



Moving ahead in time to create better future



- < CYLINDER LINER
- < LINER SLEEVE
- < LINER INSERT
- < VALVE GUIDE
- < VALVE SEAT
- < ENGINE VALVE



« Company Profile

Kavya International manufacture and export variety of cylinder liners and valve train components, which includes Liners, Cylinder Sleeves, Liner Inserts, valve seat inserts, valve guides, valve retainers and valve collets.

Located in Rajkot City in the developing manufacturing zone attached to National Highway , our city is well known for its engineering especially our segment of engine components.

We are having rich experience of almost 36 years with excellent track record for holding our customers, that has provided us goodwill in market. We have always aimed to become the most competitive in price, quality and services. We believe to work hard to achieve our goals for development of products and market.

We always take initiative for excellent Quality by adopting latest technologies in manufacturing. We are having a ISO – 9001:2008 Quality system certification. Fully integrated machine shops with all automatic CNC and Special Purpose Machine (SPM) in our manufacturing facilities.

Our focus is to develop most precision components of Automotive, Heavy Duty , Earthmoving ,marine, industrial sectors. R&D and innovative thinking helps us to achieve highest quality products as per customer specifications which leads to customer satisfaction.



Director's Message

“ At **Kavya**, we wear our purpose and value system in our hearts. We work towards building an Organization of the future and groom our people so that they are also ready to face the challenges of tomorrow. There is not a single day that goes without challenging your potential. Whether your profile is in Production, Sales, Marketing, Exports or Human Resources your skills and expertise will be utilized to the fullest. The robust and dynamic way of the business brings to you a quorum of highly skilled colleagues and mentors at the top of their fields. ”

« Our Vision



CORE PURPOSE:

"To enhance the Productivity and quality of the human life by providing preeminent solutions"

CORE VALUE

Kavya international believes in **"Continuous Learning"**

Kavya International always believes **there is no substitute of "Hard Work"**

Kavya International always deliver **"Quality as committed"**

Kavya International always **"Respect Every Individual"**

Kavya International always **"Strive for Innovation in all aspects"**

BIG HAIRY AUDACIOUS GOAL (B.H.A.G.)

To, Incorporate the great practices of The Toyota Motors, to Become a 500 Cr. valued Company by 2035.

VIVID DESCRIPTION

- By 2035, Kavya International will be spread over 25000sq. Meter area with huge production capacity.
- By 2035, Kavya International will be Great Place to Work (GPTW).
- By 2035, Kavya International will have highly educated, enthusiastic & professional employees.
- By 2035, Kavya International will have Internal Training Academy for constant learning & up gradation.
- By 2035, Kavya International will be awarded with "Industry Excellence Award" in the category of "Manufacturing & Processing".
- By 2035, Kavya International will have the world's best Quality Certificates according to industry requirements such as TS for Automotive industry & IRIS for Railways.

BRAND PROMISE:

"Specification, Packaging, and Delivery as committed"



« Manufacturing Facilities

INDUCTION MELTING



POURING



CENTRIFUGAL CASTING



FINE BORING



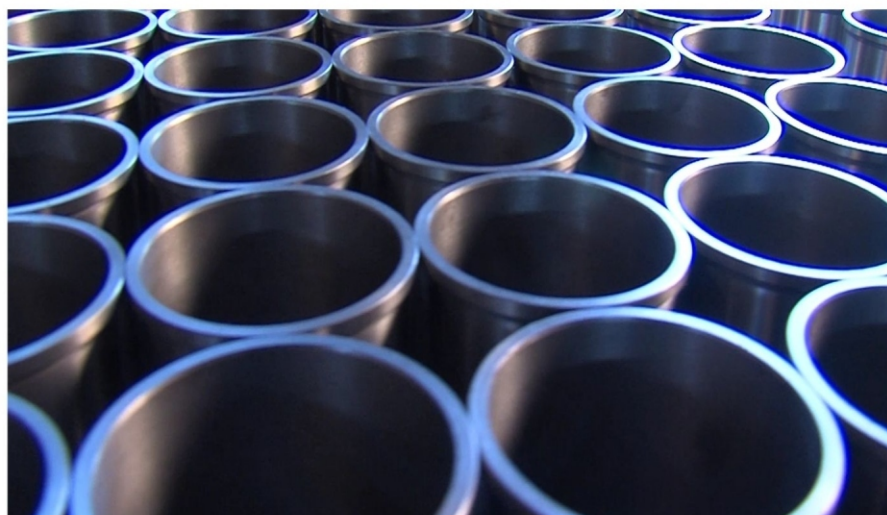
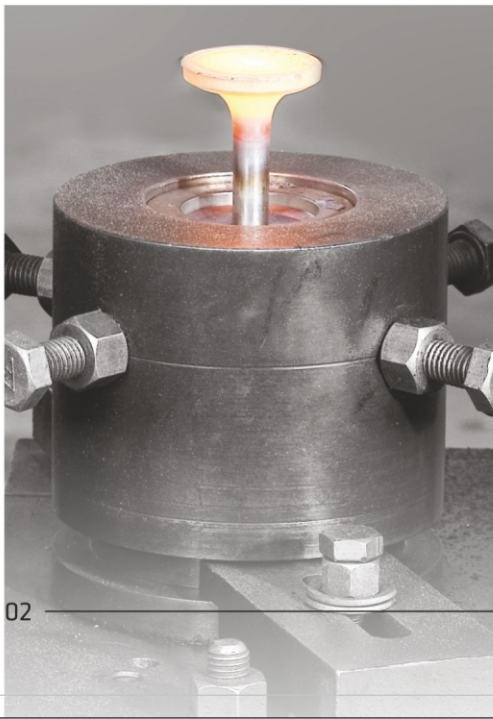
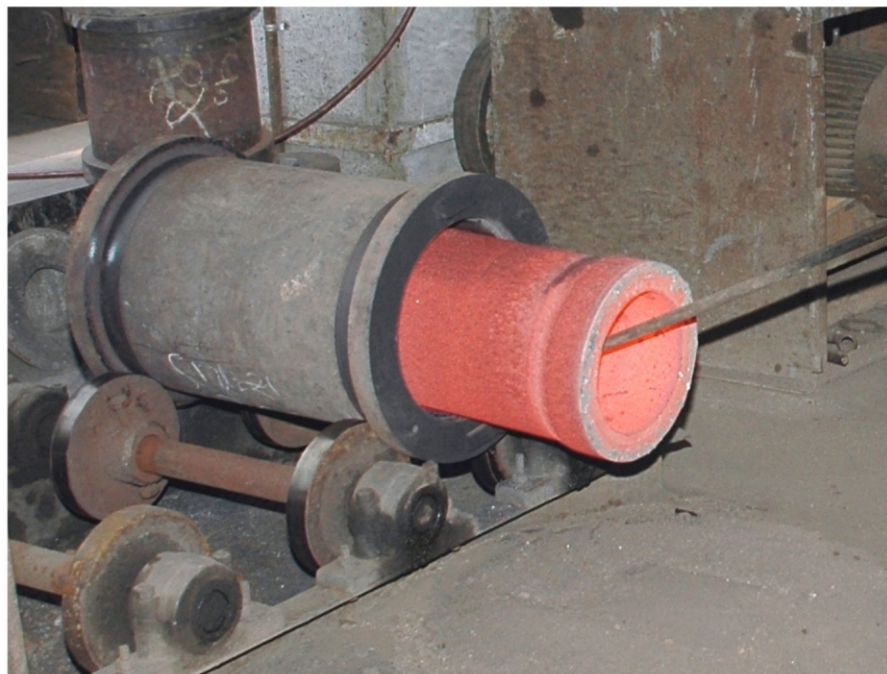
PLATO HONING



OUTER DIAMETER CNC TURNING



GRINDING & STAGE INSPECTION



« 'For us Quality is not an act, it is a habit.'

As per ISO 9001:2008 Certification and its instructions – some tests, check and inspection - we go through to pass the product before dispatch are listed as below:

- Design and drawing development is done by qualified draughtsman. On the basis of the CADD drawings approved by the customers.
- Spectrometer to ensure the elements for material test
- Induction melting furnace for special graded casting
- Heat treatment & Annealing is done by the approved OEM vendor.
- Induction hardening is done special hardness instructions received from customer.
- Structure of the material is checked with the help of microscope.
- CNC machining process for all the component machining,
- Grinding process is done for OD grinding of all the components.
- Overall run-out and concentricity checked with the help of Roundness tester.
- Surface roughness tester for Ra value test.
- For internal dimensions, radius and various angles Contour machine is being used.
- Regularly calibrated micrometres, Vernier Callipers and Bore Gauges used onsite inspection as well as finished components.
- Inside bore checking special air gauge is used
- Hardness testing machine to check the hardness of the component as per the drawings.

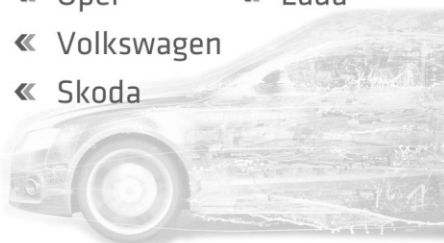


« Applications



Automotive

- « Audi
- « BMW
- « GM
- « Honda
- « Kia
- « Hyundai
- « Ford
- « Landrover
- « Peugeot
- « Fiat
- « Nissan
- « Suzuki
- « Toyota
- « Opel
- « Volkswagen
- « Skoda
- « Renault
- « Jaguar
- « Jeep
- « Lombardini
- « Lada



Trucks & Heavy Duty Trailers



- « Detroit Diesel
- « Eicher
- « Deutz
- « Bedford
- « Mercedes
- « Man
- « Leyland
- « Iveco
- « Hino
- « Volvo
- « Navistar
- « Tata
- « Tatra
- « Scania



Agricultural

- « John Deere
- « Escorts
- « Massey Ferguson
- « Case
- « New Holland
- « Perkins
- « Belarus
- « UTB
- « Zetor





Earthmoving

- « Caterpillar
- « Cummins
- « Doosan
- « Hitachi
- « JCB
- « Komatsu
- « Liebherr



Industrial



- « Andoria
- « David Brown
- « Greaves
- « Lister
- « Piestick
- « MWM
- « Kirloskar
- « Waukesha
- « Jenbacher



Marine

- | | |
|--------------|------------|
| « B&W | « Sulzer |
| « Bergen | « SKL |
| « Daihatsu | « Wartsila |
| « GE | « Yanmar |
| « Mak | |
| « Makita | |
| « Mitsubishi | |
| « Niigata | |
| « Ruston | |



« Cylinder Liner & Sleeves

Fine-tuned Quality Cylinder liners for Internal combustion engines of Automotive, Heavy Duty trucks, Earthmoving equipment, Marine and Industrial engines... and other special engine applications. Our Liners are accurate, durable and strong for the optimal result and performance.

Quality materials and controlled manufacturing processes ensure our Liners deliver top performance and long life. We are experienced in manufacturing different of Cylinder Liners made from Centrifugal casting of Heat-treated high-grade grey iron. In our manufacturing plant one can find the traditional method of production backed up by latest technology providing optimal output.

Honing operation is done for Inside surfaces smoothness which is of vital importance for piston mounted in Cylinder Liners. Utmost Precise manufacturing tolerances ensure perfectly round bores for efficient oil control and proper fit in the engine blocks.



Stainless Steel Sleeve

Rich experience in Manufacturing of Cylinder Liners we are used to deliver the best Stainless Steel Sleeves too. We are offering this range in varied customized specifications, to meet the variegated requirements of our clients. This range is widely acknowledged in the market for its excellent performance and sturdy construction. Our clients can avail this range in varied sizes, designs and custom-build models as per their requirements from us.

State of art Manufacturing and infrastructure, we offer our clients a highly durable range of Stainless Steel Sleeves. These sleeves are effective in keeping the motor cool by forcing water to flow over the surface of pump motor. Owing to its high strength and corrosion resistance, it is widely used in automotive industry. These products are manufactured by making use of quality tested raw material that makes the pumps reliable and safe to use.

Most of the steel sleeve by direct steel material. The finished sleeve is easy to machine and offers great strength and durability compared to ductile iron or Centrifugal casting. Alloy steel offer superior tensile strength with efficient and quick heat transfer. One thing that needs to be addressed is the thermal efficiency of a sleeve and the type of block into which it is installed. It is quite important to check interference fit. Because sleeves are flangeless, a tight fit keeps the sleeve from moving up and down in the bore when the engine reaches operating temperature.



Liner Inserts

Liner Inserts, made of grey cast-iron, ought to have desired casting and machining qualities, viz. strength, toughness, hardness and wear resistance. These are mainly of two types liner inserts – Dry Liner insert and Wet Liner Inserts.

Liner Inserts are 'cast-in fit', force (press) fit or slip fit. The interference between its outer diameter and bore-hole walls depends on fit-type from 0.050 to 0.075 mm. These are available in wide range suitable for light, medium and heavy duty application.

◀ Valve Guides

The valve guide is a part which supports the shaft part of a valve, maintains centre of the valve seat inserts thereby supporting the reciprocal Movement of the engine valve. Because the valve, which operates by high speed reciprocal motion, slides against the guide, high wear resistant is required in valve guides. Importance of Valve Guide is to efficiently make proper contact with the Valve. For valve guide Performance correct Material, Hardness and Dimensions are the vital aspects. The key characteristics of

materials used for valve guides are low friction and high thermal conductivity. On the other hand, from the viewpoint of manufacturing, machinability has become an important property because the inner diameter is machined after the guide is press-fitted in the cylinder head. We produce Valve Guide, most made from special graded cast iron, at the same time special applications are having requirements of aluminium bronze and Brass materials, they are also available with ours stock.





MATERIALS

ELEMENTS	GG-25
C	3.00 - 3.40%
Si	1.80 - 2.50%
Mn	0.60 - 0.80%
Cr	-
Cu	-
Sn	-
S	-
P	0.35% Max
Fe	Balance
Hardness	180-230 HB

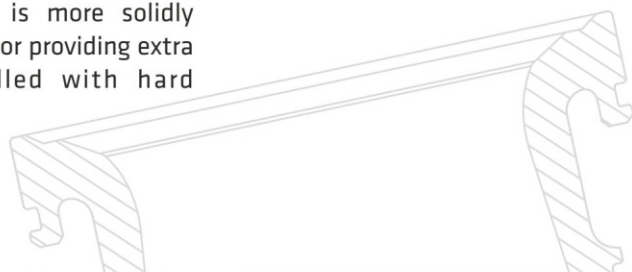
ELEMENTS	GG-25 Cr
C	3.20 - 3.50%
Si	1.80 - 2.20%
Mn	0.60 - 0.80%
Cr	0.20% Max
Cu	-
Sn	-
S	0.12% Max
P	0.65 - 0.90%
Fe	Balance
Hardness	210-270 HB

ELEMENTS	Aluminium Bronze CuZn36Mn3Al2SPb
Cu	57.60%
Pb	0.30 - 0.60%
Al	1.50 - 2.00%
Fe	0.25% Max
Si	0.60 - 0.90%
Mn	2.00 - 4.00%
Zn	Balance
Hardness	150-210 HB

<< Valve Seats Inserts

The valve seat insert avoids direct contact of the valve with the cylinder head and absorbs part of the combustion heat which is transferred to the valve by passing it on to the cylinder head. Variety of Valve Seat Inserts are used in different types engines, Valve and valve seat inserts together serve to seal off the combustion chamber regulating the inlet and exhaust gases.

More often valve seats are made from the casting, but for heavy duty engines the material changes from casting to forging. Reason for the switching off the material is very interesting, in casting blow holes are possible the melting process. Whereas in forging process material is more solidly compressed. Some times For providing extra strength seats are filled with hard facing of alloy.

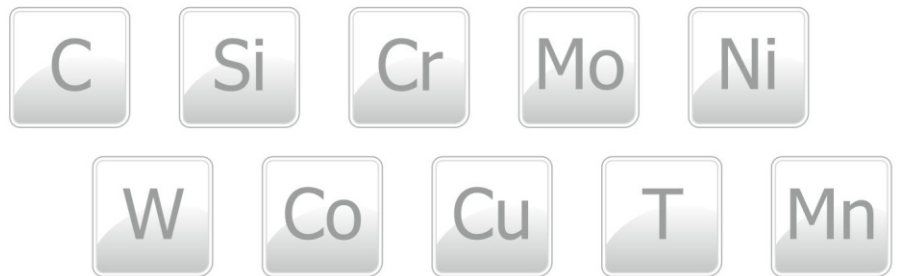


MATERIALS

ELEMENTS	PL12MV
C	1.50 - 2.20%
Si	0.80 - 1.00%
Mn	0.80 - 1.00%
P	0.04% Max
S	0.07% Max
Cr	12.0 - 14.0%
Mo	2.00 - 2.50%
Ni	0.50% Max

ELEMENTS	J 96
C	2.40%
Fe	8.00% Max
Cr	29.0%
W	15.0%
Si	1.00% Max
Ni	Balance

ELEMENTS	J 120
C	1.20 - 1.40%
Si	0.30 - 0.60%
Mn	0.30 - 0.60%
Fe	Balance
Cu	0.25% Max
Cr	3.75 - 4.25%
Mo	6.00 - 7.00%
Ni	1.00% Max
W	5.00 - 6.00%



MATERIALS

ELEMENTS	J 125
C	1.45% Max
Si	2.10% Max
Mn	0.40%
Cr	20.0%
Ni	1.30%
Fe	Balance

ELEMENTS	WELL-TITE
C	1.70 - 2.10%
Mn	0.80 - 1.20%
Si	1.75 - 2.25%
S	0.03% Max
Cr	10.0 - 12.0%
Ni	40.0 - 42.0%
Cu	0.50% Max
V	0.90 - 1.10%
W	0.20% Max
Co	1.00% Max

ELEMENTS	MAR-TITE
C	1.20 - 1.60%
Mn	0.40 - 0.60%
Si	0.50 - 1.00%
P	0.05% Max
S	0.05% Max
Cr	18.0 - 21.0%
Ni	1.80 - 2.50%
Mo	0.05% Max
Cu	0.03% Max
Fe	Balance

Engine Valves

We been developed engine valve for customers across the globe requiring the highest quality standards for petrol, diesel and alternative fuel engines.We have developed engine valves for all the applications from Agriculture, Automotive, Heavy Duty Trucks, Earthmoving Equipment

and Marine. Our rich database for engine valves provides us the upper hand in terms of range and availability. We ensure the highest standard Quality and materials for all the valves manufactured.



MATERIALS

ELEMENTS	INTAKE MATERIAL EN-52 MAGNETIC	EXHAUST MATERIAL 21-4N NON MAGNETIC
C	0.40 - 0.50%	0.48 - 0.58%
Si	2.70 - 3.30%	0.25% Max
Mn	0.80% Max	7.00 - 10.0%
P	0.04% Max	0.50% Max
S	0.03% Max	0.03% Max
Cr	8.00 - 10.0%	20.0 - 22.0%
Mo	-	-
Ni	0.60% Max	3.25 - 4.50%

ELEMENTS	EN-18D	SS-304
C	0.38 - 0.43%	0.07% Max
Mn	0.65 - 0.80%	2.00% Max
S	0.50% Max	0.03% Max
P	0.50% Max	0.04% Max
Si	0.10 - 0.35%	0.75% Max
Cr	0.85 - 1.15%	18.0 - 20.0%
Ni	-	8.00 - 10.5%

« Our Brand

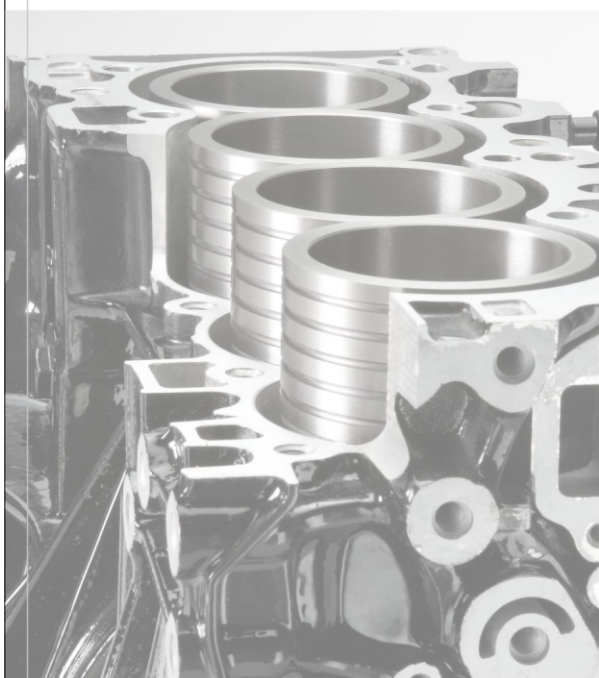
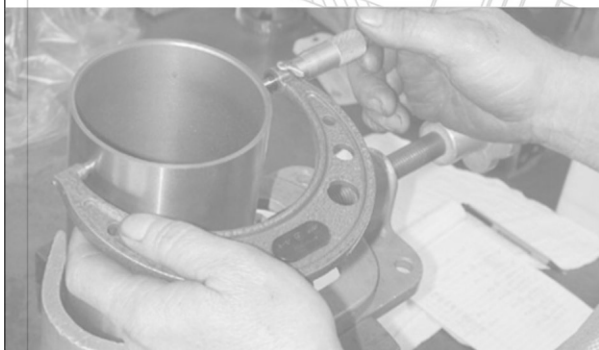
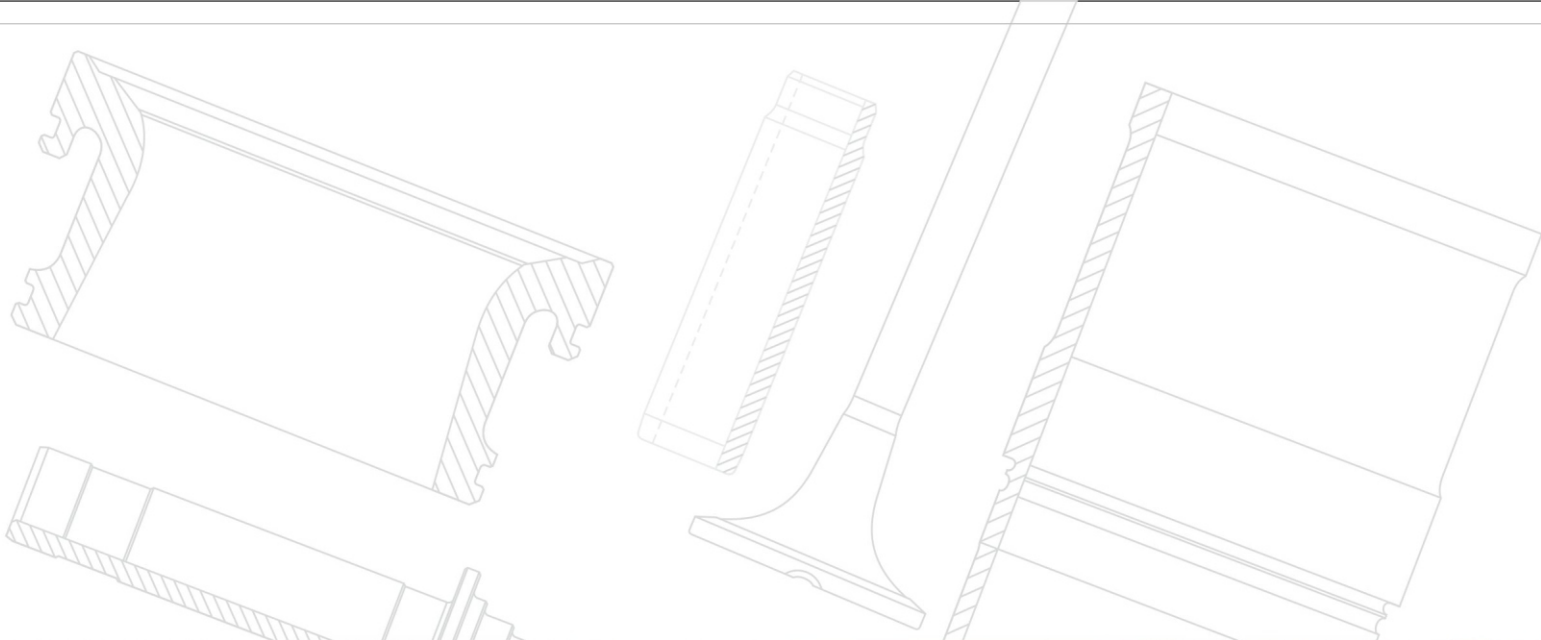


**Perfect
POWER**



« Our Market





Kavya
INTERNATIONAL

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