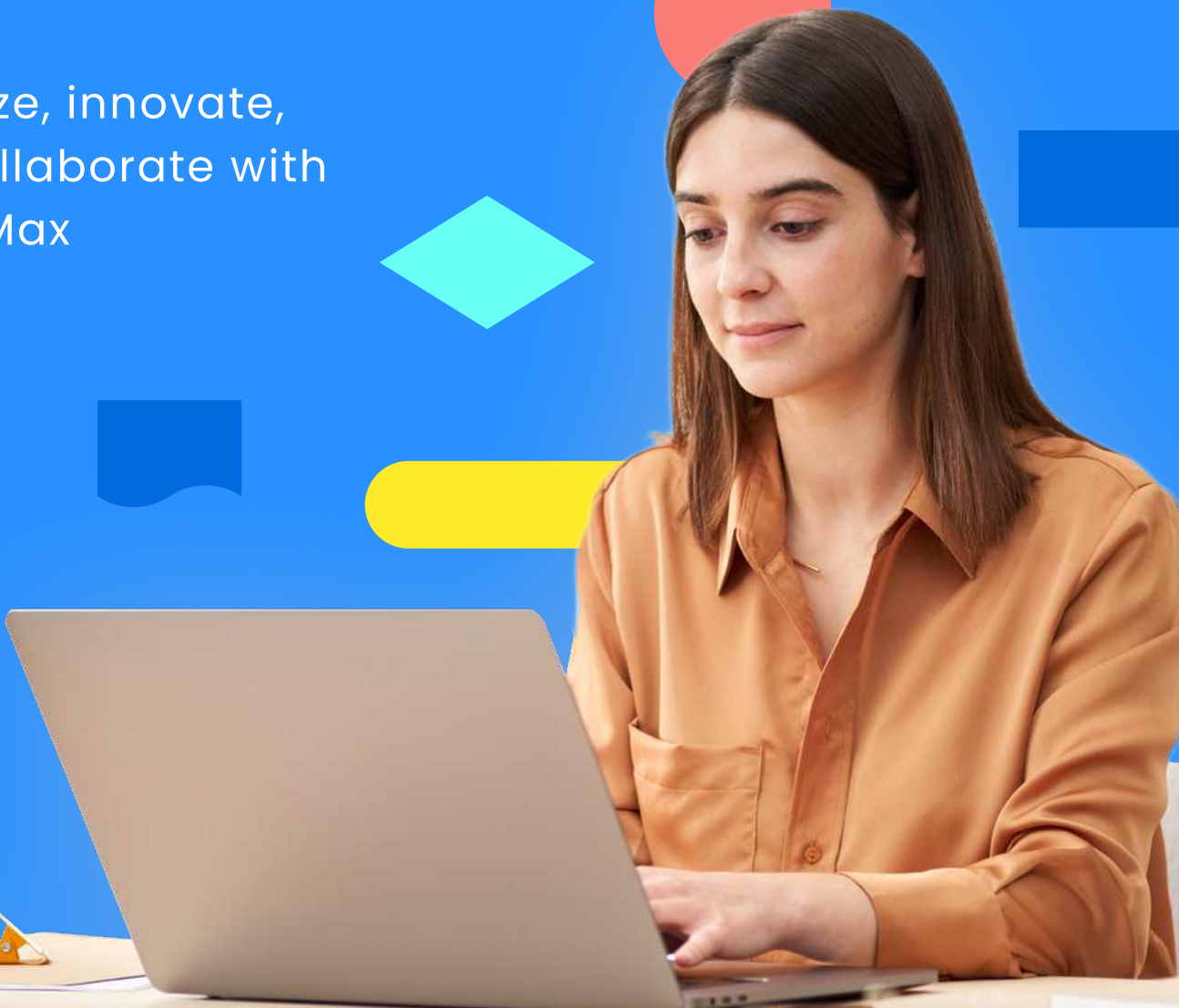


# P&ID Symbols and Meanings

## Diagram For All

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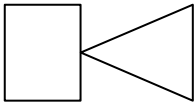
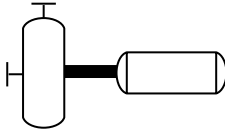
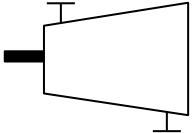
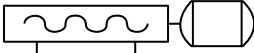
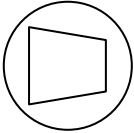
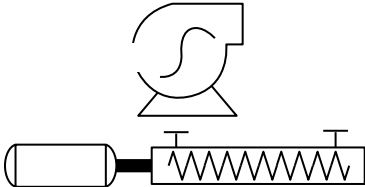

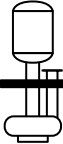

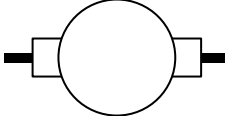
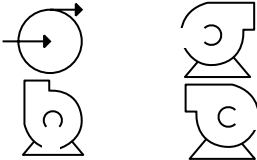
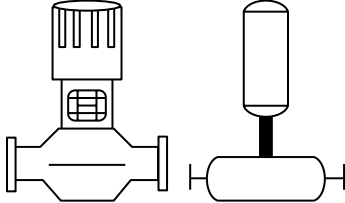
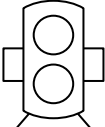
Visualize, innovate,  
and collaborate with  
EdrawMax




























## Piping P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol	Symbol Name	Symbol
One to Many		End Cap		Tundish	
Multi-lines		End Cap 2		Open Vent	
Mid-arrow		Breather		Siphon Drain	
Butt Weld		Electronically Insulated		Removable Spool	
Sonic Signal		Reducer		Y Type Strainer	
Nuclear		In Line Mixer		Diverter Valve	
Pneumatic		Separator		Pulsation Dampener	
Hydraulic Signal line		Bursting Disc		Duplex Strainer	
Mechanical Link		Flame Arrester		Basket Strainer	
Soldered/Solvent		Detonation Arrester		Vent Silencer	
Flange		Drain Silencer		Inline Silencer	
Rotary Valve		Triangle Separator		Steam Trap	
				Eject or Eductor	


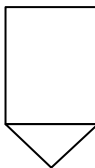

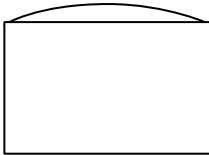
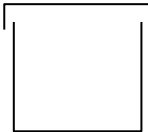
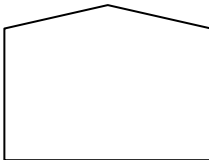
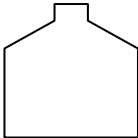
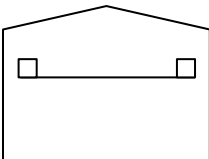

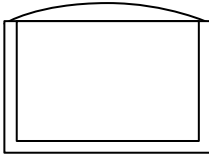
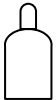
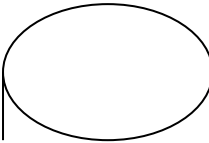

## Pumps P&ID Symbols

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 Vavle		3 Way Plug Valve	
Diaghragm		4 Way Plug Valve	
Plug Valve		Guage	
Flange Valve, Hand Operated		Orifice	
Bleeder Valve		Rotameter	


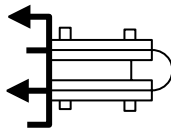
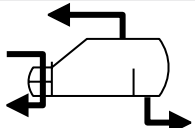
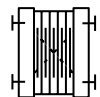
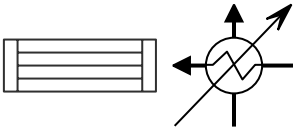

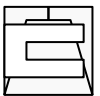
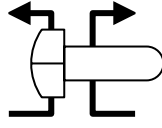
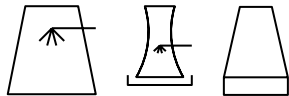
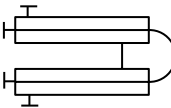

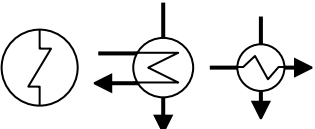
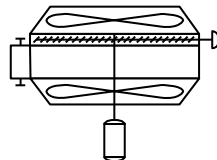
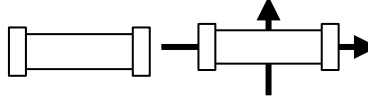

## Vessels P&ID Symbols

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

Symbol Name	Symbol
Process Connection	
Pneumatic Signal	
Electrical Signal	
Sonic Signal or Electromagnetic	
Pneumatic Binary Signal	
Pneumatic Binary Signal Line	

## Heat Exchangers P&ID Symbols


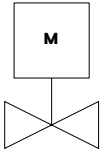

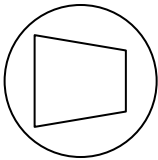



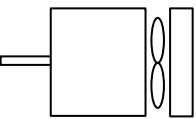

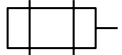

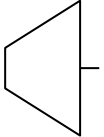



Symbol Name	Symbol	Symbol Name	Symbol
Boiler		Hairpin Exchanger	
Reboiler		Plate & Frame Heat Exchanger	
Condenser		Spiral Heat Exchanger	
Evaporative Condenser		U-tube Heat Exchanger	
Cooling Tower		Double Pipe Heat Exchanger	
Heating Exchanger		Shell & Tube Heat	
Air Cooled Exchanger		Single Pass Heat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

## Compressors P&ID Symbols


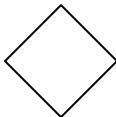





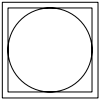


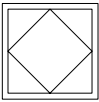
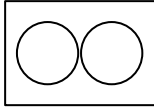

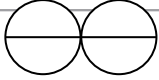













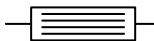
Symbol Name	Symbol	Symbol Name	Symbol
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COMP, Vacuum Pump		Rotary COMP	
Centrifugal COMP		Rotary COMP & Silencers	
Diaphragm COMP		Liquid Ring COMP	
Ejector COMP		Centrifugal COMP	
Pistol COMP		Selectable COMP	
Ring COMP		Axial COMP	
Roller Vane COMP		Air COMP	
Reciprocating COMP			
Screw COMP			
Screw			






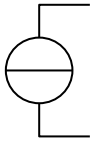



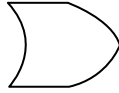





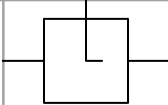




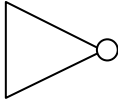


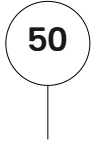

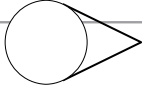



## Motors P&ID Symbols

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			

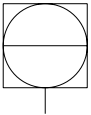




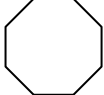



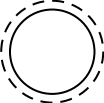





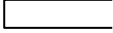

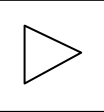


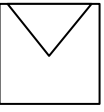




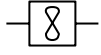
## Instruments P&ID Symbols

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 Transmitter		Venturi Meter	
Support Leg		Thermometer		Vortex Sensor	
Support Ring		Thermometers		Wedge Meter	
Support Skirt		Transducer		Weir Meter	
Target Meter		Turbine Meter			

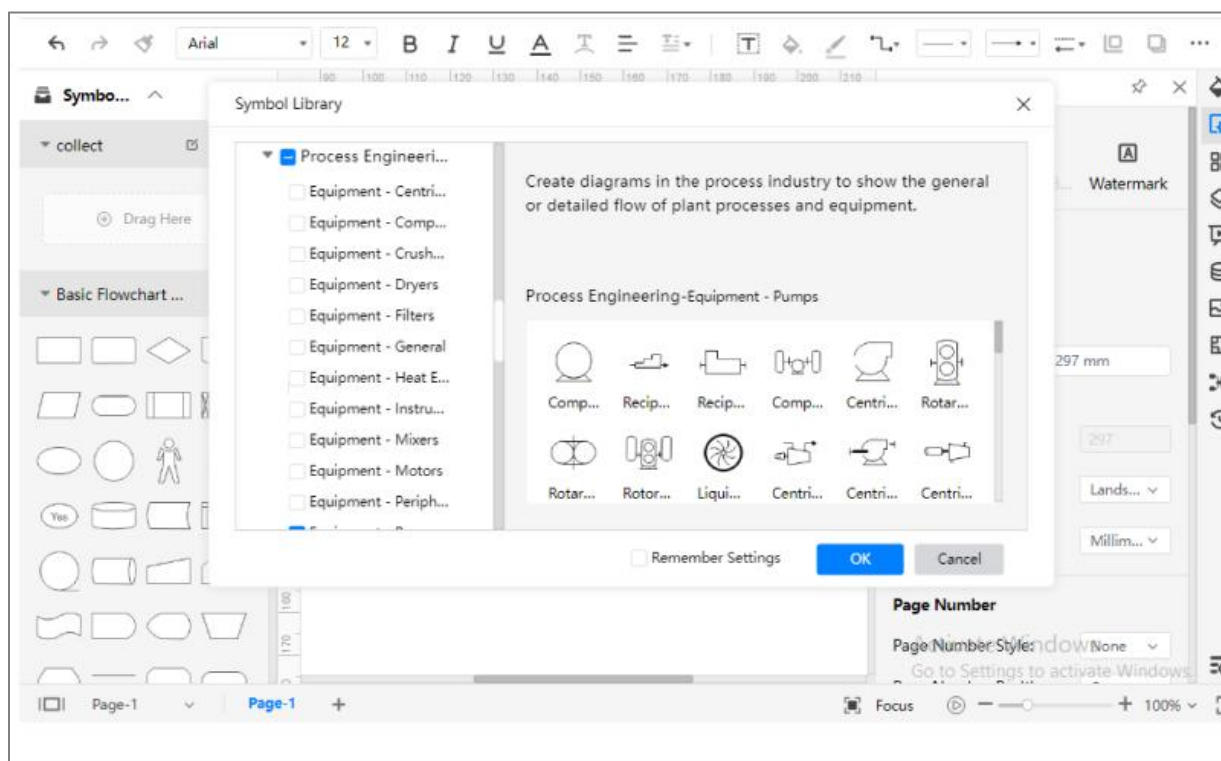
## P&ID Symbols Abbreviations

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](https://www.edrawmax.com). Here you can access [EdrawMax Online](https://www.edrawmax.com) directly. And from its P&ID Symbols Library, you can get all the needed symbols and icons for creating P&IDs.





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