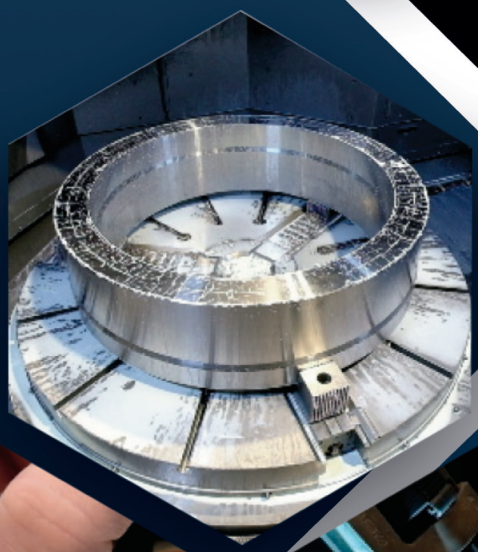

COMPANY PROFILE

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www.viargroup.com

GROUP

viar S.p.A.

FORGIATURA MARCORA 1952

coinval

SPECIAL FORGED PIECES

FOR SUBSEA AND OFFSHORE APPLICATIONS

THE ORIGINS

VIAR S.p.A., established in 1980, has since then proved to be a consistently reliable partner in design, production and supply of outlet fittings, special flanges, connectors and special forged pieces.

Initially specialized in the production of branch outlet fittings and forged fittings, VIAR® soon started supplying a wide range of special and bespoke pieces in response to international market demands.

We now manufacture a comprehensive range of products including clamp connectors, special flanges, forged barred tees, reinforced inlet fittings and reinforced outlet flanges complete with full technical support.

We are also proud to be renowned as a specialized stockist, project supplier and technical consultant - providing diverse services such as design, drawings, calculations, finite element analysis, testing, inspection and certification.

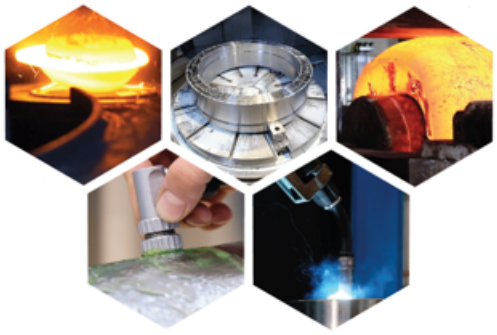
Our high-quality products are consistently utilized in a variety of worldwide projects for Oil, Gas, Water, Power, Chemical and Petrochemical industries.

VIAR Group

TODAY

VIAR's growth-oriented policy led, in recent years, to significant investments in facilities, machinery and specialized human resources, aimed at establishing a **vertically integrated production system.**

" VIAR Group, a globally recognized leader in turnkey solutions "



Nowadays, in fact, VIAR can boast:

a. A professional Engineering department;
b. Open-die forging facilities (Forgiatura Marcora) and closed-die forging facilities (Coinval);
c. New Heat treatment facilities;
d. Modern manufacturing equipment;
e. New welding/cladding facilities;
f. A professional laboratory

VIAR Group: Fully Integrated Value Chain

- DESIGN & ORDER MANAGEMENT — VIAR
- INGOT IDENTIFICATION & CUTTING — VIAR
- FORGING — FORGIATURA MARCORA
- PRE- MACHINING — VIAR
- HEAT TREATMENT — VIAR
- MECHANICAL & METALLOGRAPHIC TESTING — VIAR / ISO 17025 EXTERNAL LAB
- WELD OVERLAY — VIAR
- FINAL MACHINING — VIAR
- FINAL TESTS AND INSPECTIO — VIAR
- PACKAGING & LOGISTICS — VIAR

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FORGING FACILITIES

OPEN-DIE FORGING FACILITIES: Forgiatura Marcora

The 1st febbruary 1952 with only a saw, a furnace and a small 200 Kg. hammer, Giancarlo Marcora started his venture to produce small forged pieces. So was born FORGIATURA MARCORA.
In September 1964, the installation of the first hydraulic press of 600 tons was completed, and with the aid of the first manipulator, the Forgiatura Marcora started to produce pieces up to about 1000 Kg.
Since 1982 Forgiatura Marcora has established a Quality Control System that operates entirely independently of all other company departments.

The laboratory is equipped with inspection equipment for the product and production processes. Product inspection and testing has, for many years, been carried out inside the firm in the presence of national and foreign independent inspection autorities.
From 2000, the Third generation, Michele, has become part of the company sharing the same spirit as his founder: grandfather Giancarlo.

Forgiatura Marcora srl today is an open die forging shop producing forgings in carbon, alloy, duplex, superduplex and stainless steels, machined, heat treated and inspected up to the maximum weight of 30 tons.
Active in several fields, Forgiatura Marcora diversified its activity in all the major industries, from Oil&Gas to nuclear and mechanic industry as well.
In recent years Forgiatura Marcora has improved its production capacity with new and modern equipment so to get to the yearly production of about 12000 tons of forged products. The Company is ISO 9001 and OHSAS 18001 certified.

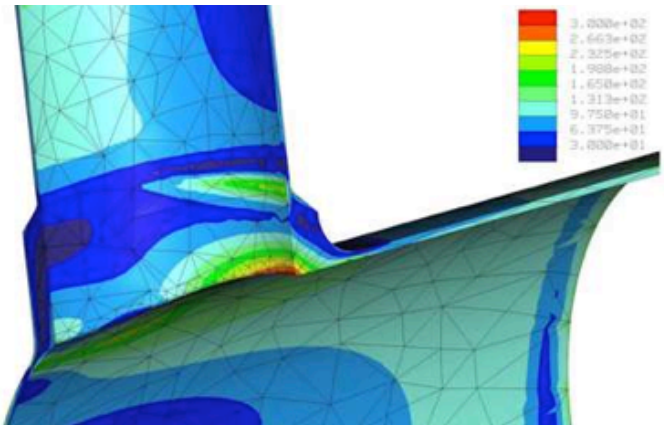
Production installations & production cycle:

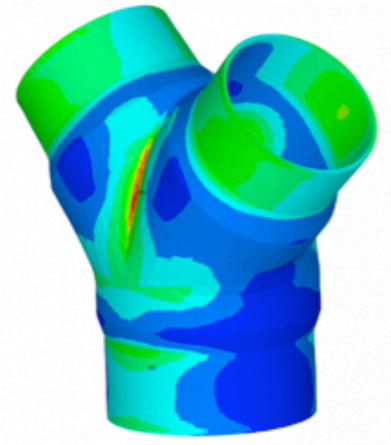
- Forging presses of 900 / 1000 / 1500 / 2000/ 5000 tons
- Manipulators up to 50 tons
- Heating furnaces up to 70 tons
- Heat Treatment furnaces up to 80 tons and 12 mt length
- Quenching tanks up to 150.000 liters (water and polymer)

CLOSED-DIE FORGING FACILITIES: Coinval

Coinval srl, with its two production plants, is specialized in close-die forging and machining of outlet fittings. The close-die facility is one of the last investment of the group, done to provide a full turnkey solution even for our standard range of outlet fittings. Relying on a working surface of 7200 sqm and thanks to a fully automatized forging line, our close-die facilities are able to forge up to 25 kgs single piece.

ENGINEERING





Our Engineering Department provides comprehensive and professional engineering services to oil, gas and pressure vessel industries as well as power plants.

Our Engineering is specialized in the conception, design and development of new products in response to clients' needs in addition to providing general engineering services.

Predominantly involved in the special and non-standard component market, our Engineering is also able to provide calculations and verifications for all other pieces as and when required. Designs are carried out in conformity with all main international codes: ASME VIII div.1 and 2, ASME B31.1, B31.3, B31.4 and B31.8, EN/ISO codes, Stoomwezen, AD 2000-Merkblatt/TRD100. Special components are designed employing sophisticated analysis instruments such as Finite Element Analysis according to ASME VIII Div.2 code and specific tests of all special components can be performed in agreement with the customer. Our Engineering also develops calculation sheets for design according to international codes.

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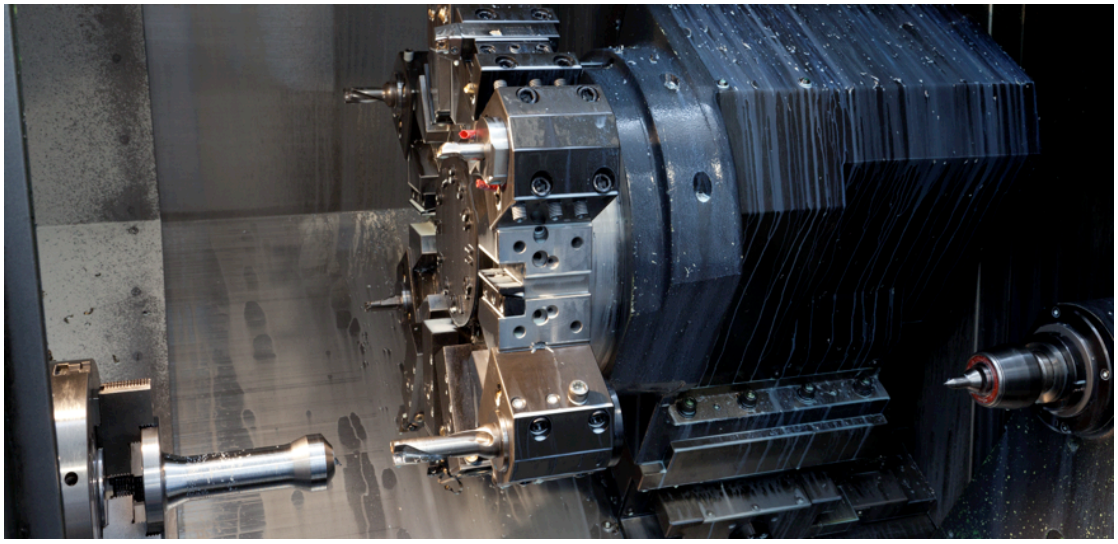
MANUFACTURING EQUIPMENT

VIAR S.p.A. workshop is equipped with an extensive range of modern machinery ensuring optimum quality of production in total conformity with the most stringent of specifications.



All machinery is regularly inspected and maintained to guarantee the best products possible and the highest efficiency. Please find below a list of our principal equipment:

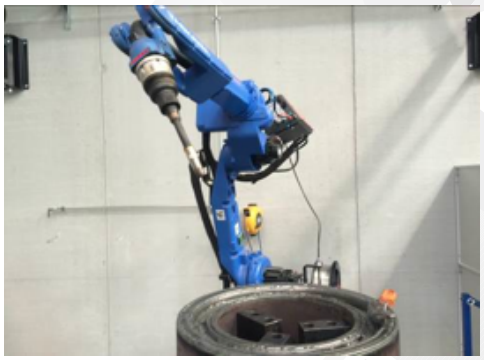
- CNC, center and hydraulic lathes;
- Vertical lathes up to Ø 2500
- Centre lathes up to 10 mt
- Milling machines (boring-mill, plano-type mill, four head mill, travelling column mill)
- Milling cutters;
- Sawing machines up to 2300×2000 mm
- Hacksaws;
- Boring machines;
- Grinding machines;
- Blasting machines;
- Vertical drilling units;
- Marking & labelling units;
- EDM machines;
- Overhead cranes up to 50 tons
- Cranes (up to 2000 kg);

WELDING / CLADDING FACILITIES

GMAW

VIAR has internal GMAW welding/cladding facilities, brand Yaskawa robot welding cell (2015), equipped with GMAW pulsed power supply.

It can perform CRA cladding on pieces up to id 1700mm, kg 2500. Operations are supported by skilled personnel and qualified by WPS and PQR, according to international standards such as ASME IX.



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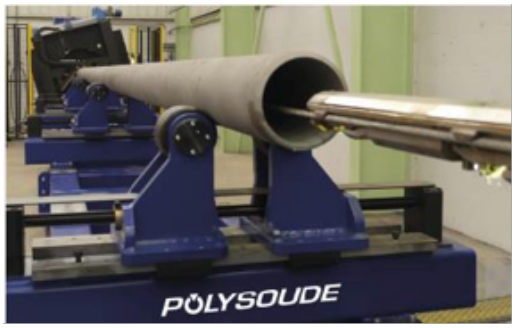
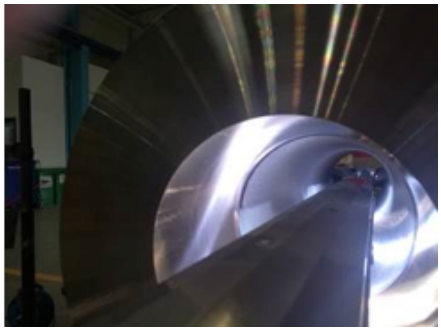
GTAW

VIAR has 2 internal GTAW/Hot Wire cladding facilities, brand Polysoude, with following characteristics:

Equipment No. 1	
Process	GTAW (TIG) – Hot Wire
Cladding Materials	SS – Ni base alloys
Technology	TIGer & Hot Wire - Polysoude
Minimum ID pre-cladding	45 mm (Hot Wire)
Minimum ID pre-cladding	100 mm (TIGer) with video control system of weld process
Minimum OD	200 mm
Max OD	1.400 mm
Max Length	3.000 mm (2 x 1.500 mm)
Data acquisition system DAQbox	Included

Equipment No. 2	
Process	GTAW (TIG)
Cladding Materials	SS – Ni base alloys
Technology	Twin (Double welding head) TIGer & Hot Wire - Polysoude
Minimum ID pre-cladding	135 mm on max 6 m length, with video control system of weld process
Minimum ID pre-cladding	150 mm on max 12 m length, with video control system of weld process
Minimum OD	150 mm
Max OD	900 mm
Max Length	12.000 mm
Data acquisition system DAQbox	Included





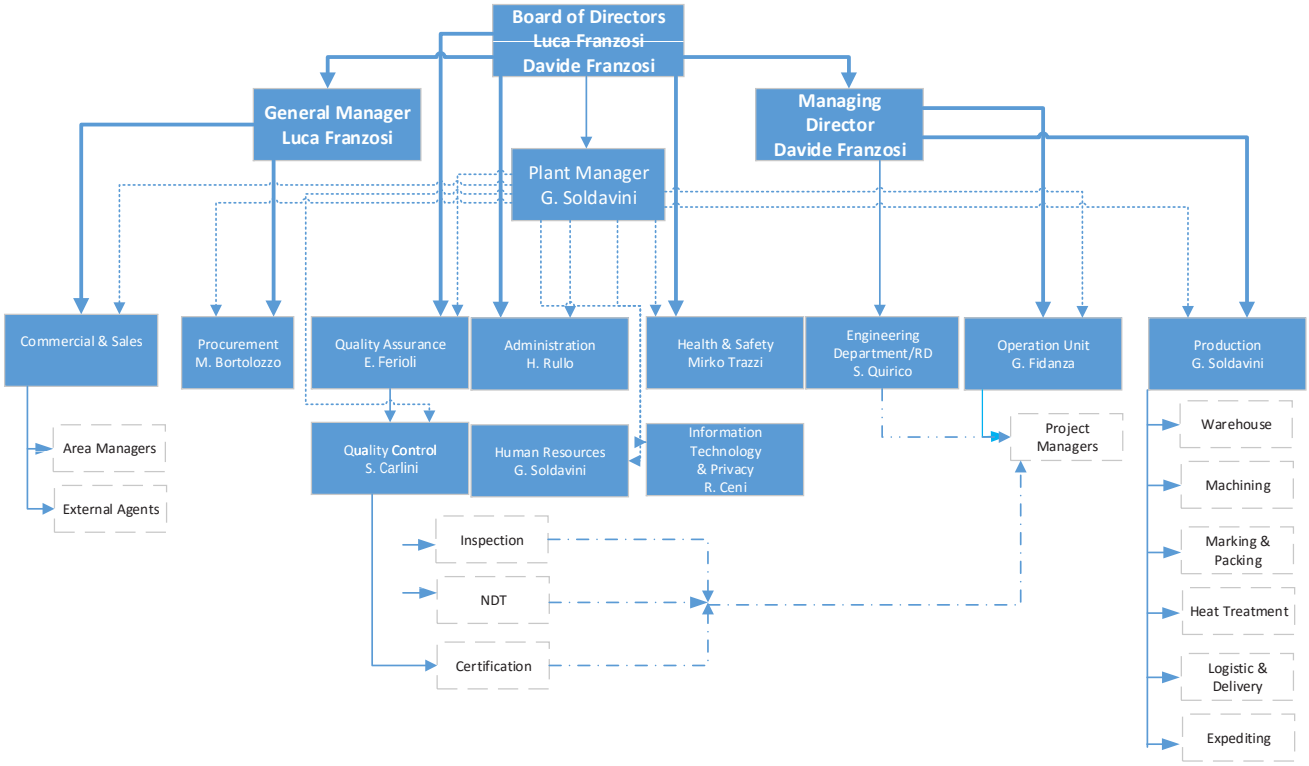
LABORATORY

VIAR's on-site laboratory enables us to perform a wide range of individual mechanical, dimensional, functional and hydro-pneumatic tests, when necessary.

In addition to the equipment listed, we also maintain a complete set of calibrated instruments for dimensional tests and measurements.

Certain tests, such as Corrosion and HIC are outsourced to highly qualified independent laboratories.

- MECHANICAL TESTS:
  Tension/ Yield, Hardness, Charpy Impact.
- NON DESTRUCTIVE TESTS:
  Liquid Penetrant Level II, Magnetic Particle Level II,Ultrasonic Examination
- POSITIVE MATERIAL IDENTIFICATION (PMI)
  By Spectroanalyser Portable Gnr, By X-Ray Analyzer Portable Inov-X, By X-Ray Niton



OUR GOALS

EXCEPTIONAL QUALITY

All items are manufactured and monitored in strict accordance with the Quality Assurance Manual and in complete conformity with norms stipulated by the UNI EN ISO-9001-2008, PED 97/23 and TUV. We are proud to consistently meet all current industry standards such as API, ANSI, DIN, ASME, STOOMWEEZEN.

ISO 9001 | ISO 29001 | ISO 14001 | BS OHSAS 18001

MOREOVER EACH COMPANY **IS CERTIFIED** BY THE MOST **PRESTIGIOUS INSTITUTE** IN SPECIFIC MARKET SECTORS

CLOSE RELATIONSHIP WITH CUSTOMERS TO **GUARANTEE SATISFACTION**

PROCEDURES, APPROVED AND VALIDATED BY INTERNATIONAL ORGANIZATIONS, GOVERN EVERY STEP OF PRODUCTION

NORSOK M-650 REV.4 | API 6A | API17D | PED

EFFICIENT DELIVERY

We are delighted to offer you a reliable and efficient delivery service. Every order can be traced from start to finish thanks to our cutting edge Bar Code system. At every stage of production, our dedicated staff will be on hand to answer any queries you may have. As a result of extensive planning, monitoring and organisation each item is delivered with optimum regard for efficiency and reliability.

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TURNKEY SOKUTIONS – EXAMPLES

“ VIAR Group, a globally recognized leader in turnkey solutions ”

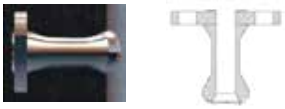
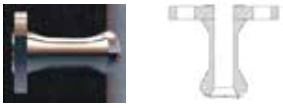
INTEGRALLY REINFORCED OUTLET BRANCH CONNECTIONS

ACCORDING TO ASME B31.1 – ASME B31.3 – ASME B31.4 – ASME B31.8 MSS SP97 – ASME I – ASME VIII DIV.1 – STOOMWEZEN D501.

ITEM	DESIGN / DIMENSIONS	RATING / SCHED.	IMAGE
VIAR® WELD	WITH BUTT-WELDING (BW) OUTLET END ACCORDING TO ANSI B16.25 FROM 1/2" TO 60"	STD/XS/160 & XXS	
VIAR® SOCK	WITH SOCKET WELD (SW) OUTLET END ACCORDING TO ANSI B16.11 FROM 1/2" TO 4"	3000/6000/9000	
VIAR® THREAD	WITH THREADED (NPT) OUTLET END ACCORDING TO ANSI B1.20.1 FROM 1/2" TO 4"	3000/6000/9000	
VIAR® ELB	WITH BW/SW/NPT OUTLET END ACCORDING TO B16.25/B16.11/B1.20.1 FROM 1/2" TO 60"	**SW & NPT:** 3000/6000/9000 **BW:** STD/XS/160 & XXS	
VIAR® LAT	WITH BW/SW/NPT OUTLET END ACCORDING TO B16.25/B16.11/B1.20.1 FROM 1/2" TO 60"	**SW & NPT:** 3000/6000/9000 **BW:** STD/XS/80/160 & XXS	
VIAR® NIP	WITH BW/SW/NPT/PE OUTLET END ACCORDING TO B16.25/B16.11/B1.20.1 FROM 1/2" TO 2"	**PE & NPT:** 3000/6000/9000 **BW:** STD/XS/80/160 & XXS	

INTEGRALLY REINFORCED OUTLET BRANCH FLANGED CONNECTIONS

ACCORDING TO ASME B16.5 – ASME B31.1 – ASME B31.3 – ASME B31.4 – ASME B31.8 ASME I – ASME VIII DIV.1 – STOOMWEZEN D501.

ITEM	DESIGN / DIMENSIONS	RATING / SCHED.	IMAGE
VIAR® NIP-FLANGED	WITH FLANGE ACCORDING TO B16.5 BW ACCORDING TO B16.25 FROM ½ " TO 2"	150/300/600/900/1500/2500 STD/XS/160 & XXS	
VIAR® WELD-FLANGED	WITH FLANGE ACCORDING TO B16.5 BW ACCORDING TO B16.25 FROM ½ " TO 12"	150/300/600/900/1500/2500 STD/XS/160 & XXS	
VIAR® ELB-FLANGED	WITH FLANGE ACCORDING TO B16.5 BW ACCORDING TO B16.25 FROM ½" TO 2"	150/300/600/900/1500/2500 STD/XS/160 & XXS	
VIAR® LAT-FLANGED			

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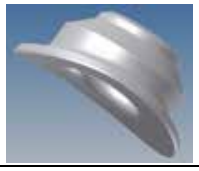
INTEGRALLY REINFORCED INLET BRANCH CONNECTIONS

ACCORDING TO ASME B31.1 – ASME B31.3 – ASME B31.4 – ASME B31.8 – ASME B16.5- ASME I – ASME VIII DIV.1 – STOOMWEZEN D101.

ITEM	DESIGN / DIMENSIONS	RATING / SCHED.	IMAGE
VIAR® SWEEP	WITH BUTT-WELDING (BW) OUTLET END ACCORDING TO ANSI B16.25 FROM 1/2" TO 60"	STD/XS/160 & XXS	
VIAR® VESS 90°	WITH BUTT-WELDING (BW) OUTLET END ACCORDING TO ANSI B16.25 FROM 1/2" TO 60"	STD/XS/160 & XXS	
VIAR® VESS 45°	WITH BUTT-WELDING (BW) OUTLET END ACCORDING TO ANSI B16.25 FROM 1/2" TO 60"	STD/XS/160 & XXS	
VIAR® SWEEP-FLANGED	WITH BUTT-WELDING (BW) OUTLET END ACCORDING TO ANSI B16.25 AND B16.5 FROM 1/2" TO 60"	150/300/600/900/1500/2500 STD/XS/160 & XXS	

FORGED FITTINGS

ACCORDING TO ASME B16.11, MSS SP95, BS 3799 MSS SP83

- 90°ELBOW
- HALF COUPLING
- COUPLING MF
- TEE
- HEXAGONAL HEAD PLUG
- ROUND HEAD PLUG
- SWAGE NIPPLE MSSP 95
- UNION MSS SP83
- 45° ELBOW
- REDUCING COUPLING
- COUPLING SW X FIL
- REDUCING TEE
- HEX RED. MF
- CONC. / ECC. REDUCERS
- PIPE NIPPLE
- UNION MF
- ELBOW MF
- COUPLING
- CAP
- HEXAGONAL NIPPLE
- RED. HEX. NIPPLE
- BOSS
- CROSS
- HEX BUSHING

DESIGN / DIMENSIONS

ACCORDING TO: ASME B16.11, MSS SP95, BS 3799 MSS SP83

FROM 1/8" TO 4"

RATING / SCHED.

BW: 40/STD/80/160/XS/XXS
SW: 3000/6000/9000
NPT: 2000/3000/6000

TEES, WYE PIECES AND SPOOL PIECES

ACCORDING TO ASME VIII DIV.1, ASME VIII DIV.2, ASME B31.1, ASME B31.3, ASME B31.4, ASME B31.8, EN/ISO Codes, Stoomwezen, AD 2000-Merkblatt/TRD 100

ITEM	DESIGN	SIZE	PRESSURE RATING	IMAGE
INTEGRAL FORGED TEE	ASME VIII DIV.1 & DIV.2	UP TO 60”	150/300/600/900/1500/ 2500	
INTEGRAL BARRED TEE	ASME VIII DIV.1 & DIV.2	UP TO 60”	n/a	
INTEGRAL LATERAL TEE	ASME VIII DIV.1 & DIV.2	UP TO 60”	300/600/900	
FLANGED TEE	ASME VIII DIV.1 & DIV.2	UPON REQUEST	n/a	
STUDDED TEE	API STANDARD	UPON REQUEST	n/a	
INTEGRAL WYE PIECE	UPON REQUEST	UP TO 60”	n/a	
INTEGRAL SPOOL PIECES	UPON REQUEST			

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CLAMP CONNECTORS

ACCORDING TO ASME VIII DIV.1, ASME VIII DIV.2, ASME B31.1, ASME B31.3, ASME B31.4, ASME B31.8, EN/ISO Codes, Stoomwezen, AD 2000-Merkblatt/TRD 100

ITEM	DESIGN	SIZE	PRESSURE RATING	IMAGE
VIAR®-LOCK	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 36”	150/300/600/900/1500/ 2500	
QUICK VIAR®-LOCK CLOSURE	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 36”	150/300/600/900/1500/ 2500	

SPECIAL FLANGES

ACCORDING TO ASME VIII DIV.1, ASME VIII DIV.2, ASME B31.1, ASME B31.3, ASME B31.4, ASME B31.8, EN/ISO Codes, Stoomwezen, AD 2000-Merkblatt/TRD 100

ITEM	DESIGN	SIZE	PRESSURE RATING	IMAGE
ANCHOR FLANGE	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 72”	150/300/600/900/1500/ 2500	
SWIVEL RING FLANGE	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 48”	150/300/600/900/1500/ 2500	
MISALIGNMENT FLANGE	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 24”	150/300/600/900/1500/ 2500	
COMPACT FLANGE	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 42”	150/300/600/900/1500/ 2500	
SPECIAL FORGED FLANGES	UPON REQUEST			

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SPECIAL APPLICATIONS

ACCORDING TO ASME VIII DIV.1, ASME VIII DIV.2, ASME B31.1, ASME B31.3, ASME B31.4, ASME B31.8, EN/ISO Codes

ITEM	DESIGN CODE	SIZE	PRESSURE RATING	IMAGE
FLOW TEE	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 72”	UPON REQUEST	
INTEGRAL FLANGED TEE	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 48”	UPON REQUEST	
QUICK DOOR	ACCORDING TO ASME VIII DIV.1 & DIV.2	UP TO 24”	UPON REQUEST	

MATERIAL AVAILABLE

CARBON STEEL					
A105N	A106B-HDG	A350 LF2-HDG	A694 F52	API/5LB	
A105N-EG	A234 WPB	A350 LF3	A694 F60	API/5LX52	
A105N-HDG	A333 GR3	A420 WPL6	A694 F65	API/5LX65	
A106B	A333 GR6	A694 F42	A694 F70	C22.8	
A106B-EG	A350 LF2	A694 F46	A860 WPHY60		
ALLOY STEEL					
A182 F1	A182 F12	A182 F9	A234 WP11	A335 P11	A335 P9
A182 F11	A182 F5 / F5A	A182 F91 / F92	A234 WP91	A335 P22	A335 P91
A182 F11 CL2	A182 F6A / F6A	A182 F22	A335 P1	A335 P5	A194 2H-HDG
STAINLESS STEEL					
A182 F304	A182 F316L	A182 F347	A312 TP316	A312 TP321H	
A182 F304H	A182 F316 TI	A182 F347H	A312 TP316H	A312 TP347	
A182 F304L	A182 F321	A182 F44	A312 TP316L	A312 TP347H	
A182 F310	A182 F321H	A312 TP304	A312 TP316L-UG	A403 WP316L	
A182 F316	A564 GR630	A312 TP304H	A312 TP316TI		
A182 F316H	A312 F310	A312 TP304L	A312 TP321		
DUPLEX / SUPER DUPLEX					
A182 F51	A182 F53	A182 F55			
NON-STANDARD MATERIALS					
AISI 4140	B165 UNS NO 4440	INCOLOY 800H	INCONEL 625		
ALLOY 20	B564 UNS NO 4440	INCOLOY 800HT	MONEL 400		
ALLOY 28	HASTELLOY C	INCOLOY 825	TITANIO GR2		
CUNI 90/ 10	INCOLOY 800	INCONEL 600	URANUS B6		
Z2CN1810	P280GH	ALLOY 825	ALLOY 625		
B564 UNS N10276	B408 UNS NO6600				
AND ANY OTHER MATERIAL ON THE MARKET					