

COMPANY PROFILE

AGRICULTURE ENGINES

2 & 3 WHEELER VEHICLES

PETROL & DIESEL CARS

LIGHT COMMERCIAL VEHICLES

TRUCKS & TRACTORS

MARINE & EARTHMOVERS

LOCOMOTIVE ENGINES



DIPSU[®]

VALVE · GUIDE · SEAT

An ISO 9001:2015 Co.

MISSION & VISION

MESSAGE

Our Mission

"Empowering industries with quality valves, driven by innovation and customer-centric excellence."

Our Vision

"To be the global leader in engine valve manufacturing, setting new benchmarks for quality, innovation, and customer satisfaction, and empowering industries to reach new heights."

“ Providing Reliable Valve Solutions & Exceptional Service to Forge Enduring Partnerships ”

Tushar

TUSHAR PATEL
Marketing Director





DIPSU®

THE COMPANY

We are the Most Reliable Manufacturers & Exporters of Engine Valves, Guides and Seats...

With well-equipped manufacturing and the latest testing facilities, we are committed to continuous addition and upgradation to meet the ever growing demand.

We supply our products to national and international OEMs & aftermarket clients.

DIPSU manufactures approx. 3 lakh pieces of Engine valves, Valve Guides and Valve Seats per annum.

This is achieved through the support of a machine shop comprising world class CNC, SPMs and Grinding machine to perform critical operation.

The in-house tool room facility has proven to be a strong support in developing Jigs, Fixtures, Tools and Dies to machine critical parameters of valves.

Necessary equipment is continuously upgraded and added to ensure meeting with the ever growing demand of complex design requirements.

In order to facilitate new product development based on customer samples and/or drawings, our Product Engineering Department, comprising cross functional heads, derives the manufacturing parameters, keeping in view the application of the product.





THE PRODUCTS

VALVES

The valves of internal combustion engines are among the most highly stressed engine components. Inlet and exhaust valves are precision components used for sealing the combustion chamber and controlling the gas exchange process. Engine valves must work reliably under severe mechanical and high thermal load conditions.

Inlet and exhaust valves have to be designed according to the engine application, considering special load cases such as temperature, corrosion, wear resistance, and mechanical loads from dynamics and combustion pressure. Valve design and material have to be selected according to these requirements.

The thermally lower stressed inlet valves are mainly cooled by the incoming gases. In contrast, exhaust valves are subject to high thermal loads and chemical corrosion during the exhaust cycle. Therefore, a wide range of materials and geometries are used in the design for exhaust valves.

VALVES GUIDES

We offer a range of Valve Guides for all engines, consisting of a wide variety of sizes and configurations. All Valve Guides are manufactured from quality materials such as Cast Iron, Brass, and Aluminium Bronze, with surface treatments like Nitrided/Phosphated, and are available semi- or fully finished

VALVE SEATS

We offer quality Valve Seats made from combination of unique wear resistant and high thermal conductivity materials. It is very important to select proper material for Valve Seat manufacturing depending upon the application in order to withstand high temperatures, stress and corrosive gases and compounds.

VALVE TRAIN COMPONENTS

We offer high-quality Valve Train Components, which include Valve Guides, Valve Seats, Valve Springs, Valve Push Rods, Valve Tappets, Valve Spring Retainers, Valve Collets, and more. We also accept orders as per customer-provided samples, drawings, and specifications.

VALVE MATERIAL

SAE	BS	JS	Wr No.	C	SI	Mn	NI	Cr	N
-	EN18D	-	-	0.38-0.43	0.10-0.35	0.65-0.80	-	0.85-1.15	-
SIL1	EN52	SUH1	1.4718	0.40-1.50	3.00-3.50	0.60 max	0.60	7.50-9.50	-
SILXB	EN59	-	1.4747	0.75-0.85	1.75-2.50	0.20-0.60	1.0-1.70	19.0-21.00	0.15-0.20
-	-	SUH11	-	0.45-0.55	1.00-2.00	0.60 max	0.60 max	7.50-9.50	-
EV-12	21-2N	-	1.4875	0.50-0.60	0.08-0.25	7.00-9.50	1.50-2.75	19.25-21.50	0.20-0.40
EV-8	21-4N	SUH35	1.4871	0.48-0.58	0.35 max.	8.00-10.00	3.25-4.50	20.00-22.00	0.35-0.45
EV-15	23-8N	-	-	0.28-0.38	0.50-1.00	1.50-3.50	7.00-9.00	22.00-24.00	0.25-0.40
EV-4	21-12N	SUH37	1	0.15-0.25	1.00 max	1.00-1.60	10.00-12.00	20.50-22.50	0.15-0.30

HARD FACING ALLOYS

	C	Cr	Fe	W	Co		
Stellite-1	2.50	30.00	3.00 max	12.00	Bal.	HRC-	50/54
Stellite-6	1.00	28.00	3.00 max	4.00	Bal.	HRC-	40/44
Stellite-12	1.35	29.00	2.50 max	8.00	Bal.	HRC-	45/47

VALVE GUIDES ~ CAST IRON GG-25 GRADE

Material	C	Si	Mn	Cr	Cu	Sn	S	P	Fe	Hardness
Percentage (%)	3.0 to 3.90	2.0 to 2.90	0.60 to 0.70	0.30 max	max 0.50	0.10	0.15 max	0.40 to 0.70	Balance	190-240 BHN

VALVE GUIDES ~ BRASS

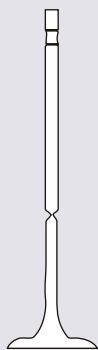
Material	Cu	Pb (Led)	Sn (Tin)	Fe (Iron)	Cu	Al	NiS	Mn	Total Impurities
Percentage (%)	56.0 to 58.0	2.0 to 3.4	TR	0.35 max	max 0.50	TR	TR	TR	0.70

VALVE GUIDES ~ ALUMINUM BRONZE

Material	Cu	Pb (Led)	Fe	Al	Mn	Si	S	Total Impurities	Hardness
Percentage (%)	57.0 to 60.0	0.30 to 0.60	0.25 max	1.50 to 2.0	2.0 to 4.0	0.60 to 0.90	0.15 max	0.40 max	150-210 BHN

TECHNICAL SPECIFICATIONS

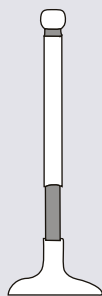
Engine Valve Types	Size Range
Mono-Metal	Valve Stem Diameter : 4 to 16 mm
Bi-Metal	Valve Head Diameter : 15 to 78 mm
Chrome Plated Stem	Valve Length : 40 to 300 mm
Nitride Stem	
Tip & Seat Satellite	
Tip & Seat Induction Hardening	
Shrouded (Deflector)	



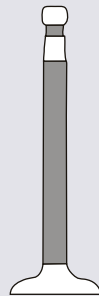
Friction Welded



Stellite Tip & Seat



With Scraper



Reduced Stem



Chrome Plated



Shrouded



Nitrided



Tip End Hxdened



Tip End Thru Hxdened



Tip & Groove Pattern Hxdened



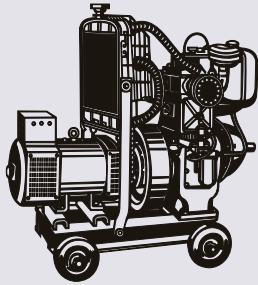
Wafer Welded



Stellite Tip (Flat)



Stellite Tip (Cavity)



DIESEL ENGINE



2 WHEELERS



3 WHEELERS



CAR



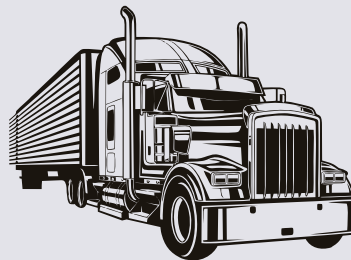
TRACTOR



CONSTRUCTION MACHINERY



LIGHT COMMERCIAL TRUCK



HEAVY TRUCK



MARINE ENGINE



CRANE



HEAVY EARTH MOVERS



LOCOMOTIVE ENGINE



- Europe
- Central America
- South America
- Middle East
- Gulf Countries

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