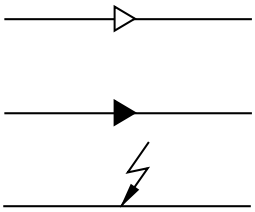
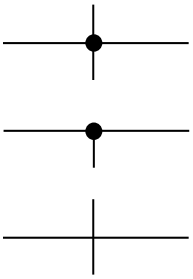
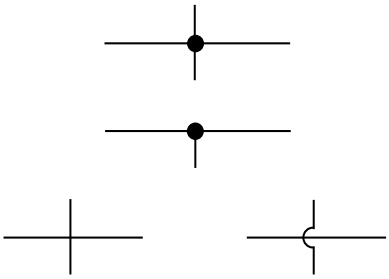
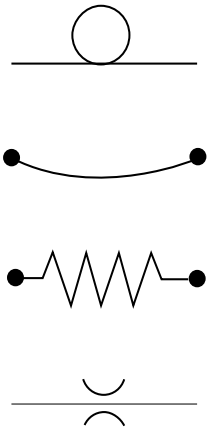
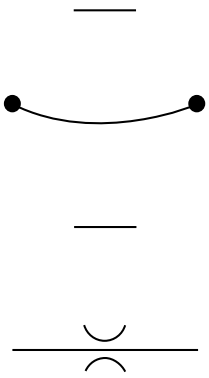
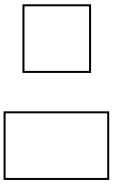
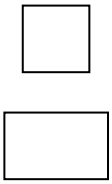
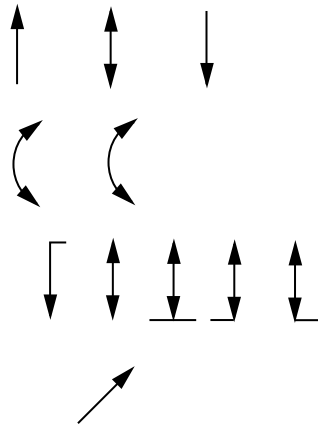
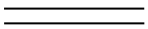
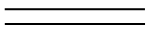
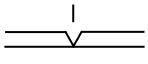
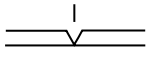
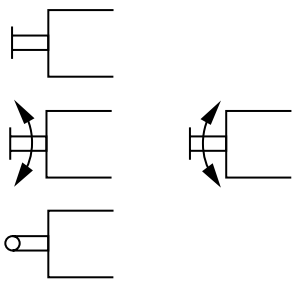
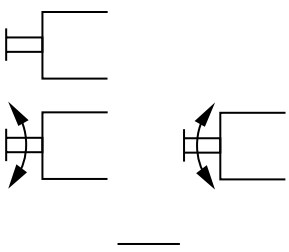
Basic symbols

Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		General Line
		Marking the Line (current direction and type of lever) Pneumatic (also outlet to atmoshere) Hydraulic Electrics
		Line Junction: with connection without connection
		Line Design: Line Loop Flexible line for connecting moving parts (Brake tube) Coiled cable (Wendelflex®) Reduction in cross-section (throttling point)
		Circuit as symbol for compressor, pump, motor, measure instrument, joint, rolls etc.

Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		Rectangle and Square
		as Symbols for valves, Cylinders and Actuators
		Square on top for conditioning (filter, lubricant devices, sedimentator, heat exchanger)
		Framing of devices which are fitted together
		Arrow, display of: flow direction
		Turning facility, direction of revolution
		Ways and flow direction inside of the valve
		Slope arrow: shows adjustment facility
Actuation		
		Lever, shaft, linkage and mechanical connection
		locking mechanism: Tool to hold a switch position
		Mechanical operated: pushing or pulling, generally via turning via a linkage

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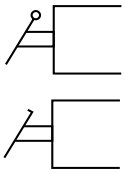
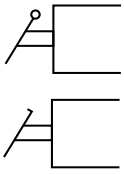
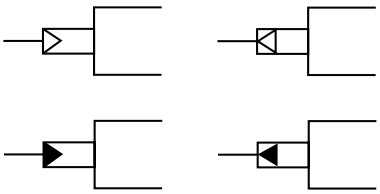
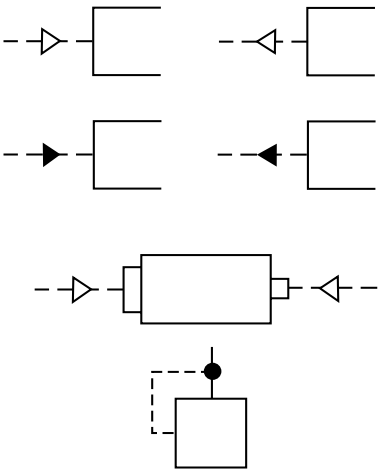
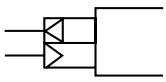
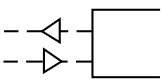
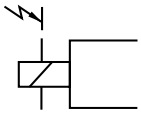
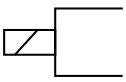
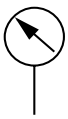
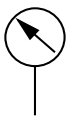
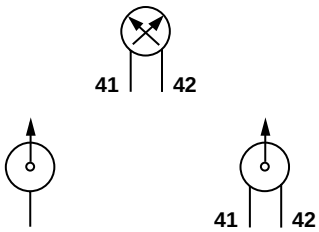
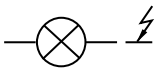
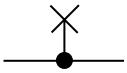
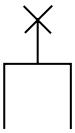
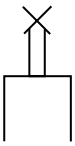
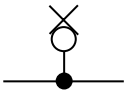
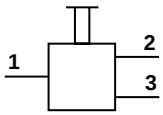
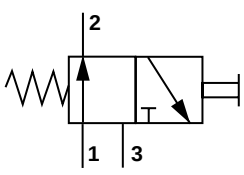
Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		Mechanical operated: via a hand lever via pedal
		Activation: pneumatic hydraulic via different control areas control channels are in the unit
		examples for multi-control dual control by pressure reduction via pressure increase triple control
 2)		activation electrical, via solenoid
		Slack Adjuster: Manually automatically
Warning devices		
		Pressure gauges Single pressure gauge

2) The arrow ( ) does not belong to the symbol

Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
	——	Dual pressure gauge
	——	Low-pressure indicator
 2)	——	Light
	——	Buzzer
Test and charging ports		
	——	Test and charging port: in a line
	——	on the device
	——	in a device with mechanical sequencing actuation
	——	Charging port: energy withdrawal is not possible
		For valves in general, a single square is used
		3/2 directional control valve hand-controlled

2) The arrow ( ) does not belong to the symbol

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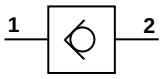
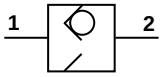
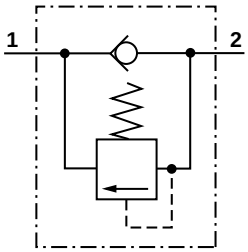
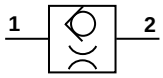
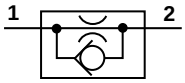
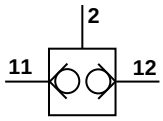
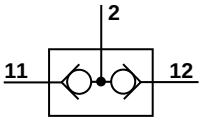
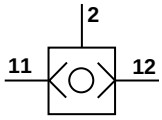
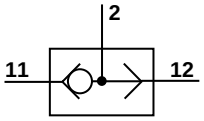
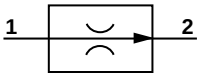
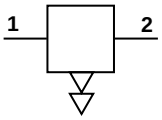
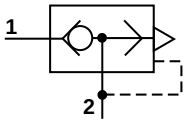
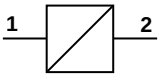
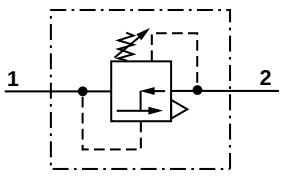
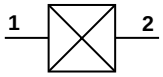
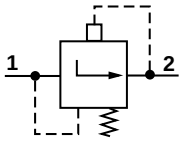
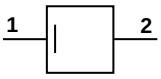
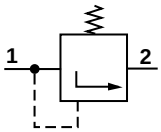
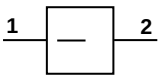
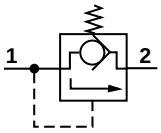
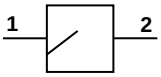
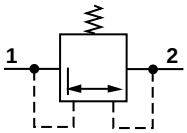
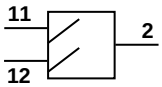
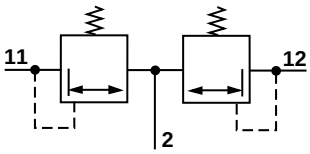
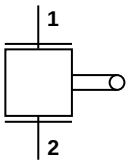
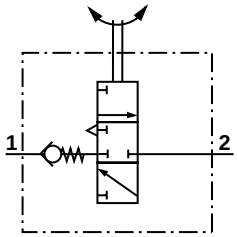
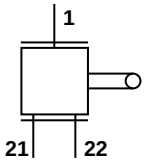
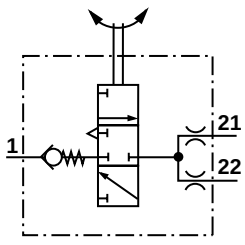
Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
1) 		Check valve
1) 		Check valve with limited back-flow
1) 		Check valve with throttled back flow (throttled check valve)
		Shuttle valve without backflow (Double check valve)
		Shuttle valve with back-flow (Two-way valve)
		Throttle valve
		Quick release valve
1) 		Proportioning Pressure Regulator, not linear (control valve)

1) Flow direction in operation is here shown from left to right

Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
1) 		Adapter valve, regulating to a continuous pressure ratio (pressure reducer)
1) 		Charging Valve: without backflow
		with back-flow
		with limited back-flow
		Dual overflow valve with limited back-flow
		Levelling Valve: with one port to bellows
		with two different evaluated ports to bellows

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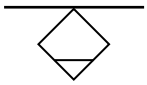
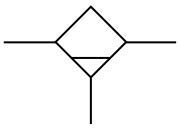
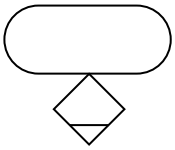
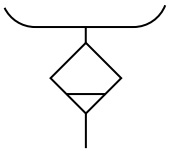
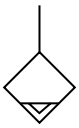
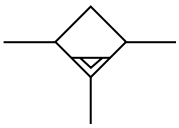
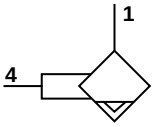
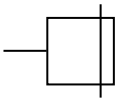
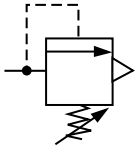
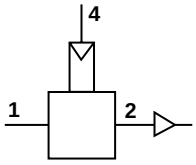
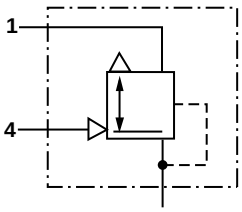
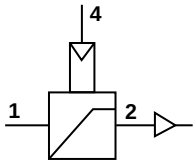
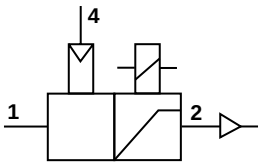
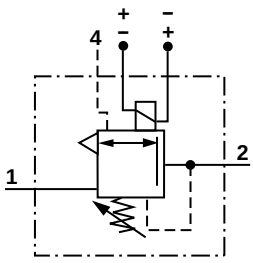
Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		Drain valve (Water separator): manually activated, in passing line
		manually activated, at the reservoir
		with automatic draining
	—	automatic draining with pulse control
1) 		Safety Valve
1) 		Relay valve
	—	with pressure reduction
		with electromagnetically actuated brake valve and Pressure limiting (solenoid relay valve)

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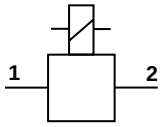
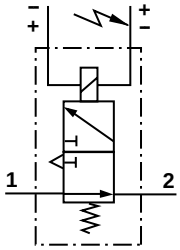
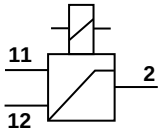
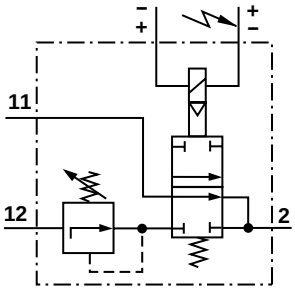
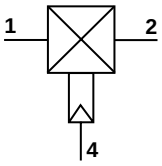
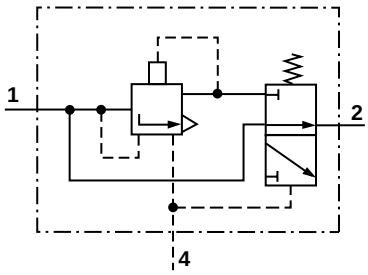
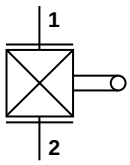
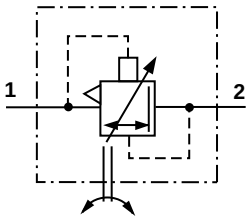
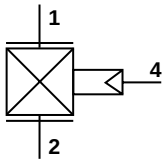
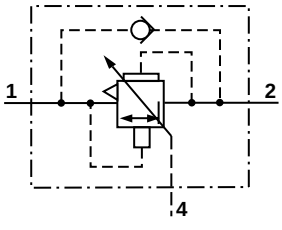
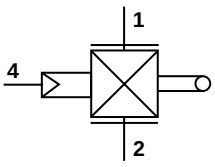
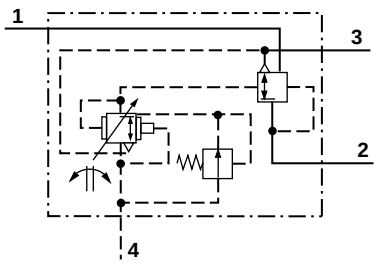
Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		Solenoid valve
1) 		Brake valve solenoid actuated, with pressure limitation
		Empty load valve
		Load Sensing Valve: mechanically controlled
		pneum. or hydr. controlled, e.g. single circuit pneumatically controlled
		mechanically controlled with integrated relay valve

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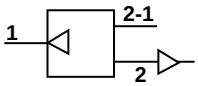
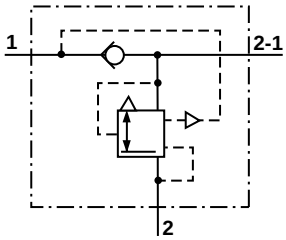
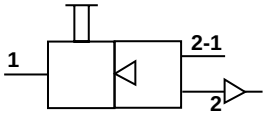
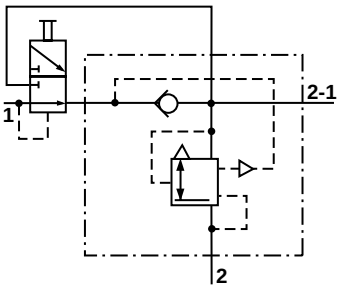
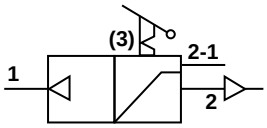
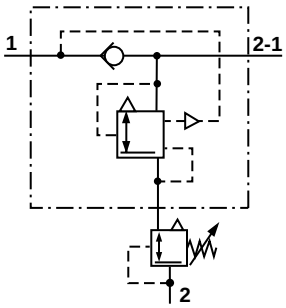
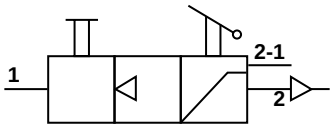
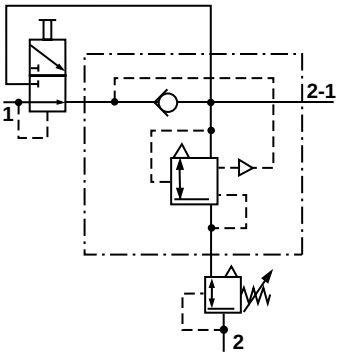
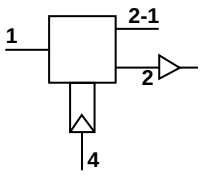
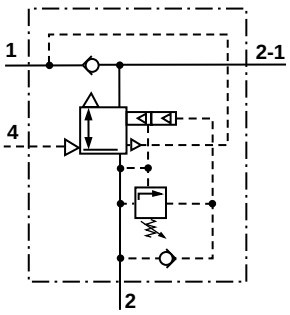
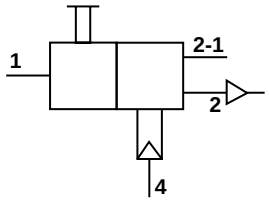
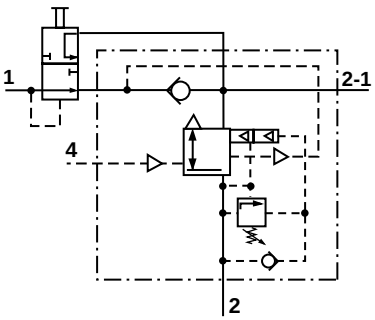
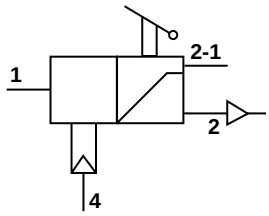
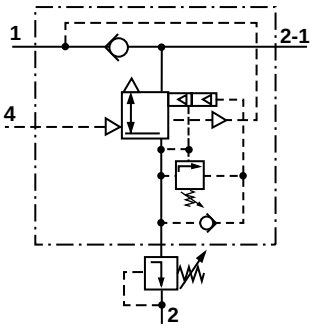
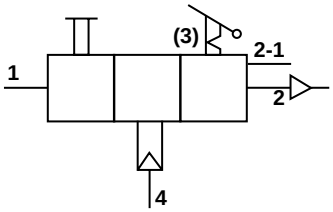
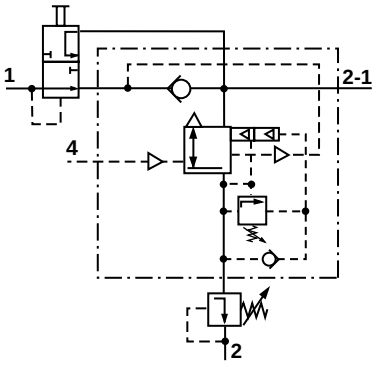
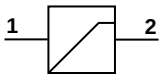
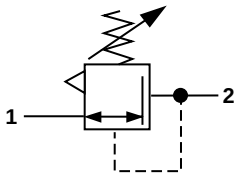
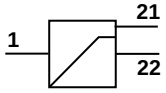
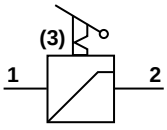
Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		Relay emergency valve for single line brake system: without release valve
		with release valve
		with hand controlled pressure limiter valve, e.g. with (3) fixed pressures
		with release valve and hand controlled pressure limiter valve without instruction of quantity of fixed pressures
		Trailer emergency brake valve for a dual line braking system without release valve, with adjustable predominance

Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
1) 		Relay emergency valve for two-line brake system: with release valve and adjustable predominance
		with hand controlled pressure limiter valve without instruction of the number of fixed pressures.
		with release valve and hand controlled pressure limiter valve, e.g. with (3) fixed pressures.
1) 		Pressure limiting valve:
	——	with one unlimited delivery (21) and one limited delivery (22)
	——	hand controlled, e.g. with (3) fixed pressures

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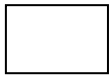
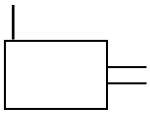
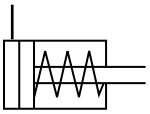
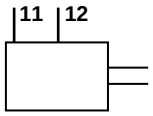
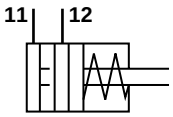
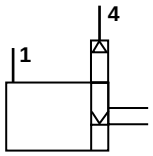
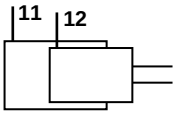
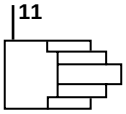
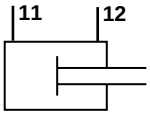
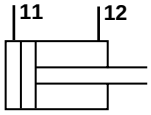
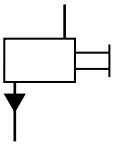
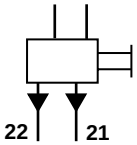
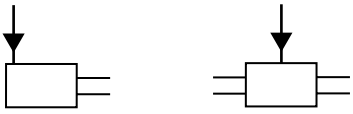
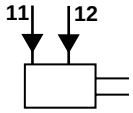
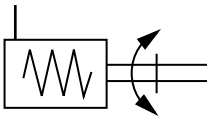
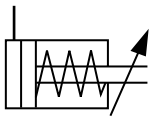
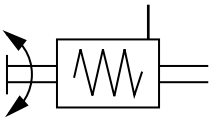
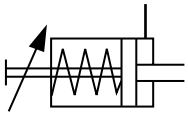
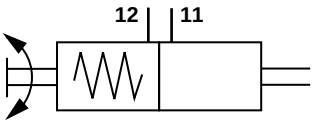
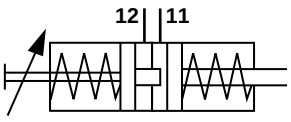
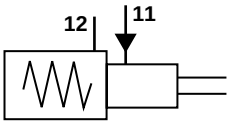
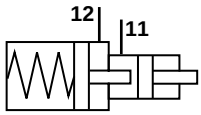
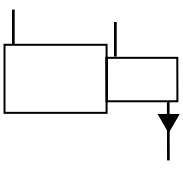
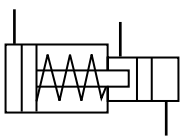
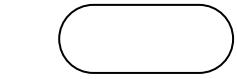
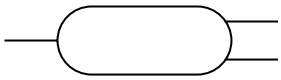
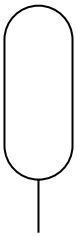
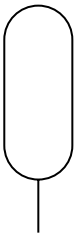
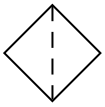
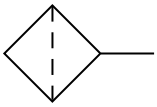
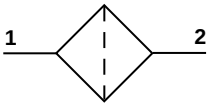
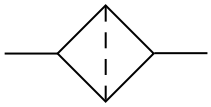
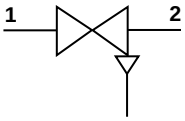
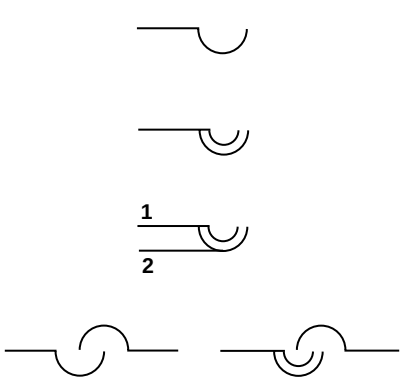
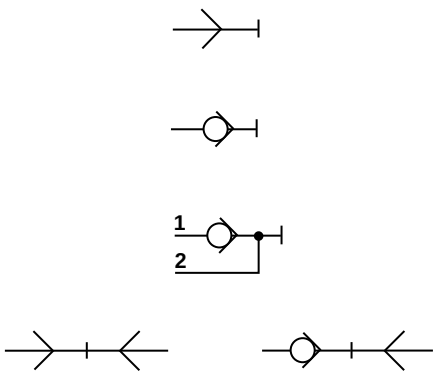
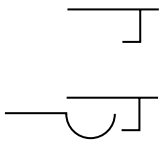
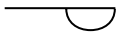
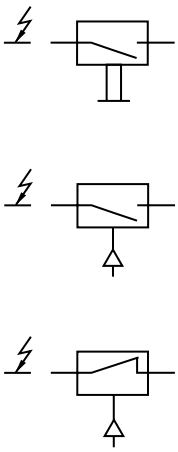
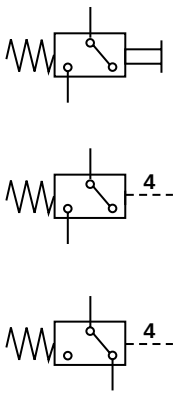
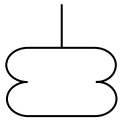
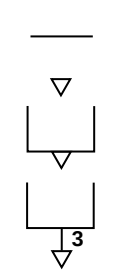
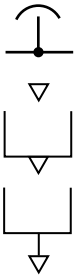
Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		Compressed air cylinder, in general: (also diaphragm cylinder)
		single circuit
		dual circuit
		with locking
		Telescope Cylinder
		Double Acting Cylinder
		General hydraulic cylinder:
		single-circuit master cylinder, mechanically actuated
		dual-circuit master cylinder, mechanically actuated
		Slave cylinder, single circuit

Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		Hydraulic slave cylinder: dual circuit
		Spring brake actuator, in general
		pull type with release device at front
		push type with release device
		Combinated brake cylinder push type, pneumatically actuated with release device at rear
		push type, pneumatically and hydraulically actuated
		Air-hydraulic actuator with hydraulic master cylinder

Reservoirs, filter and shut-off cocks

Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		General reservoir as energy storage (pressure reservoir)
		Single chamber air reservoir
		Multi chamber air reservoir
		Hydraulic Accumulator
		Fluid reservoir for balancing, anti-freeze agent or hydraulic fluid
		Filter, in general
		Air intake filter
		Line filter
		Cut-Off Cock: without exhaust
		with exhaust

Drawing symbols in accordance with standard DIN 74 253	Functional symbols in accordance with standard DIN ISO 1219	Explanation
		Coupling Head: without shut-off with shut-off with shut-off and two ports coupling heads, connected
		Dummy Coupling coupled
		blind coupling
2) 		Electrical switch Shorting switch, mechanically operated Shorting switch, pneumatically operated Opening switch, pneumatically operated
		Air Spring
		Exhausts: Exhaust Exhaust outlet directly at the device with exhaust line
		Elastic balancing device (knuckle joint)

2) The arrow ( ) does not belong to the symbol