

Accessory Valves and Devices

Relayair® valves - Type "H" and "L"
Pilot operated sequence valves



"H" and "L" Relayair® Valves

Type Pilot operated sequence valve
 Supply Pressure 200 PSI Max. Except P -059158-00045 (300 PSI)
 Control Pressure 140 psi max.
 Temperature range -40°F to 160°F
 Media Air or inert gas
 Port Size:
 Control port (port 10), breather port (port 1): 1/4" NPT
 All other ports: 3/8" NPT

Operating Characteristics

The Relayair® Valve has three basic uses:

1. As a nongraduated relay to provide a large flow of air from a separate source when piloted by small amount of control media and to stop this flow and exhaust the air to atmosphere when the control pressure is vented.
2. As an interlock to govern the flow in one circuit by placing its control in another independent circuit.
3. As a pressure-sensitive sequence valve for such circuit functions as timing, cycling, etc.

Application Notes

RELAYAIR Valves operated by pilot pressures less than 35 psi utilize one control spring while valves operated by pilot pressures greater than 35 psi use two springs. To obtain pilot pressures less than 10 psi, two diaphragms are used in series.

Model	Part No.	Old Part No.	Pilot Press. (psi)	Max. Supply Press. (psi)	Max. Control Press. (psi)	Weight lbs. (kg)
H-5-D	R431005195	P -059567-00003	3	200	140	15 (6.8)
H-5-D	R431005196	P -059567-00012	12	200	140	15 (6.8)
H-5	R431004910	P -059155-00010	10	200	140	5 (2.3)
H-5	R431004911	P -059155-00015	15	200	140	5 (2.3)
H-5	R431004912	P -059155-00020	20	200	140	5 (2.3)
H-5	R431004913	P -059155-00025	25	200	140	5 (2.3)
H-5	R431004914	P -059155-00030	30	200	140	5 (2.3)
H-5	R431004915	P -059155-00035	35	200	140	5 (2.3)
H-5	R431004916	P -059155-00045	45	200	140	5 (2.3)
H-5	R431004917	P -059155-00050	50	200	140	5 (2.3)
H-5	R431004918	P -059155-00060	60	200	140	5 (2.3)
H-5	R431004919	P -059155-00070	70	200	140	5 (2.3)
H-5	R431004920	P -059155-00080	80	200	140	5 (2.3)
H-5	R431004921	P -059155-00090	90	200	140	5 (2.3)
H-5	R431004922	P -059155-00100	100	200	140	5 (2.3)
H-5	R431004923	P -059155-00110	110	200	140	5 (2.3)
H-5	R431004927	P -059158-00045	45	300	140	5 (2.3)
L-2-A	R431006062	P -062482-00040	4	200	300	5.75 (2.6)
L-2-A	R431006063	P -062482-00070	70	200	300	5.75 (2.6)
L-2-A	R431006064	P -062482-00085	85	200	300	5.75 (2.6)
L-2-A	R431006065	P -062482-00110	110	200	300	5.75 (2.6)
L-2-A	R431006067	P -062482-00135	135	200	300	5.75 (2.6)
L-2-A	R431006068	P -062482-00150	150	200	300	5.75 (2.6)
L-2-A	R431006573	P -065215-00000	220	200	300	5.75 (2.6)

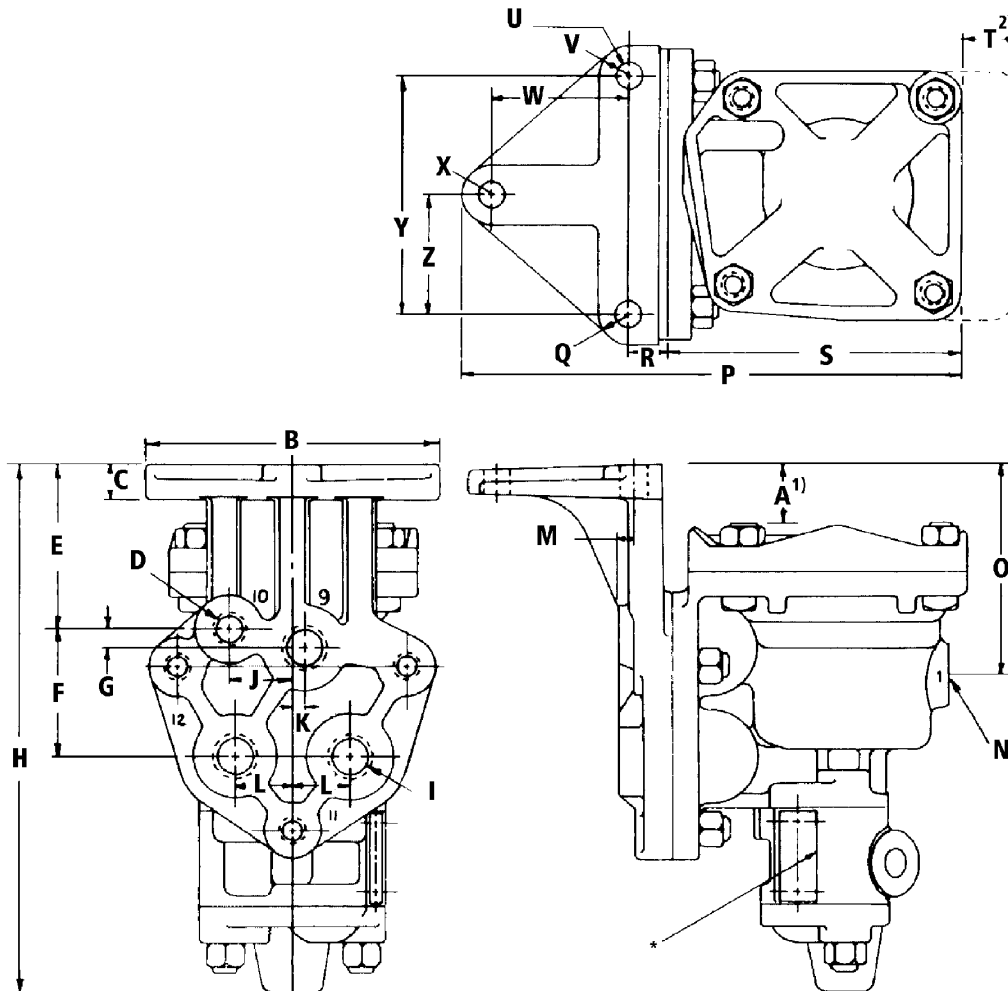
Repair Kits:

H-5-D	R431005479	P -060310-00000	H-5-D rubber parts repair kit
H-5	R431005478	P -060309-K0000	H-5 rubber parts repair kit
L-2-A	R431005480	P -060311-00000	L-2-A rubber parts repair kit
	R431005482	P -060312-K0000	Metal parts repair kit, all models up to 200 psi supply
	R431005483	P -060313-00000	Metal parts repair kit, all models up to 300 psi supply

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Pilot operated sequence valves

H-5 Relayair Valve Dimensions



- 9 = Exhaust
- 10 = Pilot
- 11 = Delivery
- 12 = Supply

* Nameplate location.

H-5 Relay Dimensions

A ¹⁾	B	C	D - NPTF	E	F	G	H	I - NPTF	J	K	L	M
13/16	4-3/8	1/2	1/4-18	2-7/16	1-7/8	9/32	7-3/4	3/8-18	15/16	3/16	27/32	1/4
N - NPT	O	P	Q	R	S	T ²⁾	U (3 places)	V	W	X	Y	Z
1/4-18	3-1/8	7-3/8	∅7/16	9/16	4-3/8	13/16	13/32	∅7/16	2	∅7/16	3-1/2	1-3/4

1) H-5 shown. "A" for H-5-D = 1/8"; for L-2-A = 5/16".

2) Clearance required for removal.

* Nameplate location.

NOTICES TO PRODUCT USERS

1. WARNING: FLUID MEDIA

Bosch Rexroth pneumatic devices are designed and tested for use with filtered, clean, dry, chemical free air at pressures and temperatures within the specified limits of the device. For use with media other than air or for human life support systems, Bosch Rexroth must be consulted. Hydraulic cylinders are designed for operation with filtered, clean, petroleum based hydraulic fluid; operation using fire-resistant or other special types of fluids may require special packing and seals. Consult the factory.

2. WARNING: MATERIAL COMPATIBILITY

Damage to product seals or other parts caused by the use of non-compatible lubricants, oil additives or synthetic lubricants in the air system compressor or line lubrication devices voids Bosch Rexroth's warranty and can result in product failure or other malfunction. See lubrication recommendations below.

AIR LINE LUBRICANTS! In service higher than 18 cycles per minute or with continuous flow of air through the device, an air line lubricator is recommended. * (Do not use line lubrication with vacuum products.) However, the lubricator must be maintained since the oil will wash out the grease, and lack of lubrication will greatly shorten the life expectancy. The oils used in the lubricator must be compatible with the elastomers in the device. The elastomers are normally BUNA-N, NEOPRENE, VITON, SILICONE and HYTREL. Bosch Rexroth recommends the use of only petroleum-based oils without synthetic additives, and with an aniline point between 180° and 210° F.

COMPRESSOR LUBRICANTS! All compressors (with the exception of special "oil free" units) pass oil mist or vapor from the internal crankcase lubricating system through to the compressed air. Since even small amounts of non-compatible lubricants can cause severe seal deterioration (which could result in component and system failure) special care should be taken in selecting compatible compressor lubricants. It is recommended that users review the National Fluid Power Association "Recommended Guide Lines For Use Of Synthetic Lubricants In Pneumatic Fluid Power Systems" (NFPA T1-1978).

3. WARNING: INSTALLATION AND MOUNTING

The user of these devices must conform to all applicable electrical, mechanical, piping and other codes in the installation, operation or repair of these devices.

INSTALLATION! Do not attempt to install, operate or repair these devices without proper training in the technique of working on pneumatic or hydraulic systems and devices, unless under trained supervision. Compressed air and hydraulic systems contain high levels of stored energy. Do not attempt to connect, disconnect or repair these products when system is under pressure. Always exhaust or drain the pressure from system before performing any service work. Failure to do so can result in serious personal injury.

MOUNTING! Devices should be mounted and positioned in such manner that they cannot be accidentally operated.

4. WARNING: APPLICATION AND USE OF PRODUCTS

The possibility does exist for any device or accessory to fail to operate properly through misuse, wear or malfunction. The user must consider these possibilities and should provide appropriate safe guards in the application or system design to prevent personal injury or property damage in the event of malfunction.

5. WARNING: CONVERSION, MAINTENANCE AND REPAIR

When a device is disassembled for conversion to a different configuration, maintenance or repair, the device must be tested for leakage and proper operation after being reassembled and prior to installation.

MAINTENANCE AND REPAIR! Maintenance periods should be scheduled in accordance with frequency of use and working conditions. All Bosch Rexroth products should provide minimum of 1,000,000 cycles of maintenance free service when used and lubricated as recommended. However, these products should be visually inspected for defects and given an "in system" operating performance and leakage test once a year. Where devices require major repair as result of the one million cycles, one year, or routine inspection, the device must be disassembled, cleaned, inspected, parts replaced as required, rebuilt and tested for leakage and proper operation prior to installation. See individual catalogs for specific cycle life estimates.

6. PRODUCT CHANGES

Product changes including specifications, features, designs and availability are subject to change at any time without notice. For critical dimensions or specifications, contact factory.

*Many Bosch Rexroth pneumatic components can operate with or without air line lubrication; see individual sales catalogs for details.

--Refer to the appropriate service catalog for parts and service information.

LIMITATIONS OF WARRANTIES & REMEDIES

Bosch Rexroth warrants its products sold by it to be free from defects in material and workmanship to the following:

For twelve months after shipment Bosch Rexroth will repair or replace (F.O.B. our works), at its option, any equipment which under normal conditions of use and service proves to be defective in material or workmanship at no charge to the purchaser. No charge will be made for labor with respect to defects covered by this Warranty, provided that the work is done by Bosch Rexroth or any of its authorized service facilities. However, this Warranty does not cover expenses incurred in the removal and reinstallation of any product, nor any downtime incurred, whether or not proved defective.

All repairs and replacement parts provided under this Warranty policy will assume the identity, for warranty purposes, of the part replaced, and the warranty on such replacement parts will expire when the warranty on the original part would have expired. Claims must be submitted within thirty days of the failure or be subject to rejection.

This Warranty is not transferable beyond the first using purchaser. Specifically, excluded from this Warranty are failures caused by misuse, neglect, abuse, improper operation or filtration, extreme temperatures, or unauthorized service or parts. This Warranty also excludes the use of lubricants, fluids or air line additives that are not compatible with seals or diaphragms used in the products. This Warranty sets out the purchaser's exclusive remedies with respect to products covered by it, whether for negligence or otherwise. Neither, Bosch Rexroth nor any of its affiliates will be liable for consequential or incidental damages or other losses or expenses incurred by reason of the use or sale of such products. Our liability (except as to title) arising out of the sale, use or operation of any product or parts, whether on warranty, contract or negligence (including claims for consequential or incidental damage) shall not in any event exceed the cost of replacing the defective products and, upon expiration of the warranted period as herein provided, all such liability is terminated. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE. No attempt to alter, amend or extend this Warranty shall be effective unless authorized in writing by an officer of Bosch Rexroth Corporation.

Bosch Rexroth reserves the right to discontinue manufacture of any product, or change product materials, design or specifications without notice.

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