

PLUMBING & MECHANICAL

QUICK-CARDS® A Unique Quick-Reference Guide



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LINES, RISERS, LINECODES & DESIGNATORS

PLUMBING RISERS & LINES SYMBOLS			
LINES	RISERS	ABBR.	NAME
		BHS	Branch and Head Sprinkler
		CHWR	Chilled Water Return
		CHWS	Chilled Water Supply
		CW	Cold Water, Cold Water Supply
		CWR	Cold Water Return
		CWV	Combination Waste and Vent
		A	Compressed Air
		CD	Condensate Drain
		CWR	Condenser Water Return
		CWS	Condenser Water Supply
		D	Drain (Indirect/Building Drain)
		DWS	Drinking Water Supply
		DSP	Dry Standpipe
		F	Fire Line
		G	Gas
		G LN	Gas Line
		HG	High Pressure Gas
		HPR	High Pressure Gravity Return
		HWS	Hot Water Supply
		HWR	Hot Water Return
		IW	Indirect Waste
		LPG	Low Pressure Gas
		LPGR	Low Pressure Gravity Return
		S	Main Supplies Sprinkler

PLUMBING RISERS & LINES SYMBOLS			
LINES	RISERS	ABBR.	NAME
		MU	Makeup Water
		MG	Medium Pressure Gas
		MPR	Medium Pressure Gravity Return
		RWL	Rain Water Leader
		R	Recirculation (usually Pump)
		SS	Sanitary Sewer
		SHW	Sanitary Hot Water Supply
		SP FLD LCH LN	Septic Field Leach Line
		S	Sewage, Combined
		SW TL	Sewer Tile
		CSI	Sewer (Cast Iron)
		SCT	Sewer (Clay Tile Bell/Spigot)
		SW	Softened Water
		SWLA	Soil, Waste or Leader (above grade)
		SWLB	Soil, Waste or Leader (above grade)
		SD	Storm Drain
		S	Storm or roof leader
		TS	Tempered Water Supply
		V	Vacuum
		VC	Vacuum Cleaning
		V	Vent
		VL	Vent Line
		WL	Waste Line
		W	Water, Water Line
		WSP	Wet Standpipe

PLUMBING LINECODES SYMBOLS	
RISERS	NAME
	Piping Service
	Piping Service, Supply
	Piping Service, Return
	Piping Service with detail information
	Dashed line for hidden or underground piping with detail
	Piping Service, Existing
	Piping Pitch (% MM/M or IN/FT)
	Piping Pitch (% MM/M or IN/FT) (Alternate)
	Piping Flow Direction
	Domestic Cold Water
	Domestic Hot Water
	Domestic Hot Water Return
	Sanitary Waste
	Acid Waste
	Acid Vent
	Storm Drain
	Hot Water Supply (Heating)
	Hot Water Return (Heating)
	Chilled Water Supply
	Chilled Water Return
	Drain
	Dual Temperature Supply (Hot or Chilled)
	Dual Temperature Return (Hot or Chilled Water)
	Glycol Supply
	Glycol Return
	Condenser Water Supply
	Condenser Water Return
	Non-Potable Water

MECHANICAL LINECODES SYMBOLS	
LINES	NAME
	Vent
	Piping, Heat Traced
	Compressed Air with detail information (Examples: Plant, Dry, Pure, ETC.)
	Vacuum Service
	Fuel Oil with detail information (Ex. Supply, Return, Fill, Vent)
	Gas
	Cooling Tower Water Supply
	Cooling Tower Water Return
	Heat Pump Water Supply
	Heat Pump Water Return
	Steam with pressure indicated (kPa or PSIG)
	High Pressure Steam
	Medium Pressure Steam
	Low Pressure Steam
	Clean Medium Pressure Steam
	Clean Low Pressure Steam
	High Pressure Steam Condensate
	Medium Pressure Steam Condensate
	Low Pressure Steam Condensate
	Pumped Condensate
	Boiler Blow Down
	Boiler Feed Water
	Refrigerant Discharge (Hot Gas)
	Refrigerant Suction
	Refrigerant Liquid
	Refrigerant Liquid Overfeed Return


















CONTROL SYMBOLS - LINES & LINE DESIGNATORS

EP (Electric Pneumatic) air (main air switched by an electric pneumatic relay)	Day-Night Air (Air that varies between day and night cycles)	Summer-Winter Air (Air that varies between summer and winter cycles)	Main Air (Pressure level may be added as noted [kPa (PSIG)])	Source Air (Pressure level may be added as noted [kPa (PSIG)])
Instrument Air (Pressure level may be added as noted [kPa (PSIG)])	Plant Air (Pressure level may be added as noted [kPa (PSIG)])			

PLUMBING RISER LINE DESIGNATORS

Waste Riser Designation	Storm Drain Riser Designation	Gas Riser Designation	Domestic Water Riser Designation
Storm Water Riser Designation	Sanitary Riser Designation	Deionized Water Riser Designation	Reverse Osmosis Water Riser Designation

FIXTURES SYMBOLS

	Toilet, floor mounted
WC	
	Toilet, wall hung
WC	
	Toilet, tank type
WC	
	Bidet
	Urinal, wall hung
UR	
	Sink, general
S	
	Sink, floor
FS	
	Sink, kitchen
KS	
	Sink, mop
MS	
	Sink utility/lavatory
SS/LAV	
	Dishwasher
DW	
	Bathtub, recessed type
	Drinking fountain, floor mounted
DF	
	Drinking fountain, wall hung
	Shower, stall type
SHWR	
	Shower, handicapped
	Shower, head
HWT	Hot Water Tank
WH	Water Heater

PLUMBING & MECHANICAL ABBREVIATIONS

&	and	D, dia., or diam.	Diameter	L	less	RPZ	Reduced Pressure Backflow Preventer
A	Area	DB	Dry Bulb	lav.	Lavatory	RRV	Roof Relief Vent
ABS	Acrylonitrile-butadiene-styrene	DBL	Double	lb.	Pound	RS	Rate of Supply
AC	Above Center	deg. or °	Degree	LG	Long	S	Hydraulic slope (in inches per ft.)
AC	Air Conditioner	D.F.	Drinking Fountain	LH	Left Hand	S & W	Soil & Waste
AD	Area Drain	DH	Double Hub Cast Iron Soil Pipe	LNG	Long	SA	Supply Air
ADAPTR	Adapter	DIFF	Diffuser	LS	Long Sweep	San	Sanitary
AFC	Automatic Flow Control	DS	Downspout	/MAIN	On Main	Sb	Anitmony (Chemical Abbreviation)
A.F.F.	Above Finish Floor	dwg	Drawing	Max	Maximum	S.B.C.C.I.	Southern Building Code Congress International
A.F.G.	Above Finish Grade	EA	Exhaust Air	MBH	1000 BTU/Hour	SD	Side
AGA	American Gas Association	EF	Exhaust Fan	MCAA	Mechanical Contractors Association of America	Sec	Second
AI	Aluminum	EG	Exhaust Grille	MECH	Mechanical	SG	Supply Grille
ASI	American Iron and Steel Institute	ELEC	Electrical	Mfr.	Manufacturer	SH	Single Hub Cast Iron Soil Pipe
ALT	Alternate	ELEV	Elevation	MGD	Million Gallons Per Day	SHDR	Shower Drain
ANSI	American National Standards Institute	ER	Exhaust Register	M.H.	Manhole	SK	Sink
AP	Access Panel	ET	Expansion Tank	MI	Malleable Iron	SL & Notch	Slotted & Notched
API	American Petroleum Institute	EWC	Electric Water Cooler	Min.	Minimum	Sn	Tin (Chemical Abbreviation)
ASCE	American Society of Civil Engineering	EWH	Electric Water Heater	Min.	Minute	SO	Side Opening
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers	EX	Example	MN	On Main	Spec	Specification
ASME	American Society of Mechanical Engineers	EX, EXIST. & EXTG.	Existing	MS	Mild Steel	Sq	Square
ASPE	American Society of Plumbing Engineers	EXT	Extended, Extension	NAPHC	National Association of Plumbing, Heating and Cooling Contractors	sq.ft. or ft²	Square Feet
ASSE	American Society of Sanitary Engineers	°F	degree Fahrenheit	NBFU	National Board of Fire Underwriters	Sq. in.	Square inches
Assy	Assembly	FCO	Floor Cleanout	NBS	National Bureau of Standards	SS	Service Sink
ASTM	American Society for Testing and Materials	Fe	Iron (Chemical Abbreviation)	NC	Normally Closed	SS	Short Sweep
Avg	Average	FER	Ferrule	NFPA	National Fire Protective Association	SS	Stainless Steel
AWWA	American Water Works Association	FF	Finish Floor	NH	Hubless Pipe & Fitting	SSU	Seconds Saybolt Universal
B & S	Bell and Spigot (also used for Brown & Sharpe gauge)	F.G.	Finish Grade	NO	Normally Open; Number	ST	Sanitary Tap
BD	Bend	Fig.	Figure	No.	Number	Std	Standard
BD	Balancing Damper	FLNG	Flange	NPS	Nominal Pipe Size (also called IPS or Iron Pipe Size)	SV	Service Cast Iron Soil Pipe
BFP	Back Flow Preventer	F.P.	Fire Plug	O	Oxygen (Chemical Abbreviation)	T	Te
B.O.C.A.	Building Officials and Code Administrators International	FS	Federal Specification	OA & OSA	Outside Air	T or t	temperature
B.O.D.	Biochemical Oxygen Demand	FS	Floor Sink	O.D.	Outside Diameter	T or t	thickness
BTU	British Thermal Unit	Fl. ft. or '³	Feet	OFD	Overflow Drain	t	time
° C	Degree Celsius, Centigrade	FTG	Fitting	OSD	Open Site Drain	TAP	Tap, Tapped
C	Celsius, Centigrade	F.U.	Fixture Unit	oz.	ounce	TCP	Temperature Control Panel
C or circ.	Circumference	Ga or ga	Gage or Gauge	P.	pressure	TOT	Tap on Top
C to C	Center to Center	Galv.	Galvanized	Pb	Lead (Chemical Abbreviation)	TP	Tap, Tapped
CB	Catch Basin	GEN	General	PDI	Plumbing Drainage Institute	TY	Tee Wye, (San Tee)
CF	Carlson Fitting	GPD	Gallons per day	PIV	Post Indicator Valve	TYP	Typical
cfm	Cubic Feet per minute	gpm or gal/min.	Gallons per minute	pH	Hydrogen-ion concentration	U, UR or Urn	Urinal
CI	Cast Iron	G.V.	Gate Valve	PLBG	Plumbing	UH	Unit Heater
CISP	Cast Iron Soil Pipe	H	Hydrogen (Chemical Abbreviation)	ppm	Parts per Million	UPC	Uniform Plumbing Code
CISPI	Cast Iron Soil Pipe Institute	H & S	Hub and Spigot	psi	Pounds per Square inch	v	Vent
Cl	Chlorine	H.B.	Hose Bib	psig	Pounds per Square Inch Gage	v	Valve
CL	Centerline	hd. or Hd.	Head	PVC	Polyvinyl Chloride	v or vel.	Velocity
CLO.	Closet	HI	High	qt	Quart	V or Vol.	Volume
CO	Cleanout	HOR	Horizontal	R	Hydraulic Radius	VCP	Vitrified Clay Pipe
COMB	Combination	hr.	Hour	R or Rad.	Radius	VERT	Vertical
COND	Condensate	H.W.	Hot Water	RA	Return Air	VS	Vent Stack
COTG	Cleanout to Grade	HTG	Heating	RCNP	Reinforced Concrete Pipe	vtr	Vent through roof
CS	Cast Steel	I.A.P.M.O.	International Association of Plumbing and Mechanical Officials	RD or R.D.	Roof Drain	W	Waste
Cu	Copper (Chemical Abbreviation)	ID	Inside/Interior Diameter	RD	Rate of Demand	W/	With
cu.ft. or ft³	Cubic Feet	in. or "	Inch	red.	Reducer	WC	Water Closet
cu. in. or in³	Cubic Inch	INC	increaser, Increasing	REV	Revert	WCO	Wall Cleanout
C.W.	Cold Water	IPS	Iron pipe size	RG	Return Grille	WH	Wall Hydrant
		L or l or len.	Length	RH	Right Hand	WH	Water Heater
				RIV	Roof Intake Vent	W.L.	Water Level
				R.L.	Roof Leader	WS	Waste Stack
						Wt	Weight
						XH	Extra Heavy Cast Iron Soil Pipe
						Y	Wye

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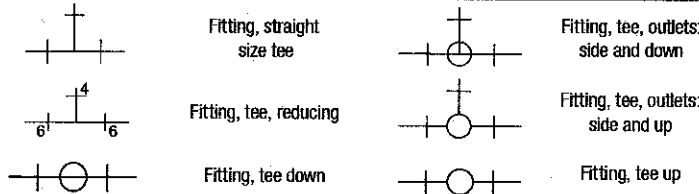
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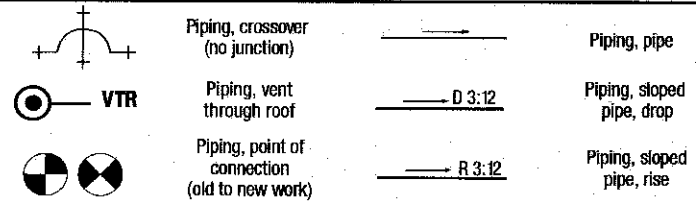


FITTING TEES & PIPING SYMBOLS - PLUMBING

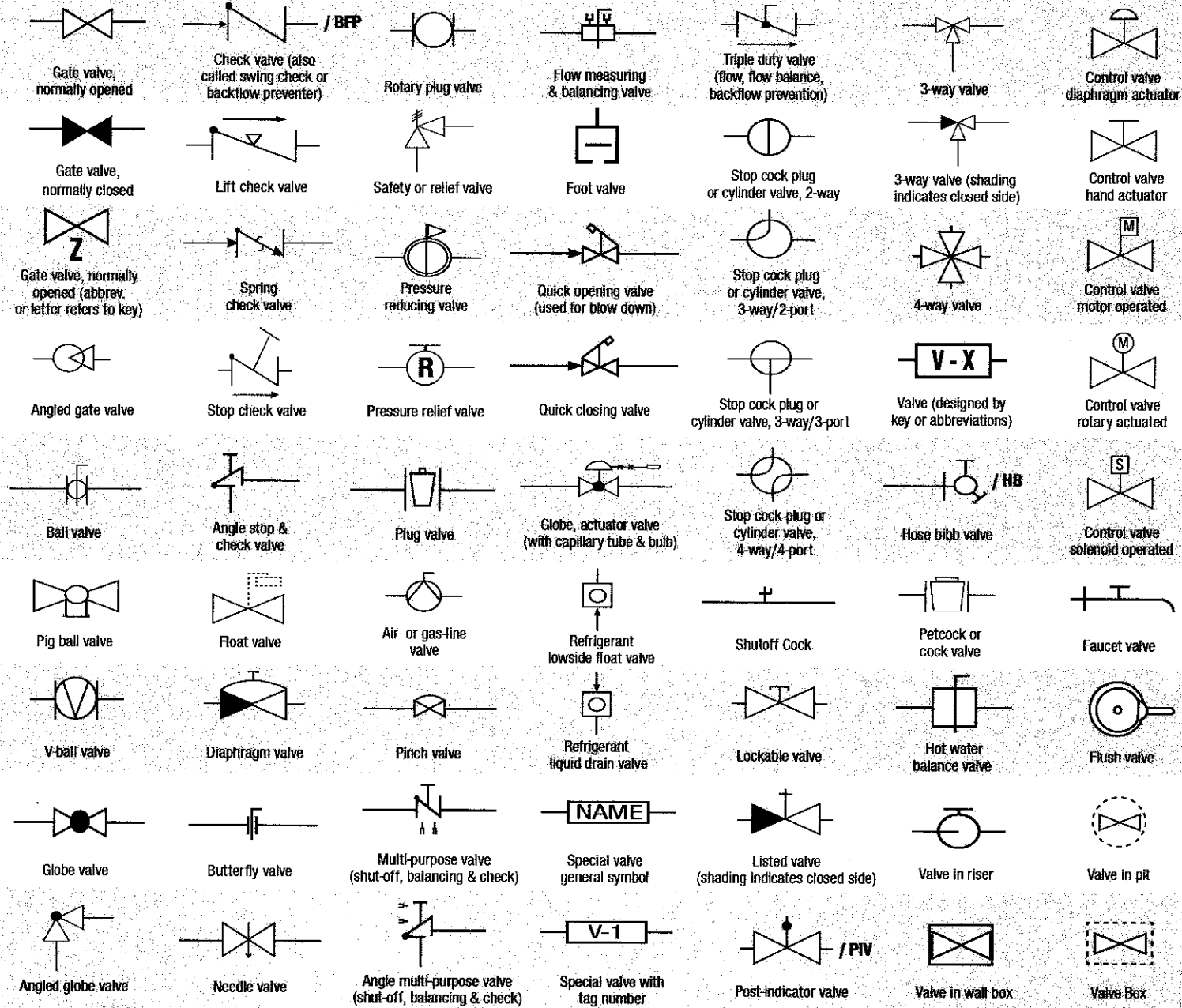
PLUMBING - FITTING TEES



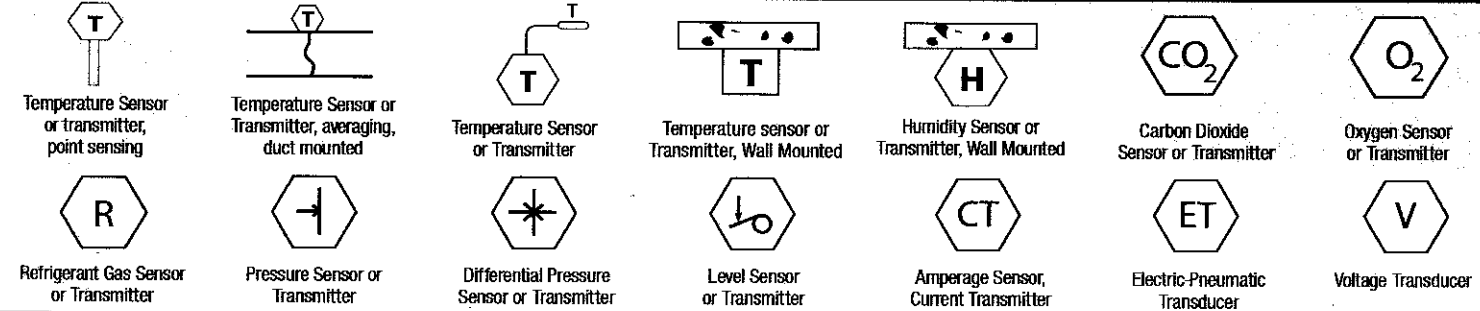
PLUMBING - PIPING



VALVES SYMBOLS - PLUMBING

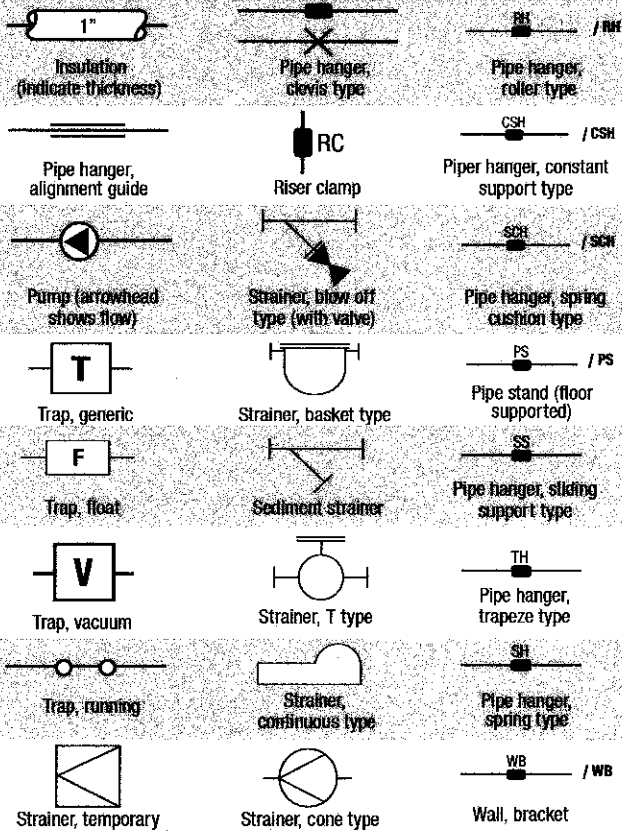


SENSORS & TRANSMITTERS SYMBOLS - MECHANICAL

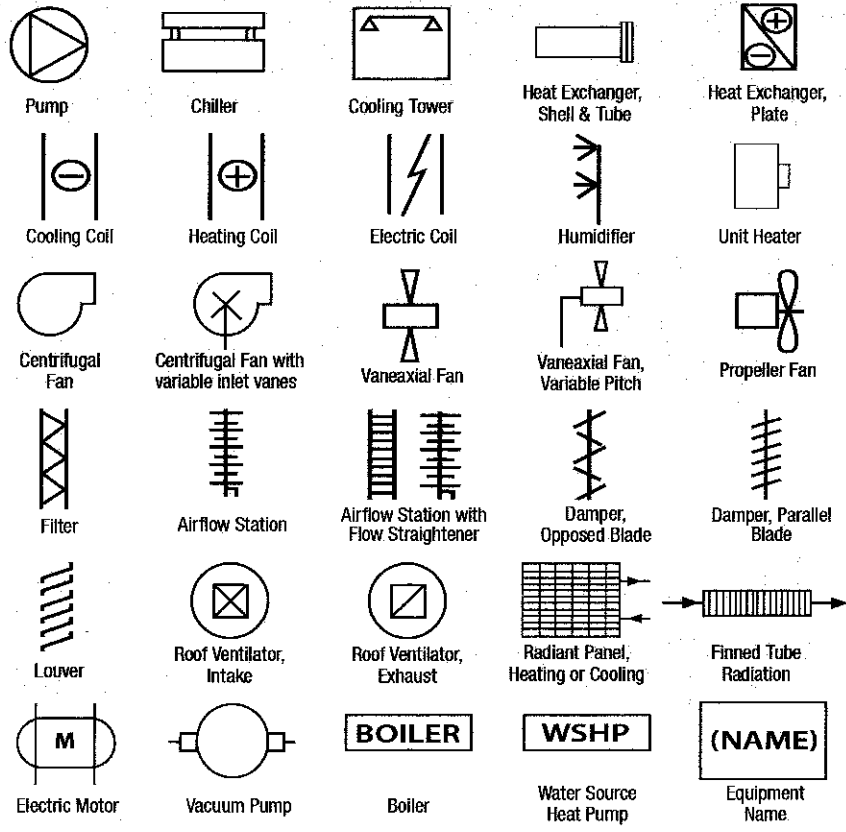


EQUIPMENT SYMBOLS - PLUMBING & MECHANICAL

PLUMBING EQUIPMENT SYMBOLS



MECHANICAL EQUIPMENT SYMBOLS



FITTINGS SYMBOLS - PLUMBING

