

# 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-O-let
- Raised Face Slip-on 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



bonney tank flange



stamped tank flange



thread-o-let



raised face slip on



raised face weld neck



blind flange



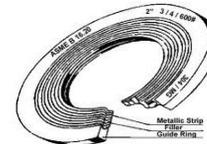
class D flange

**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 Radius Elbow 90\* - *can be ordered in short radius or sweep (bigger radius)*

Long Radius Elbow 45\*

Tee - *can be all same size or a reducing tee*

Concentric Reducer - *symmetrical*

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

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## 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

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## 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