



CRAFTECH

VALVES & PIPE FITTINGS

PRODUCT CATALOG



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CRAFTECH

VALVES & PIPE FITTINGS



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ABOUT US

Craftech Valves and Pipe Fittings delivers premium-quality valves and fittings built for reliability and performance. With industry expertise and a commitment to quality, we provide durable solutions tailored to diverse applications. Our focus is on innovation, customer satisfaction, and timely service, making us a trusted partner in the valve and pipe fittings industry.

CRAFTTECH
VALVES & PIPE FITTINGS



MISSION

OUR MISSION IS TO DELIVER INNOVATIVE, RELIABLE, AND COST-EFFECTIVE VALVE AND PIPE FITTING SOLUTIONS THAT EMPOWER INDUSTRIES TO OPERATE EFFICIENTLY AND SAFELY. WE ARE COMMITTED TO QUALITY CRAFTSMANSHIP, TIMELY DELIVERY, AND EXCEPTIONAL CUSTOMER SERVICE IN EVERY PRODUCT WE SUPPLY.

CRAFTECH

VALVES & PIPE FITTINGS



VISION

TO BECOME A GLOBALLY RECOGNIZED BRAND IN THE VALVE AND FITTINGS INDUSTRY BY SETTING NEW STANDARDS IN ENGINEERING EXCELLENCE, CUSTOMER SATISFACTION, AND SUSTAINABLE GROWTH.



OUR TEAM

AT CRAFTTECH VALVES & PIPE FITTINGS, OUR STRENGTH LIES IN OUR PEOPLE. FROM EXPERIENCED ENGINEERS TO DEDICATED OPERATIONS STAFF, OUR TEAM BRINGS DEEP INDUSTRY KNOWLEDGE, TECHNICAL EXPERTISE, AND A SHARED PASSION FOR EXCELLENCE.

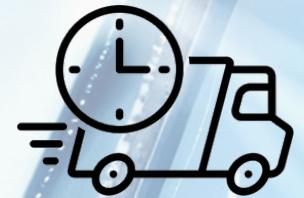
EVERY PRODUCT WE CREATE IS A RESULT OF CLOSE COLLABORATION, PRECISION, AND COMMITMENT – BECAUSE WE BELIEVE GREAT TEAMS BUILD GREAT SOLUTIONS.

WHY CHOOSE US



HIGH-QUALITY MATERIALS

WE USE ONLY PREMIUM-GRADE METALS AND COMPONENTS TO ENSURE DURABILITY, PERFORMANCE, AND SAFETY IN EVERY PRODUCT.



FAST & RELIABLE DELIVERY

TIMELY DELIVERY IS PART OF OUR PROMISE. WE ENSURE EFFICIENT LOGISTICS TO MEET YOUR PROJECT TIMELINES.



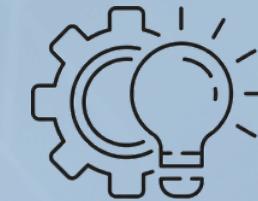
PRECISION ENGINEERING

EVERY VALVE AND FITTING IS DESIGNED AND MANUFACTURED WITH HIGH PRECISION, MEETING STRICT INDUSTRY STANDARDS.



COMPETITIVE PRICING

WE DELIVER QUALITY WITHOUT COMPROMISE – AT PRICES THAT FIT YOUR BUDGET.



CUSTOM SOLUTIONS

NEED SOMETHING SPECIFIC? WE OFFER TAILOR-MADE VALVE AND FITTING SOLUTIONS TO MATCH YOUR UNIQUE APPLICATION REQUIREMENTS.



AFTER-SALES SUPPORT

OUR RELATIONSHIP DOESN'T END AFTER DELIVERY. WE PROVIDE CONTINUED SUPPORT AND SERVICE WHENEVER YOU NEED IT.

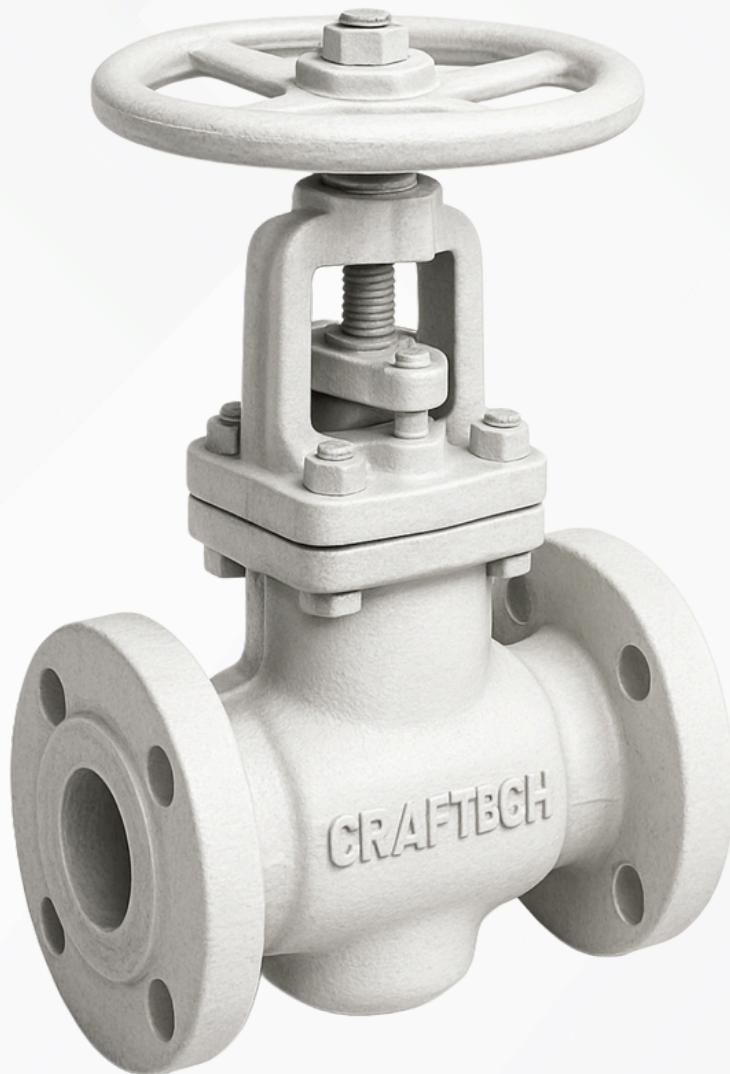
PRODUCT OVERVIEW

Craftech offers a wide range of industrial valves and pipe fittings, including flanges, elbows, and pipes. Our products are made from high-quality materials, ensuring durability and reliable performance for various industrial applications.



1. INDUSTRIAL VALVES

GATE VALVE



GATE VALVE SPECIFICATIONS

MATERIAL: CARBON STEEL, STAINLESS STEEL, CAST STEEL, ALLOY STEEL

SIZES: TYPICALLY FROM 1/2 INCH UP TO 48 INCHES (VARIES BY APPLICATION)

PRESSURE CLASS: 150, 300, 600, 900, 1500 (ASME STANDARD)

CONNECTION TYPES: FLANGED, THREADED, BUTT WELD

OPERATION: MANUAL, ELECTRIC, PNEUMATIC

DESIGN: SOLID OR FLEXIBLE WEDGE, RISING OR NON-RISING STEM

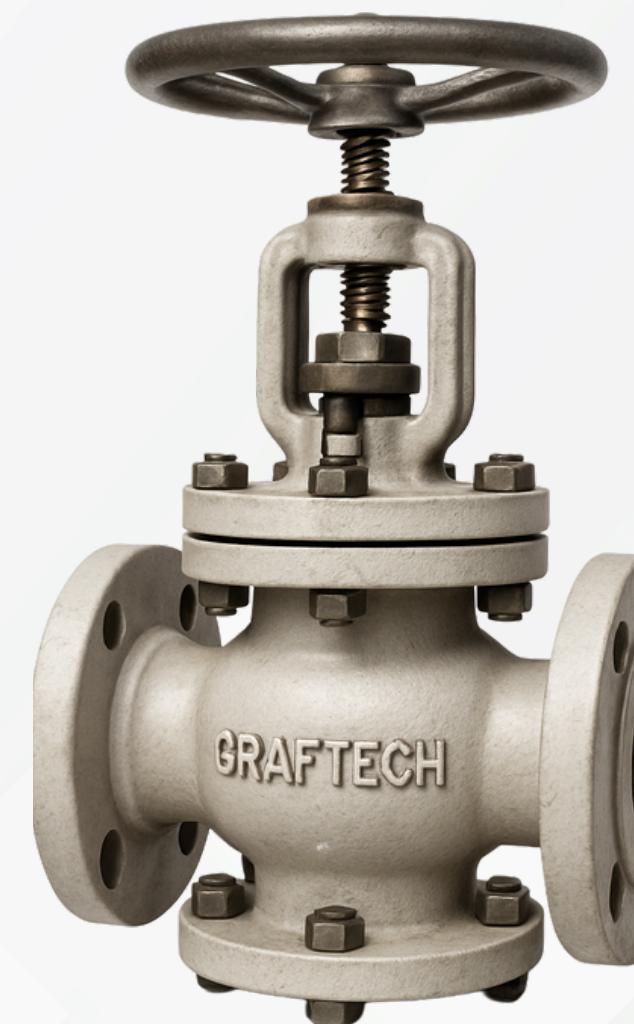
TEMPERATURE RANGE: -29°C TO 425°C (DEPENDING ON MATERIAL)

STANDARDS: ASME, API, BS, DIN

USES:-

USED MAINLY FOR ON/OFF ISOLATION OF FLUID FLOW IN PIPELINES
COMMON IN OIL AND GAS, WATER TREATMENT, CHEMICAL PROCESSING, POWER GENERATION, AND MINING INDUSTRIES
SUITABLE FOR LIQUIDS, GASES, STEAM, AND SLURRIES
IDEAL FOR FULL FLOW WITH MINIMAL PRESSURE LOSS
USED IN HIGH-PRESSURE AND HIGH-TEMPERATURE SYSTEMS
FOUND IN WATER SUPPLY, WASTEWATER MANAGEMENT, INDUSTRIAL PLANTS, AND MARINE APPLICATIONS
NOT RECOMMENDED FOR FLOW REGULATION OR THROTTLING

GLOBE VALVE



GLOBE VALVE SPECIFICATIONS

MATERIAL: CARBON STEEL, STAINLESS STEEL, CAST STEEL, BRONZE

SIZES: TYPICALLY FROM 1/2 INCH UP TO 24 INCHES (VARIES BY APPLICATION)

PRESSURE CLASS: 150, 300, 600, 900, 1500 (ASME STANDARD)

CONNECTION TYPES: FLANGED, THREADED, BUTT WELD

OPERATION: MANUAL (HANDWHEEL), ELECTRIC, PNEUMATIC

DESIGN: LINEAR MOTION VALVE WITH A PLUG OR DISC THAT MOVES PERPENDICULAR TO THE SEAT

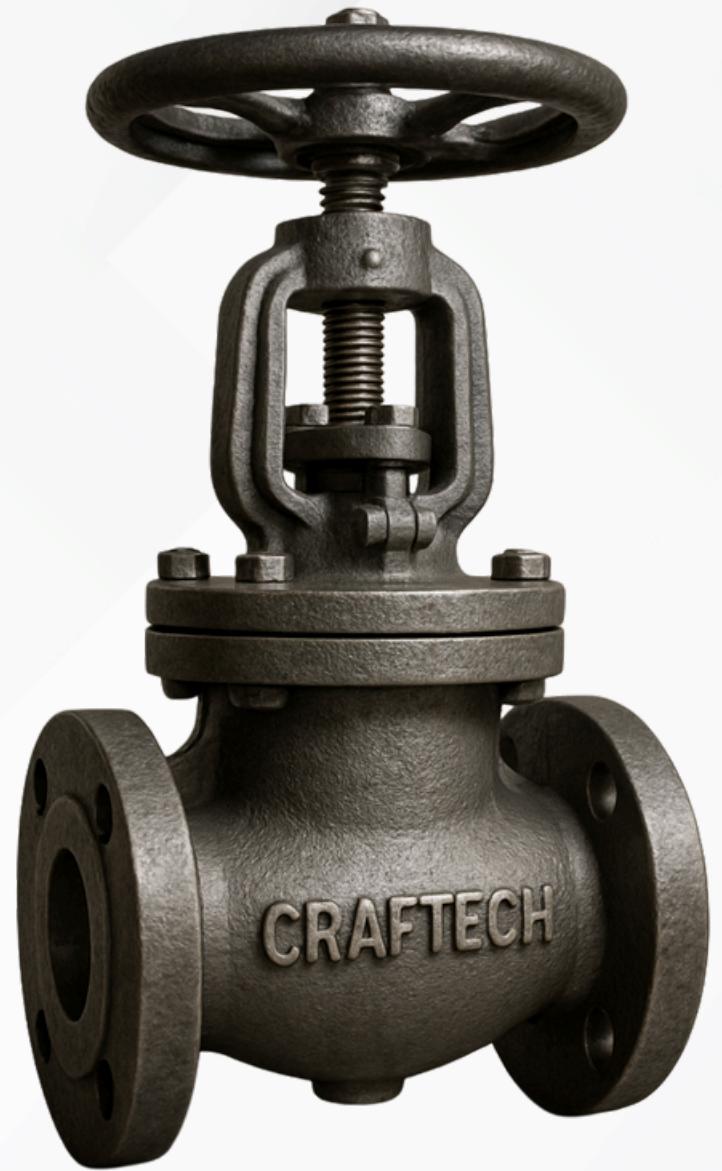
TEMPERATURE RANGE: -29°C TO 550°C (DEPENDING ON MATERIAL)

USES:-

IDEAL FOR THROTTLING AND REGULATING FLOW IN PIPELINES; COMMONLY USED IN WATER SYSTEMS, STEAM, OIL, AND GAS INDUSTRIES REQUIRING PRECISE FLOW CONTROL.

STANDARDS: ASME, API, BS, DIN

BALL VALVE



BALL VALVE SPECIFICATIONS

TYPE

- FULL PORT / REDUCED PORT
- FLOATING BALL / TRUNNION MOUNTED
- TWO-PIECE / THREE-PIECE / ONE-PIECE DESIGN

SIZE RANGE:

- $\frac{1}{4}$ " TO 12" (DN6 TO DN300)

PRESSURE CLASS:

- ANSI CLASS 150 / 300 / 600
- PN16 / PN25 / PN40

END CONNECTIONS:

- THREADED (NPT/BSP)
- FLANGED (ANSI, DIN, JIS)
- SOCKET WELD / BUTT WELD

BODY MATERIALS:

- STAINLESS STEEL (SS304 / SS316)
- CARBON STEEL (WCB)
- BRASS / BRONZE

BALL & SEAT MATERIALS:

- STAINLESS STEEL / CHROME PLATED
- PTFE / RPTFE / PEEK

STANDARDS:

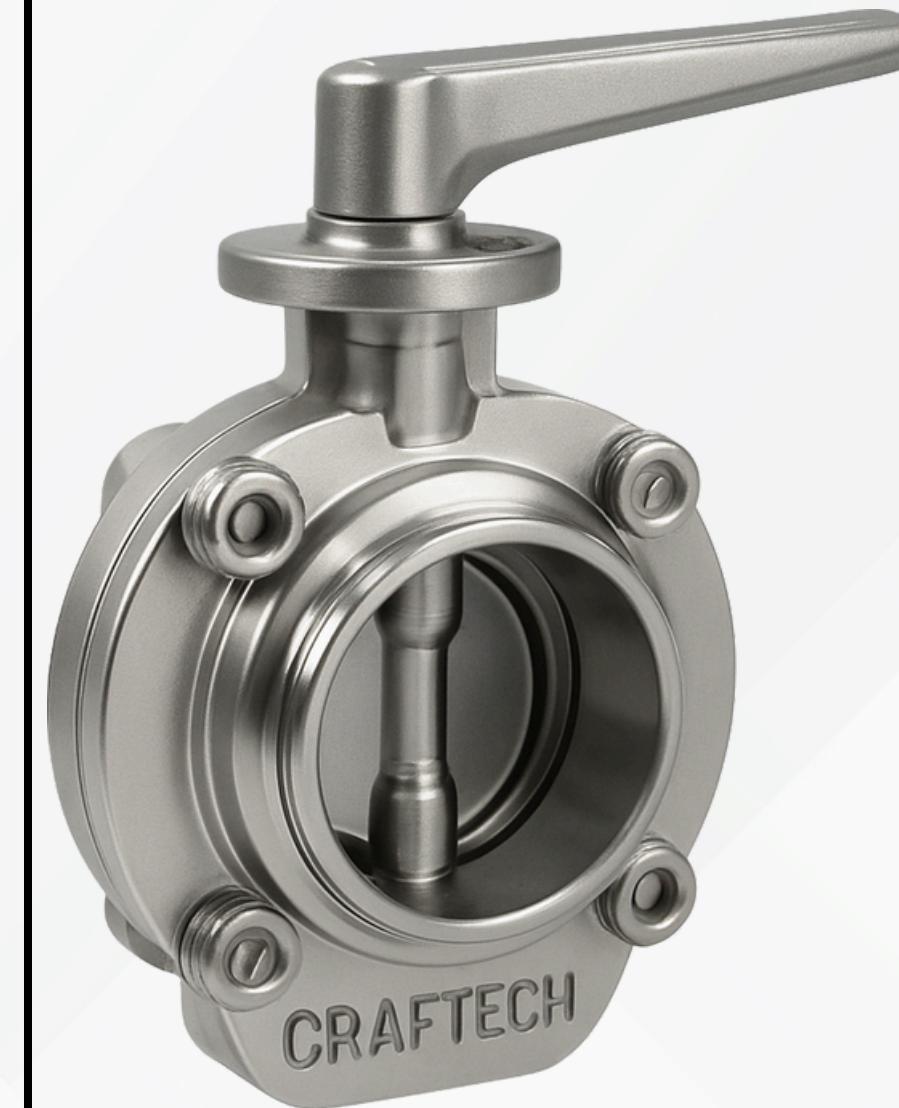
- DESIGN: API 6D / ISO 17292 / ASME B16.34
- TESTING: API 598 / EN 12266
- FLANGES: ASME B16.5 / EN 1092-1

USES:-

USED FOR QUICK ON/OFF CONTROL OF FLUID FLOW IN PIPELINES
WIDELY USED IN OIL AND GAS, CHEMICAL, WATER TREATMENT, HVAC, AND
MARINE INDUSTRIES

HANDLES LIQUIDS, GASES, STEAM, AND SLURRIES EFFECTIVELY
PROVIDES TIGHT SHUT-OFF WITH MINIMAL TORQUE AND EASY OPERATION
IDEAL FOR APPLICATIONS REQUIRING FULL BORE AND LOW-PRESSURE DROP
SUITABLE FOR HIGH-PRESSURE, HIGH-TEMPERATURE, AND CORROSIVE
ENVIRONMENTS
COMMON IN INDUSTRIAL PLANTS, PROCESS SYSTEMS, AND UTILITY SERVICES

BUTTERFLY VALVE



BUTTERFLY VALVE SPECIFICATIONS

TYPE

- WAFER / LUG / DOUBLE FLANGED / U-TYPE
- CONCENTRIC / DOUBLE OFFSET / TRIPLE OFFSET

SIZE RANGE:

- 2" TO 72" (DN50 TO DN1800)

PRESSURE CLASS:

- ANSI CLASS 150 / 300
- PN10 / PN16 / PN25

END CONNECTIONS:

- WAFER / LUG / FLANGED / BUTT WELD

BODY MATERIALS:

- CAST IRON / DUCTILE IRON
- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)
- ALUMINUM BRONZE

SEAT MATERIALS:

- EPDM / NBR / PTFE / VITON / METAL SEATED

STANDARDS:

- DESIGN: API 609 / ISO 5752 / EN 593
- TESTING: API 598 / EN 12266
- FLANGES: ASME B16.5 / EN 1092-1

USES:-

USED FOR ISOLATING OR REGULATING FLOW IN LARGE-DIAMETER PIPELINES
COMMON IN WATER DISTRIBUTION, WASTEWATER TREATMENT, HVAC, FIRE
PROTECTION, AND MARINE SYSTEMS

SUITABLE FOR LIQUIDS, GASES, AND SLURRIES

IDEAL FOR LOW-PRESSURE, LOW-TORQUE, AND SPACE-CONSTRAINED
APPLICATIONS

PREFERRED IN SYSTEMS REQUIRING QUICK OPERATION AND LIGHTWEIGHT
VALVES

WIDELY USED IN POWER PLANTS, CHEMICAL INDUSTRIES, AND PROCESS SYSTEMS
NOT SUITABLE FOR HIGH-PRESSURE THROTTLING IN ABRASIVE SERVICES

CHECK VALVE

CHECK VALVE SPECIFICATIONS

TYPE

- SWING / LIFT / WAFER / DUAL PLATE / TILTING DISC / BALL TYPE
- SILENT (SPRING-LOADED) / NON-SLAM TYPE

SIZE RANGE:

- $\frac{1}{2}$ " TO 36" (DN15 TO DN900)

PRESSURE CLASS:

- ANSI CLASS 150 / 300 / 600
- PN10 / PN16 / PN25 / PN40

END CONNECTIONS:

- FLANGED / WAFER / LUG / THREADED / SOCKET WELD / BUTT WELD

BODY MATERIALS:

- CAST IRON / DUCTILE IRON
- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)
- BRONZE / ALLOY STEELS

DISC/INTERNAL:

- STAINLESS STEEL / BRONZE / RUBBER-COATED / SPRING-LOADED OPTIONS
- METAL-TO-METAL OR SOFT SEATED (NBR, EPDM, PTFE)

USES:-

USED TO PREVENT BACKFLOW IN PIPELINES COMMON IN WATER, WASTEWATER, OIL & GAS, AND CHEMICAL SYSTEMS
PROTECTS PUMPS, COMPRESSORS, AND EQUIPMENT FROM REVERSE FLOW
SUITABLE FOR LIQUIDS, GASES, STEAM, AND SLURRIES
WIDELY USED IN POWER PLANTS, HVAC, MARINE, AND FIRE PROTECTION SYSTEMS
OPERATES AUTOMATICALLY WITHOUT EXTERNAL CONTROL
NOT SUITABLE FOR THROTTLING OR FLOW REGULATION



CONTROL VALVE

CONTROL VALVE SPECIFICATIONS

TYPE

- GLOBE / ANGLE / BUTTERFLY / BALL / DIAPHRAGM
- PNEUMATIC / ELECTRIC / HYDRAULIC ACTUATED
- LINEAR / ROTARY MOTION

SIZE RANGE:

- $\frac{1}{2}$ " TO 24" (DN15 TO DN600)

PRESSURE CLASS:

- ANSI CLASS 150 / 300 / 600
- PN10 / PN16 / PN25 / PN40

END CONNECTIONS:

- FLANGED / THREADED / SOCKET WELD / BUTT WELD

BODY MATERIALS:

- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)
- CAST IRON / BRONZE / ALLOY STEELS

TRIM MATERIALS:

- STAINLESS STEEL / HARDENED ALLOYS
- SOFT OR METAL SEATS (PTFE, RPTFE, PEEK, ETC.)

STANDARDS:

- DESIGN: IEC 60534 / ANSI/ISA 75
- TESTING: API 598 / EN 12266
- FLANGES: ASME B16.5 / EN 1092-1

ACTUATION:

- PNEUMATIC DIAPHRAGM / ELECTRIC MOTOR / ELECTRO-PNEUMATIC POSITIONER

CONTROL FEATURES:

- MODULATING OR ON/OFF CONTROL
- FLOW, PRESSURE, TEMPERATURE, AND LEVEL REGULATION
- AVAILABLE WITH POSITIONERS, I/P CONVERTERS, AND FEEDBACK SYSTEMS



USES:-

USED FOR PRECISE REGULATION OF FLOW, PRESSURE, TEMPERATURE, OR LEVEL IN PROCESS SYSTEMS
COMMON IN OIL & GAS, POWER PLANTS, CHEMICAL PROCESSING, AND WATER TREATMENT IDEAL FOR MODULATING CONTROL IN AUTOMATED SYSTEMS
SUITABLE FOR LIQUIDS, GASES, STEAM, AND SLURRIES
USED IN HVAC, PHARMACEUTICAL, FOOD PROCESSING, AND PULP & PAPER INDUSTRIES CRITICAL FOR MAINTAINING PROCESS STABILITY AND SYSTEM EFFICIENCY
NOT USED FOR SIMPLE ON/OFF ISOLATION

KNIFE EDGE GATE VALVE



KNIFE EDGE VALVE SPECIFICATIONS

TYPE

- UNI-DIRECTIONAL / BI-DIRECTIONAL
- MANUAL / PNEUMATIC / ELECTRIC / HYDRAULIC ACTUATION
- RISING / NON-RISING STEM

SIZE RANGE:

- 2" TO 48" (DN50 TO DN1200)

PRESSURE CLASS:

- PN10 / PN16
- CUSTOM RATINGS AVAILABLE FOR SPECIFIC APPLICATIONS

END CONNECTIONS:

- WAFER / LUG / FLANGED / BUTT WELD

BODY MATERIALS:

- CAST IRON / DUCTILE IRON
- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)

GATE MATERIALS:

- STAINLESS STEEL (SS304 / SS316)
- HARD-FACED OR PTFE-COATED OPTIONS FOR ABRASIVE MEDIA

SEAT MATERIALS:

- METAL-TO-METAL / EPDM / PTFE / NBR / VITON

STANDARDS:

- DESIGN: MSS SP-81
- TESTING: API 598 / EN 12266
- FLANGES: ASME B16.5 / EN 1092-1

DESIGN FEATURES:

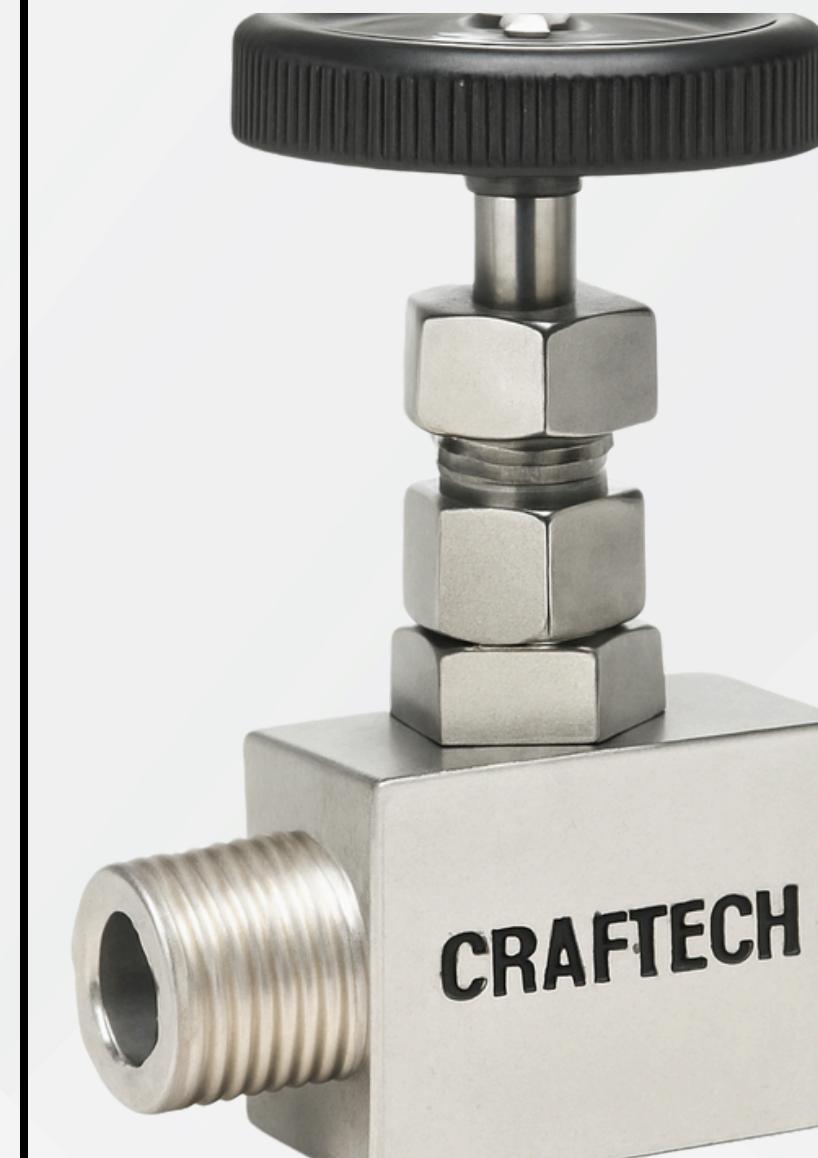
- DESIGNED FOR HANDLING SLURRIES, VISCOUS, CORROSIVE, OR ABRASIVE MEDIA
- TIGHT SHUT-OFF WITH MINIMAL PRESSURE DROP
- SELF-CLEANING GATE EDGES TO PREVENT MEDIA BUILDUP

USED FOR ON/OFF CONTROL IN SLURRY, VISCOUS, AND ABRASIVE MEDIA
COMMON IN MINING, WASTEWATER, PULP & PAPER, AND CHEMICAL INDUSTRIES
IDEAL FOR SOLIDS, SLURRY, AND BULK MATERIAL HANDLING
NOT SUITABLE FOR HIGH-PRESSURE OR THROTTLING APPLICATIONS

USES:-

USED FOR ON/OFF CONTROL IN SLURRY, VISCOUS, AND ABRASIVE MEDIA
COMMON IN MINING, WASTEWATER, PULP & PAPER, AND CHEMICAL INDUSTRIES
IDEAL FOR SOLIDS, SLURRY, AND BULK MATERIAL HANDLING
NOT SUITABLE FOR HIGH-PRESSURE OR THROTTLING APPLICATIONS

NEEDLE VALVE



NEEDLE VALVE SPECIFICATIONS

TYPE

- STRAIGHT / ANGLE / FORGED / BAR STOCK
- INTEGRAL BONNET / UNION BONNET
- MANUAL / PANEL MOUNT / INSTRUMENTATION TYPE

SIZE RANGE:

- 1/8" TO 2" (DN6 TO DN50)

PRESSURE RATING:

- UP TO 6000 PSI (414 BAR) OR HIGHER (10,000+ PSI FOR SPECIAL DESIGNS)

END CONNECTIONS:

- THREADED (NPT, BSP)
- COMPRESSION TUBE FITTINGS (DOUBLE FERRULE)
- SOCKET WELD / BUTT WELD

BODY MATERIALS:

- STAINLESS STEEL (SS304 / SS316)
- BRASS / CARBON STEEL
- ALLOY 400 / HASTELLOY / DUPLEX STEEL

SEAT & TIP MATERIALS :

- METAL-TO-METAL / SOFT SEAT (PTFE, PEEK)
- REGULATING OR SHUT-OFF TIP

STANDARDS:

- DESIGN: ASME B16.34 / API 598 (TESTING)
- THREADS: ASME B1.20.1 (NPT) / ISO 7-1 (BSP)

DESIGN FEATURES:

- FINE CONTROL OF FLOW
- LEAK-TIGHT SHUT-OFF
- COMPACT DESIGN FOR INSTRUMENTATION AND SAMPLING LINES

USES:-

USED FOR PRECISE FLOW CONTROL IN LOW-FLOW APPLICATIONS
COMMON IN INSTRUMENTATION, SAMPLING, AND PRESSURE REGULATION
IDEAL FOR OIL & GAS, CHEMICAL, AND LABORATORY SYSTEMS
NOT SUITABLE FOR HIGH-FLOW OR QUICK SHUT-OFF NEEDS

NON-RETURN VALVE



NON-RETURN VALVE SPECIFICATIONS

TYPE

- SWING / LIFT / WAFER / DUAL PLATE / SPRING-LOADED / BALL TYPE
- HORIZONTAL / VERTICAL INSTALLATION OPTIONS

SIZE RANGE:

- $\frac{1}{2}$ " TO 36" (DN15 TO DN900)

PRESSURE CLASS:

- ANSI CLASS 150 / 300 / 600
- PN10 / PN16 / PN25 / PN40

END CONNECTIONS:

- FLANGED / WAFER / LUG / THREADED / SOCKET WELD / BUTT WELD

BODY MATERIALS:

- CAST IRON / DUCTILE IRON
- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)
- BRONZE / PVC

DISC/INTERNAL:

- STAINLESS STEEL / BRONZE / RUBBER-COATED / SPRING-LOADED
- METAL OR SOFT SEATED (NBR, EPDM, PTFE)

STANDARDS:

- DESIGN: API 6D / BS 1868 / EN 12334
- TESTING: API 598 / EN 12266
- FLANGES: ASME B16.5 / EN 1092-1

USES:-

USED TO PREVENT BACKFLOW IN PIPELINES
PROTECTS PUMPS AND EQUIPMENT FROM REVERSE FLOW
COMMON IN WATER, OIL, GAS, STEAM, AND CHEMICAL SYSTEMS
OPERATES AUTOMATICALLY, NO MANUAL CONTROL NEEDED

DESIGN FEATURES:

- ALLOWS FLOW IN ONE DIRECTION ONLY
- PREVENTS REVERSE FLOW AND PROTECTS PUMPS/EQUIPMENT
- OPERATES AUTOMATICALLY WITHOUT EXTERNAL ACTUATION

PRESSURE RELIEF VALVE



PRESSURE RELIEF VALVE SPECIFICATIONS

TYPE

- SPRING LOADED / PILOT OPERATED / BALANCED BELLOWS
- SAFETY VALVE / PRESSURE RELIEF VALVE / VACUUM RELIEF VALVE

SIZE RANGE:

- $\frac{1}{2}$ " TO 12" (DN15 TO DN300)

PRESSURE RANGE:

- SET PRESSURES FROM 0.5 BAR TO 600 BAR (7 PSI TO 8700 PSI), DEPENDING ON TYPE

END CONNECTIONS:

- THREADED (NPT, BSP)
- FLANGED (ASME / DIN / JIS)
- SOCKET WELD / BUTT WELD

BODY MATERIALS:

- STAINLESS STEEL (SS304 / SS316)
- CARBON STEEL (WCB)
- BRONZE / BRASS
- ALLOY STEELS (E.G., MONEL, HASTELLOY)

SEAT & TRIM MATERIALS:

- METAL-TO-METAL / SOFT SEAT (PTFE, VITON, EPDM)
- STAINLESS STEEL / ALLOY OPTIONS FOR CORROSION OR HIGH TEMP)

STANDARDS:

- DESIGN: ASME SECTION VIII / API 520 / API 526
- TESTING: API 527
- FLANGES: ASME B16.5 / EN 1092-1

DESIGN FEATURES:

- OPENS AUTOMATICALLY AT SET PRESSURE TO RELIEVE EXCESS PRESSURE
- RESEATS ONCE NORMAL PRESSURE IS RESTORED
- AVAILABLE WITH BLOWDOWN AND BACK PRESSURE OPTIONS

USES:-

PROTECTS SYSTEMS FROM OVERPRESSURE COMMON IN BOILERS, COMPRESSORS, PIPELINES, AND PRESSURE VESSELS ENSURES SAFETY BY RELEASING EXCESS PRESSURE AUTOMATICALLY USED IN OIL & GAS, CHEMICAL, POWER, AND INDUSTRIAL PLANTS

STRAINER T TYPE



STRAINER T TYPE SPECIFICATIONS

TYPE

- FABRICATED T-TYPE (INLINE) STRAINER
- BASKET OR SCREEN TYPE ELEMENT
- BOLTED COVER / QUICK-OPENING DESIGN

SIZE RANGE:

- 2" TO 24" (DN50 TO DN600)

PRESSURE CLASS:

- ANSI CLASS 150 / 300 / 600
- PN10 / PN16 / PN25 / PN40

END CONNECTIONS:

- FLANGED (ASME / DIN)
- BUTT WELD / SOCKET WELD

BODY MATERIALS:

- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)
- ALLOY STEEL / DUPLEX / SUPER DUPLEX

SCREEN MATERIALS:

- STAINLESS STEEL (SS304 / SS316)
- PERFORATED / MESH / WEDGE WIRE SCREENS
- AVAILABLE IN DIFFERENT MICRON RATINGS (TYPICALLY 50-1000 MM)

STANDARDS:

- DESIGN: ASME B31.3 / EN 13445 (FOR PRESSURE VESSELS)
- FLANGES: ASME B16.5 / EN 1092-1
- TESTING: API 598 / EN 12266

USES:-

USED TO REMOVE DEBRIS FROM PIPELINES
PROTECTS PUMPS, VALVES, METERS,
AND INSTRUMENTS
COMMON IN OIL & GAS, CHEMICAL,
WATER, AND POWER PLANTS
IDEAL FOR HIGH-FLOW AND CRITICAL
PROCESS SYSTEMS

DESIGN FEATURES:

- DESIGNED FOR HORIZONTAL OR VERTICAL INSTALLATION
- LARGE FILTRATION AREA FOR LOW PRESSURE DROP
- EASY MAINTENANCE AND SCREEN REMOVAL
- DRAIN AND VENT CONNECTIONS PROVIDED

STRAINER Y TYPE



STRAINER Y SPECIFICATIONS

TYPE

- Y-TYPE (INLINE) STRAINER
- BOLTED CAP / BLOW-OFF PLUG OPTION
- HORIZONTAL OR VERTICAL INSTALLATION

SIZE RANGE:

- ½" TO 24" (DN15 TO DN600)

PRESSURE CLASS:

- ANSI CLASS 150 / 300 / 600
- PN10 / PN16 / PN25 / PN40

END CONNECTIONS:

- THREADED (NPT, BSP)
- FLANGED (ASME / DIN)
- SOCKET WELD / BUTT WELD

BODY MATERIALS:

- CAST IRON / DUCTILE IRON
- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)
- BRONZE / ALLOY STEEL

SCREEN MATERIALS:

- STAINLESS STEEL (PERFORATED OR MESH)
- VARIOUS MICRON RATINGS (TYPICALLY 50-1000 MM)

STANDARDS:

- DESIGN: ASME B31.3 / EN 13445
- FLANGES: ASME B16.5 / EN 1092-1
- TESTING: API 598 / EN 12266

DESIGN FEATURES:

- COMPACT AND SPACE-SAVING DESIGN
- SUITABLE FOR HIGH-PRESSURE APPLICATIONS
- EASY ACCESS FOR CLEANING AND MAINTENANCE
- OPTIONAL BLOW-OFF VALVE FOR CONTINUOUS CLEANING

USES:-

USED TO FILTER DEBRIS FROM PIPELINES
PROTECTS PUMPS, VALVES, AND INSTRUMENTS
IDEAL FOR STEAM, GAS, AND LIQUID SYSTEMS
COMMON IN OIL & GAS, CHEMICAL, AND WATER INDUSTRIES

SLUICE VALVE



USES:-

USED FOR ON/OFF CONTROL IN CLEAN OR SLIGHTLY TURBID FLUIDS
COMMON IN WATER SUPPLY, WASTEWATER, FIRE PROTECTION, AND IRRIGATION SYSTEMS
IDEAL FOR ISOLATION IN PIPELINES WITH MINIMAL PRESSURE DROP
NOT SUITABLE FOR THROTTLING OR SLURRY APPLICATIONS

SLUICE VALVE SPECIFICATIONS

TYPE

- RISING STEM / NON-RISING STEM
- SOLID WEDGE / FLEXIBLE WEDGE / SPLIT WEDGE / PARALLEL SLIDE
- MANUAL / GEAR OPERATED / ELECTRIC / PNEUMATIC ACTUATED
- HORIZONTAL / VERTICAL INSTALLATION OPTIONS

SIZE RANGE:

- 2" TO 48" (DN50 TO DN1200)

PRESSURE CLASS:

- ANSI CLASS 150 / 300 / 600
- PN10 / PN16 / PN25 / PN40

END CONNECTIONS:

- FLANGED / BUTT WELD / SOCKET WELD / THREADED / GROOVED

BODY MATERIALS:

- CAST IRON / DUCTILE IRON
- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)
- BRONZE

WEDGE/INTERNAL:

- STAINLESS STEEL / BRONZE / GUNMETAL
- RUBBER-COATED (NBR / EPDM)

METAL OR RESILIENT SEATED

STANDARDS:

- DESIGN: API 600 / BS 5163 / EN 1074-2 / IS 14846
- TESTING: API 598 / EN 12266 / IS 5312
- FLANGES: ASME B16.5 / EN 1092-1 / IS 1538

DESIGN FEATURES:

- DESIGNED FOR FULL OPEN OR FULL CLOSE OPERATION
- PROVIDES TIGHT SHUT-OFF IN BOTH DIRECTIONS
- MINIMAL PRESSURE DROP ACROSS VALVE
- MANUAL OR AUTOMATED OPERATION OPTIONS
- LONG SERVICE LIFE WITH LOW MAINTENANCE

PLUG VALVE



USES:-

USED FOR ON/OFF AND LIMITED FLOW CONTROL IN CLEAN, CORROSIVE, OR ABRASIVE FLUIDS COMMON IN OIL & GAS, CHEMICAL, PETROCHEMICAL, AND WASTEWATER INDUSTRIES
IDEAL FOR FREQUENT OPERATION, QUICK SHUT-OFF, AND TIGHT SEALING
NOT SUITABLE FOR HIGH-PRESSURE THROTTLING OR THROTTLING WITH SUSPENDED SOLIDS

PLUG VALVE SPECIFICATIONS

TYPE

- LUBRICATED / NON-LUBRICATED / SLEEVED / JACKETED / ECCENTRIC / EXPANDING PLUG
- ROUND PORT / RECTANGULAR PORT / FULL PORT / REDUCED PORT
- MANUAL / GEAR OPERATED / ELECTRIC / PNEUMATIC ACTUATED
- HORIZONTAL / VERTICAL INSTALLATION OPTIONS

SIZE RANGE:

- ½" TO 24" (DN15 TO DN600)

PRESSURE CLASS:

- ANSI CLASS 150 / 300 / 600 / 900
- PN10 / PN16 / PN25 / PN40 / PN63

END CONNECTIONS:

- FLANGED / THREADED / SOCKET WELD / BUTT WELD

BODY MATERIALS:

- CAST IRON / DUCTILE IRON
- CARBON STEEL (WCB / LCB)
- STAINLESS STEEL (SS304 / SS316)
- ALLOY STEELS / BRONZE / PVC / PTFE-LINED

PLUG/INTERNAL:

- STAINLESS STEEL / ALLOY STEEL / BRONZE
- PTFE / TEFLON / RUBBER / METAL-SEATED CORROSION AND WEAR-RESISTANT COATINGS AVAILABLE

STANDARDS:

- DESIGN: API 6D / API 599 / MSS SP-78 / MSS SP-85
- TESTING: API 598 / EN 12266
- FLANGES: ASME B16.5 / EN 1092-1

DESIGN FEATURES:

- QUARTER-TURN OPERATION FOR QUICK ON/OFF CONTROL
- TIGHT SHUT-OFF AND MINIMAL LEAKAGE
- LOW TORQUE AND COMPACT DESIGN
- AVAILABLE WITH LINED OR LUBRICATED SEALING SYSTEMS
- SUITABLE FOR FREQUENT OPERATION AND

PRESSURE REDUCING VALVE



PRESSURE REDUCING VALVE SPECIFICATIONS

TYPE:

- DIRECT ACTING / PILOT OPERATED
- SPRING-LOADED / DOME-LOADED / PISTON OR DIAPHRAGM TYPE
- SINGLE-STAGE / TWO-STAGE PRESSURE CONTROL
- HORIZONTAL / VERTICAL INSTALLATION OPTIONS

SIZE RANGE:

- $\frac{1}{2}$ " TO 12" (DN15 TO DN300)
- (LARGER SIZES AVAILABLE FOR SPECIFIC APPLICATIONS)

PRESSURE CLASS:

- ANSI CLASS 150 / 300
- PN10 / PN16 / PN25 / PN40
- INLET PRESSURE: UP TO 600 PSI (41 BAR)
- OUTLET PRESSURE RANGE: 5 PSI TO 250 PSI (0.3 TO 17 BAR), ADJUSTABLE

END CONNECTIONS:

FLANGED / THREADED / SOCKET WELD / BUTT WELD / UNION ENDS

BODY MATERIALS:

- CAST IRON / DUCTILE IRON
- CARBON STEEL (WCB)
- STAINLESS STEEL (SS304 / SS316)
- BRONZE / BRASS / PVC / GUNMETAL

TRIM MATERIALS/INTERNAL:

- STAINLESS STEEL / BRONZE / BRASS
- ELASTOMERS: NBR / EPDM / PTFE / VITON
- CORROSION AND EROSION-RESISTANT SEAT AND DISC MATERIALS

STANDARDS:

- DESIGN: EN 1567 / ASSE 1003 / BS EN 805 / MSS SP-80
- TESTING: API 598 / EN 12266
- FLANGES: ASME B16.5 / EN 1092-1

USES:-

USED TO MAINTAIN CONSTANT DOWNSTREAM PRESSURE IN FLUID SYSTEMS
COMMON IN WATER SUPPLY, HVAC, STEAM,
GAS, AND PROCESS INDUSTRIES
IDEAL FOR PROTECTING EQUIPMENT FROM
HIGH INLET PRESSURE
NOT SUITABLE FOR APPLICATIONS REQUIRING
ZERO DOWNSTREAM FLOW OR TIGHT SHUT-OFF
UNDER NO-FLOW CONDITIONS

FLANGES

A FLANGE IS A MECHANICAL COMPONENT USED TO CONNECT PIPES, VALVES, PUMPS, AND OTHER EQUIPMENT IN A PIPING SYSTEM. IT PROVIDES A SECURE, LEAK-PROOF JOINT AND ALLOWS FOR EASY ASSEMBLY, DISASSEMBLY, INSPECTION, AND MAINTENANCE. FLANGES ARE TYPICALLY JOINED BY BOLTING AND ARE SEALED USING GASKETS. THEY COME IN VARIOUS TYPES—SUCH AS WELD NECK, SLIP-ON, BLIND, AND THREADED—EACH SUITED FOR SPECIFIC PRESSURE, TEMPERATURE, AND SERVICE CONDITIONS. FLANGES ARE STANDARDIZED BY ORGANIZATIONS LIKE ASME, DIN, AND ISO TO ENSURE COMPATIBILITY AND PERFORMANCE ACROSS INDUSTRIAL APPLICATIONS.

APPLICATIONS OF FLANGES

FLANGES ARE WIDELY USED IN INDUSTRIES SUCH AS,

- OIL & GAS
- POWER PLANTS
- CHEMICAL PROCESSING
- WATER TREATMENT
- SHIPBUILDING



TYPES OF FLANGES

1. WELD NECK FLANGE (WN)

TYPE:

- LONG TAPERED HUB
- BUTT-WELDED CONNECTION
- DESIGNED FOR HIGH-PRESSURE AND HIGH-TEMPERATURE APPLICATIONS
- IDEAL FOR CRITICAL SERVICES AND VIBRATION-PRONE SYSTEMS

SIZE RANGE:

- STANDARD SIZES: $\frac{1}{2}$ " TO 60" (DN15 TO DN1500)
- CUSTOM SIZES: AVAILABLE ON REQUEST FOR SPECIAL APPLICATIONS

PRESSURE CLASS:

- ANSI/ASME RATINGS: CLASS 150, 300, 400, 600, 900, 1500, 2500
- DIN/EN RATINGS: PN10, PN16, PN25, PN40, PN64
- SUITABLE FOR HIGH-PRESSURE SYSTEMS, DEPENDING ON MATERIAL AND SCHEDULE

END CONNECTIONS:

- BUTT WELD END (INTEGRAL TO FLANGE DESIGN)
- MATCHES PIPE SCHEDULE FOR SEAMLESS WELDING
- MACHINED TO MATCH PIPE BORE (FOR SMOOTH FLOW AND REDUCED TURBULENCE)

BODY MATERIALS:

- CARBON STEEL: ASTM A105, A350 LF2
- STAINLESS STEEL: SS304 / SS316 / SS321 / DUPLEX
- ALLOY STEEL: ASTM A182 F11, F22, F91
- NICKEL ALLOYS, COPPER ALLOYS, TITANIUM, AS PER SERVICE NEEDS

SEALING FACE TYPES:

- RAISED FACE (RF)
- RING-TYPE JOINT (RTJ)
- FLAT FACE (FF)
- MALE-FEMALE (M/F)
- TONGUE AND GROOVE (T&G)

STANDARDS:

- DESIGN & DIMENSIONS:
- ASME B16.5 (UP TO 24")
- ASME B16.47 (ABOVE 24")
- EN 1092-1 (EUROPEAN STANDARD)
- ISO 7005-1
- BS 4504

TESTING STANDARDS:

- API 598
- EN 12266
- MSS SP-44

MATERIALS & WELDING:

- ASME SECTION IX (WELDING)
- ASTM MATERIAL SPECIFICATIONS

APPLICATIONS:

- OIL & GAS
- PETROCHEMICAL
- POWER GENERATION
- HIGH-PRESSURE STEAM LINES
- OFFSHORE PLATFORMS
- CRYOGENIC AND HIGH-TEMPERATURE SERVICES

WELD NECK FLANGE (WN) DESCRIPTION

A WELD NECK FLANGE (WN) IS A HIGH-STRENGTH FLANGE DESIGNED WITH A LONG TAPERED HUB THAT IS BUTT-WELDED TO A PIPE. IT PROVIDES EXCELLENT STRESS DISTRIBUTION AND IS IDEAL FOR HIGH-PRESSURE, HIGH-TEMPERATURE, AND CRITICAL APPLICATIONS. COMMONLY USED IN OIL & GAS, POWER PLANTS, AND PETROCHEMICAL INDUSTRIES, IT ENSURES A SECURE, LEAK-PROOF CONNECTION AND MINIMIZES TURBULENCE AND EROSION AT THE JOINT.



2. SLIP-ON FLANGE (SO)

TYPE:

- SLIDES OVER THE PIPE AND IS FILLET-WELDED ON BOTH THE INNER AND OUTER EDGES
- NO TAPERED HUB; FLAT FACE RESTS ON THE PIPE
- EASIER ALIGNMENT THAN WELD NECK FLANGES
- SUITABLE FOR LOW- TO MEDIUM-PRESSURE AND NON-CRITICAL APPLICATIONS

SIZE RANGE:

- STANDARD SIZES: $\frac{1}{2}$ " TO 48" (DN15 TO DN1200)
- CUSTOM SIZES: AVAILABLE ON REQUEST FOR SPECIAL APPLICATIONS

PRESSURE CLASS:

- ANSI/ASME RATINGS: CLASS 150, 300, 400, 600
- DIN/EN RATINGS: PN10, PN16, PN25, PN40
- TYPICALLY USED IN SYSTEMS WITH MODERATE PRESSURE AND TEMPERATURE CONDITIONS

END CONNECTIONS:

- DESIGNED TO BE WELDED ONTO PIPE ENDS
- MATCHES PIPE OD, NOT ID (REQUIRES ACCURATE PIPE FITMENT)
- NOT SUITABLE FOR BEVELED WELDS LIKE BUTT-WELD TYPES

BODY MATERIALS:

- CARBON STEEL: ASTM A105, A350 LF2
- STAINLESS STEEL: SS304 / SS316 / SS321 / DUPLEX
- ALLOY STEEL: ASTM A182 F11, F22
- OTHER ALLOYS: COPPER ALLOYS, NICKEL ALLOYS, CAST IRON, DUCTILE IRON, ETC.

SEALING FACE TYPES:

- RAISED FACE (RF)
- FLAT FACE (FF)
- RING-TYPE JOINT (RTJ) (LESS COMMON FOR SO)

STANDARDS:

- DESIGN & DIMENSIONS:
- ASME B16.5 (UP TO 24")
- EN 1092-1 (EUROPEAN STANDARD)
- BS 4504
- ISO 7005-1

TESTING STANDARDS:

- API 598
- EN 12266

MATERIALS & WELDING:

- ASTM SPECIFICATIONS
- ASME SECTION IX (WELDING)

APPLICATIONS:

- WATER AND WASTEWATER SYSTEMS
- FIRE PROTECTION SYSTEMS
- HVAC AND GENERAL INDUSTRIAL PIPING
- NON-CRITICAL OIL & GAS OR CHEMICAL SYSTEMS
- IDEAL WHERE FREQUENT DISASSEMBLY OR COST-EFFECTIVE INSTALLATION IS REQUIRED

SLIP-ON FLANGE (SO) DESCRIPTION

A SLIP-ON FLANGE (SO) IS A FLANGE THAT SLIDES OVER THE PIPE AND IS FILLET-WELDED ON BOTH THE INSIDE AND OUTSIDE TO PROVIDE STRENGTH AND PREVENT LEAKAGE. IT IS EASY TO ALIGN AND INSTALL, MAKING IT IDEAL FOR LOW- TO MEDIUM-PRESSURE APPLICATIONS. COMMONLY USED IN WATER, HVAC, AND INDUSTRIAL SYSTEMS, SLIP-ON FLANGES ARE COST-EFFECTIVE AND SUITABLE WHERE WELDING PRECISION IS LESS CRITICAL.



3. SOCKET WELD FLANGE (SW)

TYPE:

- FEATURES A RECESSED SOCKET INTO WHICH THE PIPE IS INSERTED
- FILLET-WELDED ONLY ON THE OUTER SIDE
- PROVIDES A SMOOTH BORE AND GOOD FLOW CHARACTERISTICS
- SUITABLE FOR SMALL-BORE, HIGH-PRESSURE PIPING SYSTEMS

SIZE RANGE:

- STANDARD SIZES: $\frac{1}{2}$ " TO 4" (DN15 TO DN100)
- NOTE: TYPICALLY USED FOR SMALL-DIAMETER PIPES ONLY
- CUSTOM SIZES: AVAILABLE UPON REQUEST

PRESSURE CLASS:

- ANSI/ASME RATINGS: CLASS 150, 300, 600, 900, 1500
- DIN/EN RATINGS: PN10, PN16, PN25, PN40
- SUITABLE FOR MODERATE TO HIGH-PRESSURE AND TEMPERATURE APPLICATIONS

END CONNECTIONS:

- SOCKET WELD CONNECTION
- PIPE IS INSERTED INTO A SOCKET AND FILLET-WELDED EXTERNALLY
- PROVIDES A STRONG, LEAK-PROOF JOINT FOR SMALL SIZES
- NOT SUITABLE FOR CYCLIC OR DYNAMIC LOADING DUE TO FILLET WELDS

BODY MATERIALS:

- CARBON STEEL: ASTM A105, A350 LF2
- STAINLESS STEEL: SS304 / SS316 / SS321 / DUPLEX
- ALLOY STEEL: ASTM A182 F11, F22
- OTHER MATERIALS: BRASS, BRONZE, COPPER ALLOYS, NICKEL ALLOYS (ON REQUEST)

SEALING FACE TYPES:

- RAISED FACE (RF)
- FLAT FACE (FF)
- RING-TYPE JOINT (RTJ)

STANDARDS:

- DESIGN & DIMENSIONS:
- ASME B16.5 (UP TO 24")
- EN 1092-1
- ISO 7005-1
- BS 4504

TESTING STANDARDS:

- API 598
- EN 12266

MATERIALS & WELDING:

- ASTM SPECIFICATIONS
- ASME SECTION IX (WELDING PROCEDURES)

APPLICATIONS:

- HIGH-PRESSURE STEAM SYSTEMS
- CHEMICAL AND PETROCHEMICAL PLANTS
- POWER GENERATION
- HYDRAULIC AND COMPRESSED AIR SYSTEMS
- IDEAL FOR SMALL PIPE SIZES IN HIGH-INTEGRITY SERVICES

SOCKET WELD FLANGE (SW) DESCRIPTION

A SOCKET WELD FLANGE (SW) IS DESIGNED FOR SMALL-DIAMETER, HIGH-PRESSURE PIPING SYSTEMS. IT FEATURES A RECESSED SOCKET INTO WHICH THE PIPE IS INSERTED AND FILLET-WELDED AROUND THE OUTER EDGE. THIS DESIGN PROVIDES A STRONG, LEAK-RESISTANT JOINT WITH SMOOTH FLOW CHARACTERISTICS. COMMONLY USED IN STEAM, HYDRAULIC, AND CHEMICAL SYSTEMS, SOCKET WELD FLANGES ARE IDEAL WHERE SPACE IS LIMITED AND HIGH INTEGRITY IS REQUIRED.



4. THREADED FLANGE (TH OR SCRD)

TYPE:

- INTERNAL THREADS ALLOW THE FLANGE TO BE SCREWED ONTO THE PIPE WITHOUT WELDING
- COMMONLY USED IN LOW-PRESSURE AND NON-CRITICAL APPLICATIONS
- IDEAL FOR FLAMMABLE OR EXPLOSIVE ENVIRONMENTS WHERE WELDING IS NOT SAFE
- ALSO KNOWN AS SCREWED FLANGE (SCRD)

SIZE RANGE:

- STANDARD SIZES: $\frac{1}{2}$ " TO 4" (DN15 TO DN100)
- CUSTOM SIZES: AVAILABLE UPON REQUEST

PRESSURE CLASS:

- ANSI/ASME RATINGS: CLASS 150, 300, 600
- DIN/EN RATINGS: PN10, PN16, PN25
- TYPICALLY USED IN LOW- TO MODERATE-PRESSURE SYSTEMS

END CONNECTIONS:

- THREADED (SCREWED) CONNECTION – NO WELDING REQUIRED
- STANDARD THREADS: NPT (NATIONAL PIPE THREAD) OR BSP (BRITISH STANDARD PIPE)
- OPTIONAL SEAL WELD CAN BE APPLIED FOR EXTRA STRENGTH OR LEAK PROTECTION

BODY MATERIALS:

- CARBON STEEL: ASTM A105, A350 LF2
- STAINLESS STEEL: SS304 / SS316 / SS321
- ALLOY STEEL: ASTM A182 F11, F22
- OTHER MATERIALS: BRASS, BRONZE, COPPER ALLOYS, PVC, GUNMETAL (FOR SPECIAL APPLICATIONS)

SEALING FACE TYPES:

- RAISED FACE (RF)
- FLAT FACE (FF)
- RING-TYPE JOINT (RTJ) (LESS COMMON FOR THREADED FLANGES)

STANDARDS:

- DESIGN & DIMENSIONS:
- ASME B16.5 (UP TO 24")
- EN 1092-1
- ISO 7005-1
- BS 4504

THREAD STANDARDS:

- ASME B1.20.1 (NPT)
- ISO 7-1 / EN 10226 (BSPT/BSPP)

TESTING STANDARDS:

- API 598
- EN 12266

APPLICATIONS:

- LOW-PRESSURE SYSTEMS
- FUEL, GAS, AND EXPLOSIVE ENVIRONMENTS
- COMPRESSED AIR AND INSTRUMENTATION LINES
- PLUMBING AND UTILITY SERVICES
- TEMPORARY OR EASILY DISASSEMBLED PIPING SYSTEMS

THREADED FLANGE DESCRIPTION

A THREADED FLANGE (ALSO KNOWN AS A SCREWED FLANGE OR SCRD FLANGE) IS DESIGNED WITH INTERNAL THREADS THAT ALLOW IT TO BE SCREWED DIRECTLY ONTO A PIPE WITHOUT THE NEED FOR WELDING. IT IS IDEAL FOR LOW-PRESSURE AND NON-CRITICAL APPLICATIONS, ESPECIALLY IN FLAMMABLE OR EXPLOSIVE ENVIRONMENTS WHERE WELDING IS HAZARDOUS. COMMONLY USED IN FUEL LINES, COMPRESSED AIR SYSTEMS, AND UTILITY PIPING.



5. BLIND FLANGE (BL)

TYPE:

- SOLID FLANGE WITH NO BORE
- USED TO SEAL THE END OF A PIPING SYSTEM OR PRESSURE VESSEL
- PROVIDES EASY ACCESS FOR INSPECTION, PRESSURE TESTING, MAINTENANCE, OR FUTURE SYSTEM EXPANSION
- SUITABLE FOR HIGH-PRESSURE AND HIGH-STRESS ENVIRONMENTS

SIZE RANGE:

- STANDARD SIZES: $\frac{1}{2}$ " TO 60" (DN15 TO DN1500)
- CUSTOM SIZES: AVAILABLE UPON REQUEST
- OFTEN USED ON LARGER DIAMETER PIPES DUE TO ITS SEALING CAPABILITY

PRESSURE CLASS:

- ANSI/ASME RATINGS: CLASS 150, 300, 400, 600, 900, 1500, 2500
- DIN/EN RATINGS: PN10, PN16, PN25, PN40, PN64
- SUITABLE FOR LOW TO EXTREMELY HIGH-PRESSURE SYSTEMS

END CONNECTIONS:

- BOLTED TO MATING FLANGES
- SEALED USING A GASKET BETWEEN FLANGE FACES
- COMPATIBLE WITH:
- RAISED FACE (RF)
- FLAT FACE (FF)
- RING-TYPE JOINT (RTJ)

BODY MATERIALS:

- CARBON STEEL: ASTM A105, A350 LF2
- STAINLESS STEEL: SS304 / SS316 / SS321 / DUPLEX
- ALLOY STEEL: ASTM A182 F11, F22, F91
- OTHER MATERIALS: CAST IRON, DUCTILE IRON, BRONZE, BRASS, COPPER ALLOYS, NICKEL ALLOYS

SEALING FACE TYPES:

- RAISED FACE (RF)
- FLAT FACE (FF)
- RING-TYPE JOINT (RTJ)
- TONGUE & GROOVE (T&G) (LESS COMMON)

STANDARDS:

- DESIGN & DIMENSIONS:
- ASME B16.5 (UP TO 24")
- ASME B16.47 (FOR SIZES ABOVE 24")
- EN 1092-1
- ISO 7005-1
- BS 4504

TESTING STANDARDS:

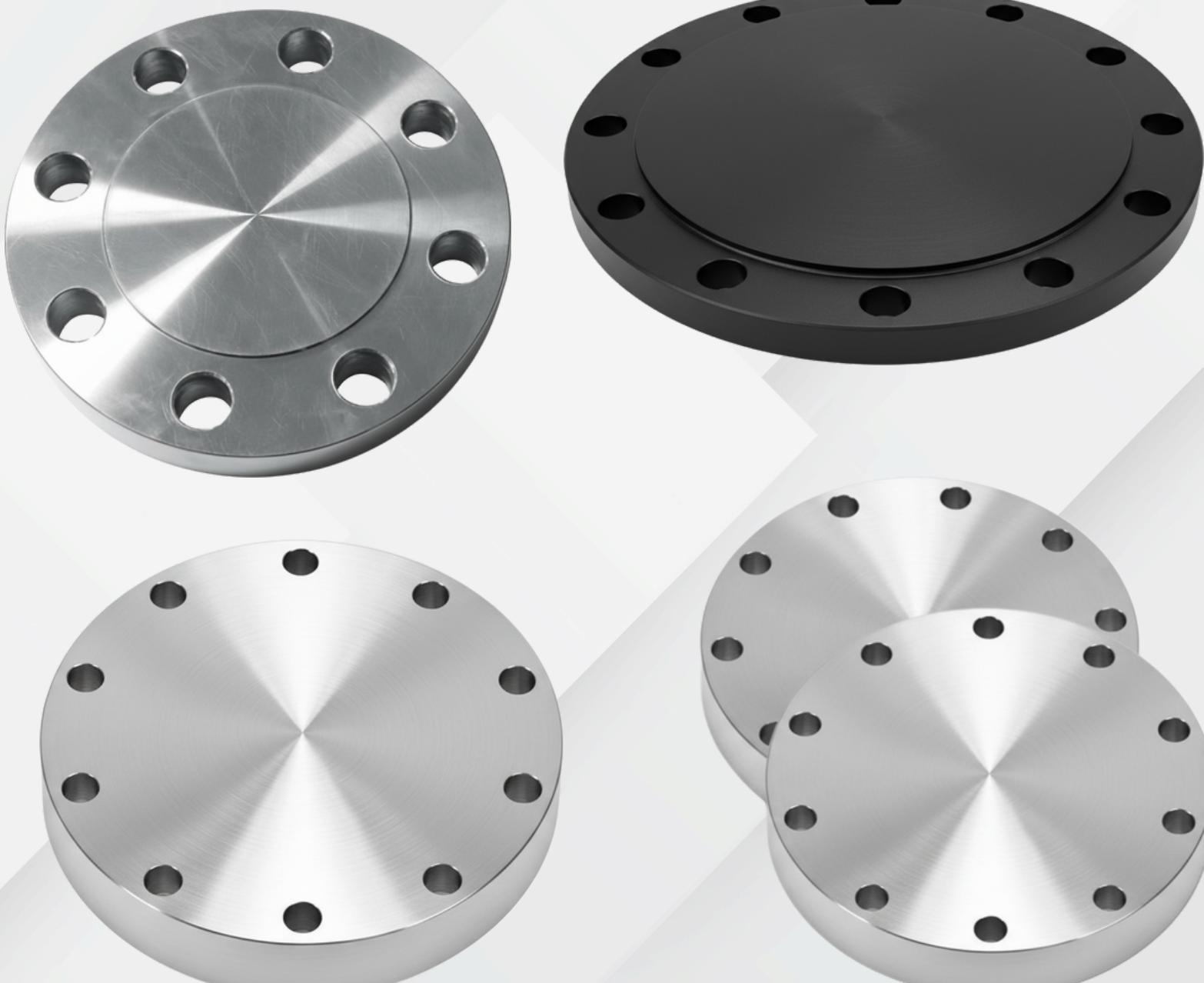
- API 598
- EN 12266

APPLICATIONS:

- PRESSURE VESSEL HEADS
- PIPELINE TERMINATIONS
- HYDROSTATIC TESTING OF PIPELINE SECTIONS
- TEMPORARY OR PERMANENT PIPE SYSTEM CLOSURE
- OIL & GAS, CHEMICAL, WATER TREATMENT, AND POWER INDUSTRIES

BLIND FLANGE (BL) DESCRIPTION

A BLIND FLANGE (BL) IS A SOLID FLANGE USED TO CLOSE THE END OF A PIPE, VALVE, OR PRESSURE VESSEL OPENING. IT HAS NO BORE AND IS BOLTED IN PLACE TO ALLOW EASY ACCESS TO THE PIPING SYSTEM FOR INSPECTION, MAINTENANCE, OR FUTURE EXPANSION. IDEAL FOR HIGH-PRESSURE APPLICATIONS, BLIND FLANGES PROVIDE A STRONG, LEAK-PROOF SEAL AND ARE COMMONLY USED IN INDUSTRIES LIKE OIL & GAS, POWER GENERATION, AND PETROCHEMICALS.



6. LAP JOINT FLANGE (LJ)

TYPE:

- TWO-PIECE DESIGN CONSISTING OF:
- A LAP JOINT FLANGE (LOOSE FLANGE)
- A STUB END (WELDED TO THE PIPE)
- THE FLANGE IS NOT WELDED OR FIXED TO THE PIPE – IT ROTATES FREELY AROUND THE STUB END
- IDEAL FOR APPLICATIONS REQUIRING FREQUENT DISMANTLING, ALIGNMENT, OR SPACE ADJUSTMENTS

SIZE RANGE:

- STANDARD SIZES: $\frac{1}{2}$ " TO 24" (DN15 TO DN600)
- CUSTOM SIZES: AVAILABLE ON REQUEST
- ESPECIALLY COST-EFFECTIVE FOR LARGER DIAMETERS

PRESSURE CLASS:

- ANSI/ASME RATINGS: CLASS 150, 300, 600
- DIN/EN RATINGS: PN10, PN16, PN25, PN40
- GENERALLY SUITABLE FOR LOW TO MODERATE-PRESSURE APPLICATIONS

END CONNECTIONS:

- REQUIRES A STUB END WHICH IS BUTT-WELDED TO THE PIPE
- FLANGE CAN ROTATE TO ALLOW EASY BOLT HOLE ALIGNMENT
- SEALED WITH A GASKET BETWEEN MATING FACES

BODY MATERIALS:

- CARBON STEEL: ASTM A105, A36
- STAINLESS STEEL: SS304 / SS316
- ALUMINUM, NICKEL ALLOYS, AND OTHER NON-CORROSIVE MATERIALS FOR SPECIFIC APPLICATIONS

SEALING FACE TYPES:

- TYPICALLY FLAT FACE (FF)
- ALSO AVAILABLE IN RAISED FACE (RF) VERSIONS
- THE ACTUAL SEAL IS ON THE STUB END FACE, NOT THE FLANGE

STANDARDS:

- DESIGN & DIMENSIONS:
- ASME B16.5 (UP TO 24")
- EN 1092-1
- ISO 7005-1
- BS 4504

TESTING STANDARDS:

- API 598
- EN 12266

MATERIALS & WELDING:

- ASTM MATERIAL STANDARDS
- ASME SECTION IX (STUB END WELDING)

APPLICATIONS:

- SYSTEMS REQUIRING FREQUENT DISASSEMBLY OR INSPECTION
- PIPING SYSTEMS WITH CORROSIVE MEDIA (USING STAINLESS STUB ENDS WITH CARBON STEEL FLANGES)
- FOOD PROCESSING, PHARMACEUTICALS, SHIPBUILDING, AND CHEMICAL INDUSTRIES
- LARGE DIAMETER OR EXPENSIVE PIPING MATERIALS TO REDUCE COSTS

LAP JOINT FLANGE (LJ) DESCRIPTION

A LAP JOINT FLANGE (LJ) IS A TWO-PIECE FLANGE SYSTEM USED WITH A STUB END THAT IS WELDED TO THE PIPE. THE FLANGE ITSELF REMAINS LOOSE AND CAN ROTATE FREELY, MAKING IT IDEAL FOR FREQUENT ASSEMBLY/DISASSEMBLY AND EASY BOLT ALIGNMENT. OFTEN USED IN CORROSIVE OR HIGH-MAINTENANCE ENVIRONMENTS, IT ALLOWS COST SAVINGS BY USING A CORROSION-RESISTANT STUB END AND A LOWER-GRADE BACKING FLANGE.



7. ORIFICE FLANGE

TYPE:

- SPECIALIZED FLANGE ASSEMBLY USED WITH AN ORIFICE PLATE TO MEASURE FLUID FLOW RATE IN A PIPELINE
- TYPICALLY SUPPLIED AS A PAIR OF FLANGES WITH:
- PRESSURE TAP HOLES (FOR DIFFERENTIAL PRESSURE MEASUREMENT)
- JACK SCREWS (TO SEPARATE THE FLANGES FOR ORIFICE PLATE REMOVAL)
- USED IN CONJUNCTION WITH FLOW METERS OR TRANSMITTERS

SIZE RANGE:

- STANDARD SIZES: 1" TO 24" (DN25 TO DN600)
- CUSTOM SIZES: AVAILABLE FOR LARGER OR SPECIALTY APPLICATIONS
- MATCHES SAME SIZE RANGE AS ASSOCIATED PIPING AND FLOW EQUIPMENT

PRESSURE CLASS:

- ANSI/ASME RATINGS: CLASS 150, 300, 600, 900, 1500, 2500
- DIN/EN RATINGS: PN10, PN16, PN25, PN40, PN64
- PRESSURE RATING MUST MATCH THE PIPING SYSTEM AND PROCESS CONDITIONS

END CONNECTIONS:

- USUALLY FLANGED (COMPATIBLE WITH STANDARD WELD NECK OR SLIP-ON TYPES)
- BOLTED TO STANDARD PIPE FLANGES OR FITTINGS
- COMES WITH TAPPED PORTS (1/4" NPT OR SIMILAR) FOR PRESSURE MEASUREMENT INSTRUMENTS

BODY MATERIALS:

- CARBON STEEL: ASTM A105, A350 LF2
- STAINLESS STEEL: SS304 / SS316 / DUPLEX
- ALLOY STEEL: ASTM A182 F11, F22
- OTHER MATERIALS: AVAILABLE BASED ON PROCESS MEDIA (E.G., HASTELLOY, MONEL)

SEALING FACE TYPES:

- RAISED FACE (RF)
- RING-TYPE JOINT (RTJ) (COMMONLY USED IN HIGH-PRESSURE SERVICES)
- GASKET TYPE DEPENDS ON THE APPLICATION AND PRESSURE RATING

STANDARDS:

- DESIGN & DIMENSIONS:
- ASME B16.36 – STANDARD FOR ORIFICE FLANGES
- COMPATIBLE WITH ASME B16.5 AND B16.47 DIMENSIONS
- EN 1092-1 (FOR METRIC SYSTEMS)

TESTING & MEASUREMENT STANDARDS:

- API 598 (PRESSURE TESTING)
- ISO 5167 (ORIFICE FLOW MEASUREMENT)
- EN 12266 (LEAK TESTING)

APPLICATIONS:

- FLOW MEASUREMENT OF GASES, STEAM, OR LIQUIDS
- USED IN OIL & GAS, CHEMICAL PLANTS, POWER GENERATION, AND WATER TREATMENT SYSTEMS
- INSTALLED WITH ORIFICE PLATES AND DIFFERENTIAL PRESSURE TRANSMITTERS
- SUITABLE FOR BOTH CLEAN AND MODERATELY DIRTY PROCESS FLUIDS

ORIFICE FLANGE DESCRIPTION

AN ORIFICE FLANGE IS A SPECIALIZED FLANGE USED FOR FLOW MEASUREMENT IN PIPELINES. IT IS DESIGNED TO HOLD AN ORIFICE PLATE AND INCLUDES PRESSURE TAP HOLES TO MEASURE DIFFERENTIAL PRESSURE ACROSS THE PLATE. COMMONLY USED IN OIL & GAS, CHEMICAL, AND UTILITY SYSTEMS, IT PROVIDES ACCURATE FLOW MONITORING AND IS BUILT TO WITHSTAND HIGH-PRESSURE ENVIRONMENTS. ORIFICE FLANGES ARE MANUFACTURED PER ASME B16.36 AND ARE COMPATIBLE WITH STANDARD PIPING FLANGES.



8. PLATE FLANGE

TYPE:

- A FLAT, CIRCULAR DISC WITH BOLT HOLES AROUND THE PERIMETER AND A CENTRAL BORE
- TYPICALLY MADE FROM A SINGLE METAL PLATE, WITHOUT A HUB OR TAPER
- WELDED DIRECTLY TO THE PIPE (USUALLY VIA A FILLET WELD)
- ECONOMICAL AND SIMPLE DESIGN, SUITABLE FOR LOW-PRESSURE, NON-CRITICAL APPLICATIONS

SIZE RANGE:

- STANDARD SIZES: $\frac{1}{2}$ " TO 48" (DN15 TO DN1200)
- CUSTOM SIZES: AVAILABLE UPON REQUEST
- WIDELY USED IN LIGHT-DUTY AND GENERAL-PURPOSE PIPING SYSTEMS

PRESSURE CLASS:

- ANSI/ASME RATINGS: CLASS 150, 300 (TYPICALLY UP TO CLASS 300)
- DIN/EN RATINGS: PN6, PN10, PN16, PN25
- NOT RECOMMENDED FOR HIGH-PRESSURE OR HIGH-TEMPERATURE SERVICES

END CONNECTIONS:

- WELDED CONNECTION – USUALLY FILLET-WELDED TO THE PIPE'S OUTER SURFACE
- EASY TO FABRICATE AND INSTALL
- NO BEVELING REQUIRED (UNLIKE WELD NECK FLANGES)

BODY MATERIALS:

- CARBON STEEL: ASTM A105, A36
- STAINLESS STEEL: SS304 / SS316
- MILD STEEL, GALVANIZED STEEL, ALLOY STEEL
- ALSO AVAILABLE IN ALUMINUM, BRONZE, AND CAST IRON FOR SPECIFIC INDUSTRIES

SEALING FACE TYPES:

- FLAT FACE (FF) (MOST COMMON FOR PLATE FLANGES)
- RAISED FACE (RF) (AVAILABLE BUT LESS TYPICAL FOR PLATE FLANGES)

STANDARDS:

- DESIGN & DIMENSIONS:
- EN 1092-1 TYPE 01 (PLATE FLANGE - PLAIN)
- ASME B16.5 (RARE; PLATE FLANGES ARE MORE COMMON UNDER EN STANDARDS)
- BS 4504
- ISO 7005-1

TESTING STANDARDS:

- EN 12266
- API 598 (FOR SYSTEM PRESSURE TESTING)

APPLICATIONS:

- LOW-PRESSURE WATER PIPELINES
- FIRE PROTECTION SYSTEMS
- GENERAL INDUSTRIAL OR STRUCTURAL PIPING
- HVAC, IRRIGATION, AND UTILITY NETWORKS
- COMMON IN NON-CRITICAL AND COST-SENSITIVE PROJECTS

PLATE FLANGE DESCRIPTION

A PLATE FLANGE IS A SIMPLE, FLAT FLANGE MADE FROM A SINGLE METAL PLATE, USED TO CONNECT PIPES OR EQUIPMENT IN LOW-PRESSURE PIPING SYSTEMS. IT IS FILLET-WELDED DIRECTLY TO THE PIPE AND FEATURES BOLT HOLES FOR SECURE FASTENING. DUE TO ITS COST-EFFECTIVENESS AND EASE OF FABRICATION, PLATE FLANGES ARE WIDELY USED IN WATER SUPPLY, HVAC, FIRE PROTECTION, AND GENERAL INDUSTRIAL SERVICES WHERE HIGH PRESSURE AND TEMPERATURE ARE NOT A CONCERN.



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