

A GRAPHICAL SYMBOLS FOR PIPING SYSTEMS AND PLANT

BASED ON BS 1553: PART 1: 1977

Scope

This part of BS 1553 specifies graphical symbols for use in flow and piping diagrams for process plant.



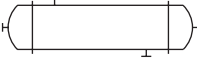
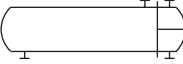
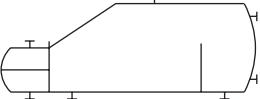
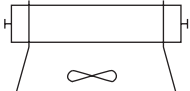

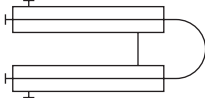

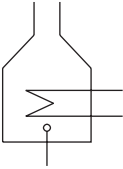
Symbols (or elements of Symbols) for Use in Conjunction with Other Symbols

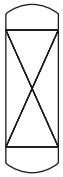
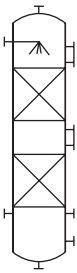
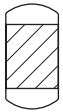
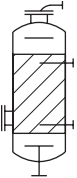
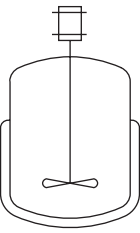
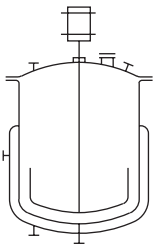
Mechanical linkage	
Weight device	
Electrical device	
Vibratory or loading device (any type)	
Spray device	
Rotary movement	
Stirring device	
Fan	



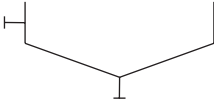
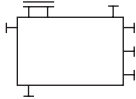

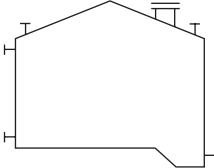
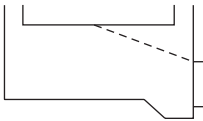
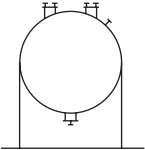
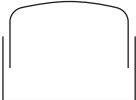
Access point	
Equipment branch: general symbol Note. The upper representation does not necessarily imply a flange, merely the termination point. Where a breakable connection is required the branch/pipe would be as shown in the lower symbol	
Equipment penetration (fixed)	
Equipment penetration (removable)	
Boundary line	
Point of change	
Discharge to atmosphere	

Basic and Developed Symbols for Plant and Equipment

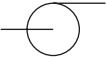
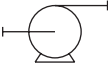
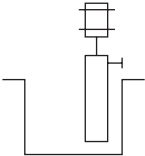

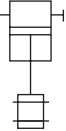
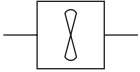
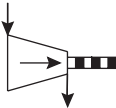
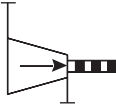


Heat Transfer Equipment

<p>Heat exchanger (basic symbols)</p> <p>Alternative:</p>	 
<p>Shell and tube: fixed tube sheet</p>	
<p>Shell and tube: U tube or floating head</p>	
<p>Shell and tube: kettle reboiler</p>	
<p>Air-blown cooler</p>	
<p>Plate type</p>	
<p>Double pipe type</p>	
<p>Heating/cooling coil (basic symbol)</p>	
<p>Fired heater/boiler (basic symbol)</p>	








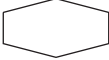


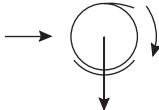
<p>Fluid contacting vessel (basic symbol)</p>	
<p>Fluid contacting vessel Support grids and distribution details may be shown</p>	
<p>Reaction or absorption vessel (basic symbol)</p>	
<p>Reaction or absorption vessel Where it is necessary to show more than one layer of material alternative hatching should be used</p>	
<p>Autoclave (basic symbol)</p>	
<p>Autoclave</p>	


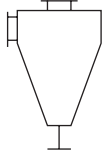

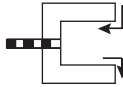

Open tank (basic symbol)	
Open tank	
Clarifier or settling tank	
Sealed tank	
Covered tank	
Tank with fixed roof (with draw-off sump)	
Tank with floating roof (with roof drain)	
Storage sphere	
Gas holder (basic symbol for all types)	

Pumps and Compressors

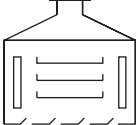

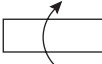
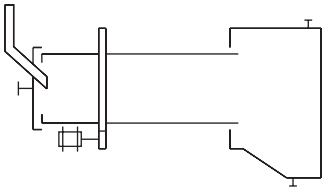
<p>Rotary pump, fan or simple compressor (basic symbol)</p>	
<p>Centrifugal pump or centrifugal fan</p>	
<p>Centrifugal pump (submerged suction)</p>	
<p>Positive displacement rotary pump or rotary compressor</p>	
<p>Positive displacement pump (reciprocating)</p>	
<p>Axial flow fan</p>	
<p>Compressor: centrifugal/axial flow (basic symbol)</p>	
<p>Compressor: centrifugal/axial flow</p>	
<p>Compressor: reciprocating (basic symbol)</p>	
<p>Ejector/injector (basic symbol)</p>	

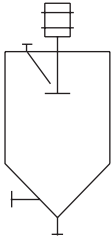

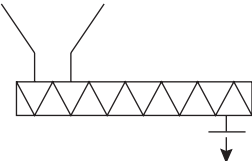

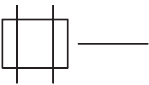
Solids Handling

Size reduction	
Breaker gyratory	
Roll crusher	
Pulverizer : ball mill	
Mixing (basic symbol)	
Kneader	
Ribbon blender	
Double cone blender	
Filter (basic symbol, simple batch)	
Filter press (basic symbol)	
Rotary filter, film drier or flaker	

Cyclone and hydroclone (basic symbol)	
Cyclone and hydroclone	
Centrifuge (basic symbol)	
Centrifuge: horizontal peeler type	
Centrifuge: disc bowl type	

Drying

Drying oven	
Belt drier (basic symbol)	
Rotary drier (basic symbol)	
Rotary kiln	

<p>Spray drier</p>	
<p>Belt conveyor</p>	
<p>Screw conveyor</p>	
<p>Elevator (basic symbol)</p>	
<p>Electric motor (basic symbol)</p>	
<p>Turbine (basic symbol)</p>	