

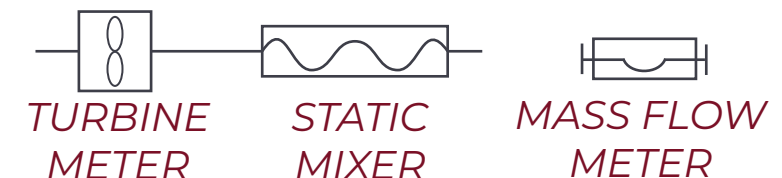
MECHANICAL P&ID SYMBOLS

VALVE AND FITTINGS

CONNECTION TYPES



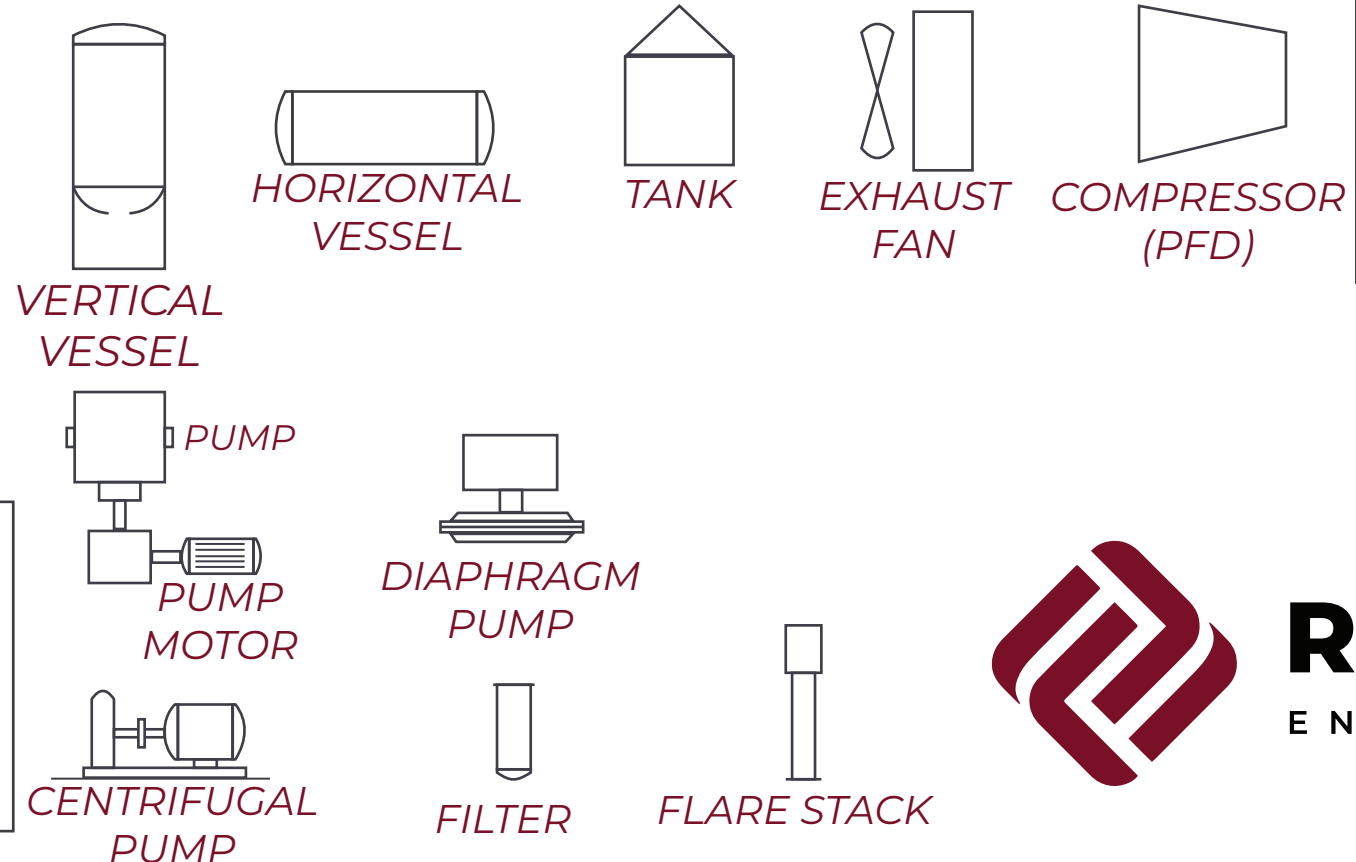
FLANGED THREADED SOCKET WELDED



VALVE ACTIONS

- FO FAIL OPEN
- FC FAIL CLOSE
- FL LOCKS IN LAST POSITION
- FLO FAILS IN LAST POSITION (DRIFTS OPEN)
- FLC FAILS IN LAST POSITION (DRIFTS CLOSED)
- NO NORMALLY OPEN
- NC NORMALLY CLOSED
- CSO CAR SEAL OPEN
- CSC CAR SEAL CLOSED

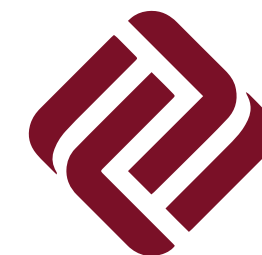
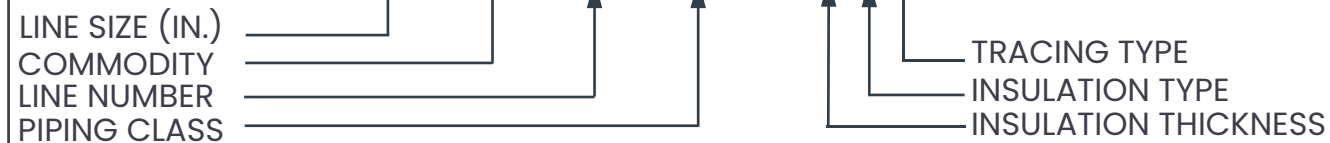
EQUIPMENT



NPS/METRIC O.D. PIPE SIZE	
NPS (INCHES)	METRIC (MM)
1/4	13
1/2	21
3/4	27
1	33
1-1/2	48
2	60
3	89
4	114
6	168
8	219
10	273
12	324
14	356
16	406
18	457
20	508
24	610

LINE NUMBER DESIGNATION

EG. 4" - PG - 180 - AL - 25HET



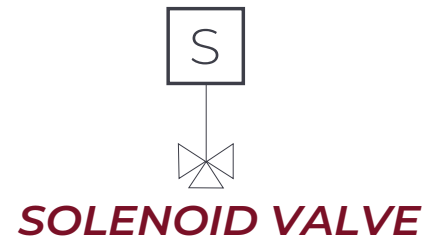
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ELECTRICAL AND INSTRUMENTATION P&ID SYMBOLS

FUNCTIONS

	PITOT		HIGH SELECT RELAY		CURRENT TO PNEUMATIC
	TARGET		LOW SELECT RELAY		PNEUMATIC TO CURRENT
	AVERAGING PIVOT		DERIVATIVE		POTENTIAL TO PNEUMATIC
	CONVERT		INTEGRAL		POTENTIAL TO CURRENT
	DIVIDE		DIFFERENCE		LOGIC (AND)
	BIAS		VORTEX SENSOR		LOGIC (OR)
	NON LINEAR		AVERAGE		PURGE
	HIGH LIMITING		SUMMATION		EMERGENCY
	ON-OFF		ROOT EXTRACTION		RESET

	TRANSDUCER		INSTRUMENT TRACING		INDICATING LIGHT / ILLUMINATOR
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INSTRUMENTATION FUNCTION SYMBOLS

	FIELD MOUNTED	FIELD/PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR
INSTRUMENTS		
CONTROL PANEL SHARED DISPLAY/SHARED CONTROL		
COMPLEX OR MULTI-FUNCTION		
INTERLOCKS		

INSTRUMENTATION

PNEUMATIC LINE

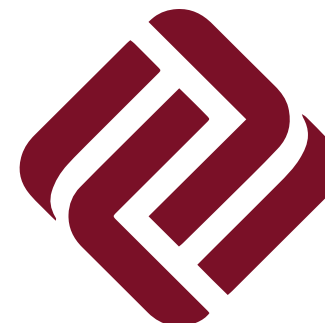
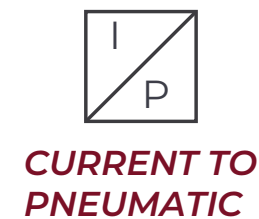
MECHANICAL LINK

HYDRAULIC SIGNAL

DATA LINK

ELECTRICAL SIGNAL

INTERLOCK



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