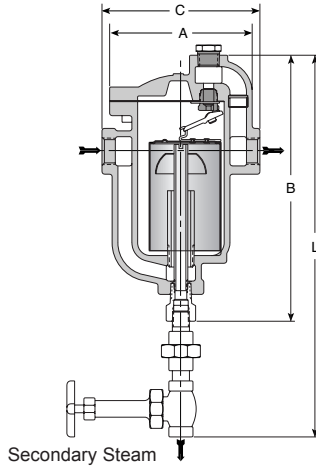




# 80-DC Series Automatic Differential Condensate Controllers

For Pressures to 250 psig (17 bar)...Capacities to 20,000 lb/hr (9,072 kg/hr)

Steam Trapping and Steam Tracing Equipment



## 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.

## Specification

Automatic differential condensate controller, type ... in cast iron.

## 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 CD #1008.

### 80-DC Series Differential Condensate Controllers

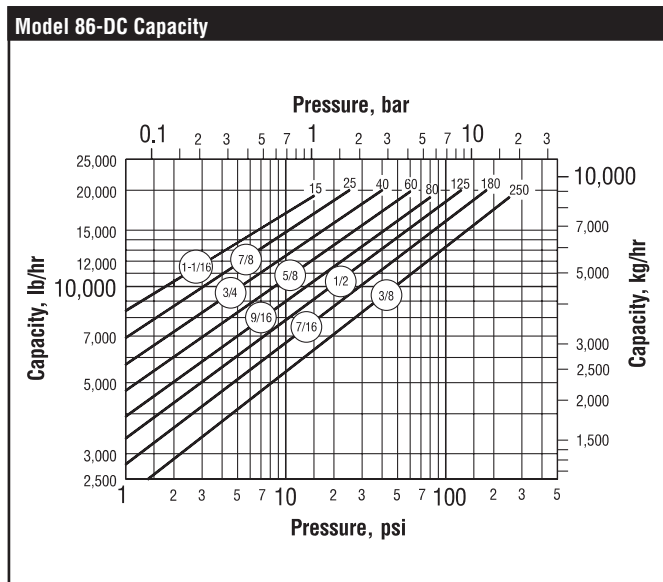
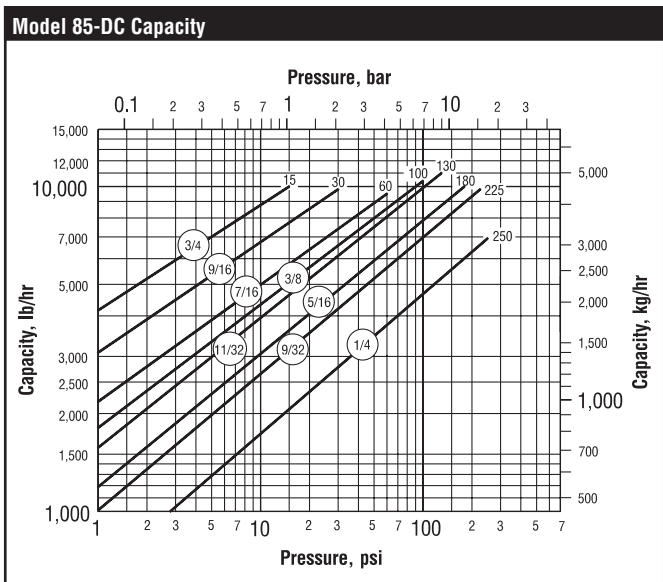
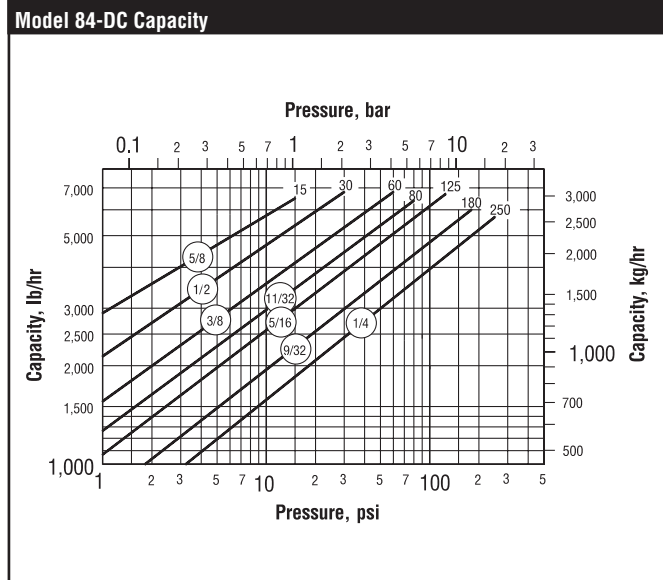
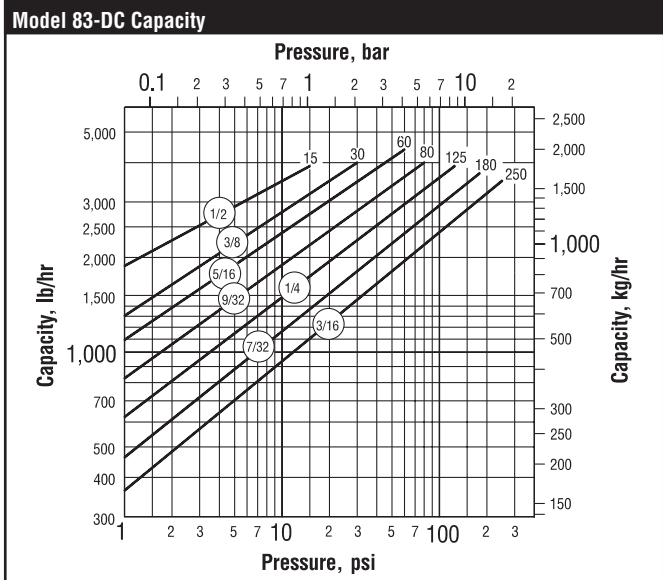
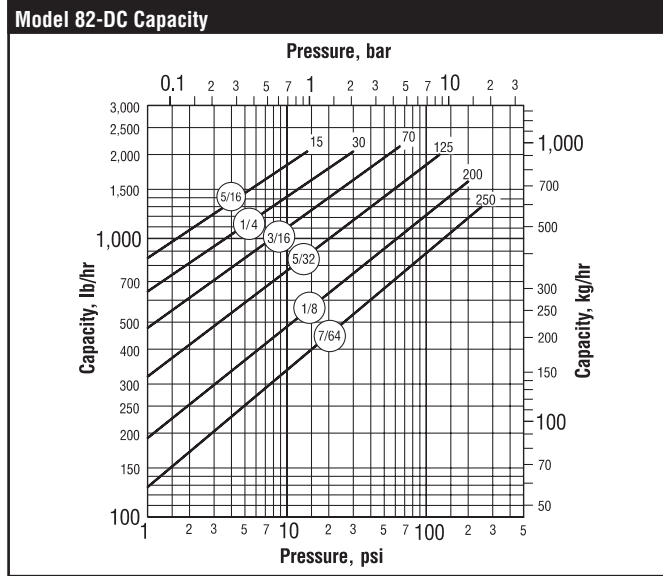
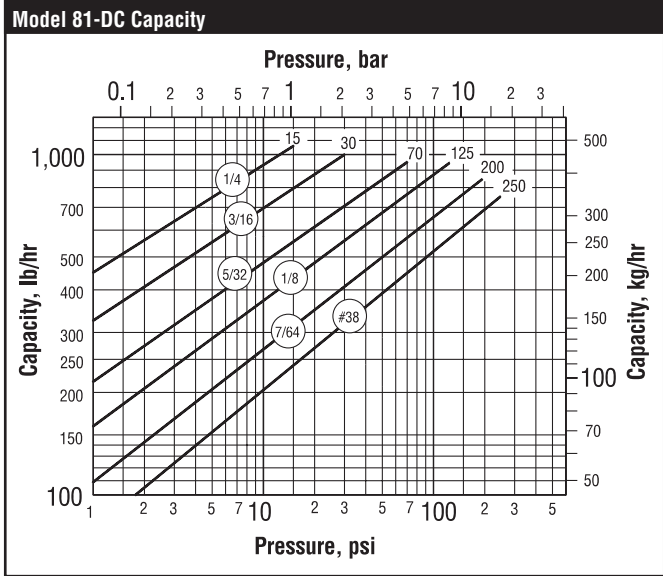
Model No.	81-DC		82-DC		83-DC		84-DC		85-DC		86-DC	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
Inlet & Outlet Connections	3/4	20	3/4	20	1	25	1-1/4	32	2	50	2	50
Secondary Steam Conn.	3/8	10	1/2	15	1/2	15	3/4	20	1	25	1-1/2	40
"A" (Diameter)	3-3/4	95	5-5/8	143	7	178	8	203	9	229	11-1/2	292
"B" (Height)	8	203	10-1/2	267	13	330	15	381	17-1/2	445	23	584
"C"	5	127	16-5/8	422	7-3/4	197	9	229	10-1/4	260	13	330
"L"	13-1/4	337	17-1/2	445	18-3/4	476	21-3/4	552	24	610	32	813
Weight lb (kg)	7-1/2 (3.4)		17-1/2 (7.9)		30-1/2 (13.7)		47 (21.3)		75 (34)		139 (63)	

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Steam Trapping and  
Steam Tracing Equipment



Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit [www.armstronginternational.com](http://www.armstronginternational.com) for up-to-date information.