

**GoTo** Products are  
highlighted in yellow.

# Series 840 Pneumatic Directional Control Valves

(Pages from SC-Master2 Catalog)

The Drive & Control Company



# Series 840 Valves, 4-Way Directional Control

Solenoid and air pilot, for 1/4" tubing

**Rexroth**  
Bosch Group

## 4 Way / 2 Position Solenoid & Air Pilot Poppet Valves

### TECHNICAL DATA:

**Port Sizes:** Integrated Fittings: 1/4" O.D. x .040" wall poly tubing (grey tube nuts)

**Flow:** Cv = .20

**Working Pressure:** 20 psi minimum (External pilots not available)  
150 psi maximum (Below 105°F) – solenoid & air pilot valves  
115 psi maximum (105°F - 122°F) – solenoid valves  
115 psi maximum (105°F - 140°F) – air pilot valves  
No vacuum service

**Temperature Ranges:** +5° to +122° F (20-115 psi) – solenoid valves  
+5° to +140° F (20-150 psi) – air pilot valves  
+5° to 105° F (20-150 psi) – solenoid & air pilot valves

**Media:** Air (either lubricated or non-lubricated)

**Materials:** Polyacetal Engineering Plastic with polyurethane seals and diaphragm

**Weight:** 2.6 oz. (single solenoid)

**Manual Override:** Locking

### ELECTRICAL DATA:

Standard Voltages (all coils are rated for continuous duty)	Power Consumption	
	Inrush	Holding
24, 120 VAC (50/60 Hz)	2.9 VA	2.0 VA
12, 24 VDC	1.6 W	

Voltage Tolerance: ±10%

### NEMA 4 ELECTRICAL PROTECTION

**NOTE:** Solenoid connectors must be ordered separately. One per solenoid required. See complete listing on page 6.2.

Wireway option - see pages 3.56 and 3.58

**Solenoids with indicator lights  
available-contact Rexroth.**

### MANIFOLD MOUNTING

(See page 2.29 to order factory assembled manifolds.)



### FEATURES

- 4 way/4 ported directional control valve.
- Compact and lightweight (only 2.6 oz. and requires less than 3 cubic inches of space).
- Designed to operate on non-lubricated air.
- Integral fitting (for 1/4" plastic tubing) for fast, leak free connections.
- Modular wireway system
- NEMA 4 Electrical Protection (valve only)
- UL Recognized
- "Clip type" valve to manifold mounting means valve installation and removal takes only seconds (similar to Type 740™ concept).
- Polyacetal Engineering Plastic construction provides excellent corrosion resistance.
- Poppet type valve design provides millions of trouble free cycles.
- Manual override standard.
- Twist lock coil design (no tools required) permits convenient interchangeability between AC and DC coils.
- 3 snap together modular manifold sections facilitate most manifold requirements (accommodates 3/8" O.D. tubing for both supply and exhaust).
- Cycle life—20-100 million cycles
- Response time:  
Supply pressure 90 psi  
Energized-(0-81 psi): 16ms  
De-energized (90-9 psi): 18ms  
Response time based on 24 VDC Single Solenoid

# Series 840 Valves, 4-Way Directional Control

Solenoid and air pilot, for 1/4 tubing

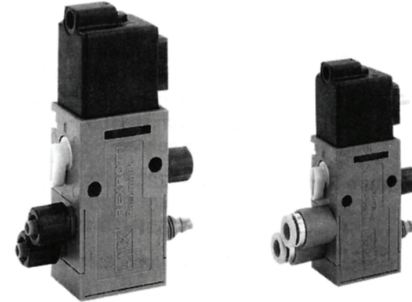
**Rexroth**  
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## 4 Way / 2 Position Poppet Valves Single & Double Solenoid, Single & Double Air Pilot

NOTE: All dimensions expressed in  $\frac{IN}{MM}$

**NOTE:** Valves on this page are not supplied with connectors.  
Connectors must be ordered separately. See bottom of this page  
and Accessories Section.

NEW PART NO.	OLD PART NO.	DESCRIPTION
5728409990	P -026641-00001	Sgl. Sol. 120 VAC/50-60 Hz
R432008661	P -026641-00002	Single Sol. 220/230 VAC
R432008662	P -026641-00004	Single Solenoid 12 VDC
5728409980	P -026641-00005	Single. Solenoid 24 VDC
R432008663	P -026641-00006	Sgl. Sol. 24 VAC/50-60 Hz
R432008664	P -026642-00001	Dbl. Sol. 120 VAC/50-60 Hz
R432008665	P -026642-00004	Double Solenoid 12 VDC
R432008666	P -026642-00005	Double Solenoid 24 VDC
R432030358	P -026642-00006	Dbl. Sol. 24 VAC/50-60 Hz
R432008659	P -026639-00000	Single Air Pilot
R432008660	P -026640-00000	Double Air Pilot



Typical width of valve:  
0.87" (22.5mm)  
Push-in fittings for metric tubing  
available. See online catalog.

## Wireways, Connectors and Manifolds

### Wireway System

#### Technical Data:

Nominal Voltage: Max. 125V

Continuous Current: 3.2A

Ambient Temperature: +5°F to +175°F

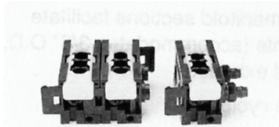
Protection: NEMA 1

Material: Blade and fork contact: nickel plated steel

Spring terminal: stainless steel

**Note:** Connectors are not required for each individual valve when using wireway R432008679, only one (1) connector per complete manifold is needed.

### Manifold System (factory assembled also available)



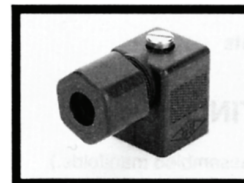
Manifold accommodates  
3/8" O.D. tubing.

Part Number	Description
*R432008411	Inlet segment
*R432008412	End segment
*R432008413	Station segment
* For a single valve subbase, order Part Number R432008744	

**Ordering Example:**  
(4 station manifold)

1 inlet segment  
1 end segment  
2 station segments

\* Includes all o-rings required.



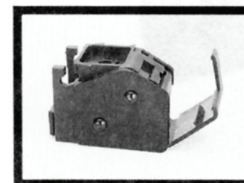
**8941012202**  
SERIES 840 VALVE  
CONNECTOR  
(See page 6.2 for  
lighted connectors)



**R432008679**  
WIREWAY SEGMENT



**R432008830**  
1/2" CONDUIT  
CONNECTOR KIT



**R432008829**  
WIREWAY END CAP

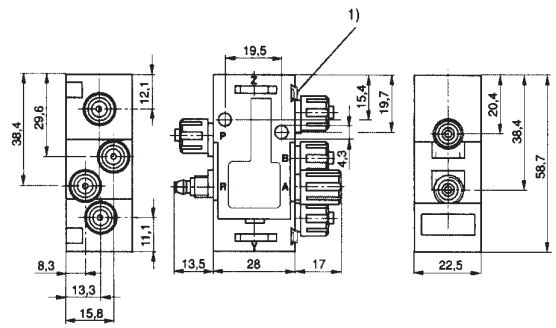
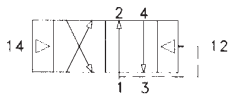
# Series 840 Valves, 4-Way Directional Control

Solenoid and air pilot, for 1/4 tubing

**Rexroth**  
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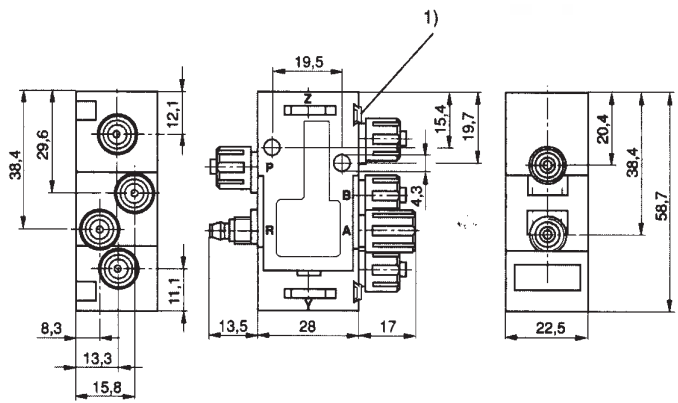
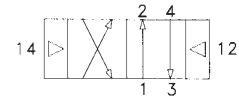
## DIMENSIONS

**SGL AIR PILOT**



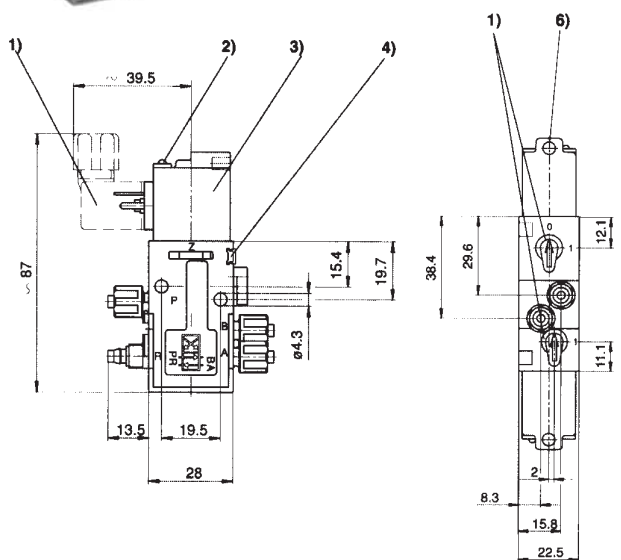
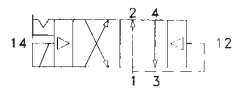
1) Mounting space for nameplate.

**DBL AIR PILOT**



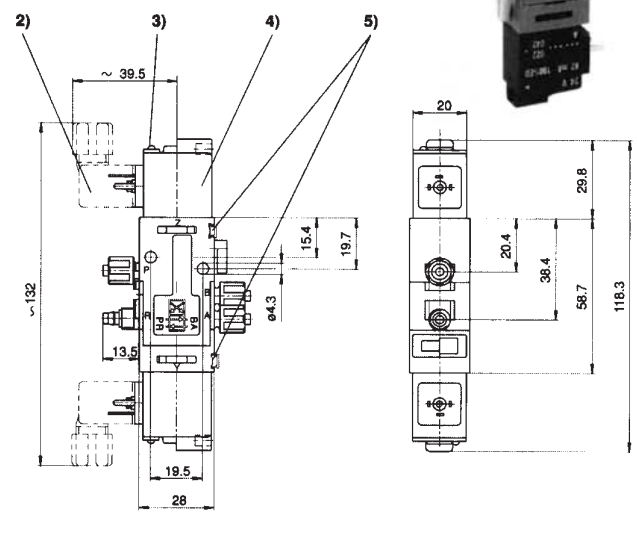
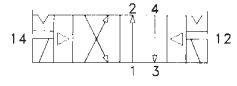
1) Mounting space for nameplate.

**SGL SOLENOID**



1) Connector rotates at 90° intervals. 2) LED indicator. 3) Coil rotates at 90° intervals. 4) Mounting space for nameplate.

**DBL SOLENOID**



1) Manual overrides. 2) Connector rotates at 90° intervals. 3) LED indicator. 4) Coil rotates at 90° intervals. 5) Mounting spaces for nameplate. 6) Hole for M5 fitting or silencer (Ø4.5mm).

# Series 840 Valves, 4-Way Directional Control

System drawing and wireway electrical information

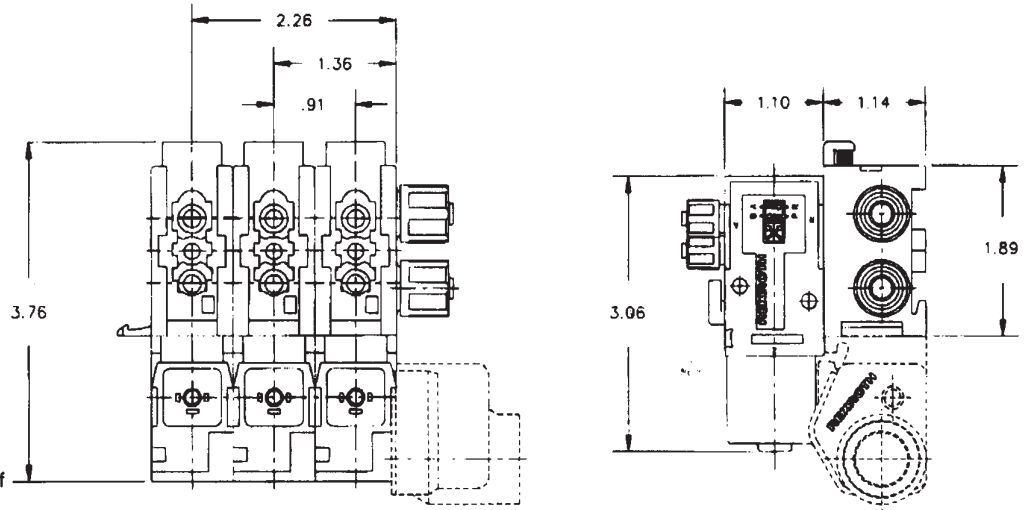
**Rexroth**  
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## TOTAL SYSTEM DRAWING

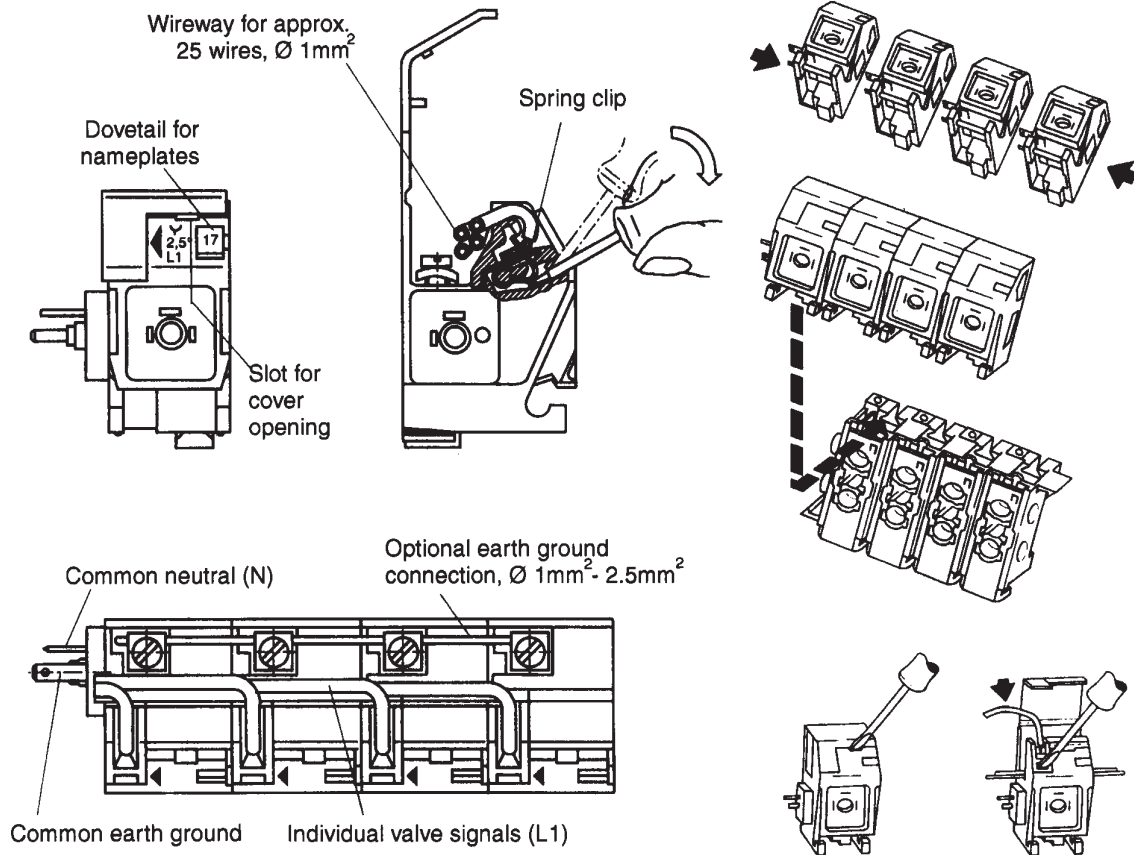
NOTE: Optional supply ports are available by drilling and tapping a #10-32 thread into the bottom or side of the manifold.

'O' rings (provided with each manifold segment) should be lubricated before installation.  
Valve to manifold "O" ring – H -897072-04744  
Manifold to manifold "O" ring – H -897086-02504

Subbases can be mounted with DIN rail (en 50 022) or with #8 screws. First, last, and every fourth station should be secured if DIN rail mounting is not used.



## ELECTRICAL CONNECTION INFORMATION

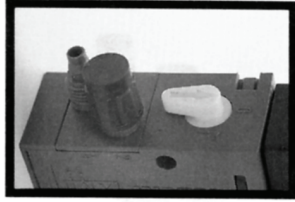


# Series 840 Valves, 4-Way Directional Control

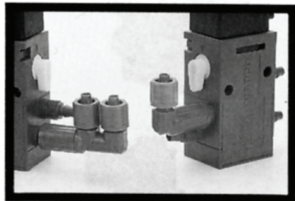
Accessories and repair parts

**Rexroth**  
Bosch Group

## Accessories & Repair Parts 4 Way / 2 Position Poppet Valves



**Blanking Cap**  
**8930715002**



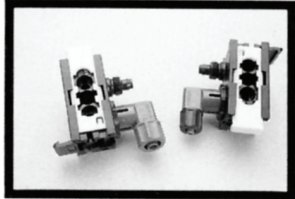
**Single Elbow**  
**R432008328**

**Double Elbow**  
**R432008416**



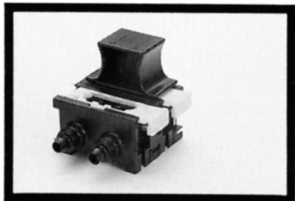
**Valve Exhaust Silencer**  
**5324002000**

**Manifold Exhaust Silencer**  
**5324002020**

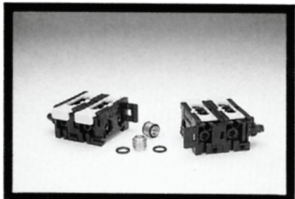


**1/4" Manifold Elbow**  
**R432015479**

**3/8" Manifold Elbow**  
**R432015301**



**Manifold Blanking Plate**  
**R432008420**



**Dual Pressure Manifold Kit**  
**5728400092**



**Exhaust Silencer for Pilot**  
**8993800114**

**Exhaust Fitting Kit**  
**R432015679**

## ACCESSORIES

PART NUMBER	DESCRIPTION
<b>8930715002</b>	Blanking Cap (for either delivery port)
<b>R432008328</b>	Elbow Fitting (1/4" for valve)
<b>R432008416</b>	Double Elbow Fitting (1/4" for valve)
<b>5324002000</b>	Exhaust Silencer (for valve)
<b>5324002020</b>	Exhaust Silencer (for manifold)
<b>R432015479</b>	Elbow Fitting (1/4" for manifold)
<b>R432015301</b>	Elbow Fitting (3/8" for manifold)
<b>R432008420</b>	Manifold Blanking Plate Kit
<b>5728400092</b>	Dual Pressure Manifold Kit
<b>R432008514</b>	Tube Nut Kit (2 pcs.) for manifold 3/8"
<b>R432015689</b>	Tube Nut Kit (2 pcs.) for valve 1/4"
<b>8930714804</b>	Tube nut, black. For 6 mm x 1 mm wall Poly tubing
<b>8993800114</b>	Exhaust Muffler (Silencer for pilot)
<b>R432015679</b>	Exhaust Fitting Kit (2 pcs.)

## MANIFOLDS

PART NUMBER	DESCRIPTION
<b>R432008411</b>	Inlet Segment
<b>R432008412</b>	End Segment
<b>R432008413</b>	Station Segment
<b>R432008744</b>	Single Subbase (used to manifold mount a single valve.)

## MOUNTING BARS

PART NUMBER	DESCRIPTION
<b>R432008414</b>	DIN Rail Mounting Bar (6")
<b>R432008415</b>	DIN Rail Mounting Bar (12")

Complete manifold assemblies snap or slide onto DIN rail. Consult factory for longer lengths of DIN rail.

## "SNAP" COILS

(Includes coil, armature, & plunger)

PART NUMBER	DESCRIPTION
<b>5420935270</b>	120 VAC/50-60 Hz
<b>5420930210</b>	12 VDC
<b>5420930220</b>	24 VDC
<b>5420935220</b>	24 VAC/50-60 Hz
<b>5428405480</b>	220/230 VAC

## 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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Further contacts:  
[www.boschrexroth.com/addresses](http://www.boschrexroth.com/addresses)

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