

Table 3.1: *Fluid power symbols (Lines)*















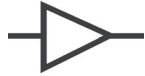


Symbol	Definition
	Main line
	Pilot line
	Enclosure outline
	Hydraulic flow direction
	Pneumatic flow direction
	Flexible pipe line
	Constant flow restriction
	Variable flow restriction
	Pressure Compensation (small perpendicular arrow)
	Temperature effect
	Vented reservoir (hydraulic)

Table 3.2: *Fluid power symbols (Pumps, compressors and prime movers)*

Symbol	Definition
	Single direction, fixed displacement pump
	Reversible, fixed displacement pump
	Reversible, variable displacement pump
	Air compressor
	Electric motor
	Internal combustion engine

double end rod. Besides to the possibility to show the cushioned design either from one side or from both sides.

Table 3.3: *Fluid power symbols (Linear and rotary actuators)*





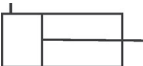

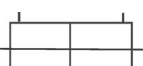
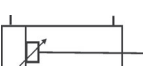
Symbol	Definition
	Single direction, fixed displacement hydraulic motor
	Reversible, fixed displacement hydraulic motor
	Reversible, variable displacement hydraulic motor
	Single acting spring loaded actuator
	Simplified symbol of single acting actuator
	Double acting, single end rod actuator
	Double acting, double end rod actuator
	Double acting actuator with adjustable cushion

Table 3.4: *Fluid power symbols (Valves)*



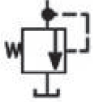






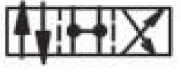
Symbol	Definition
	Butterfly manual ON-OFF valve
	Non return (check) valve
	Pressure relief valve
	Manual hand control
	Pedal foot control
	Pressure pilot control
	electric solenoid control
	One position of a control valve
	Two position four port valve
	Three position four port valve

Table 3.5: *Fluid power symbols (Miscellaneous)*

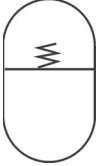
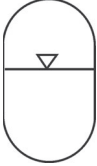






Symbol	Definition
	Spring loaded accumulator
	Gas loaded accumulator
	Heater
	Cooler
	Filter or strainer
	Pressure indicator
	Temperature indicator
	Filter Regulator Lubricator (FRL)

Table 3.6: Comparison between logic symbols and fluid power symbols (basic symbols)

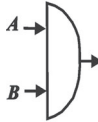
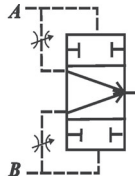
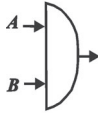
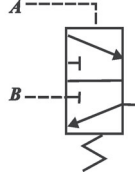
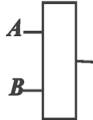

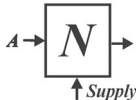
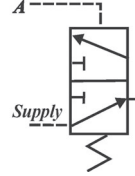
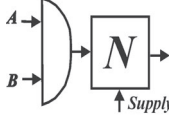
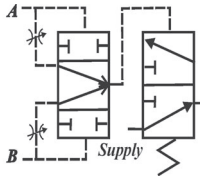
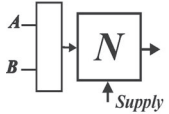
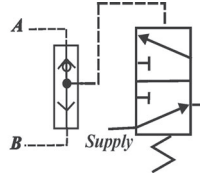
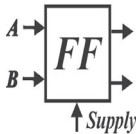
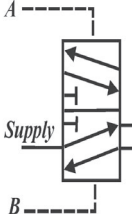
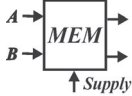
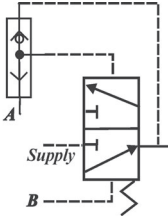

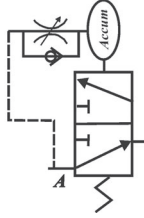
Control element	Logic symbol	Fluid power symbol
And		
Yes		
Or		
Not		
Nand		
Nor		

Table 3.7: Comparison between logic symbols and fluid power symbols (miscellaneous symbols)

Control element	Logic symbol	Fluid power symbol
Flip flop		
Memory		
Step shot		
Delay timer	