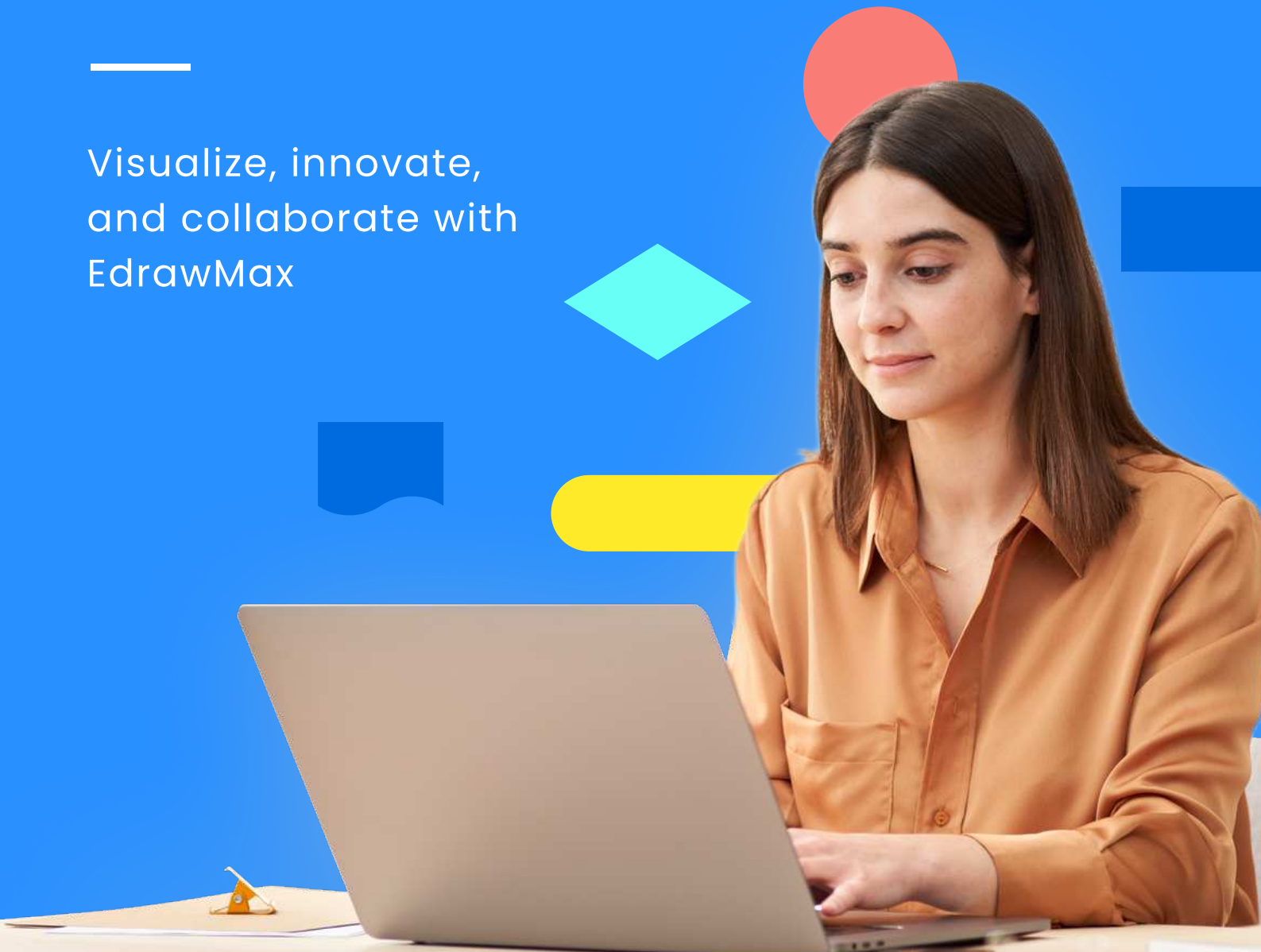


# P&ID Symbols and Meanings

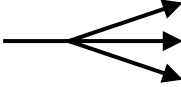
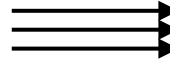





## Diagram For All








---








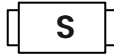

Visualize, innovate,  
and collaborate with  
EdrawMax



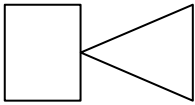
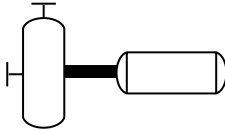
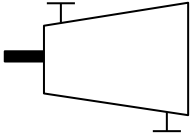
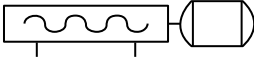
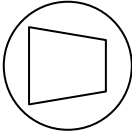
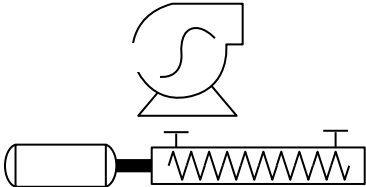



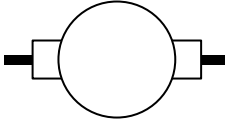
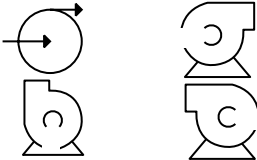
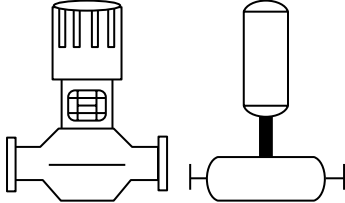
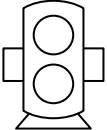
# Piping P&ID Symbols

Symbol Name	Symbol
One to Many	
Multi-lines	
Mid-arrow	
Butt Weld	x
Sonic Signal	
Nuclear	
Pneumatic	//
Hydraulic Signal line	L
Mechanical Link	●
Soldered/Solvent	○
Flange	
Rotary Valve	

Symbol Name	Symbol
End Cap	D
End Cap 2	]
Breather	
Electronically Insulated	
Reducer	
In Line Mixer	
Separator	
Bursting Disc	
Flame Arrester	
Detonation Arrester	
Drain Silencer	
Triangle Separator	

Symbol Name	Symbol
Tundish	<
Open Vent	∩
Siphon Drain	≈
Removable Spool	
Y Type Strainer	
Diverter Valve	
Pulsation Dampener	
Duplex Strainer	
Basket Strainer	
Vent Silencer	
Inline Silencer	
Steam Trap	T
Eject or Eductor	


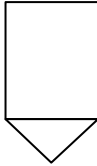

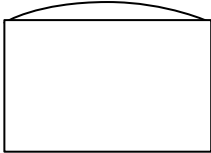
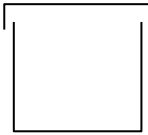
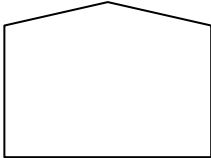
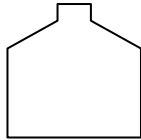
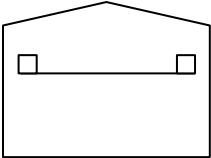

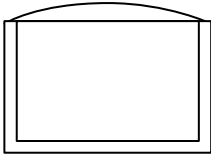
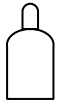
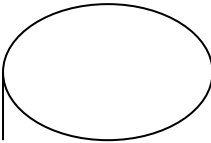

## Pumps P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol
Ejector		Horizontal Pump	
Turbine Driver		Cavity Pump	
Motor Driven Turbine		Screw Pump	
Triple Fan Blade		Sump Pump	
Fan Blades		Vaccum Pump	
Centrifugal Pump		Vertical Pump	
Gear Pump			



## Valves P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol
Gate Valve		Check Valve	
Gate Valve Hand Operated		Angle Globe Valve	
Globe Valve		Powered Valve	
Control Valve		Solenoid Valve	
Back Pressure		Hydraulic Valve	
Needle Valve		Motor-operated Valve	
Butterfly Valve		Float-operated Valve	
Ball Valve		3 Way Plug Valve	
Diaphragm		4 Way Plug Valve	
Plug Valve		Guage	
Flange Valve, Hand Operated		Orifice	
Bleeder Valve		Rotameter	


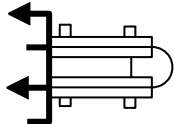
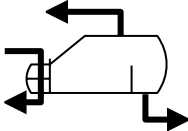

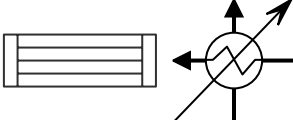


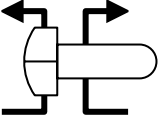

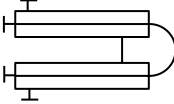

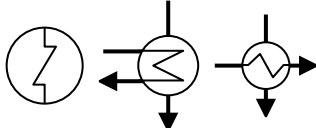
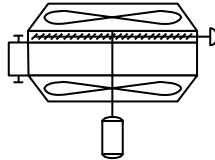
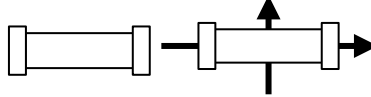

## Vessels P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol
Vertical Vessel		Bin	
Open Tank		Dome Roof Tank	
Covered Tank		Cone Roof Tank	
Tank		Internal Floating Roof	
Tray Column		Double Wall Tank	
Gas Bottle		Onion Tank	
Bag			

## Instrumentation Signals Symbols

<b>Symbol Name</b>	<b>Symbol</b>
Process Connection	
Pneumatic Signal	----- //
Electrical Signal	///
Sonic Signal or Electromagnetic	
Pneumatic Binary Signal	X
Pneumatic Binary Signal Line	X

# Heat Exchangers P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol
Boiler		Hairpin Exchanger	
Reboiler		Plate & Frame Heat Exchanger	
Condenser		Spiral Heat Exchanger	
Evaporative Condenser		U-tube Heat Exchanger	
Cooling Tower		Double Pipe Heat Exchanger	
Heating Exchanger		Shell & Tube Heat	
Air Cooled Exchanger		Single Pass Heat Exchanger	
		Heater	


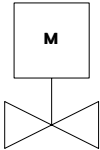

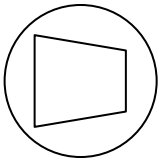

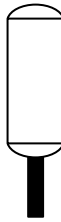

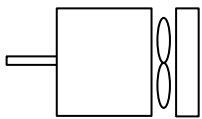

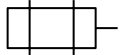

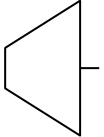



## Compressors P&ID Symbols

Symbol Name	Symbol
Compressors (COMP)	
COMP, Vacuum Pump	
Centrifugal COMP	
Diaphragm COMP	
Ejector COMP	
Pistol COMP	
Ring COMP	
Roller Vane COMP	
Reciprocating COMP	
Screw COMP	
Screw	


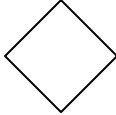





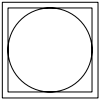


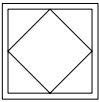
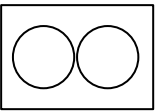

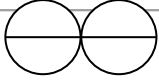














Symbol Name	Symbol
COMP Silencers	
Rotary COMP	
Rotary COMP & Silencers	
Liquid Ring COMP	
Centrifugal COMP	
Selectable COMP	
Axial COMP	
Air COMP	






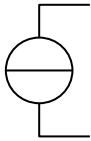



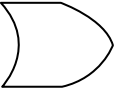





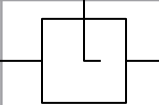




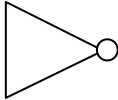


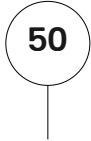

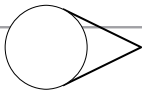



## Motors P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol
Motor		Motor Operated Valve	
Step Motor		Motor Driven Turbine	
DC Motor		Motor	
AC Motor		Diesel Motor	
Motor Generator		Electric Motor	
Gear		Turbine	
Generator			
AC Generator			
DC Generator			

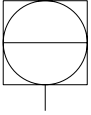




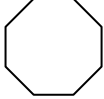



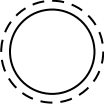





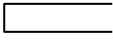

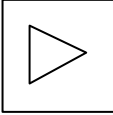




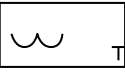
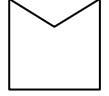


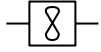
## Instruments P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol	Symbol Name	Symbol
Analyzer Transmitter		Diamond		Flow Nozzle Meter	
AND Gate		Diaphragm Meter		Flow Recorder	
Averaging Pitot Tube		Displayed Configurable		Flow Transmitter	
Behind Control		Displayed Programmable Indicator		Flowmeter	
Behind Local Control		Double		Flume Meter	
Computer		Flow Controller		Indicator	
Computer Indicator		Flow Element		Level Alarm	
Coriolis Flow Sensor		Flow Indicator		Level Controller	
Correcting Element		Flow Meter		Level Gauge	
				Straightening Vane	

## Instruments P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol	Symbol Name	Symbol
Level Indicator		On Central Control Panel		Pressure Indicator	
Level Meter		On Local Control Panel		Pressure Recorder	
Level Recorder		OR Gate		Pressure Recording Controller	
Level Transmitter		Pitot Tube		Pressure Transmitter	
Magnetic		Pitot Tube Type Flow Meter		Programmable Indicator	
Manhole		Pressure Controller		Quick Change Meter	
NOT Gate		Pressure Gauge		Rotary Meter	
Odometer		Pressure Gauges		Rotometer	
Shared Indicator		Pressure Indicating controller		Sampler	

## Instruments P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol	Symbol Name	Symbol
Shared Indicator		Temperature Controller		Ultrasonic Meter	
Socket Connection		Temperature Element		Unit Control Panel	
Specialty Item		Temperature Indicator		V Cone Meter	
Steam Tracer		Temperature Recorder		Venturi	
Support Bracket		Temperature Recorder		Venturi Meter	
Support Leg		Temperature Transmitter		Vortex Sensor	
Support Ring		Thermometer		Wedge Meter	
Support Skirt		Thermometers		Weir Meter	
Target Meter		Transducer			
		Turbine Meter			

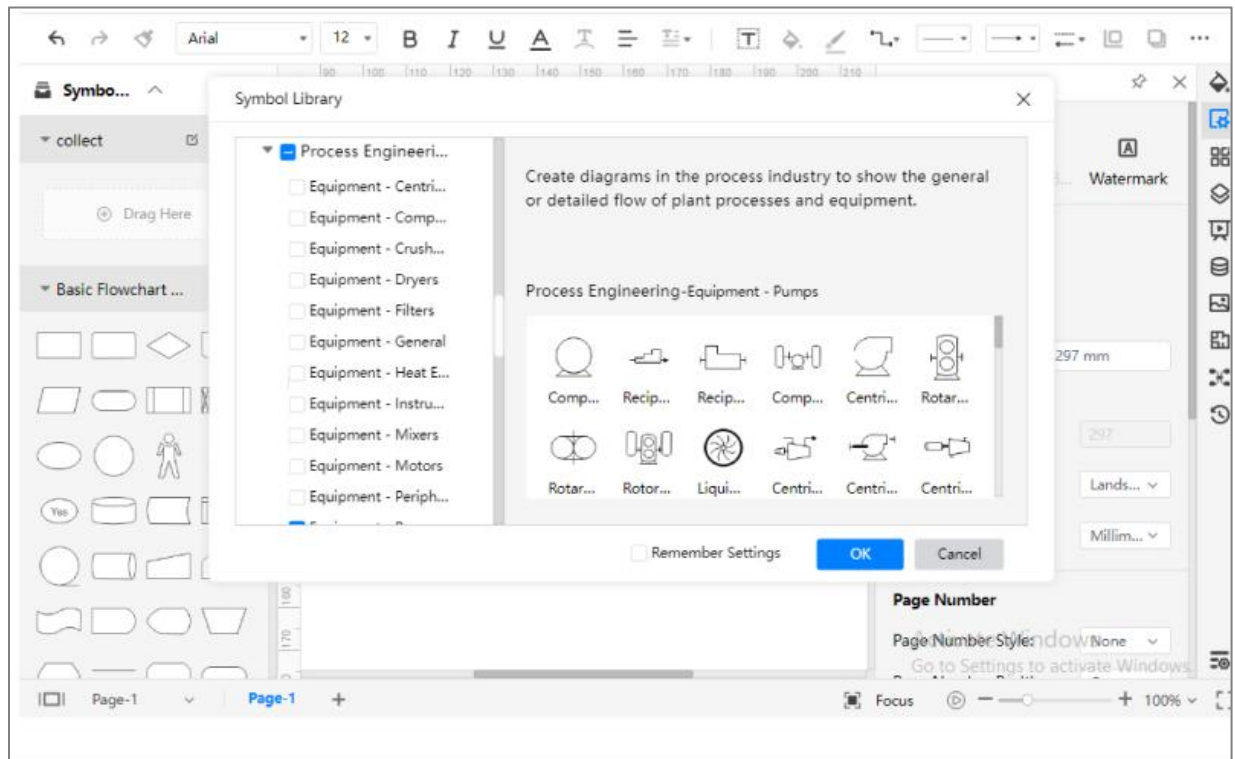
## P&ID Symbols Abbreviations

Analyzer Element (Chemical Composition)	AE
Air Operated Valves	AOV
Burner Element (flame detector)	BE
Conductivity Recorder	CR
Differential Pressure	DP
Density Transmitter	DT
Flow Controller	FC
Flow Control Valve	FCV
Flow Element	FE
Flow Sight Glass	FG
Flow Hand Control (manual)	FHC
Hand Switch in Flow Loop	FHS
Flow Indicator	FI
Flow Indicating Controller	FIC
Flow Meter	FM
Flow Quantity Recorder	FQR
Flow Quantity Indicator	FQI
Flow Recorder	FR
Flow Recorder Controller	FRC
Flow Switch	FS
Flow Transmitter	FT
Flow Transducer	FTD
Hand Operated Control Valve	HCV
Hand Switch	HS
Level Controller	LC
Level Control Valve	LCV
Level Gage Glass	LG
Level Hand Control (manual)	LHC
Level Indicator	LI
Level Indicating Controller	LIC
Level Recorder	LR
Level Switch	LS

Level Transmitter	LT
Level Transducer	LTD
Motor Operated Valve	MOV
Motion Transmitter	MT
Pressure Alarm	PA
Pressure Controller	PC
Pressure Control Valve	PCV
Differential Pressure Indicator	PDI
Ph Transmitter	PHT
Pressure Indicator	PI
Press. Indicating Controller	PIC
Press. Indicating Transmitter	PIT
Pressure Recorder	PR
Pressure Switch	PS
Pressure Transmitter	PT
Pressure Transducer	PTD
Pressure Relief Valve	PZV
Temp. Indicating Controller	TIC
Temp. Recorder	TR
Steam Trap or Airvent	TRAP
Temp. Switch	TS
Temp. Switch Alarm	TSA
Temp. Transmitter	TT
Temp. Transducer	TTD
Thermowell	TW
Weight Measuring Element	WE
Annunciator	XA
Vibration Detector	XVE
Vibration Switch	XVS

## How to Use P&ID Symbols

Try to use a professional P&ID maker like [EdrawMax](#). Here you can access [EdrawMax Online](#) directly. And from its P&ID Symbols Library, you can get all the needed symbols and icons for creating P&IDs.





# Wondershare EdrawMax

Visualize, innovate, and collaborate with  
EdrawMax



[www.edrawsoft.com](http://www.edrawsoft.com)



[support@edrawsoft.com](mailto:support@edrawsoft.com)



[www.facebook.com/edrawsoft](http://www.facebook.com/edrawsoft)



[www.linkedin.com/company/edrawsoft](http://www.linkedin.com/company/edrawsoft)



[www.twitter.com/edrawsoft](http://www.twitter.com/edrawsoft)



[www.youtube.com/user/cutedraw/videos](http://www.youtube.com/user/cutedraw/videos)



[www.pinterest.com/edrawsoft/\\_created](http://www.pinterest.com/edrawsoft/_created)



[www.instagram.com/wondershare\\_edrawsoft](http://www.instagram.com/wondershare_edrawsoft)

---