

# ***Advance Laser alignment system AVV-701 Pro***

Cost effective way to reliability



**SAVE TIME AND MONEY !**

AVV-701 - a simple compact, reliable and affordable system for all rotating equipment. It offers the benefits of a dynamic precision laser shaft alignment on machinery with minimal waste of time and without stretching the budget.

Proper alignment eliminates the leading cause of machine breakdown and pays for itself! Diminishes the cost of spare parts and production lost due to downtime!

AVV-701 makes quick, accurate shaft alignment a simple task for all new alignment users! The system is designed of easy in use and user-friendly interface!

AVV-701 can be upgradeable to advance geometrical alignment for flatness, bore, straight, cardan, spindle, etc.



**PROGRAMS AND USEFUL FUNCTIONS**

**HORIZONTAL-**

Alignment of horizontal machines train at any position with Active Universal multi-point mode at min.30° rotation angle.

**VERTICAL-**

For the alignment of vertical and flange-mounted machines by any position of 9,12,3 or 6'clock, rotation method.

**SOFT FOOT-**

Step by step to check that the machine is properly standing on all feet and remove "soft-foot" if occur.

**THERMAL GROWTH-**

Input of cold coupling target for the thermal alignment compensation, considering difference in thermal growth between machines.

**ALIGNMENT SHIM SIMULATOR-**

Shims simulation function that allows to check the possibility of use of the present shims in case they differ from the results of the calculations.

**MY DOCUMENTS-**

Versatile PC compatible file system (FAT) allows to organize data file storage and report print. Two-way communication for data files management.

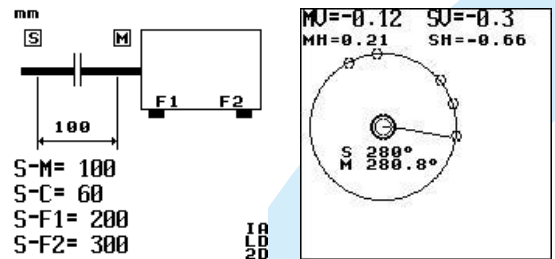
**FALCON EYE-**

Quick and easy rough alignment procedure in the presence of a large initial misalignment, while turning machine shaft the laser beams travel outside the detectors. No need to adjust laser beam while taking measurement to ensure smooth measurement.



**HORIZONTAL ALIGNMENT - LATEST MULTI-POINT MODE**

- The procedure of measuring consists of just few simple steps:
- Input of the basic dimension distances.
- Before the start of the measurement, it is strongly recommended to carry out a soft foot check, and if necessary, to tight the foot.
- Then, input the data (by pressing "Ok" button) while turning shafts with measuring units to any 3 or more positions on shaft in any direction with min. 30degree or more shaft rotation.
- The result shows clearly the adjustments that are needed to remove misalignment.
- User can use the built-in electronic inclinometer or put the shafts into the fixed positions for uncoupled coupling.



**PC REPORT CUSTOMIZE LOGO**

Alignment report

Company: KOSE Asia Pacific Pte Ltd  
Site: CSM Fab-2 Woodlands Ave 2 Zip Code 3032  
Client: COSECO, Woodlands, 100mm shaft dia.  
Machine: Pump Motor (AM)  
Power: 500W  
Operator: SM-02-155  
Number: 0000 (www.kohtect.com)

Date: 26.10.2008 13:30:12  
User: ...  
Program: Horizontal

S-M	210 mm
S-C	100 mm
S-F1	280 mm
S-F2	440 mm
Horizontal offset	0.04 mm
Vertical offset	0.03 mm
Vertical angle	0° 10'00mm

IA LD 20

Alignment report

Company: KOSE Asia Pacific Pte Ltd  
Site: CSM Fab-2 Woodlands Ave 2 Zip Code 3032  
Client: COSECO, Woodlands, 100mm shaft dia.  
Machine: Pump Motor (AM)  
Power: 500W  
Operator: SM-02-155  
Number: 0000 (www.kohtect.com)

Date: 26.10.2008 14:10:11  
User: ...  
Program: Soft foot

S-M	210 mm
S-C	100 mm
S-F1	280 mm
S-F2	440 mm
Soft foot Result	440 mm
Soft foot Result	440 mm
F1 (left near foot)	0 mm
F2 (left near foot)	0 mm
F1 (right near foot)	0.02 mm
F2 (right near foot)	0.02 mm

**TURN & RECORD AT ANY POSITION**

Ys=-0.26 Ym=-0.12  
Xs=0.36 Xm=0.18  
A=90°  
9 o'clock

Ys=0.33 Ym=-0.25  
A=180°  
12 o'clock

Ys=1.87 Ym=-2.12  
A=270°  
3 o'clock

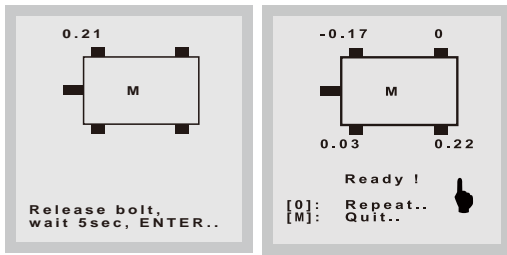
S 88.6°  
M 86.5°

S 174.6°  
M 175.7°

S 267.2°  
M 262.8°

### SOFT FOOT CHECK

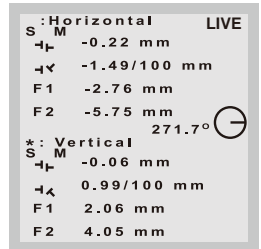
On screen step by step guide to perform soft foot check & estimate soft foot problem on machine feet.



"Soft foot"

### READY ! LIVE VALUE AND DYNAMIC ICON MODE TO ADJUST MACHINE.

Just move machine feet horizontally. (Push machine front feet 2.76mm and rear feet 5.75mm away from operator.)



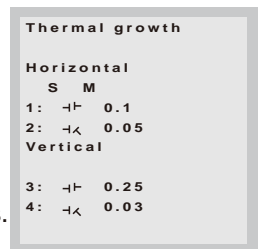
Insert shims - move machine vertically. (Add 2.06mm to front feet and 4.05mm to rear feet.)

### THERMAL GROWTH

This feature allows consider of difference between machine thermal shifts when changing from a cold state to normal operating temperature by input cold alignment target.

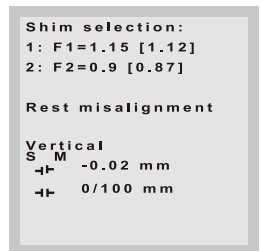
AVV-701 calculates the corrected shim and horizontal movement values considering this difference.

The thermal growth alignment target values for the machines are supplied by the manufacturers.



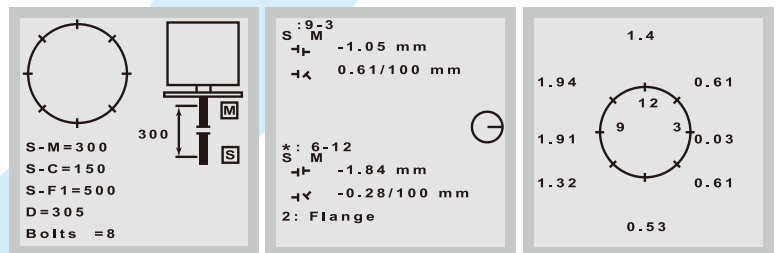
### ALIGNMENT SHIM SIMULATOR

This function allows shims simulation to check for the possibility of use of the present shims in case they differ from the results of the calculations hence reduce alignment time.



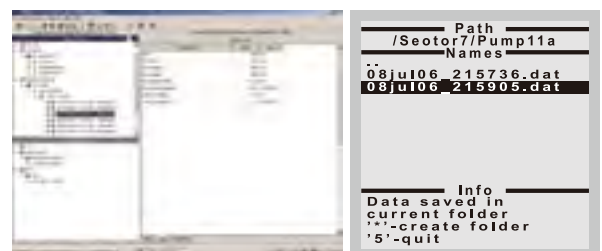
### VERTICAL ALIGNMENT

This built-in program is used for the alignment of vertical and flange mounted machines. On display shown center offset, angular error and shim correction value at each bolt.



### MY DOCUMENTS

Versatile PC compatible file system (FAT) - and Windows base "Conspect" software - allow more than 500 date save within device and upload to PC via USB 2-way communication for report print and PC alignment database management.



**RUGGED & ROBUST DESIGN**

The rugged and robust aluminum housing is industrial protection level IP65 and guarantees stable and reliable operation in any harsh environments.



**TECHNICAL SPECIFICATIONS**

**Measuring Transducer units (S, M)**

Housing material	Light weight alloy aluminum
Environmental protection	IP65 (water spray resistant, shock and dustproof)
Operating temperature	-20°C to 55°C
Laser	Diode laser
Laser wavelength	635-670nm, visible red light
Laser safety	Class-II
Resolution	0.001mm (1micron)
Detectors	10x10mm, 2-axis PSD sensor
Electronic inclinometer	0.1° resolution
Dimensions	Approx. 64x58x45mm
Measurement distance	up to 10m
Transducers weight	(M) & (S) 235g

**Control Display unit**

Housing	Light weight alloy aluminum
Environmental Protection	IP65 (water spray resistant, shock and dustproof)
Operating temperature	0°C to 55°C
Type of display	Backlit Monochrome LCD
Display size	61x61mm (active area 3.5")
Max. displayed error	+1% +1digit
Displayed resolution	0.01mm/ 0.001mm
Rechargeable battery	Built-in 5.3V NiMH
Output interface	High speed USB port Membrane
Keyboard	alphanumeric 17 key Save more than 500 data files
Memory capacity	170x110x40mm
Dimensions	approx. 600g
Weight	

**Carrying Case**

Standard	ABS with form inserted
Package weight & dimensions	Approx. 456 x 355 x 133mm
Weight incl. all std parts	7.3Kgs

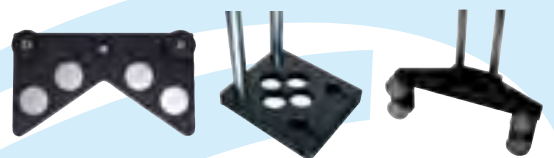
**Standard Delivery:**

1. AVV-701 display unit w/built-in rechargeable battery
2. Transducer cable (3M), 2pcs
3. 2-axis Measuring transducer units, 10m range (S, M)
4. AC switchable charger, 110-230 Volts-50Hz
5. Compact shaft brackets frame, 2pcs
6. Stainless steel bracket chains 300mm & 600mm, 2ea.
7. Support post 135mm w/ holder, 4pcs
8. Support post 300mm w/holder, 4pcs
9. Chian join clip set
10. Measuring tape, mm
11. Operating instructions manual in CD-ROM
12. Conspect PC software in CD-ROM for report and data management
13. USB PC com cable
14. Maker Calibration certificates
15. Water proof ABS carrying case w/ form inserted



**Options:**

- KB-8003-Bolt hole bracket
- KB-8004-Offset adaptor
- KB-8006-Compact magnetic bracket for rotate & non-rotate shaft.
- KB-8011P-Short support post 60mm, 2pcs
- L100-XP-Stainless steel 304 precut shims package



METZ™ Pre-cut Shims

304 Stainless steel ABCD sizes complete with case package

**Representative:**

