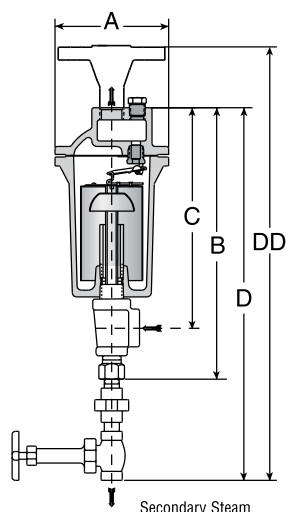


20-DC Series Automatic Differential Condensate Controllers

Cast Iron for Vertical Installation
For Pressures to 17 bar...Capacities to 9 000 kg/h



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)†: 17 bar @ 232°C
Maximum operating pressure: 17 bar
Maximum back pressure: 99% of inlet pressure

Connections

Screwed BSPT and NPT
Flanged DIN or ANSI (screw on)

Materials

Body: ASTM A48 Class 30
Cap: ASTM A48 Class 30
ASTM A-105 (Only 25-DC if PMO > 9 bar)
Internals: All stainless steel – 304
Valve and seat: Stainless Steel 17-4PH
Fittings metering valve: Metering valve – Stainless steel. Fittings 250# malleable iron

Specification

Automatic differential condensate controller, type ... in cast iron. Maximum allowable back pressure 99% of inlet pressure.

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

Table ST-118-1. 20-DC Series Bottom Inlet, Top Outlet Differential Condensate Controllers (dimensions in mm)

Model No.	21-DC	22-DC	23-DC	24-DC	25-DC	26-DC
Inlet & Outlet Connections	15	20	25	32	40	50
Secondary Steam Connection	3/8"	1/2"	1/2"	3/4"	3/4"	1"
"A" Flange Diameter	108	133	162	190	216	259
"B" Height of Trap	248	311	394	457	514	597
"C" $\varnothing$ Inlet to top of trap	197	241	324	381	425	502
"D" Height valve included (screwed)	378	460	543	606	679	787
"DD" Height valve included (flanged PN40*)	393	492	575	669	746	856
Weight in kg (screwed)	3,2	6,4	10,9	17,2	24,0	39,0
Weight in kg (flanged PN40*)	4,7	8,5	13,5	21,4	28,6	45,2

* Other flange sizes, ratings and face-to-face dimensions are available on request.

Shade indicates products that are CE Marked according to the PED (97/23/EC). All the other models comply with the Article 3.3 of the same directive.

† May be derated depending on flange rating and type.

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

20-DC Series Automatic Differential Condensate Controllers

Cast Iron for Vertical Installation

For Pressures to 17 bar...Capacities to 9 000 kg/h



Table ST-119-1. Model 21-DC Capacity

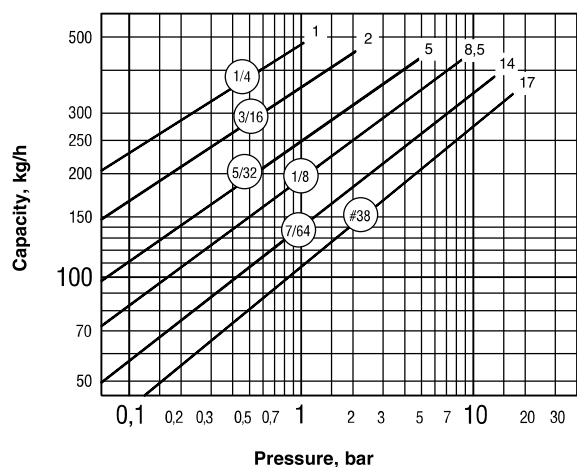


Table ST-119-2. Model 22-DC Capacity

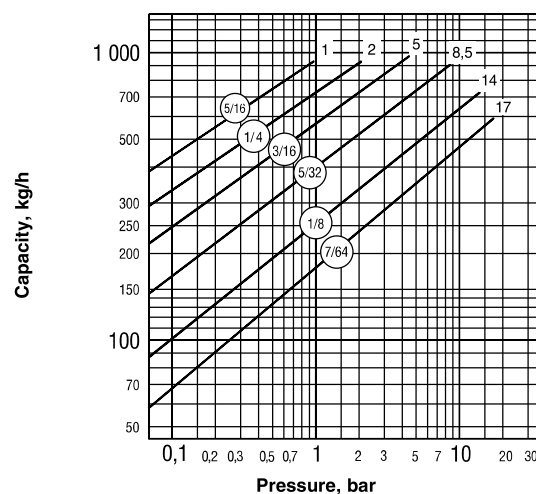


Table ST-119-3. Model 23-DC Capacity

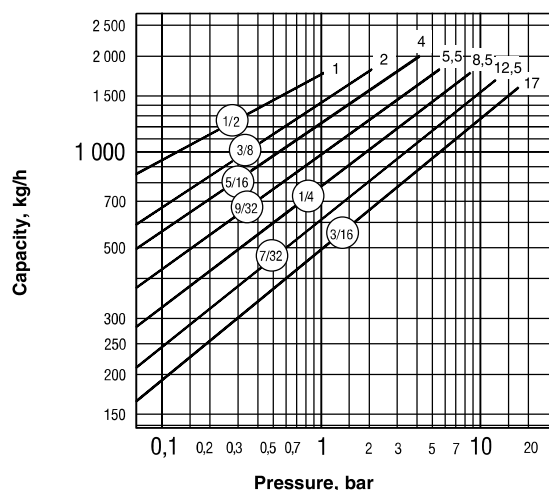


Table ST-119-4. Model 24-DC Capacity

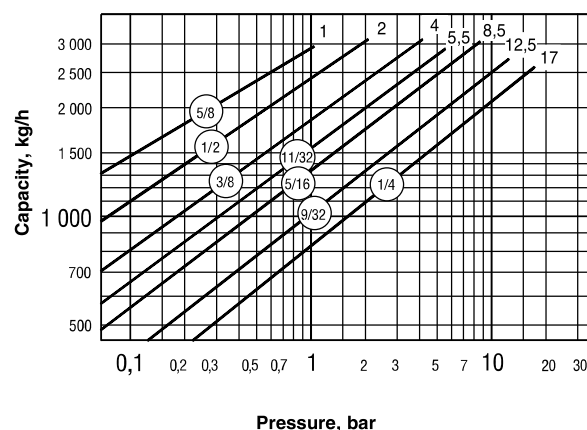


Table ST-119-5. Model 25-DC Capacity

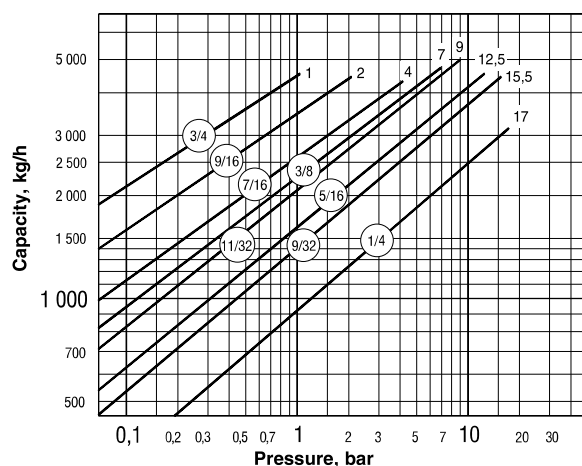
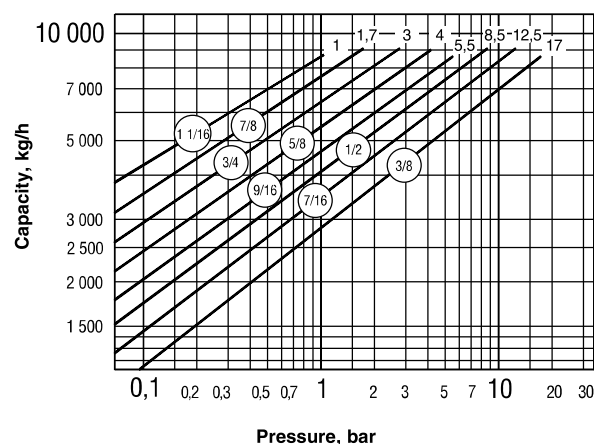
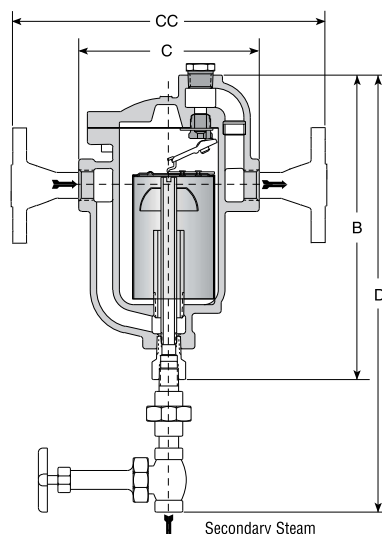


Table ST-119-6. Model 26-DC Capacity



All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.



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)†: 17 bar @ 232°C
Maximum operating pressure: 17 bar
Maximum back pressure: 99% of inlet pressure

Connections

Screwed BSPT and NPT
Flanged DIN or ANSI (screw on)

Materials

Body: ASTM A48 Class 30
Internals: All stainless steel – 304
Valve and seat: Stainless Steel 17-4PH
Fittings metering valve: Metering valve – Stainless steel.
Fittings 250# malleable iron.

Specification

Automatic differential condensate controller, type ... in cast iron. Maximum allowable back pressure 99% of inlet pressure.

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

Table ST-120-1. 80-DC Series Side Inlet, Side Outlet Differential Condensate Controllers (dimensions in mm)

Model No.	81-DC	82-DC	83-DC	84-DC	85-DC	86-DC
Inlet & Outlet Connections	20	20	25	32	50	50
Secondary Steam Connection	3/8"	1/2"	1/2"	3/4"	1"	1 1/2"
"B" Height	203	267	330	381	445	584
"D" Height (valve included)	337	445	476	552	610	813
"C" Face-to-Face (screwed)	127	165	197	229	260	330
"CC" Face-to-Face (flanged PN40*)	191	229	261	355	398	468
Weight in kg (screwed)	3,4	7,9	13,7	21,3	34,0	63,0
Weight in kg (flanged PN40*)	5,3	9,4	15,3	25,5	39,0	69,0

* Other flange sizes, ratings and face-to-face dimensions are available on request.

Shade indicates products that are CE Marked according to the PED (97/23/EC), but PMA for 86-DC is 15 bar. All the other models comply with the Article 3.3 of the same directive.

† May be derated depending on flange rating and type.

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

80-DC Series Automatic Differential Condensate Controllers

Cast Iron for Horizontal Installation

For Pressures to 17 bar...Capacities to 9 000 kg/h



Table ST-121-1. Model 81-DC Capacity

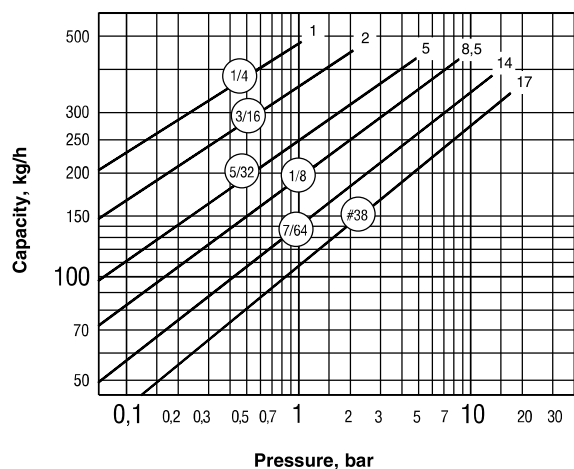


Table ST-121-2. Model 82-DC Capacity

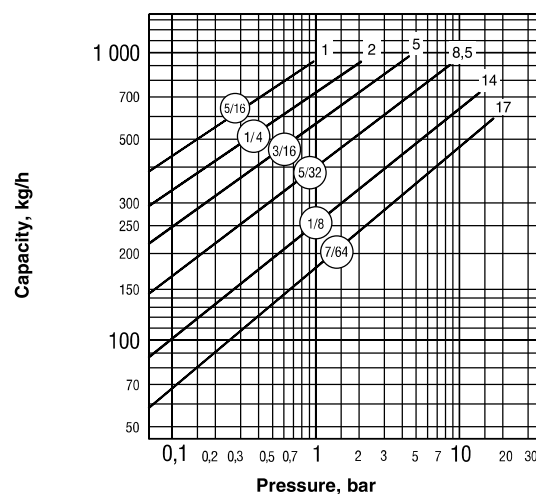


Table ST-121-3. Model 83-DC Capacity

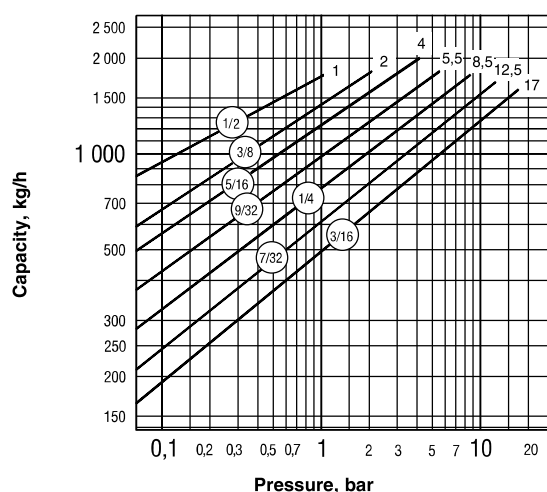


Table ST-121-4. Model 84-DC Capacity

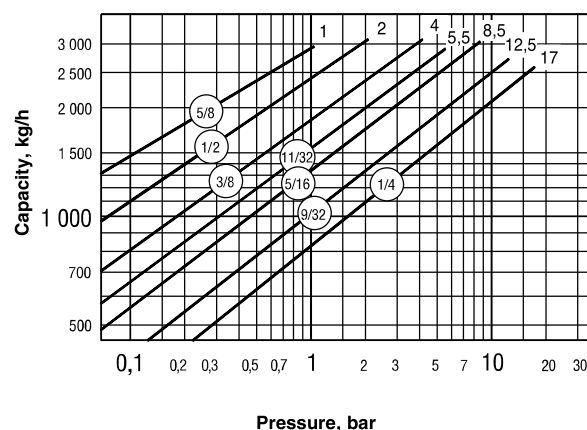


Table ST-121-5. Model 85-DC Capacity

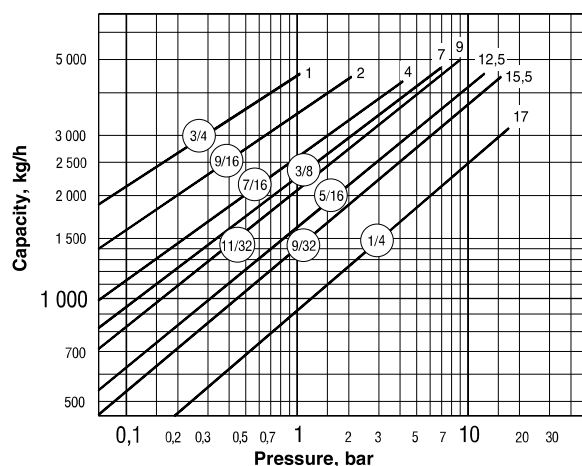
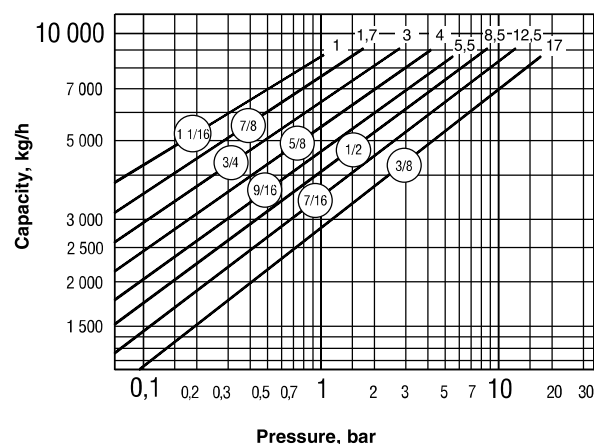


Table ST-121-6. Model 86-DC Capacity



All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.