



COMPANY PROFILE



Anix Industries Focuses On Precision And Performance, Delivering Valve Guides, Valves, And Cylinder Liners That Meet High Industry Standards. Our Experience And Understanding Of Engine Requirements Make Us A Trusted Name In The Industry.

www.anixindustries.com

About Us

Anix Industries has firmly established its footprint in the precision manufacturing industry. Through tireless dedication and a commitment to excellence, the company has become a renowned name in both national and international markets. Today, Anix Industries stands as a leading manufacturer and supplier of engine valves, valve guides, valve seats, cylinder liners, and anti-polishing rings. Specializing in custom precision components, the group operates a sophisticated manufacturing setup to deliver fully machined, ready-to-use solutions that meet the highest global standards.



**Delivering Quality, Innovation & Trust in
Every Product – Built for Growth.**

The company's strength lies in its advanced production setup, expert workforce, and commitment to continuous improvement. ANIX believes in long-term partnerships and works closely with clients to provide customized solutions as per their requirements.

With a customer-first approach, ANIX continues to grow with the mission of offering dependable, high-performance products that support business success and brand development.



MISSION & VISION

At Anix Industries, our team is dedicated to manufacturing and supplying high-precision engine components—including engine valves, valve guides, valve seats, cylinder liners, and anti-polishing rings—that strictly adhere to international quality standards.

We are committed to technological innovation and the integration of new ideas to drive continuous improvement in our manufacturing processes. This ensures that our custom precision components not only meet but exceed the evolving requirements and satisfaction of our global customers.

To achieve this, we focus on maintaining superior operational excellence and financial performance, while always upholding the highest standards of integrity and business conduct.

WHY Anix industries



Our achievements can be attributed to an emphasis on process and technology supported by a team of experienced, knowledgeable staff and professional management.

We are committed to providing value, consistent quality, and outstanding services to our valued customers by implementing a strategy of advanced engineering and automation. This practice leads to a reduction of lead time and increases efficiency while maintaining a healthy and safe work environment.

Our Core Expertise: Engine Components Manufacturing

- Engine Valves
- Valve Guides
- Valve Seats
- Cylinder Liners
- Anti Polishing Rings
- custom precision components

Key Highlights of Anix Industries

- Precision Manufacturing
- Quality Control
- Global Supply Chain
- Customer Satisfaction

OUR INFRASTRUCTURE

- Foundry Unit
- Machining Shop
- Quality Assurance Lab

Applications



Automotive



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

Trucks & Heavy Duty Trailers



Detroit Diesel	Mercedes	Hino	Tatra
Eicher	Man	Volvo	Scania
Deutz	Leyland	Navistar	
Bedford	Lveco	Tata	



Agricultural



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

Earthmoving



Caterpillar	JCB
Cummins	Komatsu
Doosan	Liebherr
Hitachi	

Industrial



Andoria	Piestick	Jenbacher
David Brown	MWM	
Greaves	Kirloskar	
Lister	Waukesha	

Marine



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

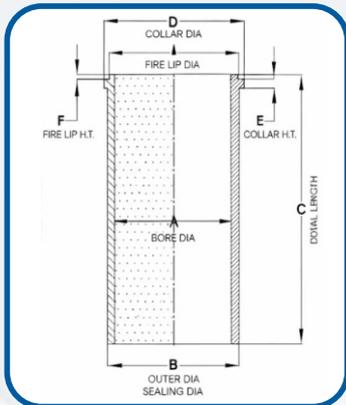
◇ CYLINDER LINERS



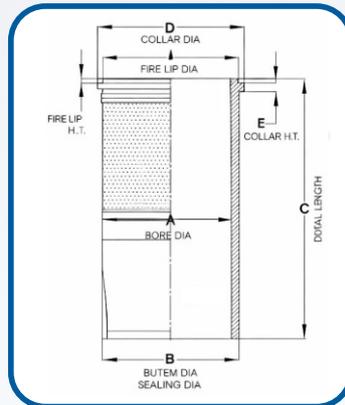
A cylinder liner is a critical engine component that forms the inner surface of the engine cylinder, providing a smooth and durable path for the piston to move up and down. It plays a key role in maintaining engine performance, efficiency, and reliability by protecting the engine block from wear, heat, and corrosion. The liner also helps maintain proper compression and ensures efficient combustion inside the engine. Cylinder liners are manufactured from high-quality cast iron or alloy materials that offer excellent wear resistance, strength, and thermal stability. Advanced metallurgy and controlled heat treatment processes are used to achieve the required hardness and microstructure. The inner bore is precision-machined and honed to provide a smooth surface finish that reduces friction, supports proper lubrication, and minimizes piston ring wear.

Depending on engine design and application, cylinder liners are available in air-cooled, wet, and dry types. Air-cooled liners feature external fins to improve heat dissipation, while wet liners come in direct contact with coolant for efficient temperature control. Dry liners are fitted tightly into the engine block and rely on the block for cooling support. Each type is engineered to meet specific operating conditions and performance requirements.

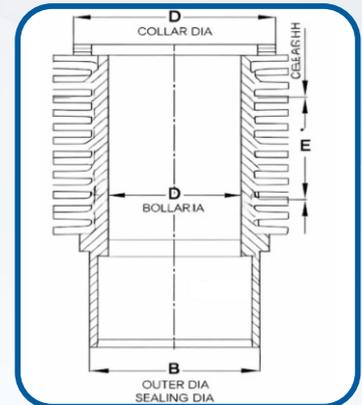
TYPES OF CYLINDER LINERS



Dry Liner



Wet Liner



Air Cooled Liner

Product Specifications

Dimension	Range (in mm)
Bore dia.	50 to 220
Total length	90 to 600

Technical Specifications

Micro Structure		
Graphite type	"A" & "B" ("D" & "E" Random)	
Flake size	4-7 Microns	
Free ferrite	Less Than 5%	
Matrix	Lamellar Pearlite	
Chemical composition	Minimum	Maximum
Carbon	2.90	3.50
Silicon	1.80	2.50
Manganese	0.60	1.00
Phosphorus	0.20	0.50
Chromium	0.20	0.50
Sulphur	0.00	0.12
Moly		As Required
Copper		As Required
Nickel		As Required
Boron		As Required
Vanadium		As Required

Hardness (BHN)

190 to 280



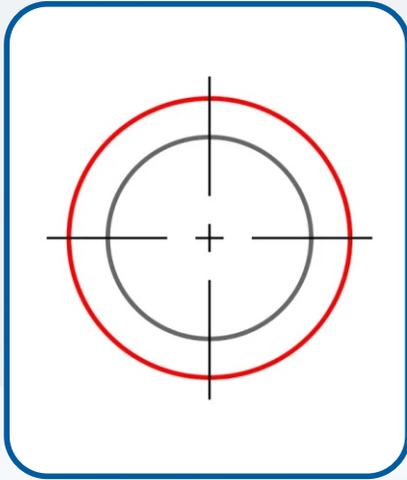
◇ Engine Valve



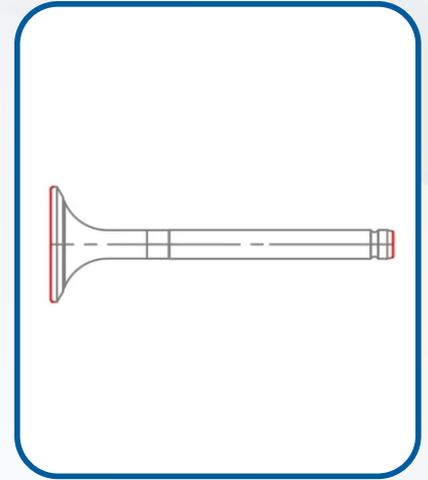
We manufacture high-quality engine valves for customers worldwide, meeting the strictest quality standards for petrol, diesel, and alternative fuel engines. Our valves are used across a wide range of applications, including agriculture, automotive, heavy-duty trucks, earthmoving equipment, and marine engines. With a strong and extensive valve database, we offer excellent product range and ready availability. Every valve we produce is made using premium materials and strict quality controls to ensure reliable and long-lasting performance.

By function, there are only two types of valves, inlet valve and exhaust valve. Inlet valves allow proper mixture of air and fuel to enter in combustion chamber, while exhaust valve opens to escape gases produced after combustion of air and fuel in chamber. Inlet valve is exposed to low thermal stress, but exhaust valve has to undergo high thermal and mechanical stress due to its operation under high temperature and pressure.

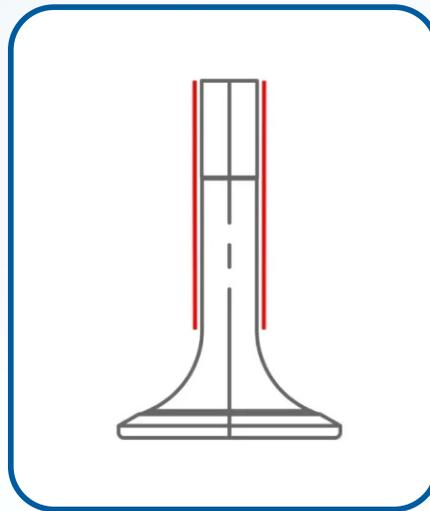
Specifications of Engine Valve



Head 15 to 175 mm



Length 55 mm to 550 mm



Stem 4 mm to 30 mm

MATERIALS

ELEMENTS	INTAKE MATERIA 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-180	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%



◇ Valve Guide

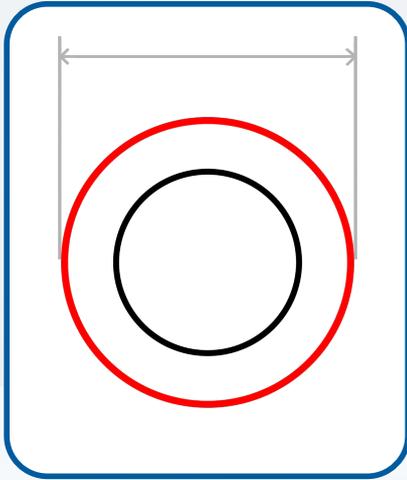


Valve guides operate under high temperatures, constant friction, and repeated mechanical stress. To withstand these demanding conditions, they are manufactured from high-quality materials such as alloy cast iron, phosphor bronze, or other wear-resistant alloys. These materials provide excellent durability, thermal conductivity, and resistance to scuffing. Effective heat transfer through the valve guide helps dissipate heat from the valve stem to the cylinder head, protecting the valve from overheating.

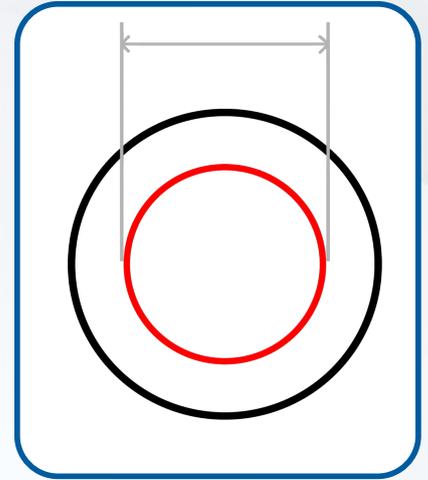
A valve guide is a crucial engine component that supports and guides the valve stem as it moves up and down during engine operation. Its main function is to maintain accurate alignment between the valve and the valve seat, ensuring proper sealing, efficient combustion, and smooth engine performance. By controlling valve movement, the valve guide reduces side forces on the valve stem and prevents uneven wear.

Precision machining and tight dimensional control are essential in valve guide manufacturing. Accurate internal bore finish ensures smooth valve movement and proper lubrication, reducing friction and oil consumption. A well-engineered valve guide improves valve life, maintains compression, supports low emissions, and enhances overall engine reliability. Valve guides are widely used in petrol, diesel, and alternative fuel engines across automotive, agricultural, heavy-duty, earthmoving, and marine applications.

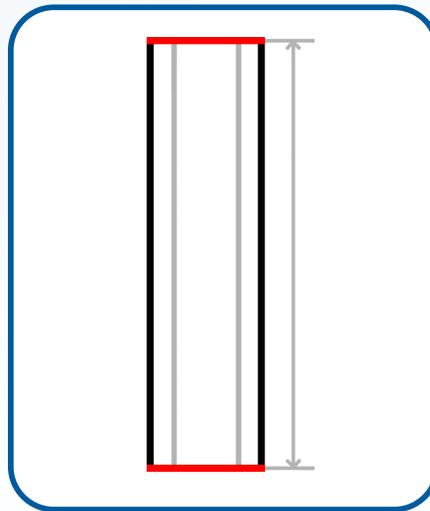
Specifications of Valve Guide



Outer Diameter 7 mm to 40 mm



Inner Diameter 4 mm to 35 mm



Length 25 mm to 300 mm

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	180-230HB

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	Aluminum Bronze CuZn36nAl2SPb
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	150-210HB

◇ Valve Seat

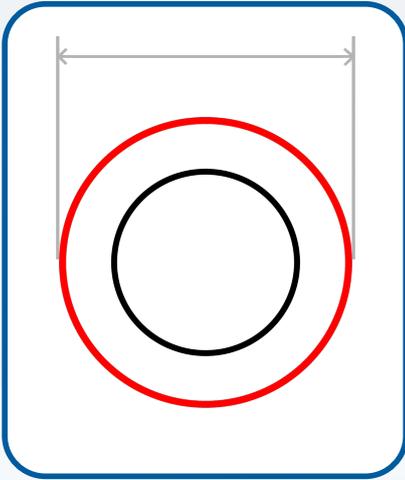


The valve seat is a vital engine component that directly affects performance, efficiency, and engine life. It provides a precise sealing surface between the valve and the cylinder head, ensuring proper compression and controlled combustion inside the engine. During operation, the valve seat is exposed to extreme heat, high pressure, and continuous mechanical impact, making strength and durability essential. A well-designed valve seat not only prevents gas leakage but also helps transfer heat from the valve to the cylinder head, protecting the engine from overheating.

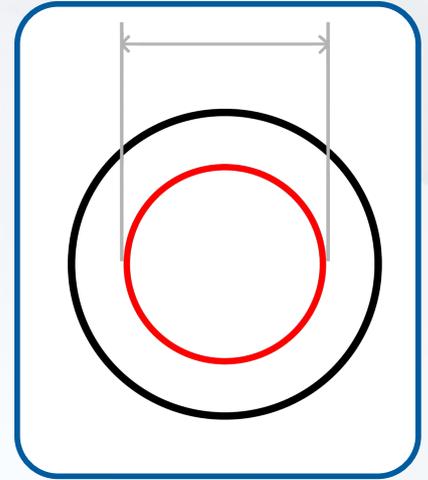
Our valve seats are manufactured using high-grade alloy materials that offer excellent heat resistance, wear resistance, and strength. In high-temperature applications, special alloys such as cobalt-based materials are used to improve durability and extend service life. Advanced heat-treatment processes further enhance hardness and resistance to deformation under extreme operating conditions.

To ensure reliable performance, every valve seat is machined with high precision for perfect fit and accurate contact with the valve face. This precision helps reduce valve leakage, improves fuel efficiency, and minimizes engine emissions. A smooth and controlled surface finish also reduces wear, ensuring long-lasting sealing performance even in demanding environments.

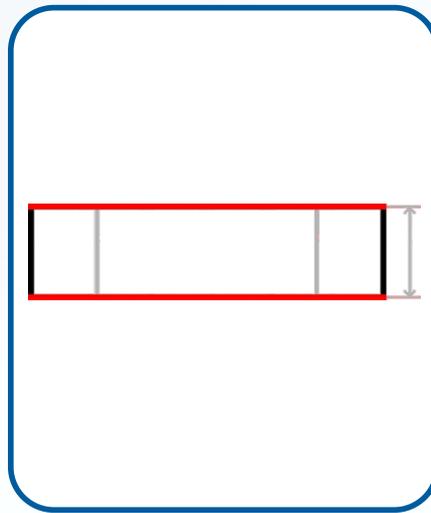
Specifications of Valve Seat



Outer Dia 18 mm to 150 mm



Inner Dia 8 mm to 125 mm



Height 6 mm to 80 mm

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%

◇ Anti Polishing Ring

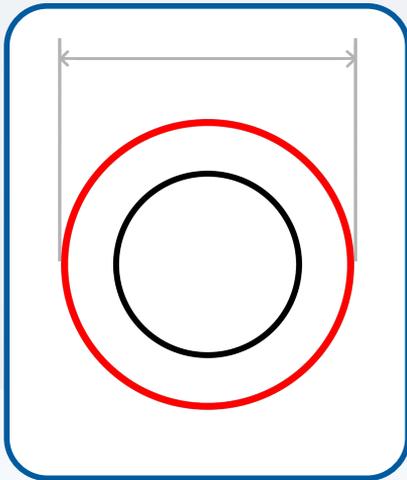


An Anti-Polishing Ring (APR) is a critical engine component installed at the top of the cylinder liner to protect the liner bore from polishing and excessive wear. During engine operation, carbon deposits can build up on the piston crown and top ring area. As the piston moves, these hard deposits may rub against the liner surface, causing polishing, increased oil consumption, and loss of compression. The anti-polishing ring prevents this by scraping off carbon deposits before they contact the liner bore.

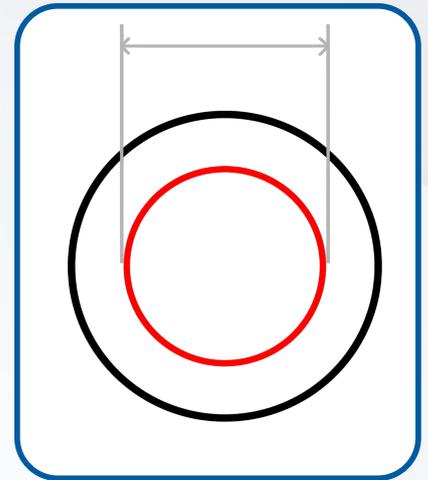
Anti-polishing rings are manufactured from high-strength, wear-resistant materials designed to withstand high temperatures, pressure, and continuous mechanical impact. By maintaining the correct bore surface condition, the ring helps preserve proper lubrication, reduces piston ring wear, and extends overall engine life.

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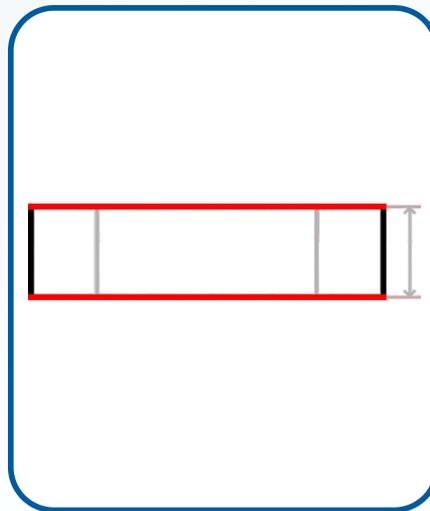
Specifications of Anti Polishing Ring



Outside 120 mm to 500 mm



Inside 100 mm to 550 mm



Height 18 mm to 80 mm

MATERIALS

ELEMENTS	ACR 15
C	2.00-2.40%
Si	0.80-1.20%
Mn	0.60-0.90%
P	0.04% Max
S	0.06% Max
Cr	13.0-15.0%
Mo	1.50-2.20%
Ni	0.50% Max
Fe	Balance

ELEMENTS	APR HDC
C	2.20-2.60%
Si	0.60-1.00%
Mn	0.50-0.80%
Cr	16.0-18.0%
Mo	2.00-3.00%
Ni	0.50-1.00%
Cu	0.30% Max
Fe	Balance

ELEMENTS	APR MCR
C	1.80-2.20%
Si	0.70-1.10%
Mn	0.60-0.90%
Cr	10.0-12.0%
Mo	3.00-4.00%
Ni	0.50% Max
P	0.04% Max
S	0.06% Max
Fe	Balance



Supplying quality engine components to customers across worldwide markets.

Anix Industries continues to build trust and long-term partnerships across global.

+91 97144 24929

info@anixindustris.com

10, Samrat Industrial Area, Behind ST Workshop, Gondal Road, Rajkot – 360004, Gujarat, India