ADJUSTABLE ELECTRONIC STEAM TRAP

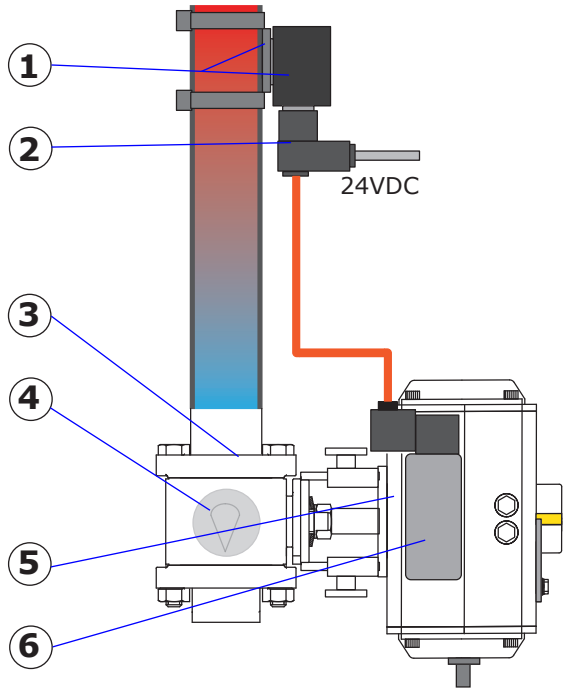
TYPE 8400

GENERAL

DIMENSION:	1/2" & 1" PN125
	DN15 & DN25 PN125
DIFFERENTIAL PRESSURE:	9 BAR STEAM MAX 180°C
MATERIAL VALVE:	CF8M, AISI 316
SEAT:	25% CARBON REINFORCED PTFE
THREAD:	BSPP - DIN259.2999
WELD ENDS:	ISO1127, SMS3008
ACTUATOR:	6 BAR CONTROL AIR PRESSURE
	(MAX 8 BAR)
SOLENOID VALVE:	24VDC
TEMPERATURE SWITCH:	TYPE 5397
VOLTAGE:	24VDC +/- 15%
TEMPERATURE/SWITCH POINT:	0°C TO 180°C
	(STATED WHEN ORDERED)
OUTPUTS:	2 X PNP 24VDC MAX 500mA
SENSOR:	PT100, +/- 0.1°C IEC751
CONNECTION:	M12X1MM 4-POLE

OPTIONS

MATERIALS:	WCB, PEEK



NO	PRODUCT	DESCRIPTION
1	Type 5397 Temperature switch Item no. 5740121525 Quick bracket	Programmable switch for directly detecting the steam temperature of a steel pipe. The sensor is supplied with a set point of 0°C to 180°C depending on the application. Supplied with quick bracket in stainless steel for quick mounting on pipeline and assembly paste.
2	M12 connector with double screw. Item no. 5300890002	M12 connector for mounting the solenoid valve and 24VDC supply. Supplied with 1m high temperature silicone cable between the sensor and solenoid valve.
3	Type 1310 3-piece ball valve in stainless steel with reduced lighting fitted with DVC quick bracket Type 5740	Powerful 3-piece block ball valve, PN125, Tripleseal® gland. Manufactured in solid stainless steel CF8M with 25% carbon reinforced seats. Threaded or welded connections.
4	Type 1931 V-port ball	V-port ball for optimum control of the condensate discharge. 30° and 60° trim possible.
5	Type 5050 pneumatic double acting actuator Type 5905 End cap with a long screw.	Rack and pinion actuator with long life. Made of anodized aluminum. The actuator comes with an extra long screw for limiting the ball valve opening degree.
6	Type 5226 IP66 NAMUR solenoid valve	5/2 way solenoid valve in high quality. Made of anodized aluminum and IP66 enclosure coil. Supplied with silencer and Ø6mm push-in fittings.

DESCRIPTION

- **Powerful steam trap control** based on temperature switch, 3-piece ball valve. Large discharge capacity. Self-regulating loop requiring only 24VDC.
- **Adjustable discharge** temperature for optimal use of energy in the steam at higher during cooling. Setpoint from 0°C to 180°C (stated when ordered).
- **The ball valve is less vulnerable to hydralic shock** than a traditional float steam trap.
- **Adjustable discharge capacity** by stroke limiter in the pneumatic actuator.
- **Same 3-part valve assembly and spare parts** as DVC manual, ON/OFF and control valves (Type 1310/1311). CE and EU1935 approved.
- **Easy and cheap servicing of** the ball valve in case of worn seals.
- **100% close in throughput due to 25% carbon-reinforced PTFE seats** that prevent steam penetration.

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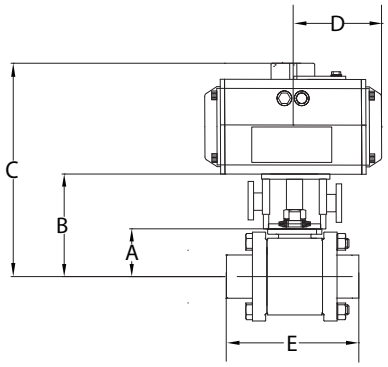
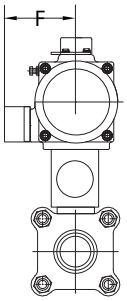
DIMENSIONS





DIMENSIONS [MM]						
DIMENSION	**A**	**B**	**C**	**D**	**E**	**F**
1/2"	29.8	71.8	163.8	73.5	64.8	63.0
1"	33.0	75.0	167.0	73.5	89.8	63.0

STEAM VOLUME [KG/H]

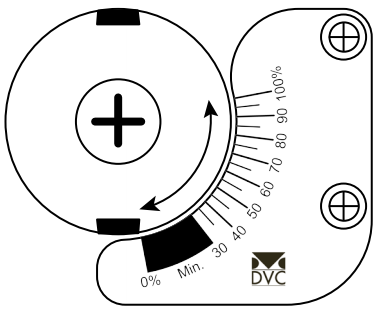
OPENING DEGREE IN % OF BALL VALVE - DISCHARGE CAPACITY IN KG/H									
DIMENSION	**V-port**	**30%**	**40%**	***50%**	**60%**	**70%**	**80%**	**90%**	**100%**
1/2" 1,5bar ΔP	30V	-	40	43	81	162	202	283	364
	60V	40	40	81	202	283	404	566	768
1/2" 2,0bar ΔP	30V	-	47	47	93	187	233	327	420
	60V	47	47	93	233	327	467	653	887
1/2" 3,0bar ΔP	30V	-	57	61	114	229	286	400	514
	60V	57	57	114	286	400	572	800	1.086
1/2" 4,0bar ΔP	30V	-	66	69	132	264	330	462	594
	60V	66	66	132	330	462	660	924	1.254
1/2" 5,0bar ΔP	30V	-	74	76	148	295	369	516	664
	60V	74	74	148	369	516	738	1.033	1.402
1/2" 6,0bar ΔP	30V	-	81	86	162	323	404	566	728
	60V	81	81	162	404	566	808	1.132	1.536
1/2" 7,0bar ΔP	30V	-	87	92	175	349	436	611	786
	60V	87	87	175	436	611	873	1.222	1.659
1/2" 8,0bar ΔP	30V	-	93	99	186	373	467	653	840
	60V	93	93	186	467	653	933	1.307	1.773
1/2" 9,0bar ΔP	30V	-	99	106	198	396	495	693	891
	60V	99	99	198	495	693	990	1.386	1.881
1" 1,5bar ΔP	30V	161	283	364	606	808	1.132	1.536	1.859
	60V	283	364	566	970	1.374	2.223	3.112	4.122
1" 2,0bar ΔP	30V	186	327	420	700	933	1.307	1.773	2.147
	60V	327	420	653	1.120	1.587	2.567	3.593	4.760
1" 3,0bar ΔP	30V	228	400	514	857	1.143	1.601	2.172	2.629
	60V	400	514	800	1.372	1.943	3.144	4.401	5.830
1" 4,0bar ΔP	30V	264	462	594	990	1.320	1.848	2.508	3.036
	60V	462	594	924	1.584	2.244	3.630	5.082	6.732
1" 5,0bar ΔP	30V	295	516	664	1.107	1.476	2.066	2.804	3.394
	60V	516	664	1.033	1.771	2.509	4.058	5.682	7.526
1" 6,0bar ΔP	30V	323	566	728	1.212	1.617	2.263	3.072	3.718
	60V	566	728	1.132	1.940	2.748	4.446	6.224	8.242
1" 7,0bar ΔP	30V	349	611	786	1.310	1.746	2.445	3.331	4.016
	60V	611	786	1.222	2.096	2.969	4.802	6.723	8.906
1" 8,0bar ΔP	30V	373	653	840	1.400	1.867	2.614	3.547	4.293
	60V	653	840	1.307	2.240	3.174	5.133	7.187	9.521
1" 9,0bar ΔP	30V	396	693	891	1.485	1.980	2.772	3.762	4.554
	60V	693	891	1.386	2.376	3.366	5.445	7.623	10.098

ADJUSTMENT OF CAPACITY

The opening degree can be adjusted by the actuator adjustment screw.

The opening degree in % is displayed on the scale plate on top of the actuator when the valve opens.

***) The valve is set by default to open 50%.**



STAGE DESCRIPTION OF TEMPERATURE SWITCH TYPE 5397

SETPOINT 1 = 120°C (OPERATING POINT)
SETPOINT 2 = 80°C (USED DURING STARTUP)

PHASE 1) Startup . *The temperature is lower than 80°C (setpoint 2)* **LED flashes briefly green every 5 seconds to indicate that the voltage is connected and everything is ok.**	The Valve is open.
PHASE 2) Heating. *The temperature is now above 80°C (setpoint 2) but below 120°C (setpoint 1)* **LED lights solid green.**	The valve is closed for 10 secs. and then open for 5 secs. to vent the system and the pressure builds up.
PHASE 3) Operation. *The temperature is over 120°C (setpoint 1)* **LED flashes red 2 sec./Pause 1 sec./Green 2 secs. and so on.**	The valve is now closed while condensate build around the sensor.
PHASE 4) Discharge. *The temperature drops briefly below 120°C (setpoint 1)* **LED lights up orange in 0.5 sec. while discharge takes place. The sensor is in phase 4 until the temperature is above 120°C, after which it goes back to phase 3.**	The valve opens for 0.5 sec. and then shuts again (back to phase 3)
PHASE 5) Fejl **By any error, for example sensor failure, the LED flashes continosly red.**	The valve is closed.

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