P&ID symbols

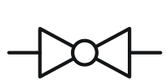
Common symbols for piping and instrumentation diagrams, drawn to ISA 5.1 and ISO 10628. Project legend sheets take precedence.

deskely

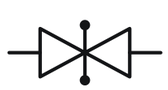
VALVES


Gate valve


Globe valve


Ball valve


Check valve


Butterfly valve


Plug valve


Diaphragm valve


Needle valve


Angle valve


Three-way valve

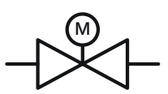

Four-way valve



Normally closed valve

CONTROL AND ACTUATED VALVES


Control valve



Motor operated valve



Solenoid valve


Piston actuated valve

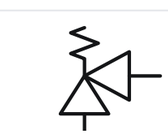

Hand operated valve

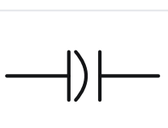

Pressure regulator

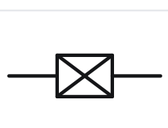


Shutdown valve

SAFETY DEVICES

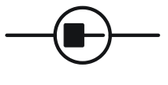

Pressure safety valve


Rupture disc


Flame arrestor

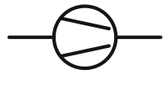
PUMPS AND COMPRESSORS

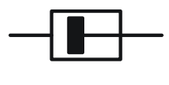

Centrifugal pump


Positive displacement pump

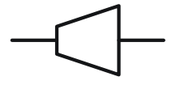

Gear pump

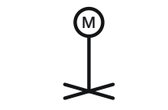

Screw pump


Centrifugal compressor


Reciprocating compressor


Fan or blower

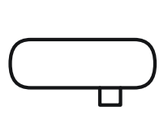

Turbine



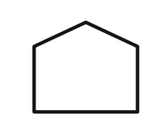
Agitator

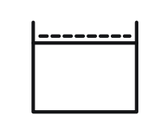
VESSELS AND TANKS

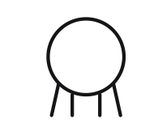

Vertical vessel

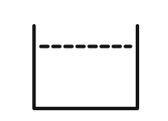

Horizontal vessel

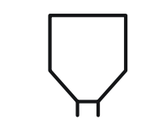

Column


Cone roof tank


Floating roof tank


Sphere


Open tank


Silo or hopper

HEAT EXCHANGERS

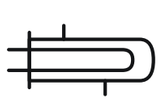

Shell and tube heat exchanger

Plate heat exchanger

Air cooler

Fired heater

Cooling tower

Kettle reboiler

FILTERS AND STRAINERS

Filter

Y-strainer

Basket strainer

Cyclone

INSTRUMENTS



Field-mounted instrument



Panel-mounted instrument



Behind-panel instrument



Local panel instrument



DCS shared display



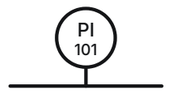
PLC function



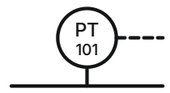
Computer function



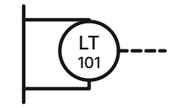
Interlock



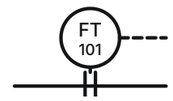
Pressure gauge



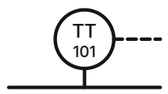
Pressure transmitter



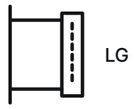
Level transmitter



Flow transmitter



Temperature transmitter



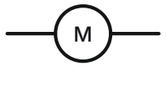
Level gauge



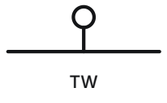
Orifice plate


Venturi


Rotameter



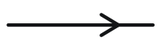
Magnetic flow meter

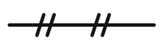


Thermowell

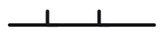
LINE TYPES

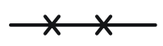

Process line

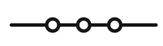

Minor process line

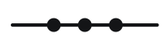

Pneumatic signal line

Electrical signal line


Hydraulic signal line


Capillary tube

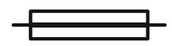

Data link


Mechanical link

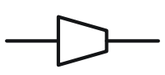

Electromagnetic signal

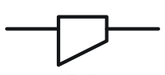


Heat traced line

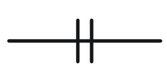

Jacketed line

PIPING AND FITTINGS

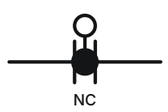

Concentric reducer



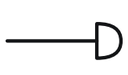
Eccentric reducer

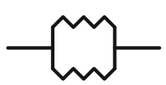

Flange


Blind flange

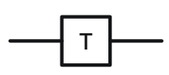


Spectacle blind

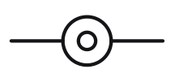

Pipe cap


Expansion joint


Flexible hose



Steam trap


Sight glass

Drain

Vent

Off-page connector