

Cylinder Liners Zylinderlaufbuchsen Camisas de cilindros гильзы цилиндров Canne cilindro قمصان سیلندر







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OMPA

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## **Quality Management**

We define 'Quality is to achieve the utmost customer satisfaction through satisfying identified and silent requirements of customers' Being certified IATF 16949 & ISO 9001:2008, reflects our company's working system of global standards with challenging international work environment.

**Anand Liners (India) Pvt. Ltd.** work with TQM (Total Quality Management) approach that emphasis on process control rather than nonconformities detection. We are concentrating on process control to enhance the strength of the process. The directed control at each stage of the process allows reducing the amount of rejection continuously. We analyze the records to downsize the lapses in process.

Modern machinery and optimal utilization helps to justify the capability of the organization and embarks to cope with technological paradigm shift.

The defined process sequence along with the latest instruments with mechanical control removes the drawback of human error in areas of measurements, material analysis, mechanical and physical properties of the products.

Our highly trained staff uses the most advanced measuring equipment and instrumentation both during and after production to assure accuracy and production dependability. By eliminating production discrepancies, we save valuable time and resources.

This translates to just-in-time delivery and lower costs.





## **About Types of Cylinder Liners**



The dry liner does not come in contact with the coolant. Instead, it fits closely against the wall of the cooling jacket in the cylinder block. With the wet liner, the coolant comes in direct contact with the liner. Wet liners may have a cooling water space between the engine block and liner, or they may have integral cooling passages. Liners with integral cooling passages are sometimes referred to as water-jacket liners.



In wet liners that do not have integral cooling passages, the water jacket is formed by the liner and a separate jacket which is a part of the block. A static seal must be provided at both the combustion and crankshaft ends of the cylinders to prevent the leakage of coolant into the oil pan sump, or combustion space. Generally, the seal at the combustion end of a liner consists of either a gasket under a flange or a machined fit. Rubber or neoprene rings generally form the seal at the crankshaft end of the liner. Liners of this type are constructed to permit lengthwise expansion and contraction. The walls of a wet liner must be strong enough to withstand the full working pressure of the combustion gases.



Air cooled block are cast by shell moulding process. Aircooled engines rely on the circulation of air directly over heat dissipation fins or hot areas of the engine to cool them in order to keep the engine within operating temperatures.

In all combustion engines, a great percentage of the heat generated (around 44%) escapes through the exhaust, not through the metal fins of an air-cooled engine (12%). About 8% of the heat energy is transferred to the oil, which although primarily meant for lubrication, also plays a role in heat dissipation via a cooler. Air-cooled engines are used generally in applications which would not suit liquid cooling.

## **Cylinder Liner, Cylinder Sleeve**

| Dimension            | Range (MM)                      |
|----------------------|---------------------------------|
| Bore Diameter        | 40 to 350                       |
| Outer Diameter       | 45 to 385                       |
| Length               | 65 to 600                       |
| Wall Thickness       | 2 to 35                         |
| Finish               | Semi Finished<br>Fully Finished |
| Surface<br>Treatment | Phosphating                     |
|                      | Nitriding                       |
|                      | Chrome Plating                  |

## **Air Cooled Blocks**

| Dimension     | Range (MM) |
|---------------|------------|
| Bore Diameter | 77 to 150  |