

# FLANGES, TEES AND CROSSES, SPOOLS AND ADAPTERS







## Quality and Innovation

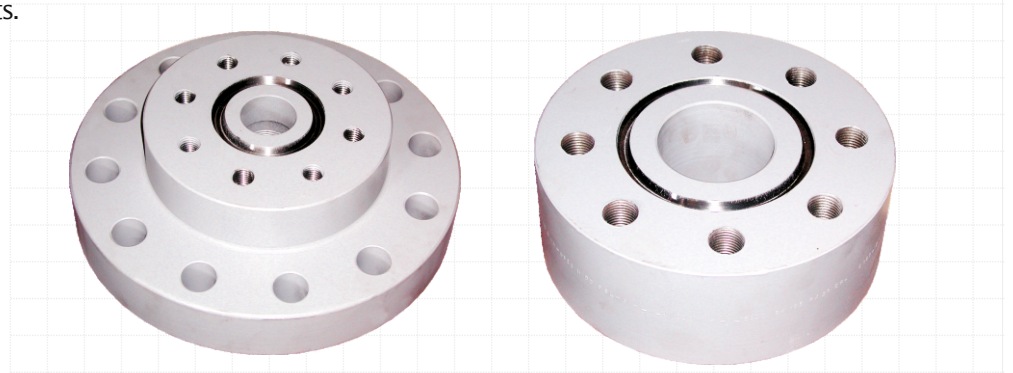


Sara manufactures a diverse range of oilfield equipment in its manufacturing facility in India, using the latest design techniques and CNC machines. These products are available through distributors worldwide, including Sara's subsidiary company (STS Products, Inc.) in Houston and various Sara locations.



## Spools and Adapters

Sara manufactures a wide range of Spools and Adapter Flanges conforming to API-16 A and 6A and in line with specific customer requirements.



### Weldneck Flanges

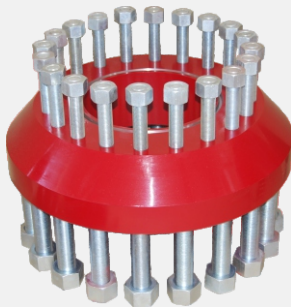
API Specified 6B Weld Neck Flanges have restricted bores to match standard pipe sizes and schedules. API Spec 6A Specified, 6 BX Weld Neck Flanges, have material and dimensions that conform to the requirements for full bore integral flanges. API Spec 6A does not specify overall length of 6BX Weld Neck Flanges, but instead provides dimensions of specific portions of the flange, with tolerance, that are added together, along with an undefined weld bevel, to achieve a length. Customers may specify weld neck length if required.



Weld Neck Flanges  
Order Formula: Nominal size, working pressure and pipe schedule

### Adapter Flanges

Sara manufactures Adapter Flanges in all sizes and pressure ratings. Popular Adapter Flanges are Double studded adapter flanges, companion flanges, flange x union adapters. Customers may use Adapter Flanges for transition in nominal size and/or pressure rating. Sara Adapter Flanges have minimum overall heights, or customer specified thicknesses, consistent with design considerations.



Double Studded Adapter Flange



Companion Flange



Flange to Union Crossover



## Spools and Adapters

### Swivel Flanges

The Swivel Flange permits 360° rotation of an outer ring around a hub. Swivel Flanges can be designed for any size and pressure rating.



Swivel Flange

### Adapter Spools

Sara manufactures Adapter Spools in every size and pressure rating. Adapter Spools have end connections that differ from one another in nominal size and/or pressure rating.

### Spacer Spools

Sara manufactures Spacer Spools in all sizes and pressure ratings suitable for Well Head extension, BOP spacing, and Choke, Kill, and Production Manifold applications. Spacer Spools usually have the same nominal end connections. Spacer Spool identification consists of naming each end connection and the overall length. Sara Spacer Spools usually do not have outlets, but customers may specify outlets.

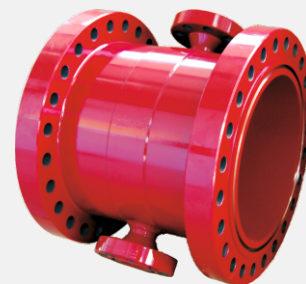


Spacer/Adapter Spool

### Drilling Spools

Sara manufactures Drilling Spools in every size and pressure rating. Drilling spools usually have the same nominal end connections and the same nominal outlet connections.

Customers may specify any combination of end connections and outlet connections as well as overall height or length (OAL) and outlet extension. When specified 'minimum height (or length)', Sara Adapter Spools, Drilling Spools and Spacer Spools have minimum overall height (or length) consistent with adequate clearance to accommodate studs, nuts, wrenches, and clamps where applicable.



Drilling Spool



## Flanges, Tees and Crosses

Sara manufactures a wide range of high pressure flanges, tees, crosses and conforming to API 6A and in line with specific customer requirements.



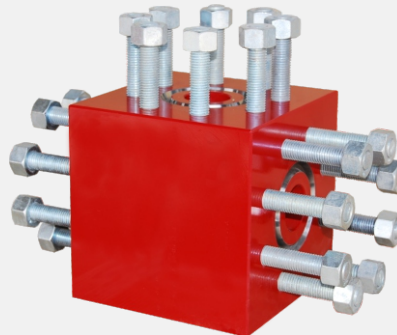
### Studded Crosses and Tees

Sara manufactures Studded Crosses and Tees according to the designs and tables in API Spec 6A.

### Flanged Crosses and Tees

Sara manufactures Flange Crosses and Tees according to the design requirements and face to centerline requirements of API Spec 6A.

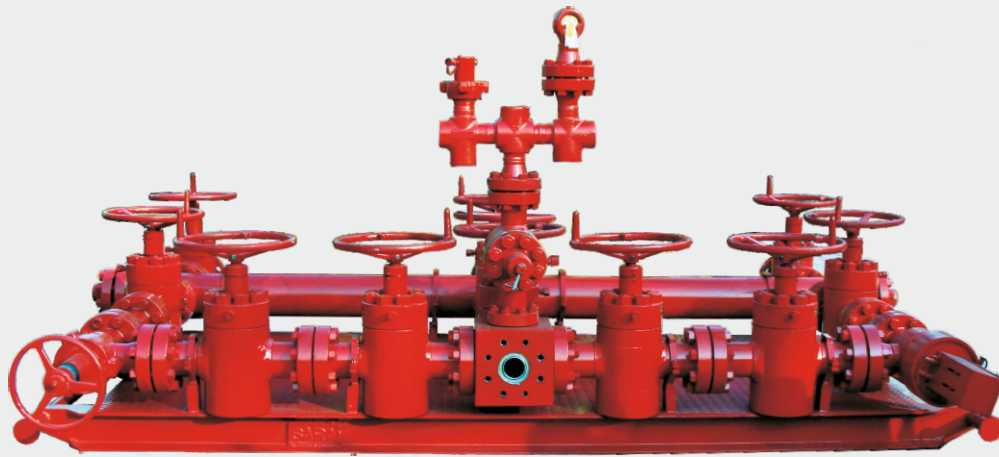
When specific nominal sizes and combinations of nominal sizes do not appear in API Spec 6A, Sara shall manufacture Studded / Flanged Crosses and Tees according to the design criteria provided in API Spec 6A.



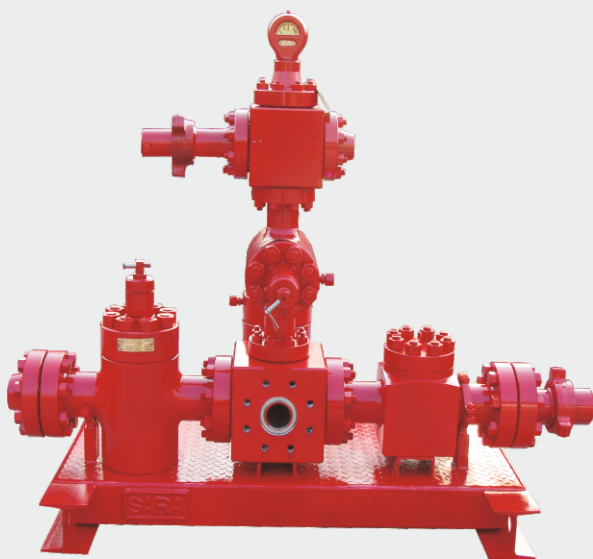
**Studded Tees**  
Order Formula: Nominal  
size and working pressure

## Manifolds

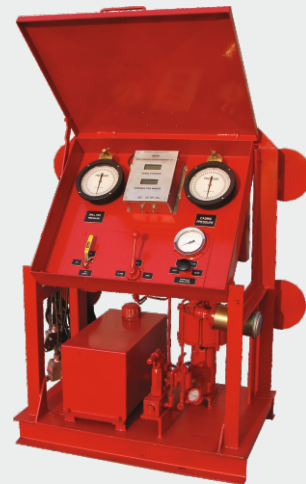
Sara manufactures a range of Manifolds for applications like choke and kill, standpipe and high pressure pumping in sizes up to 4-1/16" and pressures up to 15,000 PSI. Customized manifolds to specific requirements can be ordered.



Choke Manifold



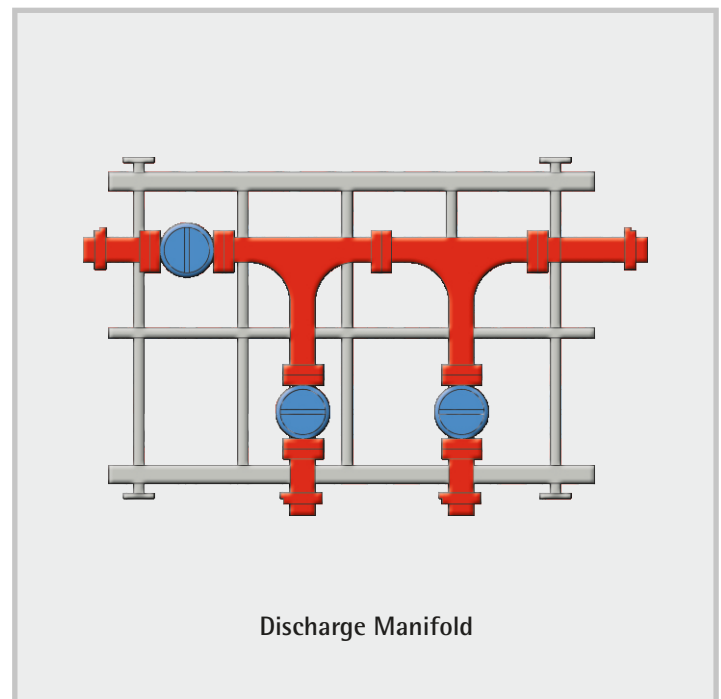
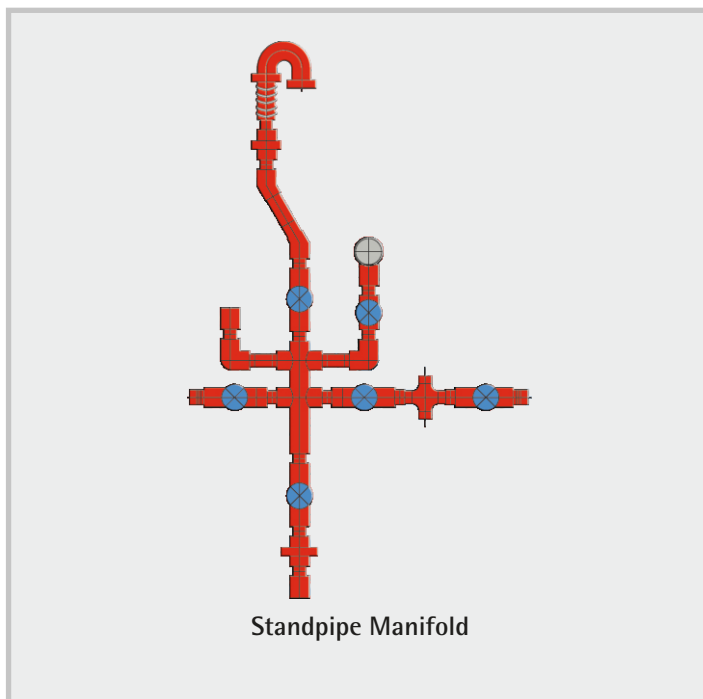
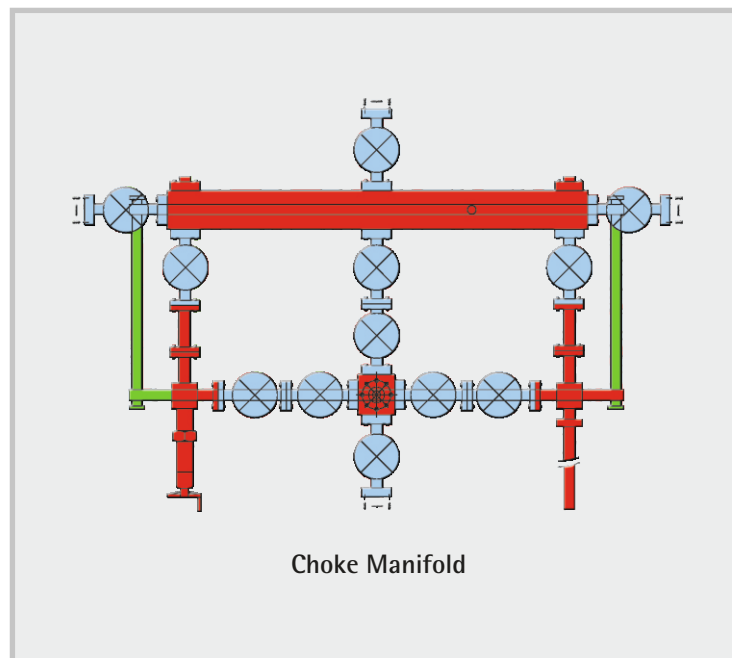
Kill Manifold



Console



# Manifolds





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