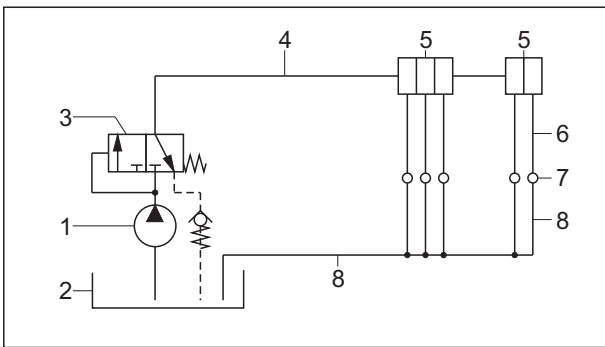


Classification of central lubrication systems

Central lubrication			
Consumption lubrication	Lubricant		Circulating lubrication
Single line system	oil / fluid grease	oil	Single line system
Dual line system	oil / grease	oil	Dual line system
Multi line system	oil / grease	oil	Multi line system
Restrictor system	oil	oil	Restrictor system
Progressive system	oil / grease	oil	Progressive system
Oil- and air mixing system	oil		

Schematic presentation of the lubrication systems and definition

Components of a central lubrication system:

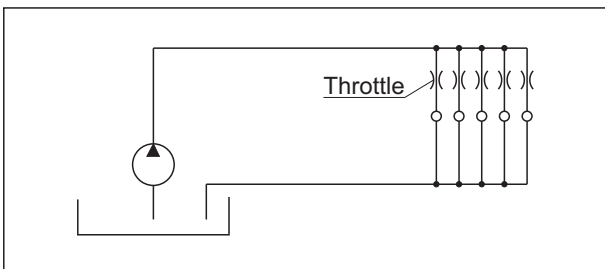


- 1 Pump
- 2 Reservoir
- 3 e.g. directional valve
- 4 Main line
- 5 Lubricant distributor
- 6 Lubrication line
- 7 Lubrication point
- 8 Return

Note:

The scheme on the left only shows the components of a central lubrication system. The function is shown with the following schemes of the lubrication systems.

The throttle system:



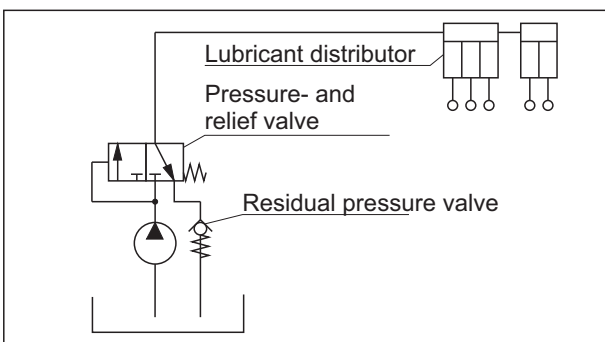
Definition:

At this system the lubricant is distributed by the use of throttle resistances.

Note:

Although the system is listed under consumption- and circulating lubrication systems in the overview, the restrictor system is mainly used in circulating lubrication systems.

The single line system:



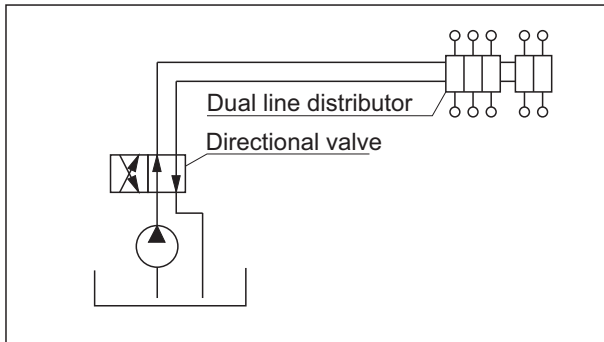
Definition:

The lubricant is with intermittent pressure and via the main line supplied to the lubricant distributors. From there it is distributed to the lubrication points.

Note:

Although the single line system is listed under consumption- and circulating lubrication, the single line system is mainly used in consumption lubrication systems.

The dual line system:



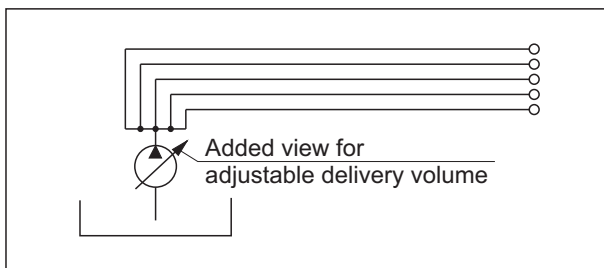
Definition:

The lubricant is under pressure and via a directional valve alternately supplied to both inlets of the dual line distributor, which, controlled by the pressure changeover, distribute the lubricant to the lubrication points.

Note:

Although this system is listed under consumption- and circulating lubrication systems, it is mainly used in consumption lubrication systems.

The multi line system:



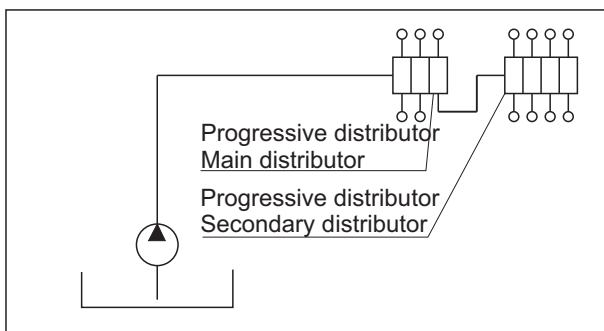
Definition:

At the multi line system the lubricant is supplied in defined amounts over one or several outlets of the pump. A line goes directly from each outlet to the lubrication point.

Note:

Although this system is listed under consumption- and circulating systems, it is mainly used for consumption lubrication systems.

The progressive system:



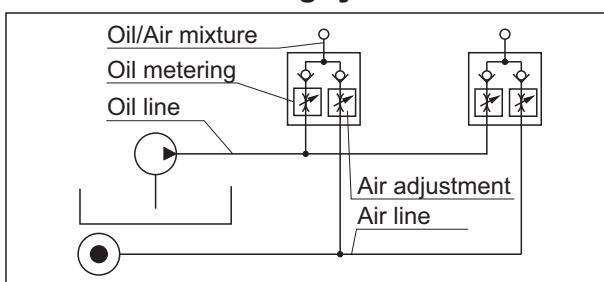
Definition:

At the progressive system the lubricant is supplied to the lube points in inevitable order.

Note:

The progressive system is used in consumption- and circulating lubrication systems. Here is only shown the consumption lubrication system.

The oil- and air mixing system:



Definition:

At this system, the oil is transported with air as a fine film along the pipe walls of the lubrication point line. Thus, when oil is added in certain intervals, a fine oil amount is continuously sprayed on the lub point.

Note:

The oil/air system enables continuous spraying of smallest amounts, without oil fog, e.g. into bearings.

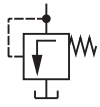
Use

Graphic symbols according to DIN 24 271 Part 2 and DIN ISO 1219-1 for the individual parts of central lubrication systems, which are suitable for technical drawings.

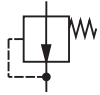
	Lubrication point		Lubricant reservoir
	Venting		Throttle distributor (e.g. for 3 lubrication points)
	Displacement pump (with constant displacement volume)		Throttle distributor, adjustable
	Displacement pump, adjustable		Single line distributor (e.g. for 3 lubrication points)
	Electric motor		Dual line distributor (e.g. for 8 lubrication points)
	Pump unit		Progressive distributor (e.g. for 8 lubrication points)
	Multi line pump (with constant displacement volume) (e.g. with 5 utilizable outlets)		Fan nozzle
	Multi line pump, adjustable (e.g. with 5 utilizable outlets)		Spray nozzle
	Agitator (priming device for grease delivery)		Atomization nozzle
	Follower piston (priming device for grease delivery)		Time dependent program controller
	Maintenance unit		Machine cycle dependent program controller
	Oiler (Oil fog device)		Reversing valve (operation not shown)
			Relief valve
			Non-return valve

Graphic symbols of the individual parts of central lubrication systems

Graphic symbols



Pressure limitation valve



Pressure regulating valve



Throttle valve



Throttle valve, adjustable



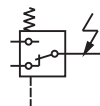
Flow control valve



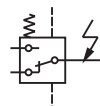
Orifice valve



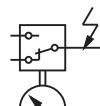
Stop valve
e.g. gate, cock, valve



Pressure switch



Differential pressure switch



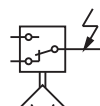
Contact manometer



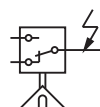
Pressure gauge
(Manometer)



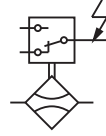
Filling- and ventilation filter



Level switch



Temperature switch



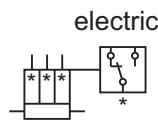
Flow switch



Pressure indicator

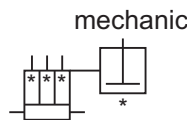


Flow indicator



electric

Function indicator
(e.g. at a single line distributor)
(refers to all outlets marked with *)



mechanic



Level indicator



Counter
(e.g. for lubricating cycles or volume)



Flow meter



Thermometer

02-1-10-04 state: 09.14EN

Subject to alterations!