

Product Data Sheet

SD 1400-4E02

July 2009

Damcos® KF/KFR

Hydraulic Linear Single-Acting Spring-Closing Actuator



DAMCOS®


EMERSON™
Process Management

Damcos® KF/KFR

Description

The KF/KFR is designed as hydraulic fail close actuators. When the actuator is operated by hydraulic pressure, the output spindle is lifted (and the valve is thus opened) and the spring package is compressed. When the pressure is released, the spring package will press down the spindle and close the valve. The KF/KFR has no external moving parts during operation. The KF/KFR is designed with built-in crossover valve and is equipped with a direct visual position indicator. The KF/KFR can be operated in any kind of environment and is easily

adapted to all well-known globe valves, and all models are prepared for direct built-on modular control functions. The KFR is also equipped with a unique emergency system; when the hydraulic pressure is not available, the valve can be opened and closed by means of a built-in manual hand pump. When the pressure is reestablished, the manual hand pump function is automatically disengaged at the first hydraulic opening of the actuator.

Technical data

Working pressure	135 bar
Test pressure	1,5 x working pressure
Burst test	min. 675 bar
End Closing thrust (spring)	1500 - 16500 N
Viscosity of hydraulic oil	15 to 200 cSt

Technical specifications

Temperature range	-20°C to +80°C (Other temperature ranges on request)
Piston	GGG40
Housing	GGG40
Output spindle	Brass, other material on request
Indicator housing	Brass MS 58
Intermediate flange	St 52-3, other material on request
Hand pump	Brass MS 58
Coating	Primer: min. 40 µm, type Hempel EE 13140 Top coat: Min. 25 µm alkyd, red no. 51320

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Standard optionals

The KF/KFR actuator for fail close operation of globe valves:

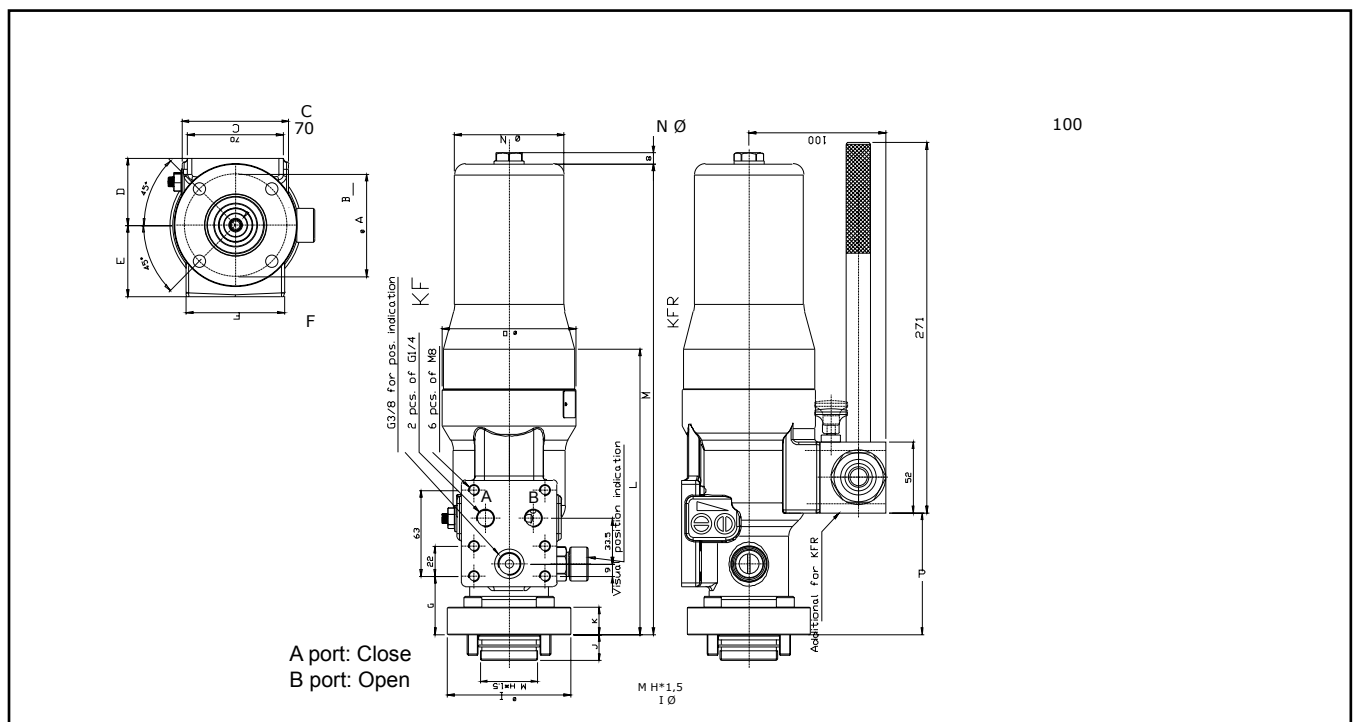
- Unique and simple design with built-in crossover valve
- Easy installation on intermediate flange at globe valve
- Same unit for several valve sizes
- Will operate in sea air as well as sea water
- No external moving parts during operation
- Prepared for direct built-on modular control functions or LPU
- Built-in hydraulic emergency operation for KFR
- Direct visual position indication
- Electrical on/off or continuous position indication IP 68
- Connection block with e.g. filter
- Throttle valve
- Quick connection for emergency operation with portable hand pump
- LPU mounting
- Epoxy coating
- On request spec. features as:
 - Flushing valve built into the connection block
 - Making it possible to flush the system without

Manufacture

The KF/KFR actuators are manufactured in accordance with the guidelines for quality system stated in the American standard ANSI/ASQC Z-1.15.

After assembly each actuator is flushed to NAS 1638/10 standard and plugged. Flushing to NAS 1648/7 standard can be performed on request.

Main dimensions



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Technical specifications

Type	End thrust kN	Max Stroke* mm	Total dry weight kg	Oil displac- ment at full stroke, litres	Dimensions bottom view, mm.						Dimensions front view, mm.									
					ØA	ØB	C	D	E	F	G	H	ØI	J	K	L	M	ØN	ØO	P
KF 65	1.5	16.25	6	0.021	62	9	80	48	-	-	35	36	76	17	15	154	231	58	80	-
KF 125	4.8	31.25	11	0.082	75	9	76	50	52	72	42.5	42	90	17	20	213	366	80	98	-
KF 250	16.5	62.50	51	0.428	118	14	70	78	77	72	71.5	72	140	23	35	-	630	150	150	-
KFR 125	4.8	31.25	12	0.082	75	9	76	50	52	72	42.5	42	90	17	20	213	366	80	98	88
KFR 250	16.5	62.50	52	0.428	118	14	70	78	77	72	71.5	72	140	23	35	-	630	150	150	151
KF 250/150	8.0	37.5	43	0.257	118	14	70	78	77	72	71.5	72	140	23	35	-	469	150	150	-
KFR 250/150	8.0	37.5	44	0.257	118	14	70	78	77	72	71.5	72	140	23	35	-	469	150	150	151

*Valves demanding shorter stroke needs pre-stress more than 3 mm.

Classification

Meets the requirements from the major classification and approval authorities like:

- Det Norske Veritas
- Lloyd's Register of Shipping
- American Bureau of Shipping
- Rina
- Russian register of Shipping
- Bureau Veritas
- Germanischer Lloyd
- U.S. Coast Guard

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