



GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-182 Grade F 23

Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service

Group - Ferrous Mild Steel Alloys

Sub Group - ASME SA-182 Grade F 23 Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service

Application - Intended for Valve, Pump, General Engineering, Automotive and other Industries

Grade Belongs to the Industry - Pipe and Forging

Chemical Composition		
Carbon	C %	0.040 - 0.100
Manganese	Mn %	0.100 - 0.600
Phosphorus	P %	0.030 Max.
Sulphur	S %	0.010 max.
Silicon	Si %	0.500 max.
Nickel	Ni %	0.400 max.
Chromium	Cr %	1.900 - 2.600
Molybdenum	Mo %	0.050 - 0.300
Niobium	Nb %	0.020 - 0.080
Titanium	Ti %	0.005 - 0.060
Vanadium	V %	0.200 - 0.300
Boron	B %	0.001 - 0.006
Nitrogen	N %	0.015 max.
Aluminium	Al %	0.030 max.
Tungsten	W %	1.450 - 1.750

Chemical Composition		
Iron	Fe%	Balance
-	-	-
-	-	-
-	-	-
-	-	-
Heat Treatment		
Normalising & Tempering		
Mechanical Properties		
Tensile Strength in Mpa	510 min.	
Yield Strength in Mpa	400 min.	
Elongation in %	20 min.	
Reduction of Area in %	40 min.	
Hardness in BHN	220 max.	
Impact in Joule	-	

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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
K40712	UNS	USA	Steel
SA-1017 Grade 23	ASME	USA	Steel
SA-213 T23	ASME	USA	Steel and Tubing
A 213 T23	ASTM	USA	Steel and Tubing
A 335 Grade P23	ASTM	USA	Steel
A 1017 Grade 23	ASTM	USA	Steel and Plate
EN 10216-2 1.8201	EN	European Union	Tubing

Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email marketing@gravitycastindia.com

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.

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