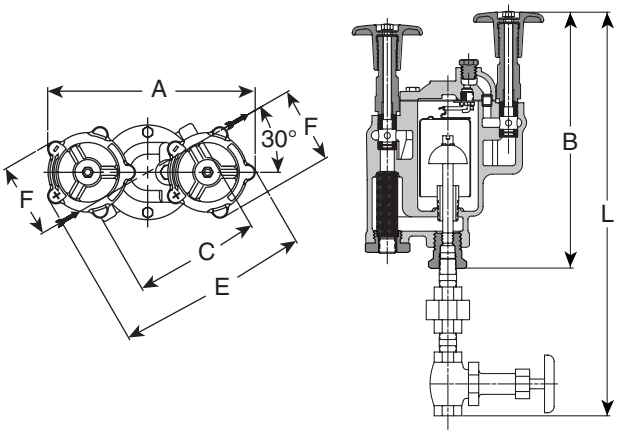
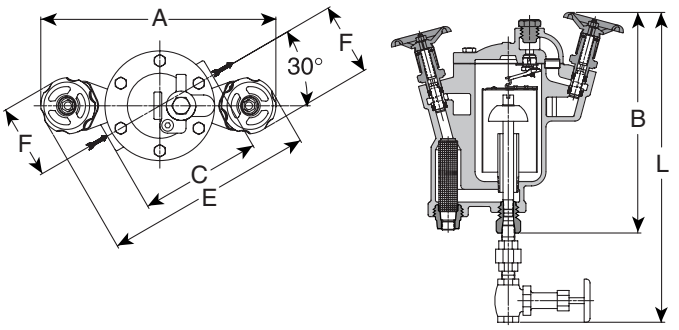
TVS 80-DC Series Automatic Differential Condensate Controllers

For Pressures to 250 psig (17 bar)…Capacities to 4,400 lb/hr (2,000 kg/hr)



TVS 81-DC



TVS 82-DC & TVS 83-DC

Description

Armstrong automatic differential condensate controllers (DC) are designed to function on applications where condensate must be lifted from a drain point or in gravity drainage applications where increased velocity will aid in condensate drainage.

When lifting from the drain point, often referred to as syphon drainage, the reduction in pressure that occurs when the condensate is elevated causes a portion of it to flash back into steam.

Ordinary steam traps, unable to differentiate between flash steam and live steam, close and impede drainage. Increased velocity with gravity drainage will aid in drawing the condensate and air to the DC. This increased velocity is caused by an internal steam by-pass, controlled by a manual metering valve, so the condensate controller will automatically vent the by-pass or secondary steam. This is then directed to the condensate return line or collected for use in other heat exchangers.

Maximum Operating Conditions

Maximum allowable pressure (vessel design): 250 psig @ 450°F (17 bar @ 232°C)
Maximum operating pressure: 250 psig (17 bar)

Connections

Screwed NPT and BSPT

Materials

Body:	ASTM A48 Class 30
Internals:	All stainless steel—304
Valve and seat:	Hardened chrome steel—17-4PH
Fittings metering valve:	Metering valve—Bronze with stainless steel trim. Fittings 250# malleable iron.
Handwheel:	Ductile iron
TVS 80 Series	
Piston valve internals:	Stainless steel and graphite

Specification

Automatic differential condensate controller, type TVS in cast iron complete with integral piston valves on the inlet, and outlet with strainer.

How to Order

- Specify model number
- Specify size and type of pipe connection
- Specify maximum working pressure that will be encountered or orifice size
- Specify any options required

For a fully detailed certified drawing, refer to:
TVS 81-DC CD #1088
TVS 82-DC and TVS 83-DC CD #1089

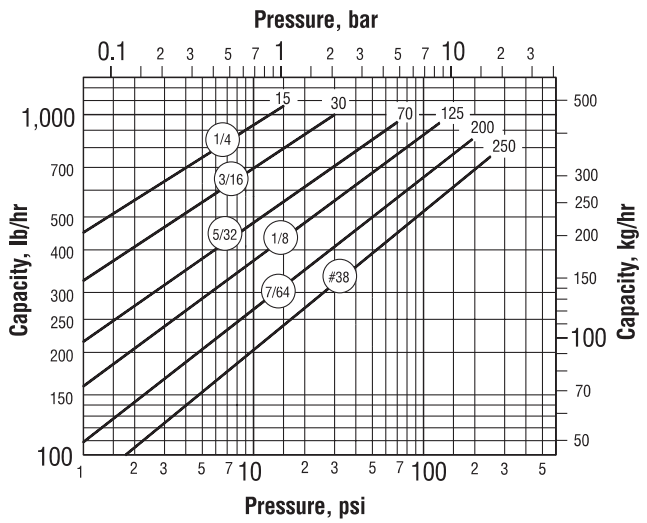
TVS 80-DC Series						
Model No.	**TVS 81-DC**		**TVS 82-DC**		**TVS 83-DC**	
Inlet & Outlet Connections	**in**	**mm**	**in**	**mm**	**in**	**mm**
	1/2, 3/4	15, 20	1/2, 3/4	15, 20	3/4, 1	20, 25
Secondary Steam Connections	3/8	9	1/2	15	1/2	15
Test Plug	1/4	6	1/2	15	3/4	20
"A" Width Across Handwheels	8-1/4	210	13-3/4	349	15-1/8	384
"B" Outlet Valve Open	11	279	12-5/8	320	15-1/8	384
"C" Face to Face	5	127	6-1/2	165	7-3/4	197
"E"	7-5/8	194	13	330	14-3/8	365
"F"	3	76	4-1/2	114	4-7/8	124
"L"	16-3/4	425	18-3/8	467	20-3/4	527
Number of Bolts	6	6	6	6	6	6
Weight lb (kg)	13-1/2	6	27-1/2	12.5	50	23
Maximum Allowable Pressure (Vessel Design)	250 psig @ 450°F (17 bar @ 232°C)					
Maximum Operating Pressure psi (bar)	250 (17)					

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for up-to-date information.

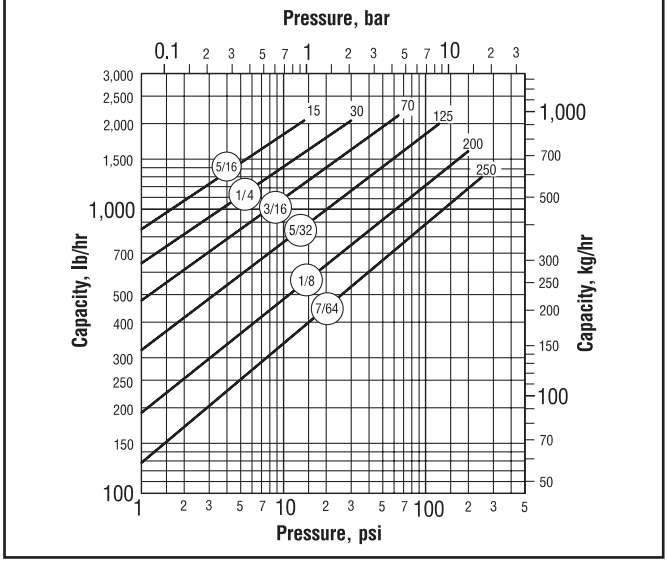
TVS 80-DC Series Automatic Differential Condensate Controllers

For Pressures to 250 psig (17 bar)...Capacities to 4,400 lb/hr (2,000 kg/hr)

Model TVS 81-DC Capacity



Model TVS 82-DC Capacity



Model TVS 83-DC Capacity