



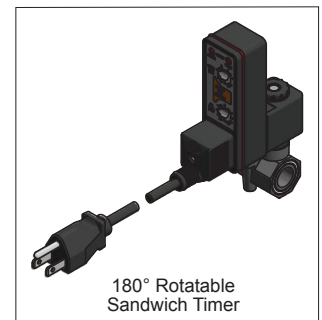
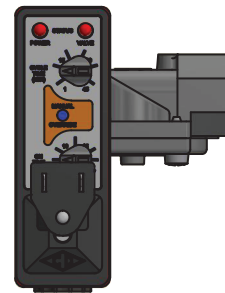
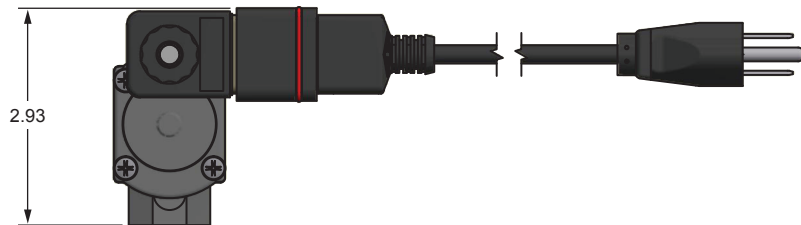
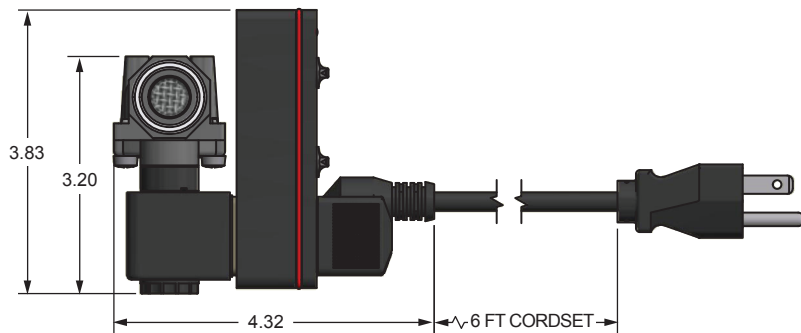
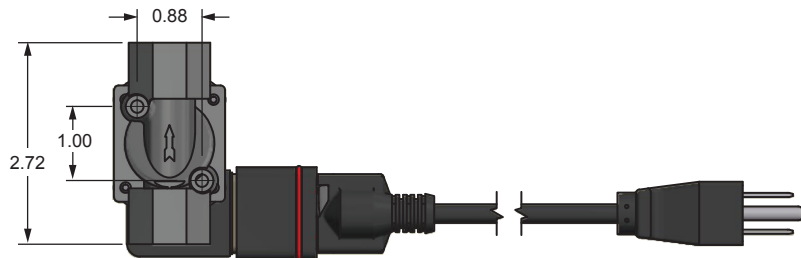
Series CRDV

Condensate Drain Condensation Removal Drain Valve

The Spartan Scientific Series CRDV (Condensation Removal Drain Valve) is a unique and efficient way to keep your air lines and tanks free of water with this robust electronic timed automatic drain valve. The unit installs in a modular form between an existing coil and connector with a plug and play design and retrofits on virtually any installation. The Cycle and On times are easily adjustable on the compact sandwich timer and features two status indicator lights. The Cycle Time drain has settings to release moisture every 1 to 45 minutes. The On Time setting allows you to set how long you want the valve open, 0.25 to 25 seconds. We offer a variety of Nylon or Brass valves depending on your application. These 2-Way, 2-Position, Normally Closed valves range from 1/4", 3/8", 1/2" or 1" NPT and can handle pressures up to 230 psi max. The Series CRDV offers its users the most versatile combination of timing and flow capacities in the industry today, and is proudly made in the USA.

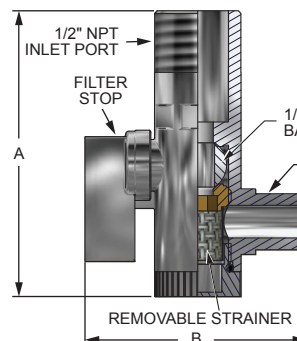
Dimensional Data

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

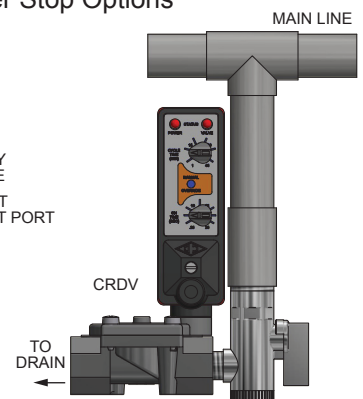


180° Rotatable
Sandwich Timer

Ball / Strainer Filter Stop Options



DIMENSIONAL TABLE		
Port NPT	A	B
1/2"	2.74"	2.27"
1/4"	2.73"	2.15"
3/8"	3.57"	2.14"





Series CRDV

Condensate Drain Condensation Removal Drain Valve

Technical Data

Function: 2-Way, 2-Position; Piloted Diaphragm; Normally Closed

3505

Port Size 1/4" NPT / 1.55 Cv

Flow Factor: 3/8" NPT / 1.95 Cv
1/2" NPT / 2.45 Cv

Orifice Size: 12.7 mm

Pressure Range: 0 to 230 psi

Response Time: 20 to 80 ms Complete Cycle

Valve Body: Brass

3585

Port Size 1/4" NPT / 1.55 Cv

Flow Factor: 3/8" NPT / 1.95 Cv
1/2" NPT / 2.45 Cv

Orifice Size: 12.7 mm

Pressure Range: 7 to 150 psi

Response Time: 20 to 80 ms Complete Cycle

Valve Body: Glass-Filled Nylon

6200

Port Size 1/4" NPT / 1.55 Cv

Flow Factor: 3/8" NPT / 1.95 Cv

Orifice Size: 4.0 mm

Pressure Range: 0 to 250 psi

Response Time: 16 to 40 ms Complete Cycle

Valve Body: Glass-Filled Nylon

3685

Port Size 3/4" NPT / 9.50 Cv

Flow Factor: 1" NPT / 14.0 Cv

Orifice Size: 28.5 mm

Pressure Range: 10 to 120 psi

Response Time: 80 to 120 ms Complete Cycle

Valve Body: PEI

Temp. Range: Fluid max.: +60°C
Dry Range: Ambient +10° to +50°C

Media: Air, emulsion, water

Manual Override: Valve: Push non-locking (only available for 3505)
Electronic: Push button (standard for all options)

Environment Protection: IP65 (IEC 144), NEMA 4. Dust-tight and water resistant (with electrical connector)

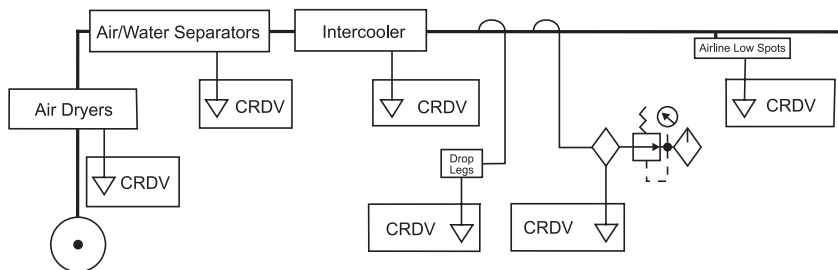
Mounting: In-line

Wetted Materials: Elastomers: EPDM, FKM, NBR
Operator: 300 and 400 Series Stainless Steel; or Brass
Orifice Basket: Acetal
Shading Ring: Copper
Springs: 300 Series Stainless Steel

Coil Data: (Pilot Option) Duty Cycle: Continuous (within specifications)
Encapsulation: Glass-Filled Nylon
Insulation: Class F
Power Rating: 8.5 VA VAC (6200 11.5 VAC)
Voltage: 120, 220, 240 VAC 50/60 Hz
Voltage tolerance: +/- 10% Nominal
Winding: Class H

Connections: DIN Spades: Accordance with DIN 43650
Form "A" / ISO 4400, EN175301-803;2000
Cable: 6 ft. cord set with ground wall plug
(wall plug not available on other voltages)

Packaged Weight: 3505: 1.20 lbs. + 6200: 0.57 lbs. +
3585: 0.50 lbs. + 3685: 0.78 lbs. +



How To Order

Port Size	Orifice	PSI	Construction
4 - 1/4" NPT	12.5mm	230 psi	Brass (3505)
5 - 3/8" NPT	12.5mm	230 psi	Brass (3505)
6 - 1/2" NPT	12.5mm	230 psi	Brass (3505)
J - 1/4" NPT	12.5mm	180 psi	Nylon (3585)
K - 3/8" NPT	12.5mm	180 psi	Nylon (3585)
L - 1/2" NPT	12.5mm	180 psi	Nylon (3585)
M - 1/4" NPT	4.0mm	135 psi	Nylon (6200)
N - 3/8" NPT	4.0mm	135 psi	Nylon (6200)
Q - 3/4" NPT	28.5mm	120 psi	Nylon (3685)
R - 1" NPT	28.5mm	120 psi	Nylon (3685)

Note: CSA version available. Consult factory.

CRDV - ☐ 2 ☐ ☐

Ball / Strainer
0 - Without
1 - With

Coil Options
7 - 120 VAC 50/60 Hz
8 - 220 VAC 50 Hz
9 - 240 VAC 60 Hz

Order Example: CRDV-4270
1/4" NPT, 12.5mm, 230 psi, Brass (3505)
120 VAC 50/60 Hz, without Ball / Strainer



Model CRDV

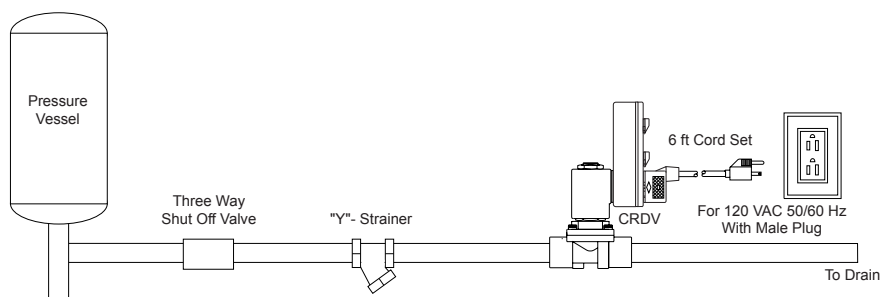
Application and Installation Guide

General Description

The model CRDV (condensation removal drain valve) automatically drains water from compressed air systems. Applications include air dryers, separators, coalescing filters and drop legs.

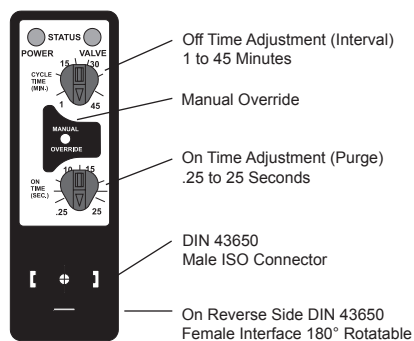
The installation should include a three way shut-off valve to facilitate future maintenance, and a "Y"-strainer to catch large particulates that can clog the CRDV orifice. The proper size and quality fittings should be used with ample inside diameters as not to restrict the flow to the CRDV. Adjustment of the timer purge time and purge interval allows for optimal system drainage. The schematic below depicts a typical CRDV installation.

Installation



Timer Adjustment

Sandwich Timer



Sandwich CRT - Adjust the timer by turning the dimple in the adjustment wheel to correspond to the numerical number value on the timer bezel.

Model CRDV

Application and Installation Guide

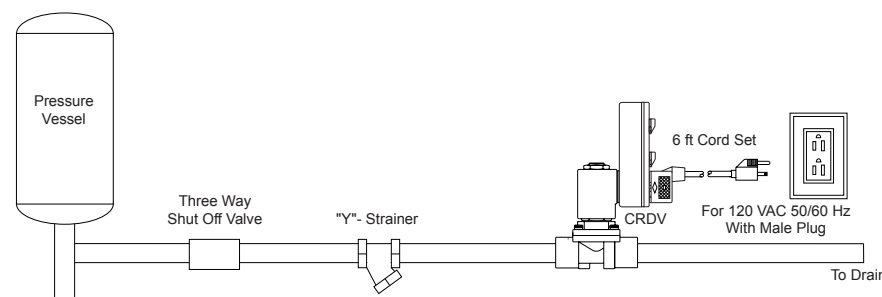


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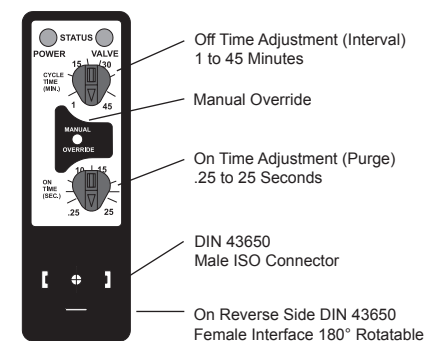
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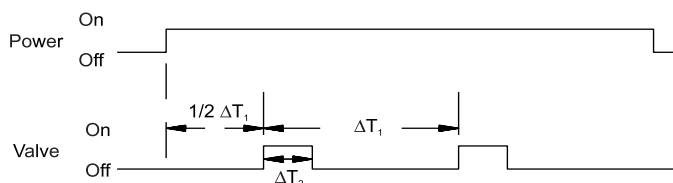


Model CRDV

Application and Installation Guide

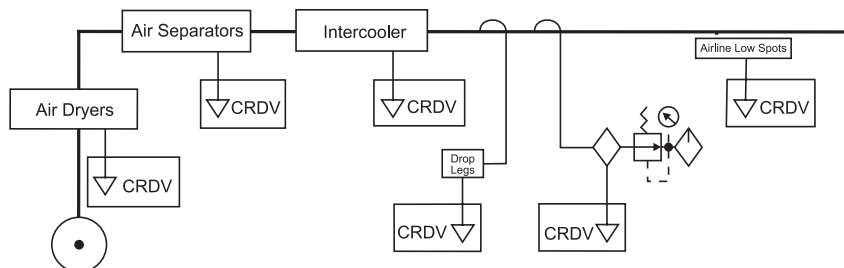
Timer Function

Upon application of power to the input terminals, the OFF cycle is initiated. At the end of the preset OFF time, the solenoid is energized and the on cycle begins. At the end of the preset ON time, power is removed from the solenoid and a new cycle begins. Cycling continues until power is removed from the input terminals.



ΔT_1 = Cycle Rate (1min. to 45 min.)
 ΔT_2 = Valve ON Time (.25 sec to 25 sec.)

Applications



Caution

Excessive use of pipe sealant can cause clogging and leakage. Please follow ASME standards for applying pipe sealant and tape. Do not use media, voltage or pressures other than that recommended by Spartan Scientific Inc. as valve malfunction could result. Misuse or misapplication of Spartan solenoid valves could cause serious bodily injury or property damage.

Warranty Information

Solenoid valves and all other products manufactured by Spartan are warranted by Spartan to be free from defects in material and workmanship for a period of 1 year from the date of purchase. Spartan's obligation under this warranty is limited to repair or replacement of the defective product or refund of the purchase price paid solely at the discretion of Spartan and provided such defective product is returned to Spartan freight prepaid and upon examination by Spartan such product is found defective. This warranty shall be void in the event that the product has been subject to misuse, misapplication, improper maintenance, modification or tampering. This warranty is expressed in lieu of all other warranties, expressed or implied from Spartan Scientific, Inc., representatives or employees.

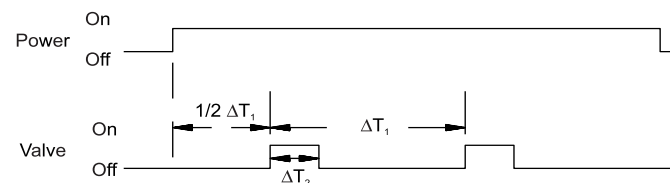


Model CRDV

Application and Installation Guide

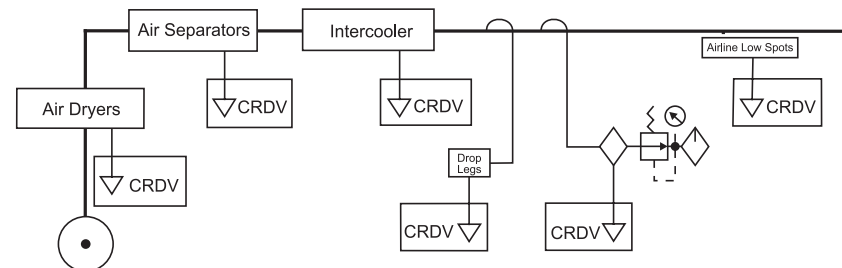
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