

LINE RUPTURE PROTECTION VALVES

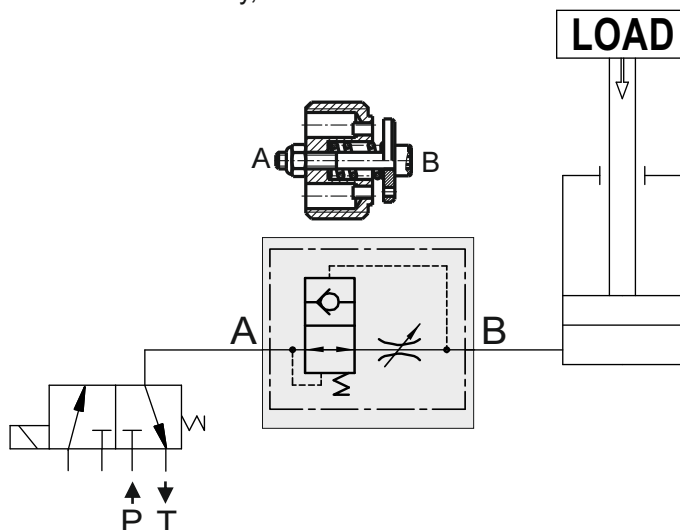
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Line rupture protection valves are mounted in hydraulic systems, driving cylinders or hydraulic motors, used to lift heavy weights. When a pressure hose, or a pressure pipe to the cylinder (hydraulic motor), is ruptured, the movement of the unit is accelerated under the force of the weight which acts in the direction of its descending. This may lead to serious damages to the installation, and to unwanted oil leakage as well. The role of the line rupture protection valve in this case is to close the flow of oil in the direction from the cylinder to the system. The valve is adjusted to close when the flow through it is increased with 15...20 % more than the volume during the normal work of the system. In this way the valve will be activated only when there is a breach in the integrity of the pipes from the valve to the tank, as this is the moment when a reduction of the pressure drop to the tank occurs and the flow is increased over the volume calculated for the normal work of the system. In certain cases it is advisable not to lock the cylinder when it breaks down, but to retract it slowly to its initial position under the pressure of the weight. To achieve this, a hole is drilled in the dish of the valve. The diameter of this hole determines the speed of descending after the valve is closed. The existence of such a hole changes the graphic of the valve adjustment. You can contact us for a more precise selection of the parameters.

When a valve is mounted, it is advisable to comply with the following rules:

- the valve can close when the adjusted flow of the fluid is exceeded only in one of the directions of this flow. In the other direction the flow of the fluid cannot lead to a closure, irrespective of the volume of the flow. The direction of closure must be from the cylinder to the system.
- when the cylinder performs an action only in one direction, it is enough to mount only one valve in its discharge end.
- the valve must be mounted directly on the threaded feeder of the cylinder (under the orifice). To make that possible it is made with a longer thread or within a body, screwed in the feeder.



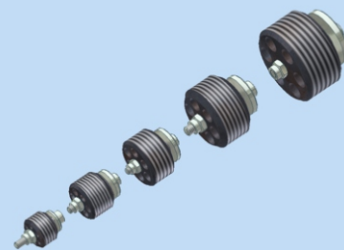


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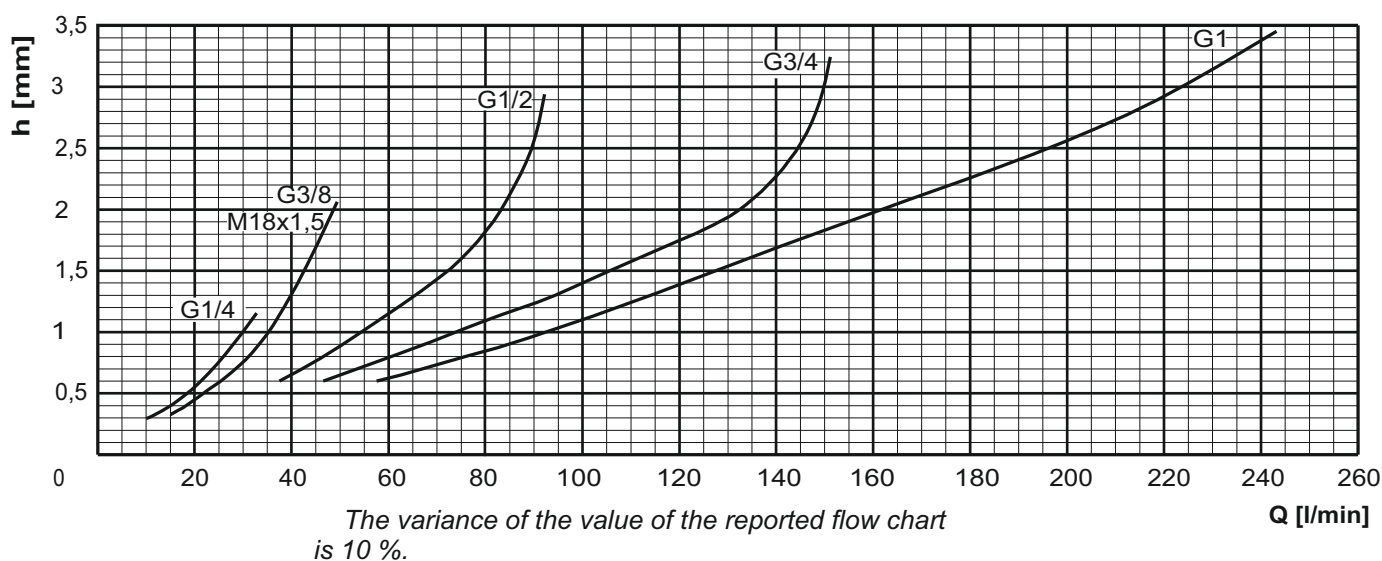
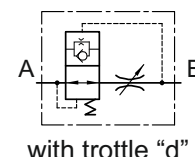
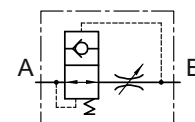
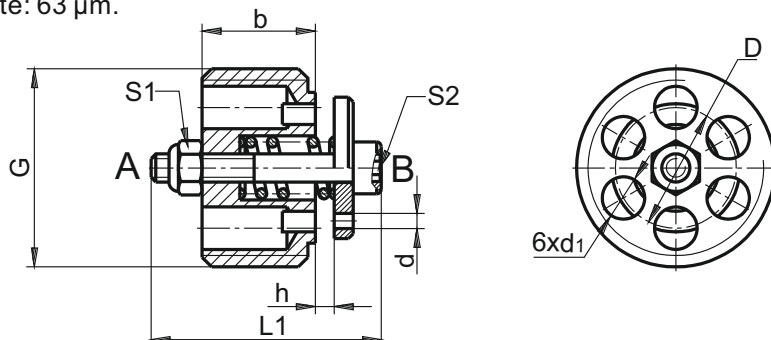
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The valve is screwed directly into the pressurized inlet port of the hydraulic cylinder.

The required flow rate is adjusted by the clearance "h".

All performances and calibration are carried out by using hydraulic oil with viscosity approx. 46 cSt at 50°C Temperature range: -20 °C...+80 °C. Filtration absolute: 63 µm.



Type	Adj. flow range L/min	P _{max.} bar	G	L1 mm	b mm	h _{max.} mm	S1 mm	S2 mm	D mm	d1 mm	Tightening torque Nm
KA..14	10...30	350	G1/4	19	8,7	1,2	5,5	2,5	8,3	2,2	8
KA..38	15...50		G3/8	25	12	2			10	3,5	12
KA..M18	15...50		M18x1,5	25	12	2			10	2,5	12
KA..12	35...100		G1/2	25	12	2,5	7	3	12,8	4,5	18
KA..34	45...150		G3/4	32	16,5	2,8			16	6	23
KA..1	55...260		G1	34	18,5	3,5			21,5	7	25

ORDERING CODE

KA 10 14 0.6

Type

Closing flow value (l/min)
/under client's order/

Treads "G" - code:

G1/4" - 14

G3/8" - 38

G1/2" - 12

G3/4" - 34

G 1" - 1

M18x1,5 - M18

Diameter d [mm] : ...
/under client's order/
Without hole : **Omit**

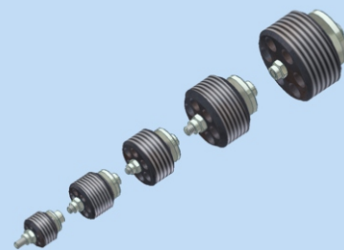


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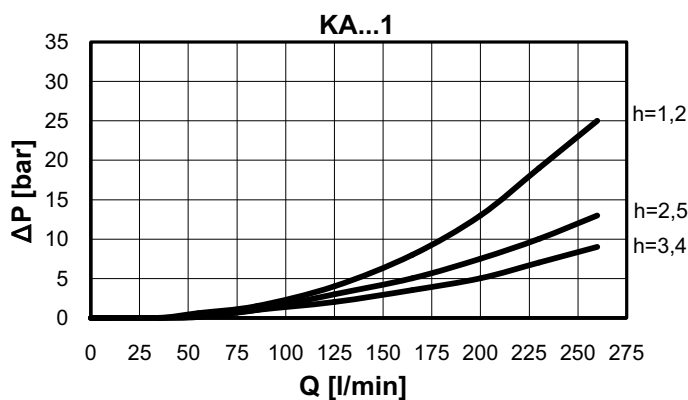
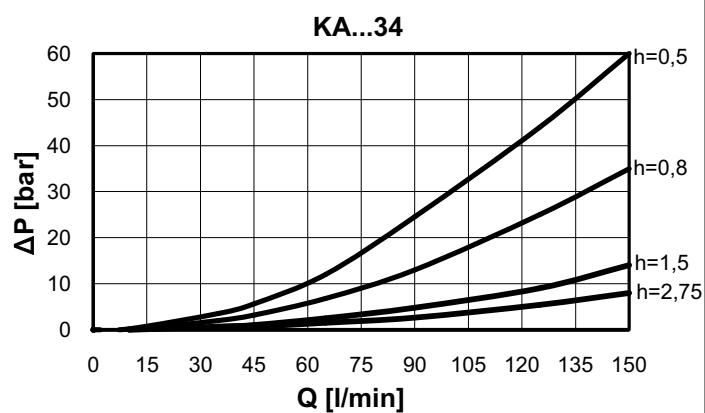
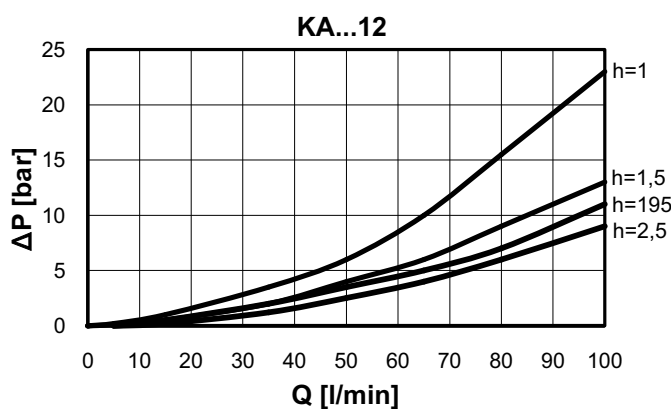
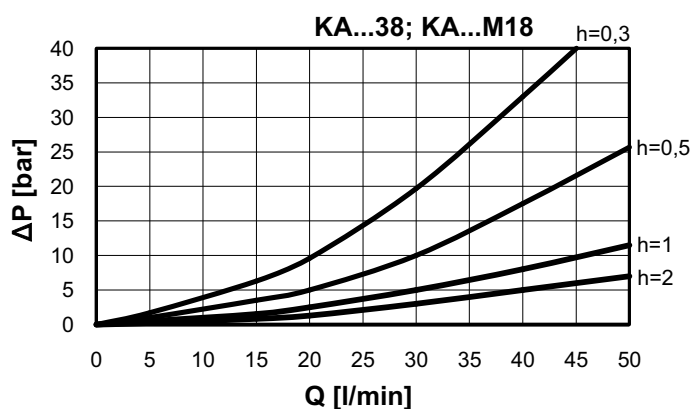
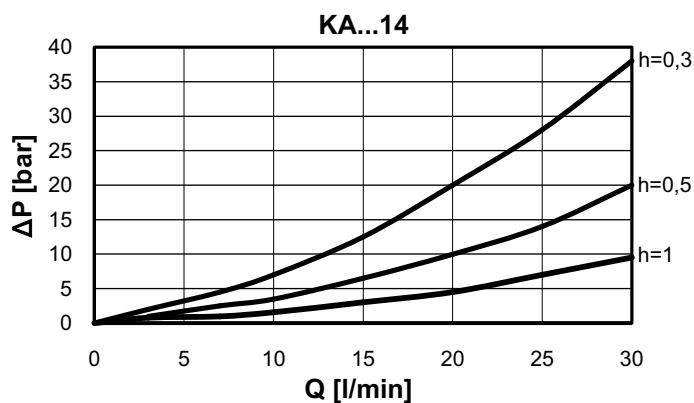
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$\Delta P=f(Q)$ - diagrams the flow from "A" to "B" at a different set values for "h"



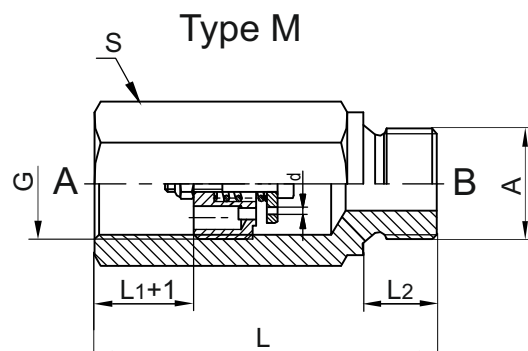
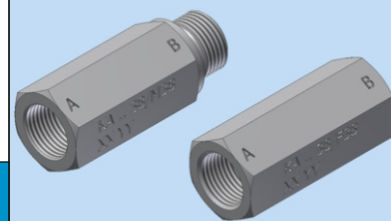


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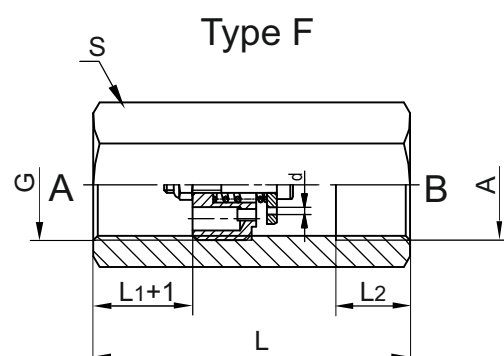
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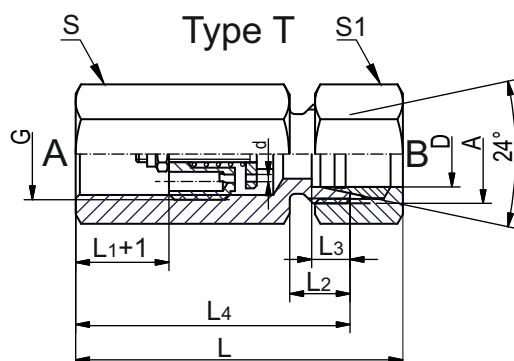
Tab. 1

Type	P _{max.} bar	G	L mm	S mm	A	L1 mm	L2 mm
KA .. 14M..	350	G1/4"	50	19	G1/4"	13	12
KA .. 38M..		G3/8"	58	22	G3/8"	15	12
KA .. 12M..		G1/2"	65	27	G1/2"	19	14
KA .. 34M..		G3/4"	78	36	G3/4"	23	16



Tab. 2

Type	P _{max.} bar	G	L mm	S mm	A	L1 mm	L2 mm
KA .. 14/F..	350	G1/4"	48	19	G1/4"	13	12
KA .. 38/F..		G3/8"	52	22	G3/8"	15	13
KA .. 12/F..		G1/2"	60	27	G1/2"	18	14
KA .. 34/F..		G3/4"	72	36	G3/4"	23	16
KA .. 1/F..		1"	80	41	G1"	25	18



Tab. 3

Type	P _{max.} bar	G	L mm	S mm	S1 mm	A	L1 mm	L2 mm	L3 mm	L4 mm	D mm
KA .. 38/T12L	350	G3/8"	59	22	22	M18x1,5	17	11	7	50	12

Tab. 4

Type	KA1/4	KA3/8	KA1/2	KA3/4	KA1
Tightening torque N.m	10	15	20	25	30

Note:

For more information and technical data see pages 5.6 to 5.8

ORDERING CODE

Type

KA 10 14 0.6 / F 14 12 L

Series: L, S
only type T

Threads "G" - code:

G1/4" - 14
G3/8" - 38
G1/2" - 12
G3/4" - 34
G1" - 1

Diameter d [mm] : ...
/under client's order/
Without hole : Omit

Type : M, F, T

Threads "A" - code :

G1/4" - 14
G3/8" - 38
G1/2" - 12
G3/4" - 34
G1" - 1
for type T-Omit

Tube O.D.:
Diameter D
/see tab.3/
only type T

Closing flow value
(l/min)
/under client's order/