

Fittings Basics

Flanges

A protruding rim, edge, rib, or collar, as on a wheel or a pipe shaft, used to strengthen an object, hold it in place, or attach it to another object.

> **Bonney Tank Flanges Stamped Tank Flanges** Thread-0-let

Raised Face Slip-on Flange bonney tank flange

Raised Face Weld Neck Flange - raised face on one side, weld neck on other

Blind Flange

Plate Flange - cut from plate

Class D Flange - no features, same as plate flange

Threaded Flange - threaded on inside









thread-o-let



raised face slip on



raised face weld neck



blind flange



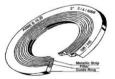
class D flange

Gaskets A mechanical seal which fills the space between two or more mating surfaces, generally to prevent leakage from or into the joined objects while under compression.

> 150# Full Face Fiber Gasket 150# Spiral Wound Gasket



full face fiber gasket



spiral wound gasket

Valves

A valve is a device that regulates, directs or controls the flow of a fluid (gases, liquids, fluidized solids, or slurries) by opening, closing, or partially obstructing various passageways.

Brass Ball Valve - simple in-line valve, has ball with hole inside

Brass Gate Valve - has a blade shape inside to regulate flow

Wafer Butterfly Valve - has round plate inside to regulate flow

Lug Butterfly Valve - has lug pattern on outside Gear Operator - standard on 6" and bigger



brass ball valve



brass gate valve



wafer butterfly valve



lug butterfly valve



gear operator shown on lug valve



Fittings Basics

Elbows, Tees, Reducers

As a general rule, black fittings are weld ends, galv fittings are threaded

Long Raduis Elbow $90^{*}\,$ - can be ordered in short radius or sweep (bigger radius)

Long Raduis Elbow 45*

Tee - can be all same size or a reducing tee

Concentric Reducer - symetrical Eccentric Reducer - offset

Bell Reducer - same as concentric but would imply there are threads



long radius 90*



long radius 45*



tee



concentric reducer



eccentric reducer

Unions and Couplers

Hammer Union - tightened by hammering protusion on ring

Threaded Hex Union - tightend with hex nut

Coupling - usually threaded

Half Coupling - same as coupling but not as long

Grooved Coupling - commenly referred to as Victaulic (brand name)



hammer union



threaded hex union



coupling



grooved coupling

Misc

Cap - black is weldable, galv is threaded

Square Head Plug - threaded plug with square head

Hex Plug - threaded plug with hex head



butt weld cap



square head cap



hex head cap