
- **P140-T**: 160 HP / 2500 rpm, 3:1 gearbox
- **P200-T**: 250 HP / 2400 rpm, 2.5:1 gearbox
- **P200-Q**: 200 HP / 2200 rpm, 3:1 gearbox
### Python-Drive

#### Type P200-W
- **Maximum shaft torque**: 200 kgm
- **Propeller shaft diam.**: 50 - 60 mm
- **Maximum prop. thrust**: 30 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 200 HP / 2200 rpm

P200-W model 2006 remains available in 2007

### Type P501-Q
- **Maximum shaft torque**: 500 kgm
- **Propeller shaft diam.**: 55 - 60 mm
- **Maximum prop. thrust**: 22 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 430 HP / 2300 rpm

P501-Q model 2006 remains available in 2007

### Type P501-W
- **Maximum shaft torque**: 500 kgm
- **Propeller shaft diam.**: 60 - 80 mm
- **Maximum prop. thrust**: 30 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 620 HP / 2400 rpm

CV drive shaft optional lengths 221 or 260 mm.

### Type P501-L
- **Maximum shaft torque**: 500 kgm
- **Propeller shaft diam.**: 60 - 80 mm
- **Maximum prop. thrust**: 45 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 420 HP / 1900 rpm

Recommended rpm: Max. 1500 rpm

CV drive shaft optional lengths 221 or 260 mm.

### Type P750-L
- **Maximum shaft torque**: 750 kgm
- **Propeller shaft diam.**: 70 - 80 mm
- **Maximum prop. thrust**: 45 kN
- **Shaft connection**: Clamp
- **Example use with diesel engine**: 730 HP / 2200 rpm

Recommended rpm: Max. 1500 rpm
### Python-Drive

**Type** | **P750-G**
---|---
Maximum shaft torque | 750 kgm
Propeller shaft diam. | 70 - 100 mm
Maximum prop. thrust | 60 kN
Shaft connection | Clamp
Example use with diesel engine | 680 HP / 2000 rpm 3:1 gearbox

**Type** | **P1000-G**
---|---
Maximum shaft torque | 1000 kgm
Propeller shaft diam. | 70 - 100 mm
Maximum prop. thrust | 60 kN
Shaft connection | Clamp + Shrink disc
Example use with diesel engine | 810 HP / 1800 rpm 3:1 gearbox

**Type** | **P1500-G**
---|---
Maximum shaft torque | 1500 kgm
Propeller shaft diam. | 80 - 100 mm
Maximum prop. thrust | 60 kN
Shaft connection | Clamp + Shrink disc
Example use with diesel engine | 900 HP / 1800 rpm 4:1 gearbox

- a) Bearing housing
- b) Thrust bearing
- c) Thrust rubbers
- d) Hub
- e) Internal clamp
- f) CV joint thrust bearing side
- g) Intermediate shaft
- h) Boot kit
- i) CV joint gearbox side
- j) Gearbox adaptor flange
- k) Propeller shaft

Above mentioned **Python-Drive** units are supplied complete with CV-drive shaft, thrust bearing unit, adaptor flanges for most regular 4", 5", 5.75" and 7.25" gearbox flanges, all bolts, nuts, thrust-rubbers and Lock washers. Also included is an easy to read installation manual.
The Python-Drive unit can be easily assembled over the propeller shaft and mounted exactly where required, between the stern tube and the gearbox. Combination with a (double) flexible shaft coupling or alike to be mounted on the end of the shaft is thus throughout possible. The propeller thrust is transmitted to the ships hull by means of rubber silent blocks. The unit comes complete with internal clamp coupling, bolts, nuts and silent rubber blocks. Below are some examples of stand alone thrust bearing units:

<table>
<thead>
<tr>
<th>Model</th>
<th>Shaft Diameter</th>
<th>Thrust Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-R</td>
<td>Up to 30 mm</td>
<td></td>
</tr>
<tr>
<td>PD-K</td>
<td>Up to 40 mm</td>
<td></td>
</tr>
<tr>
<td>PD-S</td>
<td>Up to 45 mm</td>
<td></td>
</tr>
<tr>
<td>PD-T</td>
<td>Up to 60 mm</td>
<td></td>
</tr>
<tr>
<td>PD-W</td>
<td></td>
<td>30 kN</td>
</tr>
<tr>
<td>PD-L</td>
<td></td>
<td>45 kN</td>
</tr>
<tr>
<td>PD-G</td>
<td>Up to 100 mm</td>
<td>60 kN</td>
</tr>
</tbody>
</table>

Below a PD-G thrust bearing unit, shaft diam. up to 100 mm., max. propeller thrust up to 60 kN.
Individual **Python-Drive** CV drive shafts

**Picture left:** Drawing of the original design of the first CV joint (constant velocity joint) by Alfred Rzeppa from 1927. On basis of this drawing the CV joint was patented.

**Python-Drive** CV drive shafts operate in the same way; they have no torsional or inertial excitations inherent in cardan style drive shafts. The smooth torque transmitted from a **Python-Drive** CV drive shaft occurs even when the operating angles are unequal. The **Python-Drive** CV drive shaft will successfully accommodate unequal angles better than any other coupling device.

**Python-Drive** constant velocity drive shafts may be used to a maximum angle of 8° (8° per CV-side).

The maximum prop shaft rpm. may be 4500 rpm. (depending on model).

For more detailed information, please refer to the installation manual.

**Python-Drive** CV-drive shafts are also available in custom lengths.

All the above data and limits are for pleasure craft applications only, for commercial applications we’ll gladly calculate the correct **Python-Drive** combination for you.

Please always refer to the installation manual prior to fitment.

Your **Python-Drive** dealer:

Look at [www.pythondrive.com](http://www.pythondrive.com) for international distributors, installation manual, other languages and additional information.

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The information given in this leaflet is correct at the time of going to press. However in the interest of technical progress, design specifications are subject to change without notice.

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