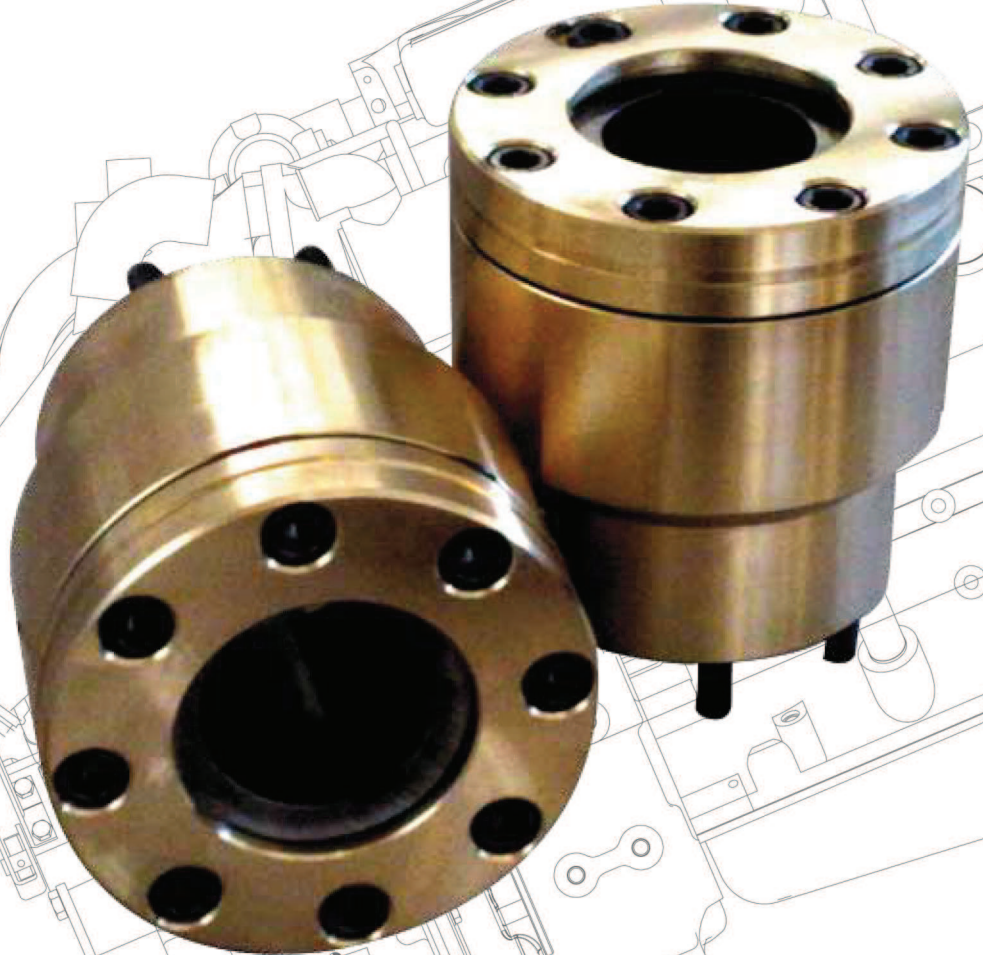


Sigma Drive

HIGHER COMFORT ON BOARD



**STOP PROPELLER SHAFT VIBRATIONS!**

- Stop noise and vibrations on prop-shaft
- CV joint without thrust bearings
- Propeller shaft always aligned
- Longer life to all propulsion systems components
- Compact size similar to standard couplings
- Quick and easy installation, no maintenance required
- Standard and V-Drive applications



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[www.sigmadrive.info](http://www.sigmadrive.info)

Good alignment of the propeller shaft is the starting point to ensure a low level of noise and vibration on board, and also to give a reduced stern gear maintenance schedule.

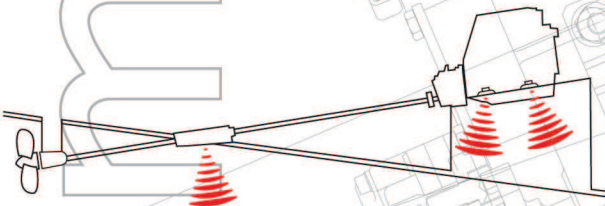
There are many products on the market that try to solve the problem of good alignment with different systems, like rubber couplings, Carden units, thrust bearings etc. The only way to solve the problem is to use constant velocity joints because they make it possible to rotate the propeller shaft without transmitting the engine's movement and vibrations, but systems on the market at this moment are often expensive because they demand the shaft line to be modified and can also require lengthy installation time.

New SigmaDrive couplings are special cv joints able to resist to the propeller thrust without the need of thrust bearings. These couplings are very compact and can transmit higher torque than other couplings with similar dimension.

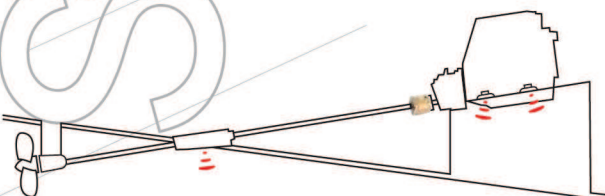
Especially designed for yachts and workboats to reduce or even eliminate noise and vibration, installed at the same place of standard shaft couplings, they dramatically reduce or even eliminate noise and vibration that the engine and propeller transmit to the prop-shaft.

In this diagram we show the traditional system used with 3 fixed points: propeller mount, mechanical seal and gearbox.

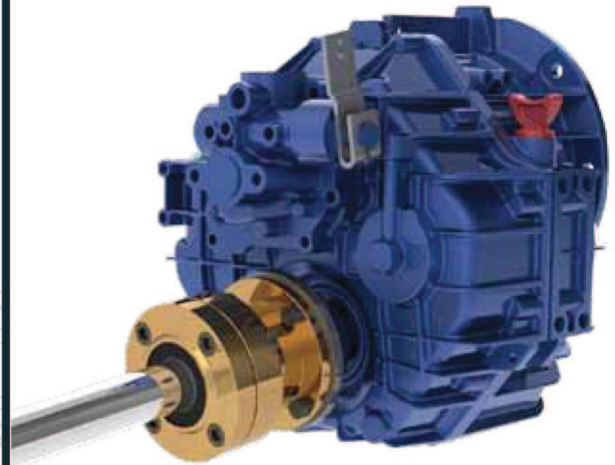
- Here there are 2 potential causes for vibrations to occur:
- The imperfect alignment of the 3 points that offloads the eccentric movement on the central point and also on the engine mounts.
  - The oscillations of the engine that are passed directly down the shaft, that are transmitted directly through the hull of the vessel.



The improved system with SigmaDrive as opposed to using traditional shaft mounts, becomes much more flexible. The coupling corrects imperfect coaxial alignment between the prop-shaft and the gearbox up to 8° under torque during use. The engine vibrations are eliminated and the prop-shaft simply rotates naturally without transmitting vibrations to the hull, reducing noise and improving navigation comfort.

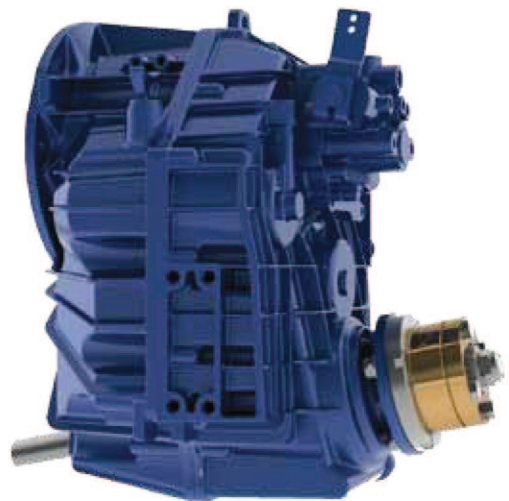


### Standard installation

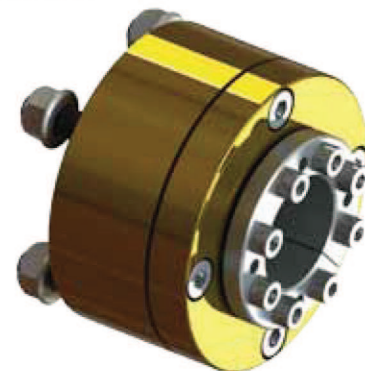


Tapered shaft 1/10 + Keyway

### VDrive installation



### SD55 - SD100



Parallel ended shaft

SigmaDrive can be installed as an angular corrector, because it allows the propeller shaft to rotate with a maximum misalignment between the gearbox and the shaft within a 6 degree.

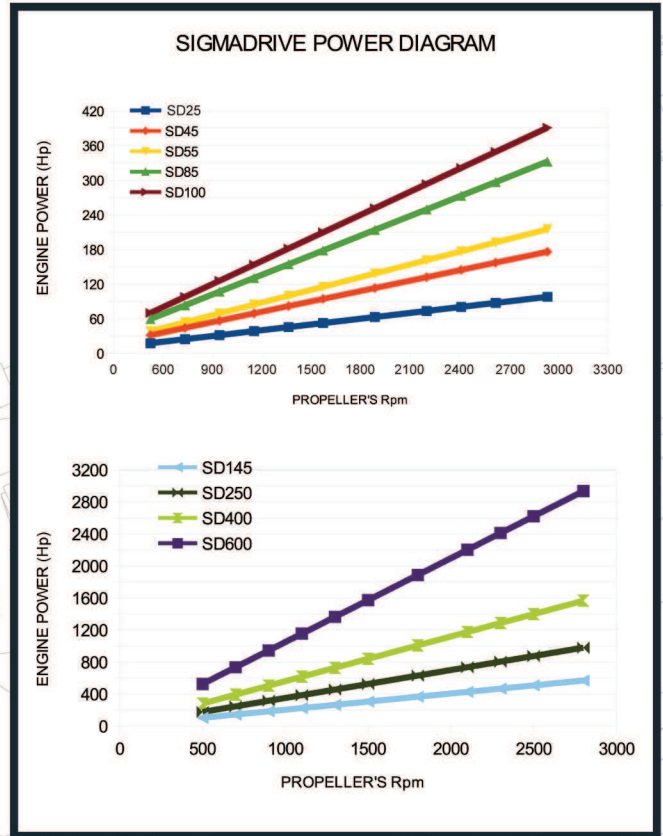
SigmaDrive allows the propeller shaft to "self-align" between rubber bearings and shaft seals and will therefore give longer life to all propulsion system components. By installing SigmaDrive you will have your propeller shaft system always accurately aligned.










The coupling is manufactured from a special bronze alloy that makes it possible to have a premium product that doesn't create problems of maintenance and heat generation and also provides a hard-wearing component with a long service life. No bearings or rubber are included in the construction and SigmaDrive cancels out vibration and compensates for each movement and vibration of the engine.

Different standard models of SigmaDrive are available for engines up to 1300HP. SigmaDrive systems for more powerful engines on demand.

Formula to select the correct Sigmadrive:

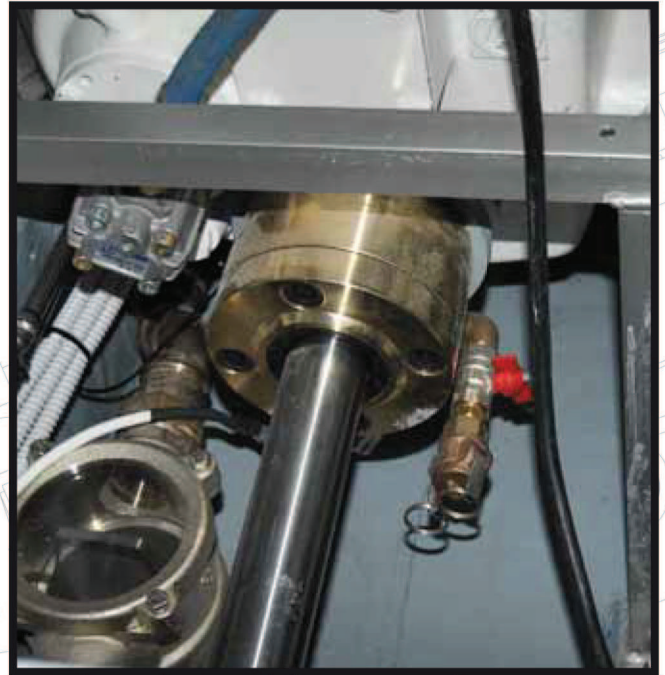
$$\text{Max Torque} > \left( \frac{\text{Kw}}{\text{Rpm}} \right) \times 9680 \times \text{Reduction}$$



MODEL	Max TORQUE	SHAFT TYPE	SHAFT D.	INPUT FLANGE	SIZE DIAM. x L	Max Angle	Max Rpm
 SD25	250Nm	TAPERED 1/10+KEYWAY V-DRIVE	25 → 30	4" KANZAKY	100x110	6	5000
 SD45	450Nm	TAPERED 1/10+KEYWAY V-DRIVE	25 → 35	4" KANZAKY	100x110	6	5000
 SD55	550Nm	PARALLEL ENDED V-DRIVE	25 → 35 1" → 1" 1/2	4" KANZAKY	100x70	6	5000
 SD85	850Nm	TAPERED 1/10+KEYWAY V-DRIVE	35 → 45 1" → 1" 1/2	4" - 5" KANZAKY	130x135	6	5000
 SD100	1000Nm	PARALLEL ENDED V-DRIVE	25 → 35 1" → 1" 1/2 40 → 45 1"3/4 → 2"	4" - 5" KANZAKY	130x90	6	5000
 SD145	1450Nm	TAPERED 1/10+KEYWAY 1/12+KEYWAY V-DRIVE	40 → 50 1"3/4 → 2"	5" KANZAKY	130x135	6	5000
 SD250	2500Nm	TAPERED 1/10+KEYWAY 1/12+KEYWAY V-DRIVE	50 → 60 2" → 2" 1/2	6"	150x145	6	3000
 SD400	4000Nm	TAPERED 1/10+KEYWAY 1/12+KEYWAY V-DRIVE	50 → 80 2" → 3"	6"	150x150	6	3000
 SD600	6000Nm	TAPERED 1/10+KEYWAY 1/12+KEYWAY V-DRIVE	50 → 90 2"1/2 → 3" 1/2	7"	180x150	6	3000

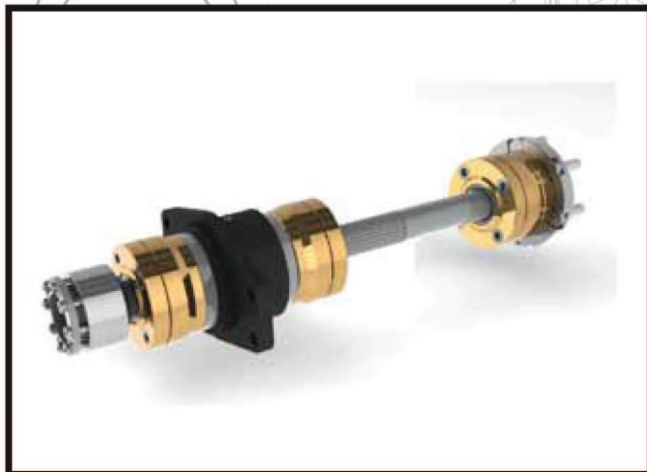
**The main characteristics of SigmaDrive are:**

- Compact size, comparable to a standard shaft coupling
- Perfect alignment (6 degree tolerance)
- Easy and quick installation without modifying the propeller shaft
- Fixture plates or brackets for thrust bearings are no longer required
- No rubber inside
- It works perfectly in line or out of line
- Applicable on both V-Drive or direct propeller shafts
- Internal grease lubricants reduce the need for frequent maintenance
- SigmaDrive can be easily fitted to new build and refit vessels



SigmaDrive SD400 installed on 100 feet sailing boat  
385Hp 3:1 reduction ratio

**Other products of Unimec:**



**STS**  
**SigmaDrive Thrust System**



**D-Sigma**  
**Ideal for waterjet**