

OFFSET Fixtures

Fast Precision Alignment of Offset Driven Machines



Machines with offset drives are often thought of as insensitive to alignment errors between driving and driven shaft. However, they cannot absorb angular misalignment between the shafts, hence our kit the Offset Fixtures. The fixture kit, consisting of machined parts with high precision (parallelity and flatness within 0,03 mm) makes it possible to do accurate alignment which conventional methods can't do.

Why Align Cardan Shafts?

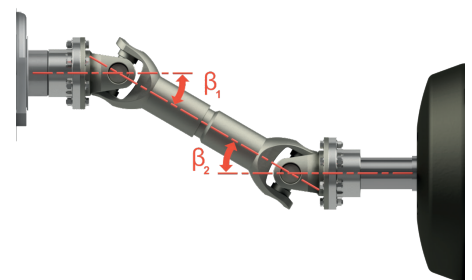
Cardan shafts with angular misalignment typically cause the driven shaft to rotate unevenly during operation, which results in increased vibrations. In other words, it is just as important to align cardan shafts as regular shafts. Why is that?

- Vital part in drives for machines, where breakage of cardan shafts causes down time
- Badly aligned cardan shafts set limitations in production speed and product quality
- Stands for a considerable cost when repair is needed or a breakdown occurs
- Badly aligned cardan shafts reduce lifetime in gearboxes and motors
- Breakdown of a cardan shaft in running condition could be extremely dangerous.

Use the NXA with the Offset Fixtures and you can perform precision alignment on any offset mounted machine as fast as you align any other shafts. The Offset Fixture kit consists of both software and fixtures.

Equipped with laser pointer for fast mounting

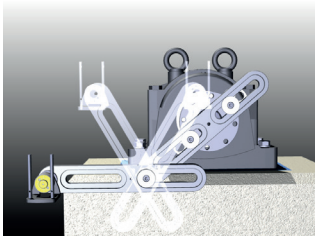
The Offset Fixtures are equipped with a laser pointer, which means that the alignment system is not needed in order to mount the fixtures. The fixtures only have to be adjusted until both the lasers are hitting the center of the opposing target. Thanks to this feature, the mounting can be performed fast.



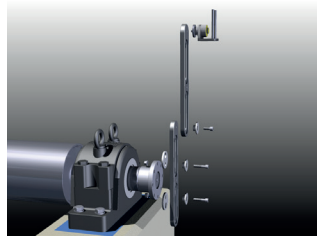
The Theory of Aligned Cardan Shafts

Ideally, the angles between the driver and driven shafts and the cardan shaft, shown as β_1 and β_2 in the figure below, would be equal. Geometrically, this should equate to zero angularity existing between the driver and driven unit. In other words, the shafts of the driver and driven machine would be parallel to each other.

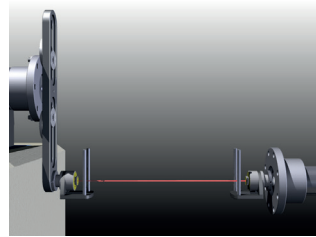
Express Mounting and Measurement of the Offset Fixtures



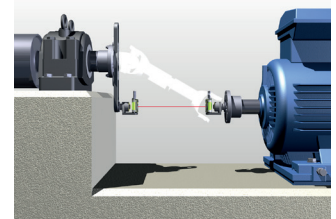
The Offset Fixture kit comes with a number of methods of attachment. The system is designed so you can, in most cases, utilize the coupling bolts themselves when mounting the arm on the flange.



The Offset Fixtures' laser is adjustable in a plane parallel to the flange face of the stationary machine and can be set at any position to eliminate the offset from the driven unit.

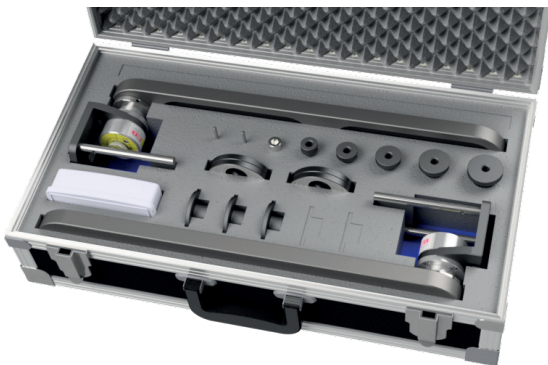


The built-in lasers in each rotation unit are pre-adjusted so the laser beam represents the axis of rotation for the unit on which it is mounted.



The Clock method is used to get the result. In the Clock method, machinery positions are calculated by taking three points with 180 degrees of rotation.

Offset Fixture Kit with Case



Technical Specification

Weight – standard system incl. case 10,2 kg

Weight – standard system incl. optional equipment and case 12,3 kg

Dimensions of case (L x H x W) 570 x 330 x 160 mm

Max distance between bolt holes 360 mm

Max offset 650 mm

Material Anodized aluminum

Laser pointer Class 2 laser

Operating temperature (laser pointer) 0°C - +50°C

Storage temperature (laser pointer) -20°C - +70°C

Content

2 pcs of fixture arms

2 pcs of rotation units

4 pcs of hardened spacer washers

3 pcs of guide washers

2 pcs of rod tools

5 pcs of screws with thread nut size M12, M16, M20, M24, M30

Box incl. 2 pcs of allen keys, 8 and 2 mm, and 4 pcs of batteries, SR44 1,5V



Offset Fixture Accessory Kit

Fixture arm

2 pcs of guide washers

ACOEM AB is a global player and leader in developing innovative, userfriendly equipment for shaft alignment. By helping industries worldwide to become perfectly aligned, and eliminating anything that might not be, we minimize unnecessary wear and production stoppages. This will ultimately make our customers more profitable and our environment more sustainable.



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