

ACOEM PAT

Belt Alignment

ACOEM PAT – the belt alignment system designed to ensure optimal performance and longevity of your belt-driven machinery. Experience the difference precision alignment can make in reducing wear, preventing bearing failures, and minimizing vibrations.

Key Features:

Dual Laser Transmitters: Equipped with visible red laser lines, the ACOEM PAT uses two transmitters with spring-loaded guides that fit into pulley grooves, ensuring accurate alignment every time.

Versatile Alignment: Suitable for V-belts, Poly-V, and timing belts (optinal) with various sized removable guides to fit standard sheave sizes A - E (6 mm - 40 mm).

Easy to Use: Simple setup and operation. Just mount, turn on the lasers, and adjust until the laser lines are aligned with the center marks.

Fast and Efficient: One-person operation with instant results, saving you valuable time and reducing maintenance downtime.



Belt Alignment Procedure

Step 1 (M/S)

VERTICAL ANGLE ALIGNMENT (TWIST)

If the laser lines deviate from being parallel to the center line on the targets, there is a vertical angular misalignment.



Step 2 (M)

HORIZONTAL OFFSET ALIGNMENT

If the laser line is parallel to but not centered on the center line, there is a horizontal offset misalignment.



Step 3 (S)

HORIZONTAL ANGLE ALIGNMENT

If the laser line on the stationary side is parallel to the center line but is not centered, it indicates a horizontal angular misalignment.



M



S



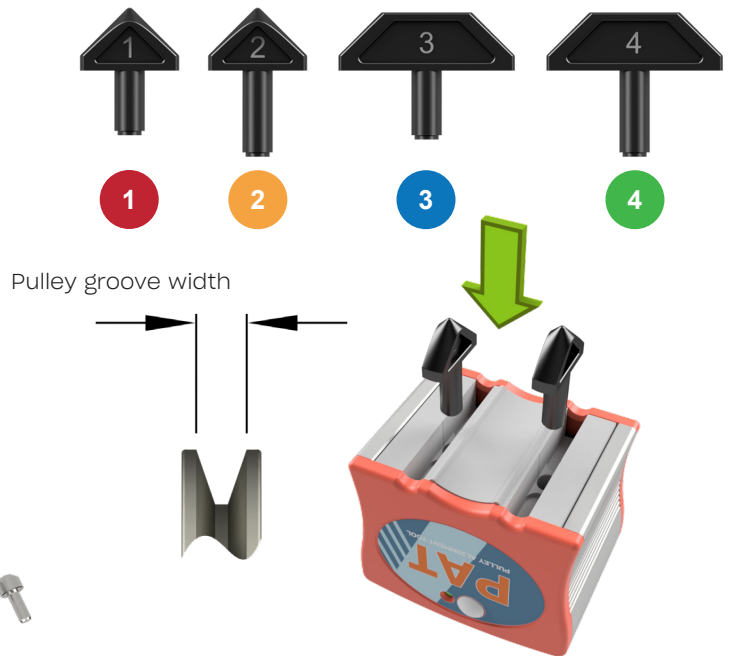
Verify that the laser line is precisely aligned with the center line on both the movable and stationary sides.

V-guide selector				
Pulley groove width (mm)	Belt profile	Min diam (mm)	Pulley datum diameter →	Max diam (mm)
6	Y/6	75		700
8	8	75		900
9	3V/9N	85		900
9.7	SPZ	85		900
10	Z/10, ZX/X10	80		900
12.7	SPA	85		900
13	A/13, AX/X13	80		900
15	5V/15N	90		1300
16.3	SPB	90		1300
17	B/17, BX/X17	90		1300
20	20	140		1300
22	SPC, C/22, CX/X22	140		1300
25	25, 8V/25N	300		1800
32	D/32	300		1800
40	E/40	300		1800

V-guide 1: 5-22 mm short rod
V-guide 2: 5-22 mm long rod
V-guide 3: 22-40 mm short rod
V-guide 4: 22-40 mm long rod

V-Guide Selection and Mounting

To accommodate pulley grooves of varying widths and types, four sizes of V-guides are available. Refer to the V-guide selector to choose the correct size. Install two V-guides on each PAT unit during mounting.



Optional equipment enables the alignment of timing belt driven machines.



Sensor Specifications

Housing Material:	Extruded aluminium (molded PA cover)
Operating Temp:	0 to 40° C (32 to 104° F)
Relative Humidity:	0 - 90%
Weight:	340 g (12 oz)
Dimensions:	61 x 77 x 61 mm (2,4 x 3 x 2,4 in)
Laser:	630 - 680 nm class II diode laser
Laser Line Fan Angle:	90°
Laser Power:	< 1 mW
Measurement Distance:	50 mm - 6000 mm (1,97-236,33 in)
Power Supply:	2 pcs LR03 (AAA) 1,5 V per unit
Operating time:	20 hours of continuous operation



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