

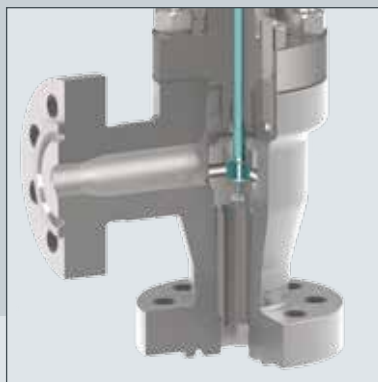
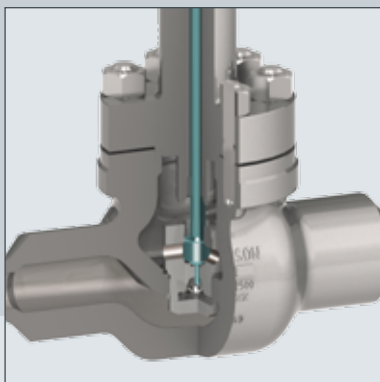
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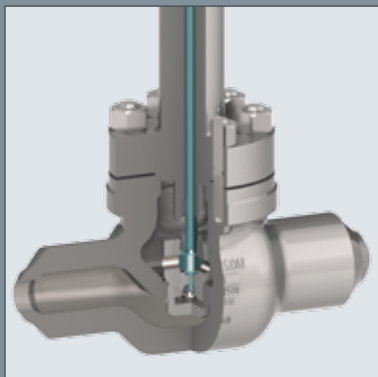


## Severe Service Valves for Marine Applications

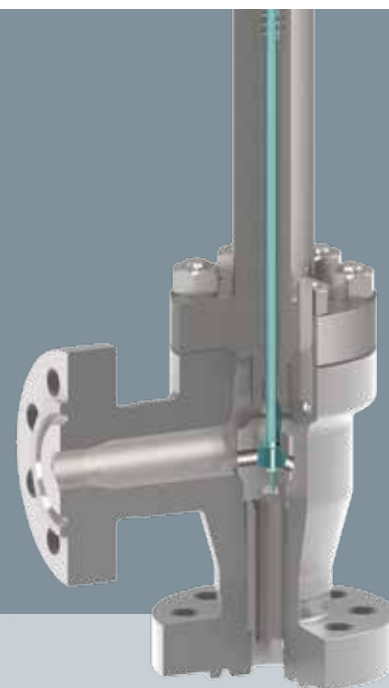
Zero Travel 1 trim, AC trims, valves with perforated plugs



# ZT-1 – Zero Travel 1 Trim



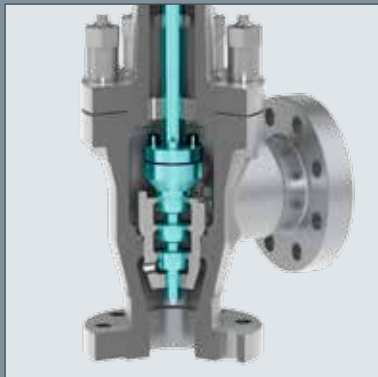
The Zero Travel 1 trim is intended for a single-stage letdown in the FTC (flow-to-close) direction of flow. It is suitable for liquids, two-phase flows, or gases. The benefit of the trim is that a single-stage letdown at differential pressures can be achieved under certain conditions. Typical applications include: Pressure letdown and critical steam applications.



Zero Travel 1 trim

<b>Suitable for</b>	Type 3251 · Type 3256
<b>Valve size</b>	DN 50 to 80 · NPS 2 to 3
<b>Pressure rating</b>	PN 16 to 400 · Class 150 to 2500
<b>K<sub>v</sub> coefficients · C<sub>v</sub> coefficients</b>	0.16 to 1.3 · 0.2 to 1.5
<b>Temperature range (depending on the valve bonnet)</b>	-196 to +550 °C · -325 to +1022 °F
<b>Direction of flow</b>	FTC
<b>Characteristic</b>	Equal percentage · Linear
<b>Materials (seat and plug)</b>	Stellite® 6B
	1.4401/1.4404 with Stellite® facing · 316/316L with Stellite® facing
	1.4006 with Stellite® facing · 410 T

# AC Trims



The main task of AC trims is to prevent cavitation. Additionally, they increase the operational reliability of the valve used and the overall availability of the plant. The double guiding of the plug by the seat and body allow standard SAMSON globe and angle valves to be operated with little vibration. Thanks to the modular design of the SAMSON valves, AC trims can easily be retrofitted.

In part, low-cavitation operation can considerably reduce the sound pressure level in the valve and prevent mechanical vibration. As a result, erosion on the surfaces of the internal parts can be avoided, which considerably extends the valve's service life. The cost incurred throughout the entire product life cycle is reduced, not least because unscheduled plant shutdowns are avoided.

AC Trims	AC-1 	AC-2 	AC-3 	AC-5 
<b>Suitable for</b>	Series 240 and 250	Series 240 and 250	Series 250	Series 250
<b>Valve size</b>	DN 50 to 300 NPS 2 to 12	DN 80 to 250 NPS 3 to 10	DN 15 to 300 NPS ½ to 12	DN 25 to 200 NPS 1 to 8
<b>Pressure rating</b>	PN 16 to 160 Class 150 to 900	PN 16 to 160 Class 150 to 900	PN 40 to 400 Class 300 to 2500	PN 40 to 400 Class 300 to 2500
<b>Kv coefficients</b> <b>Cv coefficients</b>	22 to 1500 26 to 1730	16 to 320 30 to 375	0.25 to 160 0.3 to 190	0.4 to 63 0.5 to 75
<b>Temperature range</b>	-10 to +220 °C · 14 to 428 °F			
<b>Direction of flow</b>	FTO			
<b>Characteristic</b>	Equal percentage	Mod. equal percentage	Equal percentage · Linear	
<b>Materials (seat and plug)</b>	1.4006, 1.4301, 1.4404*	1.4006, 1.4301, 1.4404*	1.4006, 1.4301, 1.4112, 1.4404*	1.4006, 1.4301, 1.4112, 1.4404*

\* Optional Stellite® facing

# Valves with Perforated Plugs



The perforated plug is mainly used for valves in steam applications, particularly for operation in the wet steam region. Additional fields of application include the control of two-phase medium flow, liquid media which vaporize on the outlet side (flashing valves) or emergency relief valves (blow-off valves) involving gas relief in which flow velocities lower than 0.3 Mach cannot be kept.



Perforated plug						
Suitable for		Type 3241	Type 3248	Type 3251	Type 3254	Type 3256
Valve size		DN 25 to 500 NPS 1 to 20				
Pressure rating		PN 16 to 400 Class 125 to 2500				
K <sub>v</sub> coefficients C <sub>v</sub> coefficients*	Linear characteristic:	4 to 1300 5 to 1500	4 to 1300 5 to 1500	4 to 3200 5 to 3700	63 to 3200 75 to 3700	4 to 1240 5 to 1440
	Equal percentage characteristic:	4 to 1000 5 to 1150	4 to 1000 5 to 1150	4 to 2500 5 to 2900	54 to 2500 62 to 2900	4 to 950 5 to 1100
Temperature range (depending on the valve bonnet)		-196 to +450 °C -325 to +842 °F	-273 to +220 °C -459 to +428 °C	-196 to +550 °C -325 to +1022 °F	-196 to +550 °C -325 to +1022 °F	-196 to +550 °C -325 to +1022 °F
Standard direction of flow		FTO	FTO	FTO	FTO	FTC
Characteristic		Equal percentage · Linear				
Materials (seat and plug)		Selection depending on application				

\* Values for standard direction of flow and versions without flow divider

## Some of our references

SAMSON – A name recognized worldwide as a synonym for high-quality work, entrepreneurial spirit, and innovative strength. Our field of expertise spans the entire range of instrumentation and controls.

SAMSON supplies high-quality control valves for marine applications. The fields of application

range from ballast water systems to highly complex applications for regasification skids on board ships and fuel gas supply systems.

The table below contains a list of hull identification numbers in which SAMSON control valves are installed.

Shipyard	Hull identification number
SAMSUNG Heavy Industries	2023
Hyundai MIPO Dockyard, Korea	8166, 8167, H2449, H2450, H2451, H8159, H8160, H8161, H8184, H8185
Hudong-Zhonghua Shipbuilding	H1663A, H1664A
CSSC Jiangnan Shipyard	H2535, H2536, H2561, H2562, H2563, H2564, H2573
Hyundai Heavy Industries Co. Ltd	H2708, H2709, H2710
WISON Offshore & Marine Ltd	M12028
COSCO Shipyard Group Co., Ltd.	NE212, NE213
Sinopacific Offshore & Engineering Co. Ltd	S1015, S1016, S1017, S1018, S1019, S1020, S1024, S1025, S1026, S1027
STX Offshore & Shipbuilding Co. Ltd	S4031, S4032, S4080
Nantong COSCO KHI Ship Engineering	NE212, NE213
Dingheng (Jiangsu)	AD0015
Kawasaki Heavy Industries	KHI 22N1709
Imabari	H8177, H8188
Hanjin Heavy Industries	SN00268



SAMSON

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Severe service valves  
for marine applications



● Production sites ● Subsidiaries

## SAMSON sites with experience in marine applications

### Germany

SAMSON AKTIENGESELLSCHAFT  
Weismüllerstraße 3 · 60314 Frankfurt am Main  
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507  
E-mail: samson@samson.de · Internet: www.samson.de

### United States of America

SAMSON CONTROLS INC.  
4111 Cedar Boulevard · BAYTOWN, TX 77523-8588  
Phone: +1 281 3833677 · Fax: +1 281 3833690  
E-mail: samson.us@samsongroupna.com  
Internet: www.samson-usa.com

### Norway

MATEK-SAMSON REGULERING A/S  
Porsgrunnsveien 4 · 3730 SKIEN  
Phone: +47 35900870 · Fax: +47 35900880  
E-mail: post@matek.no · Internet: www.matek.no

### France

SAMSON REGULATION S.A.  
1-3, rue Jean Corona · 69512 VAULX-EN-VELIN  
Phone: +33 4 720475-00 · Fax: +33 4 720475-75  
E-mail: samson@samson.fr · Internet: www.samson.fr

### People's Republic of China

SAMSON CONTROLS (CHINA) CO., LTD.  
No. 11, Yong Chang Nan Lu, BDA · BEIJING 100176  
Phone: +86 10 6780-3011 · Fax: +86 10 6780-3196  
E-mail: info@samsonchina.com · Internet: www.samsonchina.com

### Korea

SAMSON CONTROLS LTD., CO.  
#119-82, Sasa-Dong, Sangrok-Gu  
ANSAN-SI, GYEONGGI-DO 426-220  
Phone: +82 31 4190464 · Fax: +82 31 4190465  
E-mail: sales@samsonkorea.kr · Internet: www.samsonkorea.kr

### Japan

SAMSON K.K.  
6-38-28 Kamiasao, Asao-ku · KAWASAKI, KANAGAWA 215-0021  
Phone: +81 44 988-3931 · Fax: +81 44 988-3861  
E-mail: sales@samsonkk.co.jp · Internet: samsonkk.co.jp

### Singapore

SAMSON CONTROLS PTE. LTD.  
27 Kaki Bukit Vie · Kaki Bukit Techpark II · SINGAPORE 415962  
Phone: +65 67488810 · Fax: +65 67451418  
E-mail: samsonsp@singnet.com.sg · Internet: www.samson-sea.com

SAMSON AKTIENGESELLSCHAFT  
Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany  
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507  
E-mail: samson@samson.de · Internet: www.samson.de

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