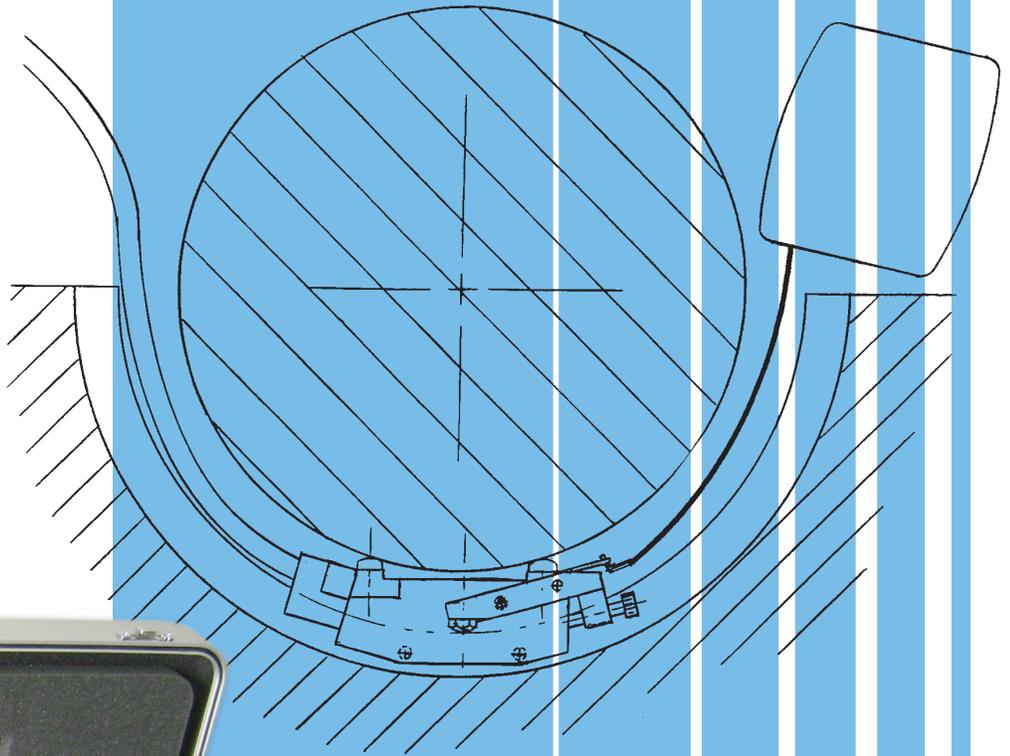


LARGE/SMALL CONCENTRICITY ALIGNMENT TOOL

Model CAT-1

(Contains both Large and
Small Measuring Heads)



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Where thoughts become reality

www.turbinealignment.com

Schenectady, New York

Equipment Development Services

3578 Guiderland Avenue
Schenectady, NY U.S.A. 12306-1825

Phone:
(518) 356-7841

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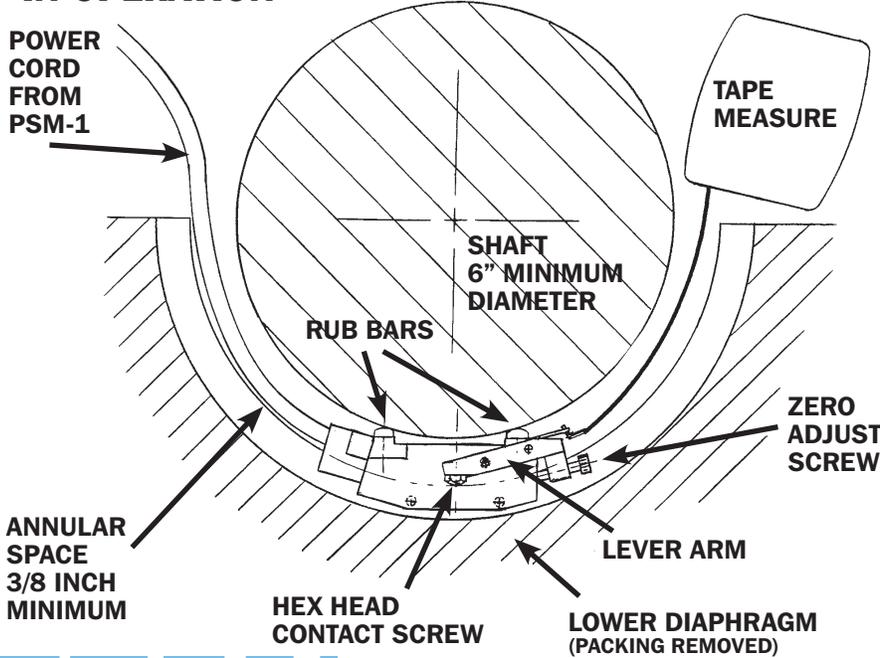
APPLICATION

The tool is designed to be used to concentrically align diaphragms to the shaft of a turbine. The Concentricity Alignment Tool (CAT) has two measuring heads, a large (LCAT) and small (SCAT). The LCAT head is to be used on larger turbines such as those manufactured by General Electric in Schenectady, New York. The SCAT head is used on smaller turbines, such as those manufactured by General Electric in Lynn, Massachusetts. The SCAT head may also work on some smaller marine turbines.

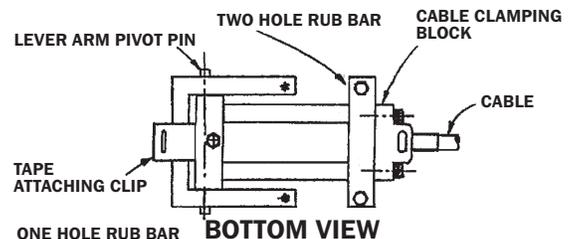
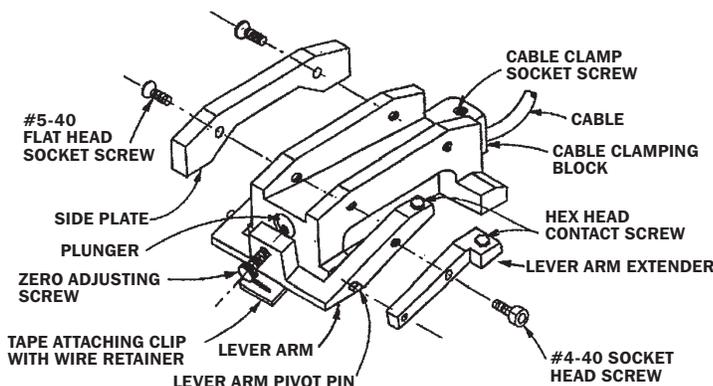
DESCRIPTION

To use LCAT/SCAT, the packing must be removed from the turbine and the packing T-slot cleaned of any wear deposits. The shaft must also be cleaned to give accurate readings. The LCAT/SCAT sensor head is then fitted to the packing gland T-slot by installing the proper side plates and shims for the width measurement along with the lever arm extenders, if needed, and then adjusted for the shaft to stator annular clearance by installing the rub bars onto the base of the sensor head and the lever arm. A tape measure is then threaded through the packing gland groove and is used to pull the sensor head around the shaft. The sensor head is then inserted into the packing gland groove and attached to the tape measure. The meter on the LVDT Power Supply Module (PSM) must be "zeroed" using the zero adjustment screw on the sensor head for a coarse adjustment and then using the zero adjustment knob on the power supply. After a zero is established, the sensor head is pulled around the shaft, using the tape measure. As it is pulled into the 6:00 o'clock and the 9:00 o'clock positions, the readings are recorded.

CONCENTRICITY ALIGNMENT TOOL IN OPERATION



The LCAT/SCAT tool gives very accurate and reliable readings due to its ability to operate around a zero setting. This is important because the LVDT inside the sensor head is most accurate when operating either side of the null or zero point. It is also easier to interpret the readings.

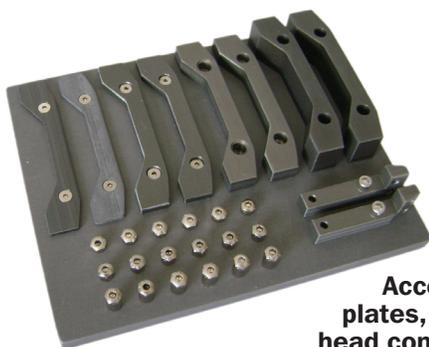


FEATURES

- Extremely accurate.
Absolute reading- less than 1% of full scale.
Calibration chart supplied with each LCAT and SCAT.
Repeatability – within .0004 inch.
Resolution- .0001 inch.
- Self contained- portable.
- Built in battery testers
- test positive and negative.
- Shock resistant carrying case
- foam lined.



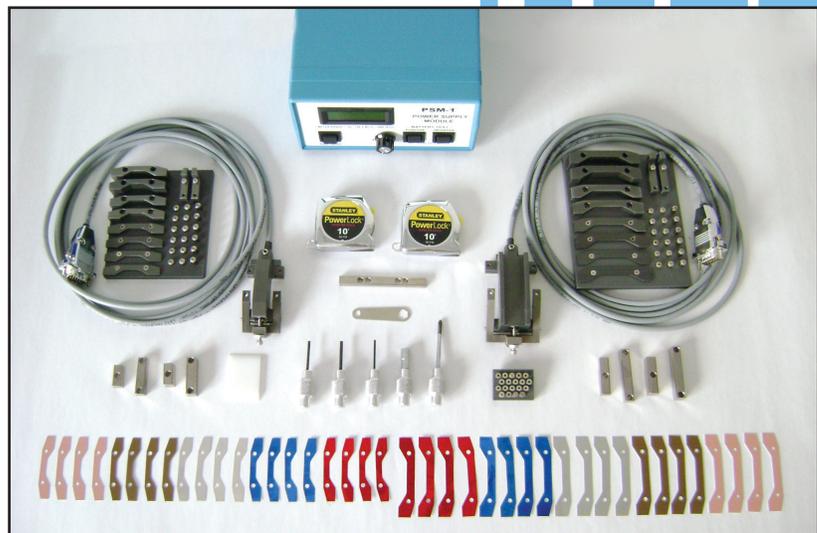
Close-up of PSM-1 Power Supply Module.



Accessory plate showing arrangement of side plates, lever arm extenders and assortment of hex head contact screws with appropriate spacers.

SPECIFICATIONS

- WEIGHT
(Complete with case and batteries) 15 pounds for CAT-1 (with large and small measuring heads)
- BATTERIES
(5) 9-volt (transistor radio) cells.
- BATTERY LIFE
Approximately 20 hours continuous use w/alkaline batteries.
- MEASURING CAPABILITY
For LCAT- annular spacing from .500 to 1.500 inch- packing width from 1.00 to 2.00 inch.
For SCAT- annular spacing from .375 to 1.000 inch – packing width from .500 to 1.500 inch.



Model CAT-1 shown without carrying case. Accessory plates for LCAT and SCAT, Tools, and Rub Bars.

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NOTES

- Equipment Development Services manufactures other alignment and measuring tools such as:
- Electronic Adjustable Measuring Parallels, which are used when trying to measure into deep recesses such as when measuring gib key clearances and performing coupling alignment.
- Bridge and Joint Micrometer Sets.
- Tight Wire Alignment Sets.
- If you have an application which needs specialty tools, please give us a call. We are continually developing new tools for the power generation industry.

TERMS & CONDITIONS

Sold only to rated firms- otherwise COD, money wire transfer, or check w/ order. All prices are FOB our facility, Schenectady, New York. Prices include boxing for shipment- shipping charges extra. Payment terms to rated firms are Net 30 days. New York sales taxes will be added for firms in New York unless an Exemption Certificate or Resale Certificate is supplied with order.

PRICE

(See separate price list sheet)

All models include one locking carrying case, one LVDT control module with batteries, two measuring heads (LCAT and SCAT), two accessory plates with extender arms, side plates and hex contact screw assortment with spacers and the necessary tools required for set-up and battery replacement.

DELIVERY

Standard delivery is 1 to 2 weeks after receipt of order.
(Patented)

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