

→ Series 651mSK

651mSK

Diaphragm safety valves
made of gunmetal, angle-
type with threaded
connections

■ SUITABLE FOR

Solar heating systems



■ EXAMPLES OF USE

For the protection of:

- closed-circuit, intrinsically safe solar heating systems with water or water mixtures as a heat transfer medium, with permissible supply temperatures of up to 120°C.

As these valves are completely made of metal, they can also be installed at high environmental or radiation temperatures. All materials suitable for max. temperatures up to 160°C.

- intrinsically safe, thermal solar plants

For non intrinsically safe plants and temperatures >120°C please use the safety valves 451/851bG series or 452/852bGL series.

Safety valves are set and sealed at the factory.

■ APPROVALS

TÜV Type test approval 2013 SOL

EU type examination SOL

TSG ZF001-2006 SOL

TR ZU 032/2013 - TR ZU 010/2011 SOL

Requirements

TRD 721 DIN EN ISO 4126-1
DIN 4757 Part 1 PED 2014/68/EU
DIN EN 12976

Classification society

American Bureau of Shipping	ABS
DNV	DNV
Russian Maritime Register of Shipping	RS
Lloyd's Register EMEA	Lloyd's Register EMEA
Registro Italiano Navale	RINA



■ MATERIAL



■ SPECIFICATION



1/2" – 1"



– 10°C to + 120°C



2,0 – 10 bar

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Gunmetal	CC499K	CC499K
Outlet body	Gunmetal	CC499K	CC499K
Internal parts	Brass	CW617N	CW617N
Spring	Spring steel with anti-rust protection	1.1200	ASTM A228

Series 651mFK ■ VALVE VERSION

m	Standard with diaphragm	The diaphragm prevents the medium entering into the spring housing and protects moving parts from being affected by the medium.
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■ MEDIUM

S	Solar hot-water or solar hot-water mixtures	Flow temperature $\leq 120^{\circ}\text{C}$ in intrinsically safe solar systems
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■ TYPE OF LIFTING MECHANISM

K	Standard with twist-type lifting mechanism
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■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		15	20	25
Inlet		1/2" (15)	3/4" (20)	1" (25)
Outlet	1/2" (15)			
	3/4" (20)	■		
	1" (25)		■	
	1 1/4" (32)			■

■ TYPE OF CONNECTION INLET / OUTLET THREADED CONNECTIONS

f / f	Standard	Female thread BSP-P / Female thread BSP-P	DIN EN 10226, ISO 7-1 / DIN EN 10226, ISO 7-1
m / f	On request for DN 15	Male thread BSP-P / Female thread BSP-P	DIN EN 10226, ISO 7-1 / DIN EN 10226, ISO 7-1

■ SEALS

EPDM	Ethylene propylene diene	Elastomere flat seal and diaphragm (up to 100% glycol resistant)	-10°C to $+120^{\circ}\text{C}$
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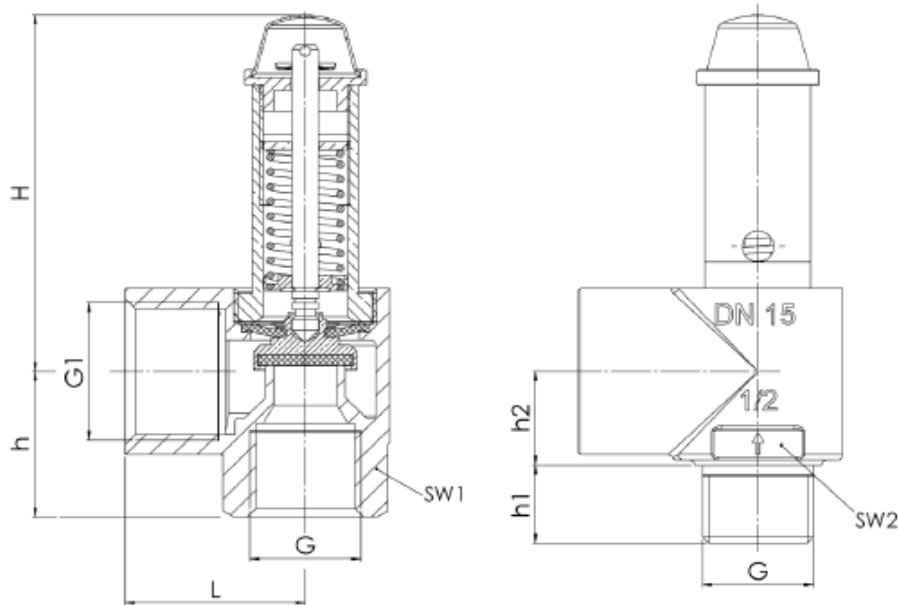
NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 651mSK: Connection, installation dimensions, ranges of adjustment

Nominal diameter	DN	15	20	25
Connection DIN EN 10226-1	G	1/2" (15)	3/4" (20)	1" (25)
Outlet DIN EN 10226-1	G1	3/4" (20)	1" (25)	1 1/4" (32)
Installation dimensions in mm	L	34	40	45
	H	70	65	75
	h	28	34	41
	h1	15	-	-
	h2	18	-	-
	SW1	27	32	40
	SW2	27	-	-
Weight	kg	0,30	0,45	0,75
Set pressure ¹	bar	3, 4, 6, 8, 10	3, 4, 6, 8, 10	3, 4, 6, 8, 10

¹Other pressures between 2 bar and 10 bar against surcharge

MAIN DIMENSIONS, INSTALLATION DIMENSIONS



INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection size		Seal	Options	Set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
651	m	S	K	25	f	f	25	32	EPDM		3,0	10
651	m	S	K	15	m	f	15	20	EPDM		6,0	2
651	m	S	K			f			EPDM			
651	m	S	K			f			EPDM			

■ CAPACITY TABLE ACC. TO ISO 4126-1 / AD2000 A2

Series 651mSK: Blowing-off rates at 0,5 bar or 10% above set pressure									
Solar plants	Nominal diameter	DN	15		20		25		
	Capacity		kW	Kcal/h	kW	Kcal/h	kW	Kcal/h	
	DIN 4757		50	45.000	100	90.000	200	175.000	
	Surface of the collector inlet	m ²	50		100		200		