

Figure 1
This expanded view of the diagram for a single hollow piston clamp shows the item numbers of the parts needed to connect this clamp to the circuit.

Application:

The hydraulic installation kit is custom designed per the needs of the application.

The components are selected to make the hydraulic connections to the various elements of the Hilma die clamp and lift system as shown on a diagram provided.

Description:

The kit includes lengths of steel tube with couplings, mounting clips and fittings plus the necessary bulk hose with reusable hose end fittings, all indicated by specific item numbers on the diagram. The diagram (see Figure 2) is a line schematic with the item numbers (see Figure 1) that link each part of the kit to an inventory sheet. The sheet also has generic part drawings to help identify each component. Individually purchased elements such as clamps, rollblocks, manifolds, connection blocks, and the power unit are identified on the diagram with their part numbers. An installation manual is included to help with tips and necessary procedures to facilitate the installation.

Advantages:

- ◆ all components selected for the maximum operating pressure, ports size and type
- ◆ line drawing with itemized list, to simplify the installation
- ◆ hose connections for moving parts, rigid tubing for fixed parts

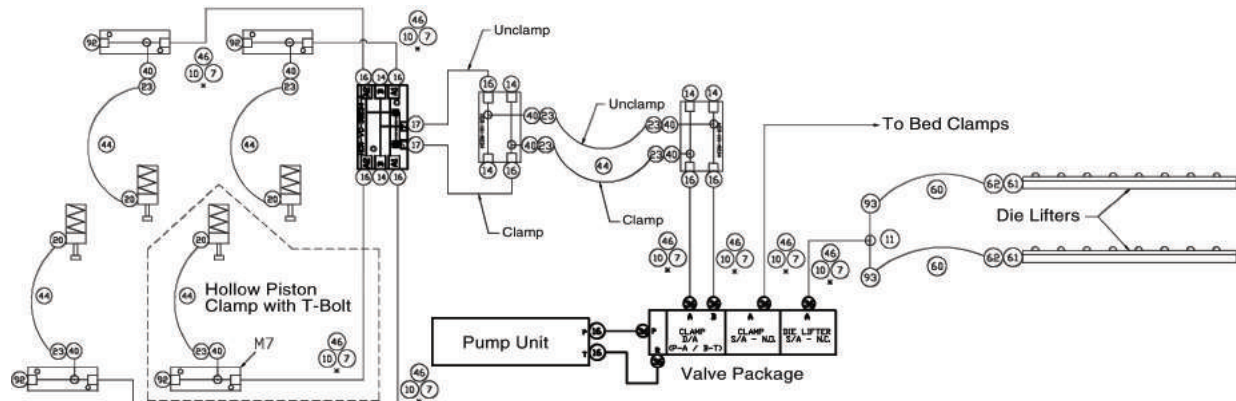


Figure 2
This kit diagram covers the pump and remote valve package with the four hollow piston clamps, hoses, and safety connection blocks on the slide and two rollblocks for the bolster.



Control Panels for controlling power units

Part no.	Clamp circuits	Die lifter circuits	Size
HCR-EC-S10	1	0	8 x 10 x 4
HCR-EC-S11	1	1	10 x 10 x 6
HCR-EC-S20	2	0	10 x 10 x 6
HCR-EC-S21	2	1	10 x 10 x 6

Application:

Control panels are used to operate clamp and die lift circuits which can be combined with the press's safety interlocks.

Description:

Standard prewired control panels with keyed switches for clamp controls and standard switches for die lift controls. Includes pilot lights for power on, slide clamped and bed clamped. Latching relays are used for bottom dead center and press enable circuits.

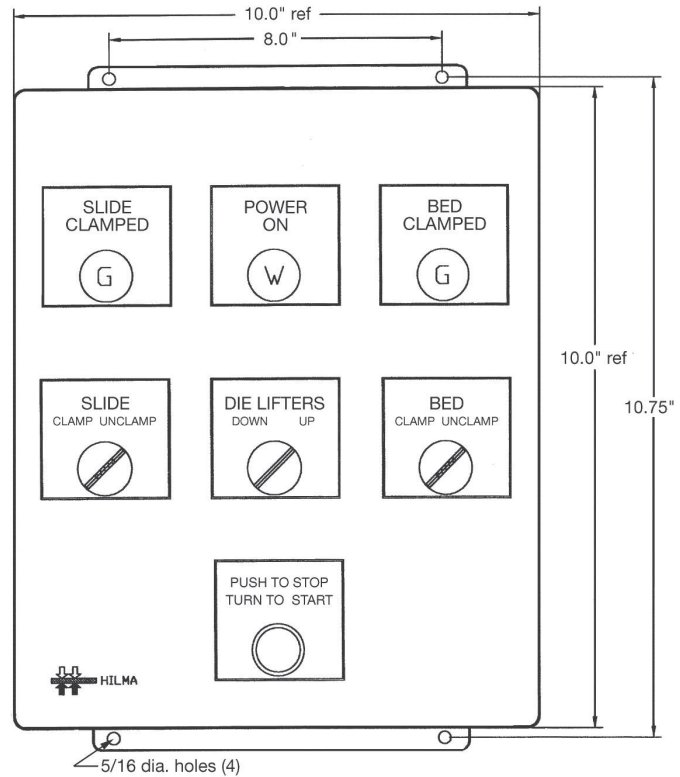
The control panel operates with 110 control voltage. Suitable for use with most Hilma power units with 110 VAC solenoid valves.

Advantages:

- ◆ oil tight 10 x 10 x 6 enclosure or 8 x 10 x 4 enclosure for EC-S10
- ◆ prewire to terminal strip
- ◆ press safety interlock circuit
- ◆ clamp pressure LEDs
- ◆ keyed clamp switches

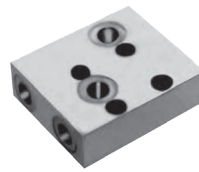
Specials:

Special control panels and complete PLC controls available upon request.



HCR-EC-S21 shown

Manifold Blocks single and multicircuit



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Manifold blocks single

Part no.	No. of circuits	No. of ports per circuit	Size of "A" SAE port (Th'd.)
HCR-HH-M134	1	3	#4 (7/16-20)
HCR-HH-M136	1	3	#6 (9/16-18)
HCR-HH-M144	1	4	#4 (7/16-20)
HCR-HH-M146	1	4	#6 (9/16-18)
HCR-HH-M234	2	3	#4 (7/16-20)
HCR-HH-M236	2	3	#6 (9/16-18)

Application:

These manifolds provide an oil distribution block for mounting directly on the press.

Description

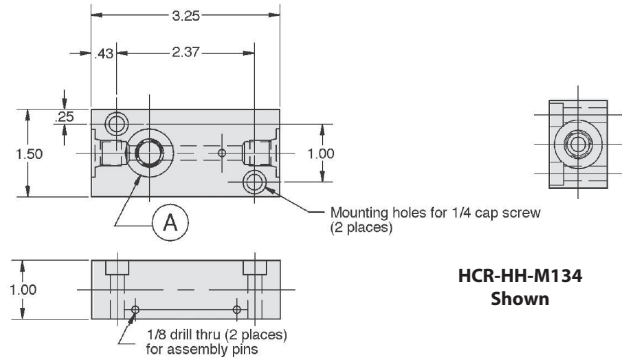
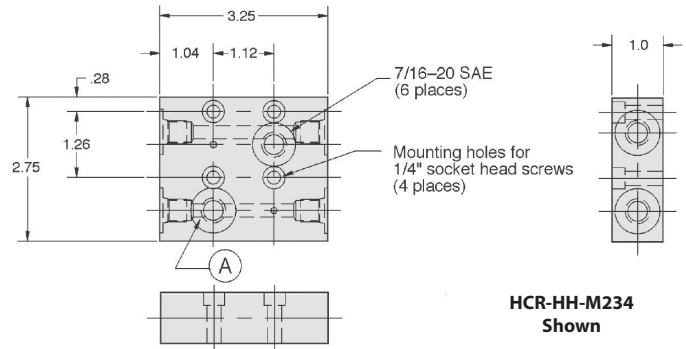
The manifolds are used as a secure transition point from rigid mounted tubing to flexible hose such as:

- From the press column to the slide clamp circuit.
- From the bolster or slide to the movable clamps.

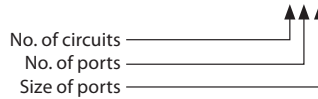
Advantages:

- ◆ single units can be pinned together to create a multi-circuit manifold (pins included)
- ◆ standard SAE ports

Specials available on request.



HCR-HH-M134

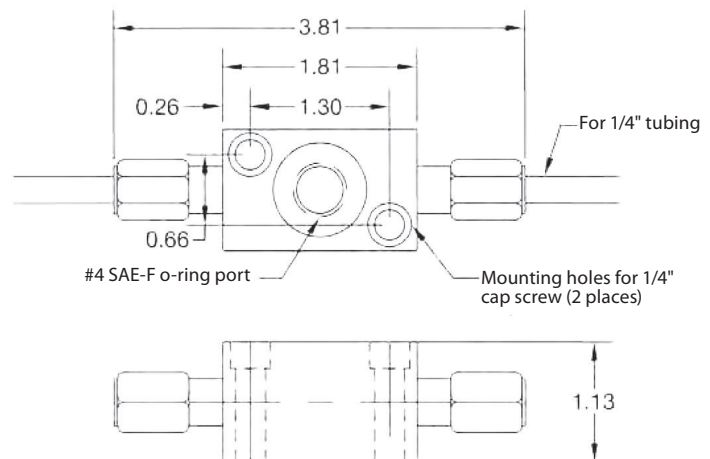


HCR-HF-4C-4S-T

This custom manifold provides 1/4" compression fittings for tubing and SAE #4 outlet port for hose connection.

Nuts and ferrules included.

Optional cap HCR-HF-4-FNU-S

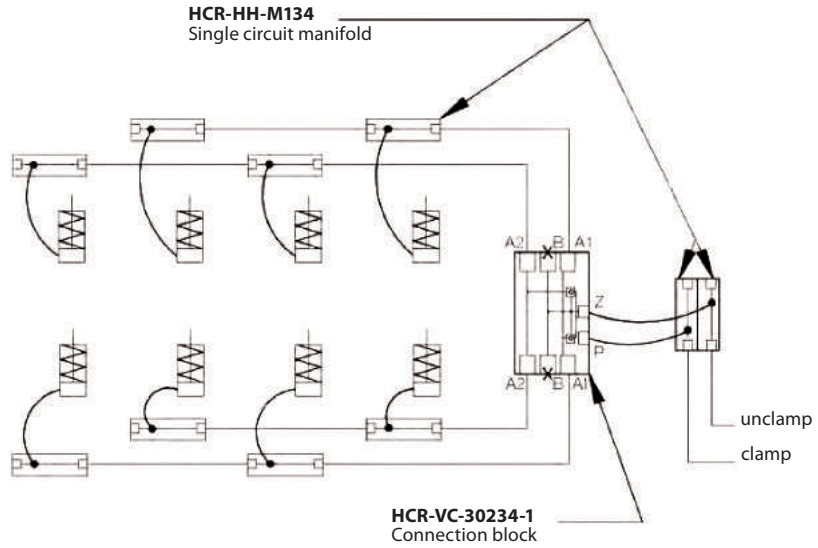




Application example A:

Hollow piston clamp circuit for the press side.

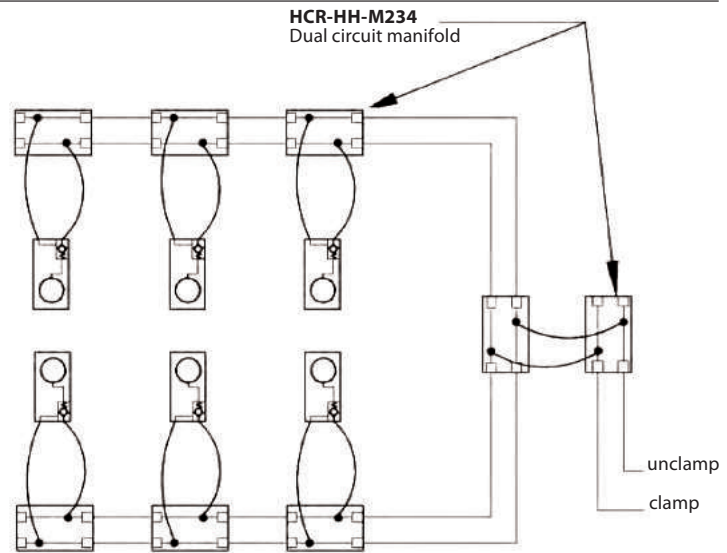
This circuit includes single-acting spring return cylinders with connection block having dual pilot operated check valve safety circuits.



Application example B:

Sliding clamp circuit for the press slide.

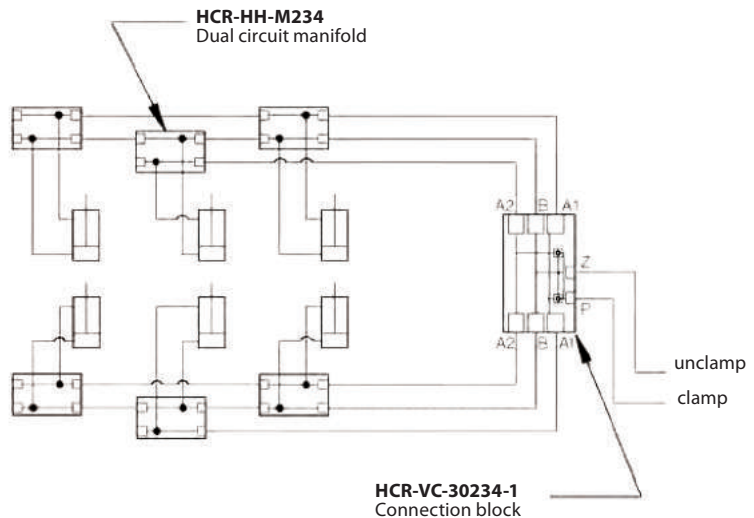
These clamps are single-acting spring return cylinders with an integrated pilot operated check valve in each clamp.



Application example C:

Double-acting clamp circuit for the press bolster.

Manifolds are used with hoses for service of clamps. This circuit includes double-acting cylinders such as a swing sink clamp, with a connection block having dual pilot operated check valve safety circuits.



Connection Block dual pilot operated check valves/ dual safety circuits



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Application:

This connection block provides an important safety function for most press clamp circuits. It can be used with single- or double-acting clamps on the press bed or slide.

Description:

The block splits incoming lamp line into two circuits. This provides dual safety protection for the bed or slide circuit by means of two pilot operated check valves.

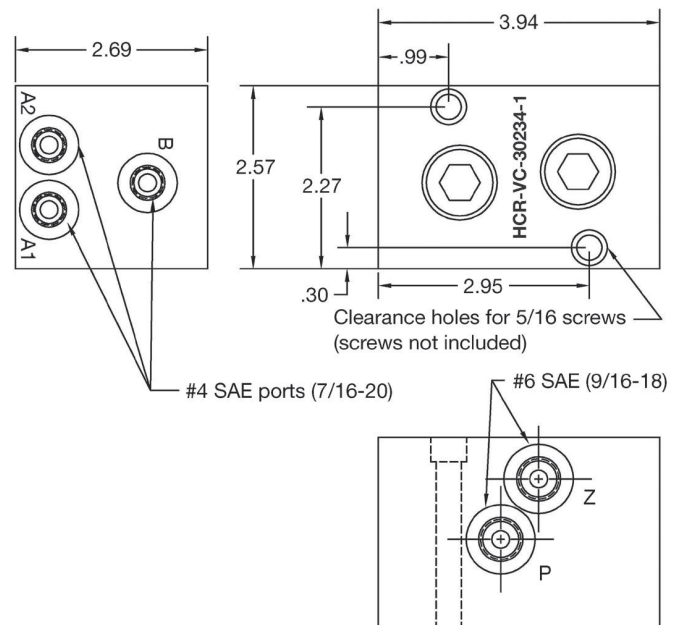
If there is a pressure loss in one circuit (A1) the opposite clamps in circuit (A2) stay clamped.

The pressure loss, monitored by a pressure switch at the pump triggers the press E-stop circuit.

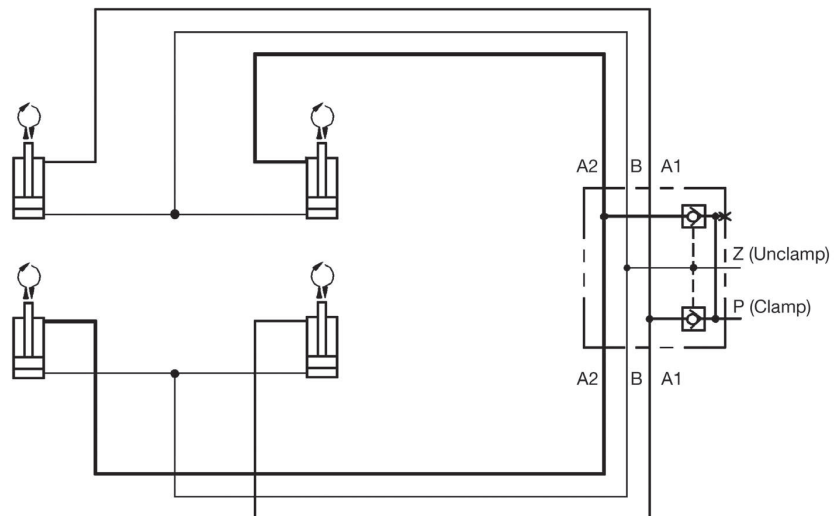
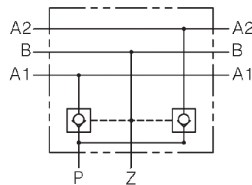
Not for use in high temperature applications.

Advantages:

- ◆ dual safety circuits
- ◆ zero leak check valves



Schematic symbol



Typical schematic application:

Bed die clamp circuit using four swing sink clamps.

Technical data

Max. operating pressure	(psi)	5,800
Max. flow rate	(cu in/min)	900
Output ports	SAE (thread)	#4 (7/16-20)
Input ports	SAE (thread)	#6 (9/16-18)
Weight	(lbs)	7.5
Release pressure of check valves is 38% of clamp pressure		
Part no.		HCR-VC-30234-1



Manual remote control

Description

Electric control M1C

The electric control M1C is used for small and medium-sized machines.

Dimensions	500 x 500 x 250 mm
Error display	not available
Connections	1 to 2

Electric control M2C

The electric control M2C is used for large machines. An additional LCD display allows a quick diagnosis by the display of the error code.

Dimensions	vary depending on the machine size
Error display	yes
Connections	1 to 8

Manual remote control

With removable key-operated switch on the manual remote control to prevent unauthorized actuation.

Advantages

- ◆ Highest safety standards (as per EN 201/EN 289)
- ◆ Standardized integration via EUROMAP 70 interface
- ◆ Simple error diagnosis by software readout
- ◆ Easy to maintain by exchangeable master module
- ◆ Compact design
- ◆ Status display on the LED panel

Integration into the machine

For the integration of the magnetic clamping system into the machine, there are the following three alternatives:

Euromap 70.0 (complete integration)

- Two-channel release signal to the machine
- 3 release signals from the machine to the magnetic clamping system
- Control via remote control with key-operated switch (included in the delivery)
- Interface cable with plug connection

Euromap 70.1 (complete integration)

- Two-channel release signal to the machine
- 3 release signals from the machine to the magnetic clamping system
- Control via machine panel
- Interface cable with plug connection

Retrofit interface (partial integration)

- Two-channel release signal to the machine
- Without release signal from the machine to the magnetic clamping system
- 3-minute timer as a time slot for demagnetization
- Second key-operated switch as safe state for the release of the magnetic clamping system
- Interface cable with plug connection

Technical basic data

Voltage*	[V]	380 – 480
Frequency*	[Hz]	50 / 60
Fuses	[A]	32
Code class		IP 54

* as per customer's request



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Seller warrants that the product described herein will be free from defects in material and workmanship. If any failure to conform to this warranty be found within twelve (12) months, from date of receipt of the product by Buyer, and Seller is given immediate notification thereof, Seller, upon being satisfied of the existence of such nonconformity, will correct the same by replacement of the defective product or making suitable repairs. If the Seller is unable to correct such nonconformity by replacement of the product or making suitable repairs, whether due to the nature of such nonconformity, the use made by the Buyer of the product, or for any other reason, it will return to Buyer the price set forth herein, or where appropriate, the unit price for such number or quantity of products as shall have such nonconformity which Seller is unable to correct, upon Seller's receipt of the nonconforming product f.o.b. its plant; provided, however, no product shall be returned to Seller without its express written consent; and provided further that such receipt of any nonconforming product will not be required where it is no longer possible for Buyer to return the same to Seller. In no event shall Seller be liable to Buyer, either directly or by way of contribution or indemnity, for direct, special, incidental or consequential damages such as, but not limited to, property damage, loss of profit, damages based on loss of use of the product, or damages for cover, whether the claim for any such damages be based on warranty, express or implied, contract, tort, or otherwise. THE FOREGOING IS SELLER'S SOLE WARRANTY WITH RESPECT TO THE PRODUCT. SELLER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.