Typical Applications for using DME Hydraulic Valve Gate Products

This Applications note is to help customers understand the overview of DME Hydraulic Valve Gate Control Products and how they are integrated with other DME Control Products. It is not intended to reference the Injection Molding Valve Gate Components other than the connectors that may be used to interface to them.

Typical Hydraulic Control Systems

4 ZONE HYDRAULIC SYSTEM

VCTH-03-04

(8) VCAH1500
HOSES

991-2
DME MRO Male
Hydraulic Coupler
(8) Located on Mold

Customer Supplied

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating.
8 Gallon Tank + hoses + Cylinders. About 15 Gallons.

Electrical 120 VAC US Plug supplied under 7 amps. Can use 115 to 255 VAC 50/60 Hz.

Shop Air about 100PSI at upto 50 CFM.

Trigger Signal Dry Contact Closure (Typically from Injection Forward)

Alarm Output Connector with Crimp Pins to be wired by customer and used by Injection Molding Machine to stop next Trigger Signal when Alarm Occurs.

6 ZONE HYDRAULIC SYSTEM

VCTH-03-06

(12) VCAH1500
HOSES

991-2
DME MRO Male
Hydraulic Coupler
(12) Located on Mold

Customer Supplied

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating.
8 Gallon Tank + hoses + Cylinders. About 15 Gallons.

Electrical 120 VAC US Plug supplied under 7 amps. Can use 115 to 255 VAC 50/60 Hz.

Shop Air about 100PSI at upto 50 CFM.

Trigger Signal Dry Contact Closure (Typically from Injection Forward)

Alarm Output Connector with Crimp Pins to be wired by customer and used by Injection Molding Machine to stop next Trigger Signal when Alarm Occurs.

8 ZONE HYDRAULIC SYSTEM

Users Manual 1 + 1

VCTH-03-08

(16) VCAH1500 HOSES

991-2 DME MRO Male Hydraulic Coupler (16) Located on Mold

Customer Supplied

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating.
8 Gallon Tank + hoses + Cylinders.
About 15 Gallons.

Electrical 120 VAC US Plug supplied under 7 amps. Can use 115 to 255 VAC 50/60 Hz.

Shop Air about 100PSI at upto 50 CFM.

Trigger Signal Dry Contact Closure (Typically from Injection Forward)

Alarm Output Connector with Crimp Pins to be wired by customer and used by Injection Molding Machine to stop next Trigger Signal when Alarm Occurs.

12 ZONE HYDRAULIC SYSTEM

Users Manual 1 + 1

VCTH-03-12

(24) VCAH1500 HOSES

991-2 DME MRO Male Hydraulic Coupler (24) Located on Mold

Customer Supplied

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating.
8 Gallon Tank + hoses + Cylinders.
About 15 Gallons.

Electrical 120 VAC US Plug supplied under 7 amps. Can use 115 to 255 VAC 50/60 Hz.

Shop Air about 100PSI at upto 50 CFM.

Trigger Signal Dry Contact Closure (Typically from Injection Forward)

Alarm Output Connector with Crimp Pins to be wired by customer and used by Injection Molding Machine to stop next Trigger Signal when Alarm Occurs.

16 ZONE HYDRAULIC SYSTEM

Users Manual 1 + 1

VCTH-03-16

(32) VCAH1500 HOSES

991-2 DME MRO Male Hydraulic Coupler (32) Located on Mold

Customer Supplied

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating.
8 Gallon Tank + hoses + Cylinders.
About 15 Gallons.

Electrical 120 VAC US Plug supplied under 7 amps. Can use 115 to 255 VAC 50/60 Hz.

Shop Air about 100PSI at upto 50 CFM.

Trigger Signal Dry Contact Closure (Typically from Injection Forward)

Alarm Output Connector with Crimp Pins to be wired by customer and used by Injection Molding Machine to stop next Trigger Signal when Alarm Occurs.

Adding a SmartSeries Hot Runner Temperature Control System with 12 zone base mainframe width to a Hydraulic Control System.

SmartSeries MFP20G Hot Runner Temp Control system Shown

VCTH-03-16 Hydraulic 16 Zone Time Based Control System Shown

FSEXT-0001 SmartSeries Floorstand Extension Kit

Customer Supplied

It is recommneded that 3 people perform this task. Two hold the controller(s) while the other person removes the bolts and re-fastens them. Remove Electrical Power from systems while performing this proceedure.

Customer to Remove Hydraulic Controller that is held in place by 4 bolts thru the mainframe stand.

Put Floorstand Extension Angle Iron Brackets between Hydraulic Controller and Floorstand and re-Bolt back together.

Place SmartSeries 12 Zone wide base Mainframe (Stacked MFP20G shown) on top of Hydraulic controller and bolt mainframe in 4 places to the Exension Angle Iron Bracket.

Refer to individual components for their connections.

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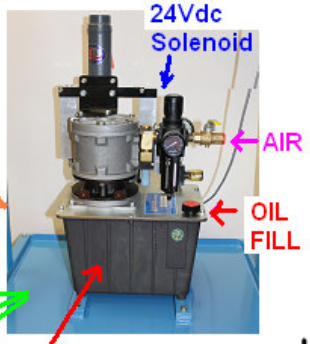
1 Zone Hyd. Pump System - Designed for Maintanence Tool Room or Small Prototype Runs
Hyd. Manifold has 4 Taps controlled by 1 solenoid

Mounted on an Optional SmartSeries Floorstand
Slanted FSSL-0001
-- or --
Straight MFS-512-G

Mounted on an Optional Drip Pan FSDP-0001



HPS-024D-01-04
1 Zone Hyd. Pump Supply

991-2 DME MRO Male Hydraulic Coupler (2,4,6 or 8) Located on Mold

VCAH1500 (2,4,6 or 8) HOSES

Customer Supplied

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating.
2.5 Gallon Tank + hoses + Cylinders. About 8 Gallons.

Shop Air about 100PSI at upto 50 CFM.

+24 Vdc at 31 Watts wired and applied to solenoid to control the 1 hydraulic zone.

- No Oil Filter
- No Alarms or Sensors
- Manual Accumulator Dump Valve
- Manual Air Valve
- ONE Zone ONLY, 4 Taps on Manifold

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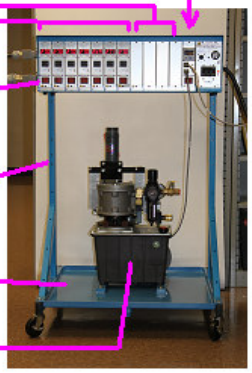
1 Zone Hyd. Pump System with Temp. Controls - Designed for Maintanence Tool Room or Small Prototype Runs
Hyd. Manifold has 4 Taps controlled by 1 solenoid

(1) TCM-03-024D
(4) MFBP10G
(7) SSM1512
(1) MFP12G

Mounted on an Optional SmartSeries Floorstand
Slanted FSSL-0001

Mounted on an Optional Drip Pan FSDP-0001

(1) HPS-024D-01-04



991-2 DME MRO Male Hydraulic Coupler (2,4,6 or 8) Located on Mold

VCAH1500 (2,4,6 or 8) HOSES

Customer Supplied

Customer to Assemble all components

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating. 2.5 Gallon Tank + hoses + Cylinders. About 8 Gallons.

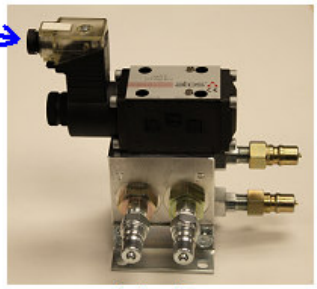
Trigger Signal - Injection Forward

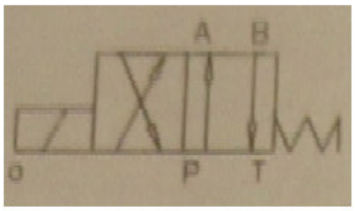
Shop Air about 100PSI at upto 50 CFM.

Supply Electrical Power 240 VAC 3 phase 50 amp to Controller

- No Power or TC Cables Listed
- No Oil Filter
- No Alarms or Sensors
- Manual Accumulator Dump Valve
- Manual Air Valve
- ONE Zone ONLY, 4 Taps on Manifold

Single Zone 24 Vdc Hydraulic Solenoid Valve
- For Customer Special Applications
HSV-024D-01-001





991-2 DME MRO MALE Hydraulic Coupler
1/4 NPT

990-2 DME Female Hydraulic Coupler MRO
1/4 NPT

VCAH1500 HOSE

Female Couplers Both Ends

Customer Supplied

Customer to Mount Valve.

Customer to provide hydraulic pressure source and return to tank.

Customer to supply 24 Vdc control signal to power 32 Watt Solenoid Coil.
Screw Terminal and Amber LED inside coil wiring area.

- See TCM-03-024D Time Based single zone controller to control 24 Vdc Solenoid.

4 ZONE HYDRAULIC SYSTEM

Users Manual

(8) VCAH1500 HOSES

VCTH4000

991-2 DME MRO Male Hydraulic Coupler (8) Located on Mold

Customer Supplied

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating.
8 Gallon Tank + hoses + Cylinders.
About 15 Gallons.

Electrical 120 VAC US Plug supplied under 7 amps. Can use 115 to 255 VAC 50/60 Hz.

Shop Air about 100PSI at upto 50 CFM.

Trigger Signal Dry Contact Closure
(Typically from Injection Forward)

(This may be discontinued, see VCTH-03-04 for replacement)

8 ZONE HYDRAULIC SYSTEM

Users Manual

(16) VCAH1500 HOSES

VCTH8000

991-2 DME MRO Male Hydraulic Coupler (16) Located on Mold

Customer Supplied

Hydraulic Oil DTE 25 or equivelent with ISO 46 rating.
8 Gallon Tank + hoses + Cylinders.
About 15 Gallons.

Electrical 120 VAC US Plug supplied under 7 amps. Can use 115 to 255 VAC 50/60 Hz.

Shop Air about 100PSI at upto 50 CFM.

Trigger Signal Dry Contact Closure
(Typically from Injection Forward)

(This may be discontinued, see VCTH-03-08 for replacement)