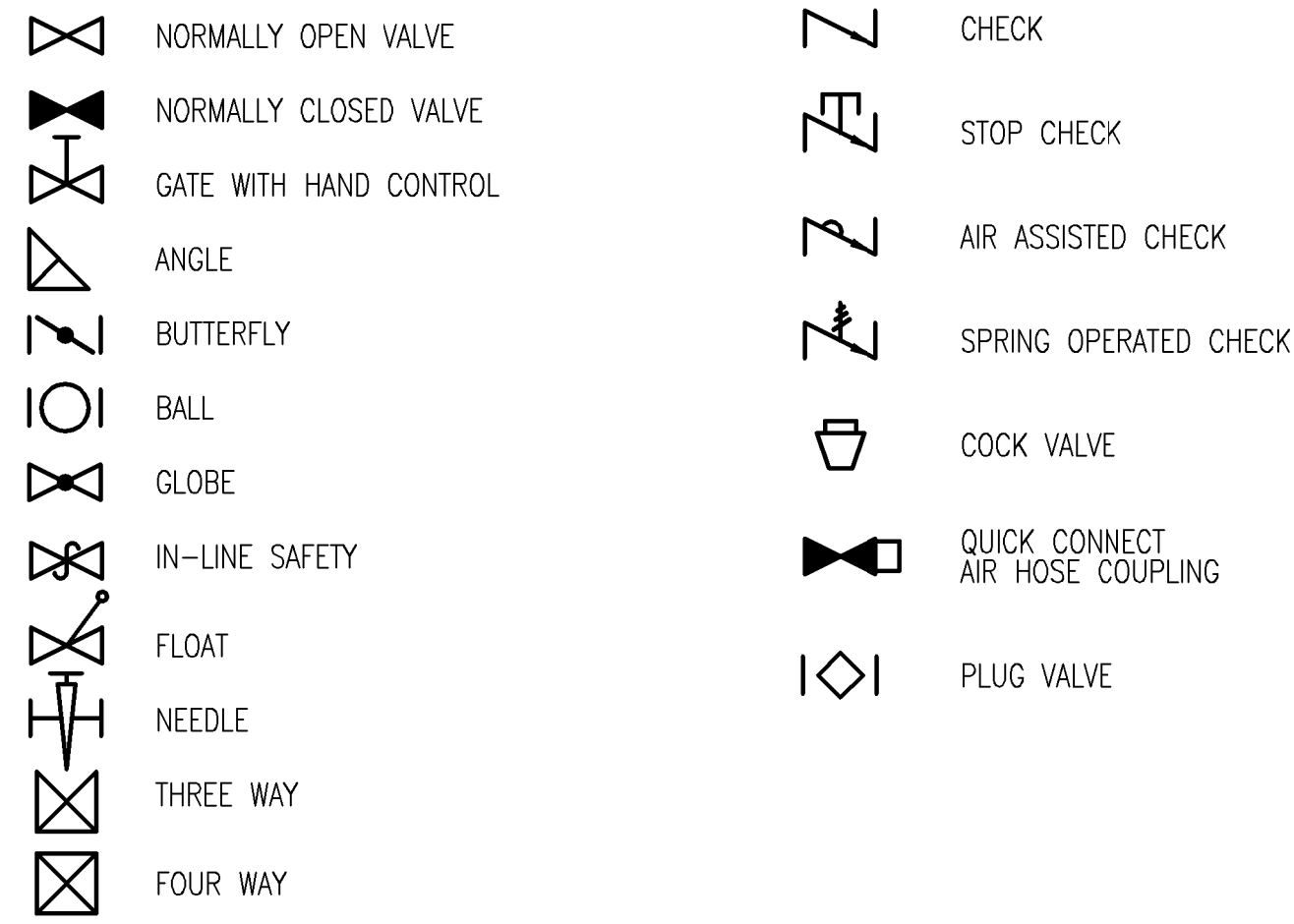
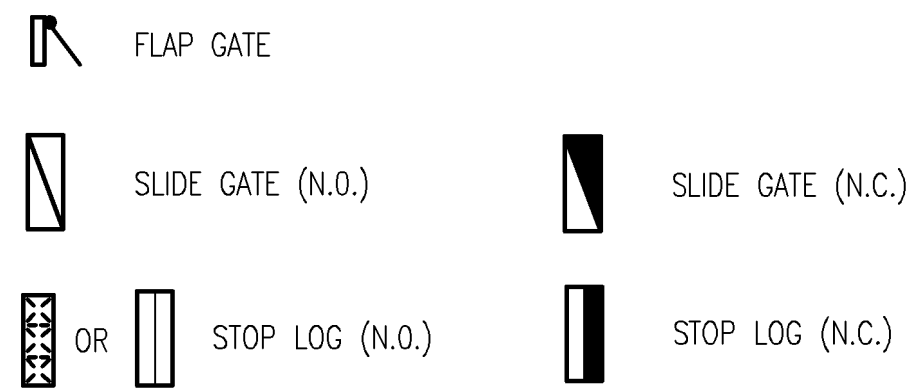


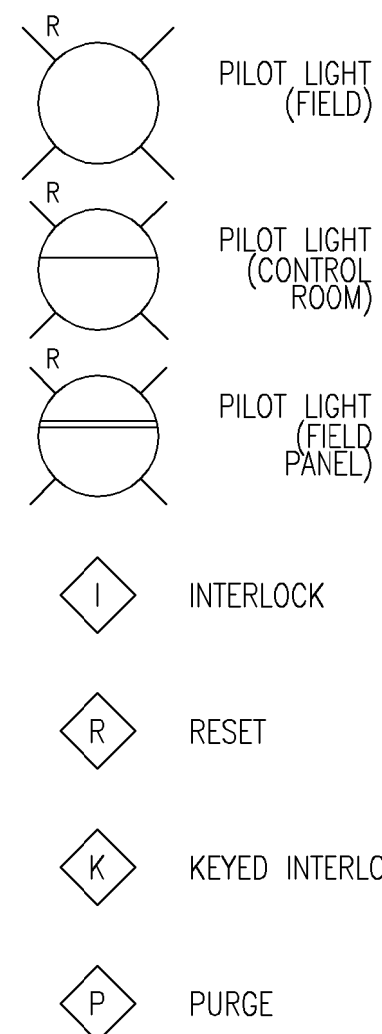
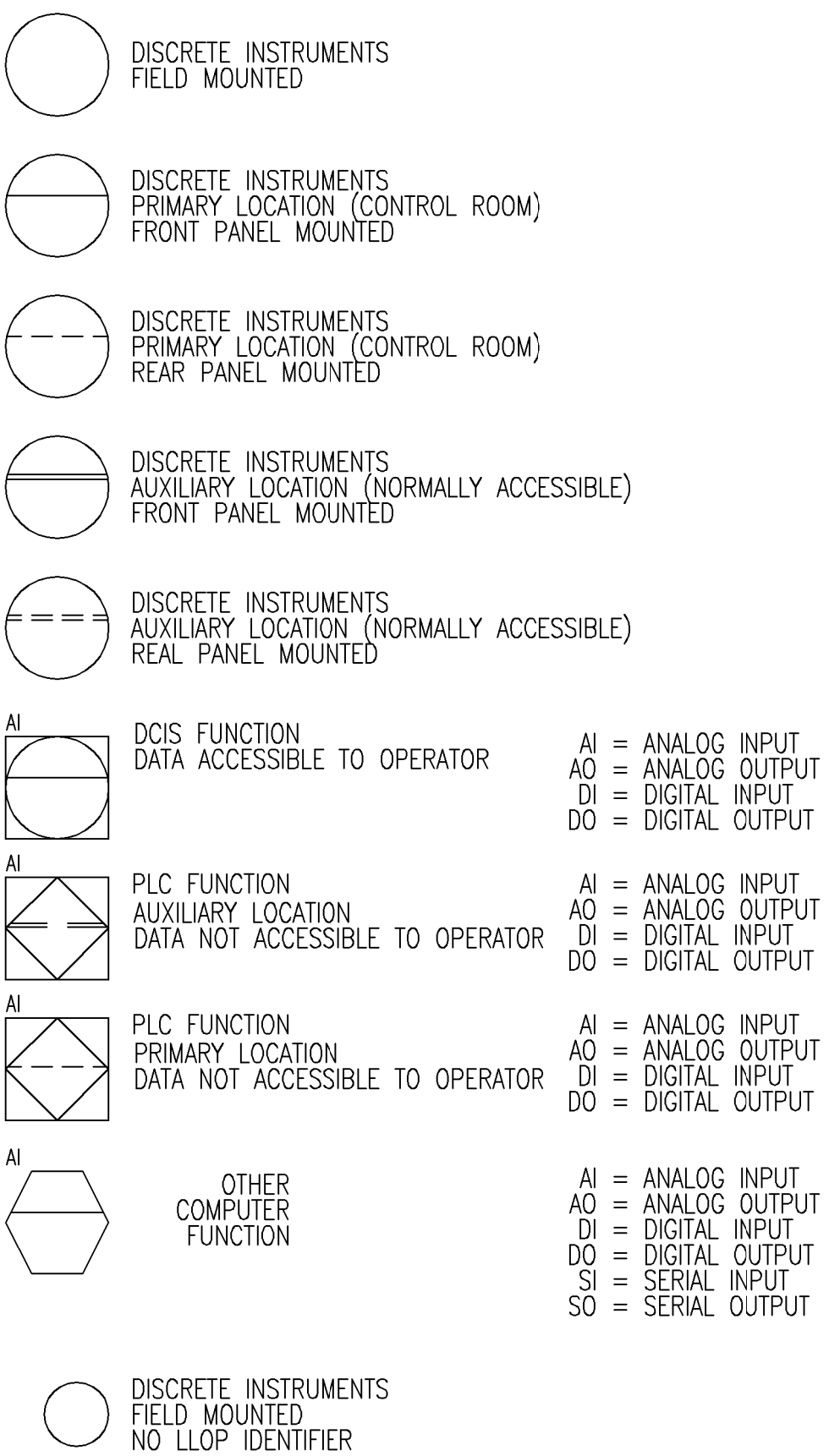
**VALVE SYMBOLS**



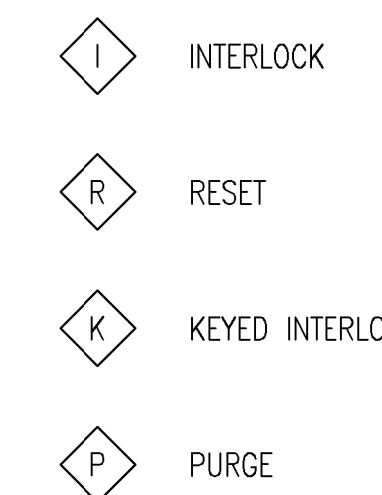
**GATE SYMBOLS**



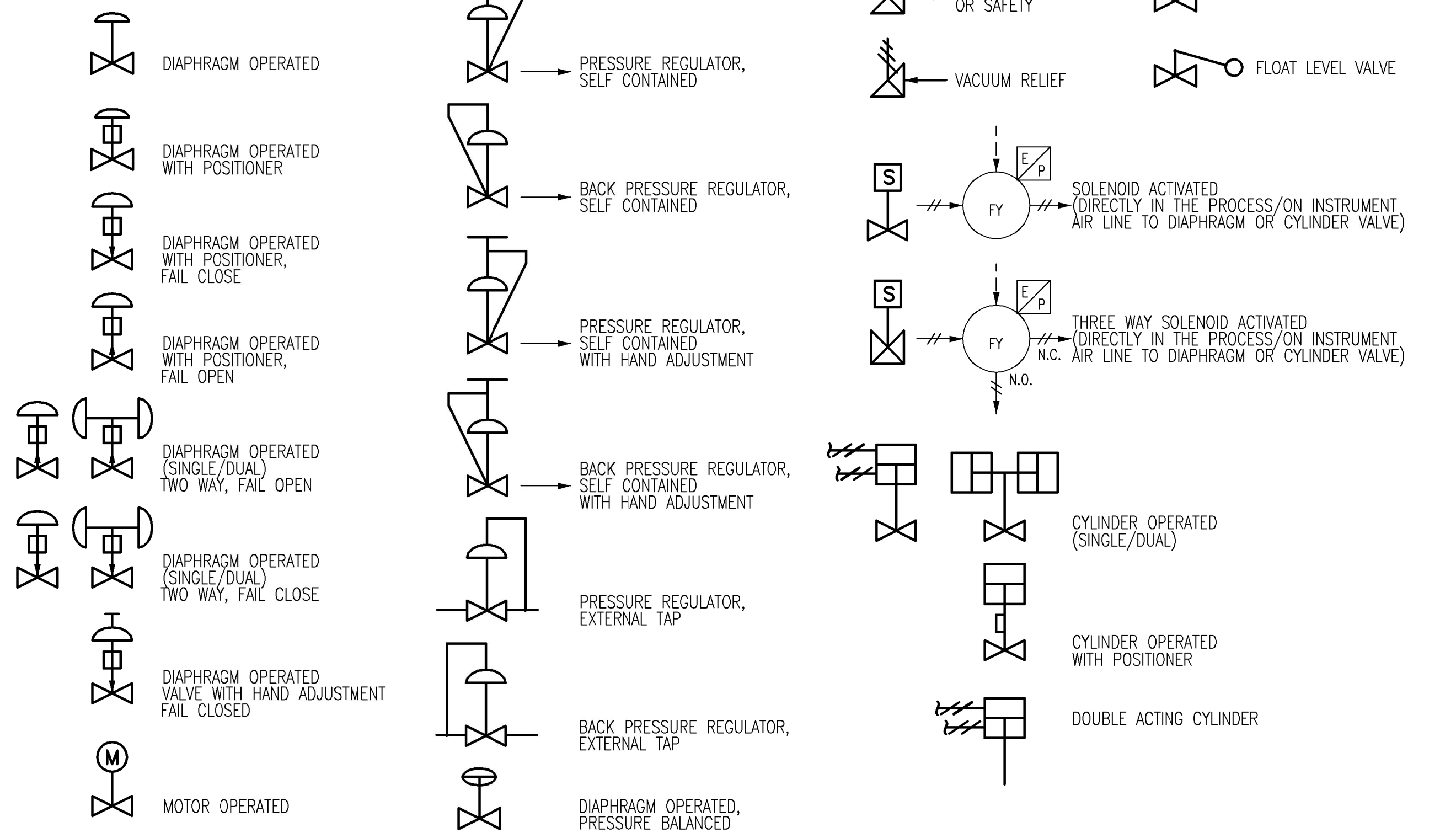
**INSTRUMENT SYMBOLS**



W = WHITE  
R = RED  
G = GREEN  
A = AMBER  
B = BLUE



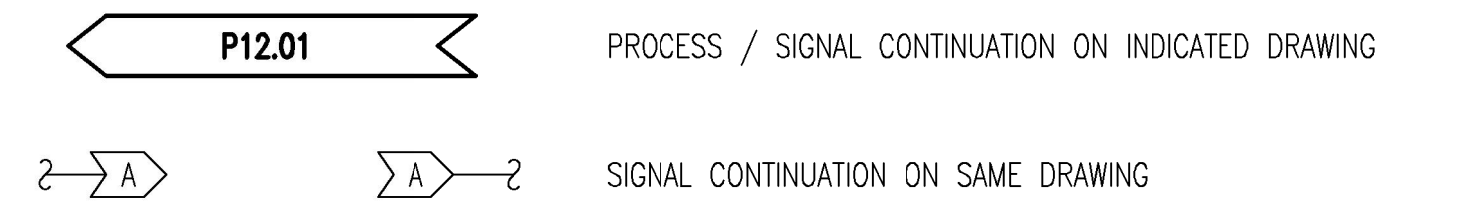
**ACTUATOR SYMBOLS**



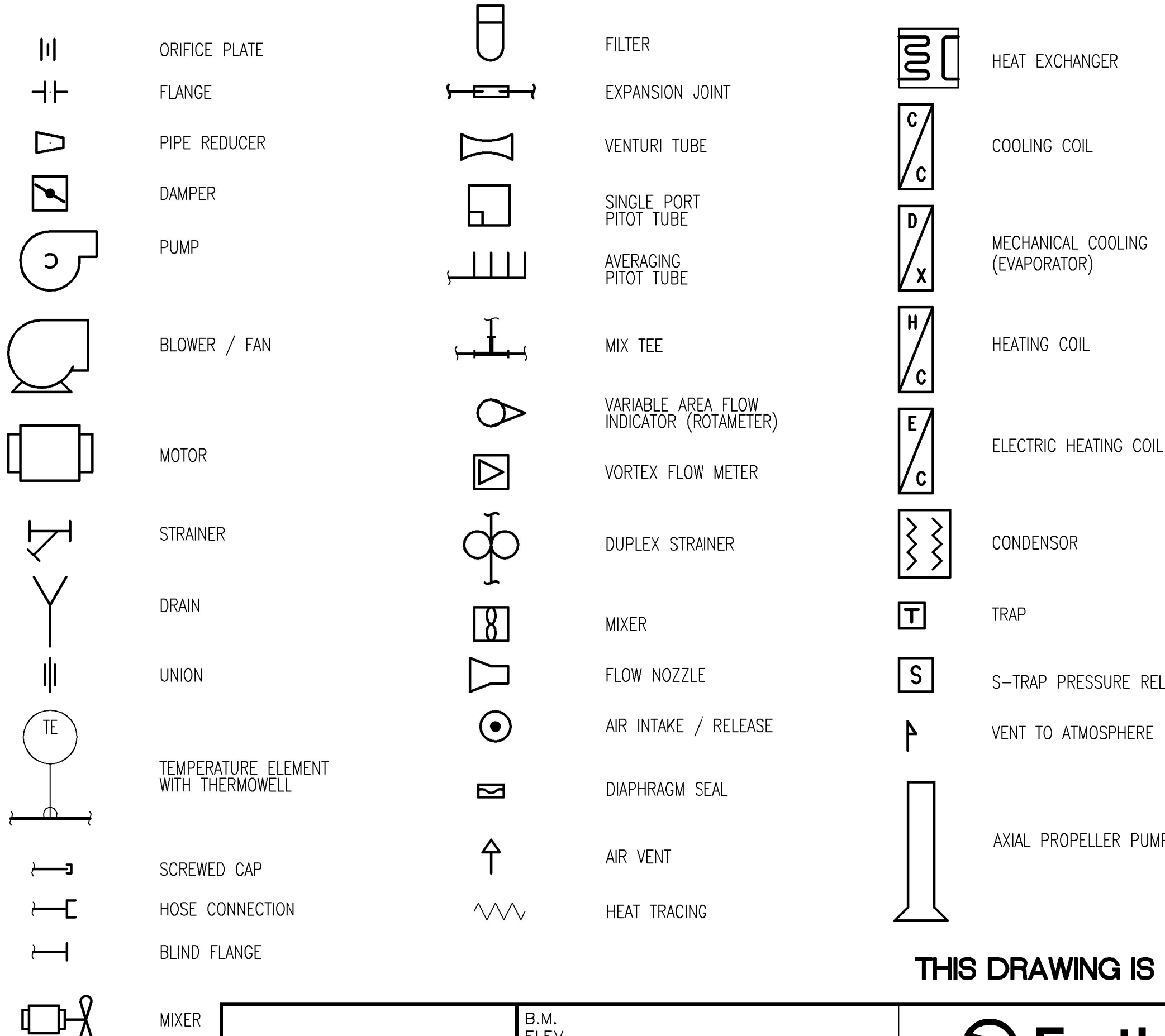
**PID STANDARDS**

- DRAWINGS UTILIZE CITY OF WINNIPEG STANDARDS FOR BORDER AND TITLE BLOCK. ALL DRAWINGS ARE PRODUCED ON AUTOCAD (LATEST REV., R2000 OR LATER).
- ALL UNITS ARE IN METRIC, EXCEPT AS NOTED OTHERWISE. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS (mm).
- DRAWING CONTENT GENERALLY CONFORMS WITH TO ISA-5.1 STANDARD. AN EXCEPTION REGARDING EQUIPMENT TAGGING HAS BEEN MADE TO ALLOW BETTER CONFORMITY IN NAMING.
- PID'S INDICATE MAJOR PROCESS PIPING AND EQUIPMENT AND ASSOCIATED LOCAL INSTRUMENTATION, DCS AND OTHER PROCESS I/O.
- EQUIPMENT INCLUDING VESSELS, DRUMS, EXCHANGERS, HEATERS, PUMPS, COMPRESSORS, ETC. ARE ARRANGED IN SEQUENCE WITH PRINCIPLE FUNCTIONS AND FLOWS.
- ALL MAJOR EQUIPMENT INCLUDING PUMPS, COMPRESSORS, TANKS, ETC. ARE LABELED AS TO FUNCTION WITH DESIGN SIZES AND RATINGS.
- ALL PROCESS LINES ARE LABELED ACCORDING TO FUNCTION AND SIZE UTILIZING SYSTEM CODES DEFINED HEREIN.
- EACH SYSTEM INTERCONNECTION POINT BETWEEN DRAWINGS IS LABELED WITH A SOURCE DRAWING NUMBER OR DESTINATION DRAWING NUMBER. ARROWS ON PROCESS PIPING INDICATE DIRECTION OF FLOW BETWEEN DRAWINGS.

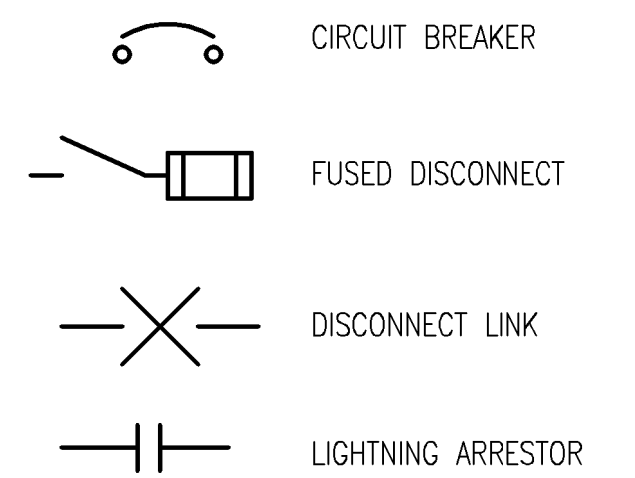
**CONNECTING ARROWS**



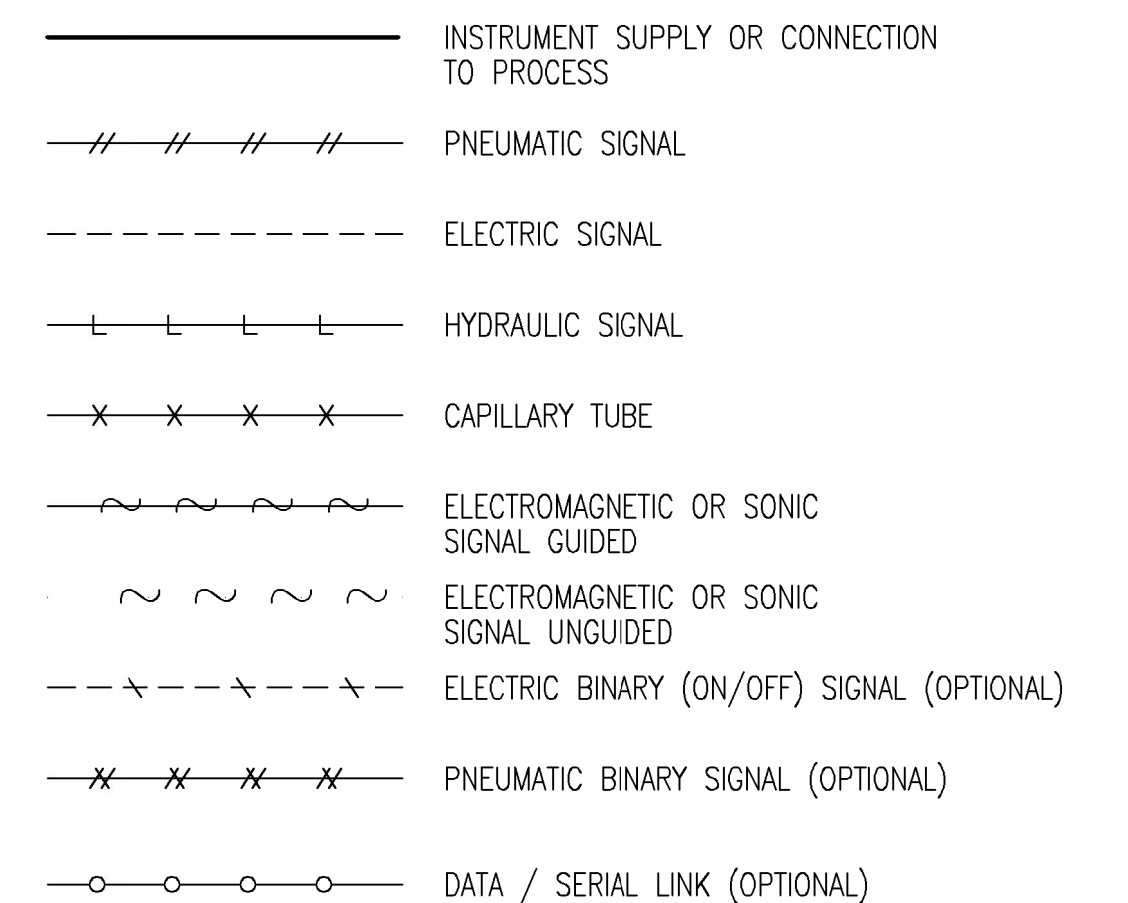
**ACCESSORY DEVICE SYMBOLS**



**ELECTRICAL SYMBOLS**



**INSTRUMENT LINE SYMBOLS**



THIS DRAWING IS BASED ON CITY OF WINNIPEG DRAWING NUMBER 1-0101A-D-A0001-001-06D

**NOTICE:**  
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REVISION 03 CHANGES	
THE ENGINEER'S DESIGN RESPONSIBILITIES ARE LIMITED TO THE CHANGES INDICATED IN THE CLOUDED WORK	
DESIGNED BY: CGL	CHECKED BY: KJS
DRAWN BY: SRG	APPROVED BY: KJS
DATE: -	RELEASED FOR CONSTR. DATE: -

<p>Certificate of Authorization AECOM Canada Ltd. No. 4671 Date: April 6/16</p>			
DESIGNED BY:	LAE	CHECKED BY:	SB
DRAWN BY:	LAE	APPROVED BY:	
SCALE:	NONE	RELEASED FOR CONSTRUCTION BY:	
DATE:	2006/01/16	DATE:	

<p>A Tyco International Ltd. Company</p>			
DESIGNED BY:	LAE	CHECKED BY:	SB
DRAWN BY:	LAE	APPROVED BY:	
SCALE:	NONE	RELEASED FOR CONSTRUCTION BY:	
DATE:	2006/01/16	DATE:	

CONSULTANT DRAWING NO.	P4.01

<p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION</p>	
NEWPCC CENTRATE NUTRIENT TREATMENT NITROGEN REMOVAL FACILITY	CITY FILE NUMBER
PROCESS AND INSTRUMENTATION DIAGRAMS LEGEND AND DETAILS	SHEET 1 OF 3
	CITY DRAWING NUMBER
	1-0101C-P0016-001-03