

TaskMaster[®] Pneumatic Directional Control Valves

(Pages from SC-300 Catalog)

The Drive & Control Company



TaskMaster® Valve

Technical data and features

Rexroth
Bosch Group



4 Way / 2 & 3 Position 1/4" & 3/8" NPTF Solenoid, Air Pilot, & Lever Operated

TECHNICAL DATA:

Port Sizes: 1/4" & 3/8" NPTF

Working Pressure: Valve inlet: 200 psi maximum with external pilot
150 psi maximum with internal pilot
Mechanical Operators: 200 psi maximum

Minimum Pilot Pressure: 2-position: 15 psi
Spring return models: 25 psi

Flow: $C_v = 1.0$

Temperature Range: -20°F to +160°F

Media: Air and inert gases (In service higher than 18 cycles per minute or with continuous airflow, a lubricator is recommended.)

Materials:

- Body, subplate and operators:
Die cast anodized aluminum
- Spool: Machined from high-tensile anodized aluminum
- Seals: Buna-N specially treated.

Manual Override: Non-Locking

ELECTRICAL DATA:

Standard Voltages (all coils are rated for continuous duty)	Power Consumption	
	Inrush	Holding
24, 120 240 VAC (60 Hz)	33 VA	22 VA
12, 24 VDC	12 W	

Molded Coil: Standard

Lead Length: 24"

Approximate Weights

Single Solenoid	2-5/8 lbs.
Double Solenoid	3-3/8 lbs.
3-position Double Solenoid	3-7/8 lbs.
Single Air Pilot	2-1/8 lbs.
Double Air Pilot	2-1/8 lbs.
3-position Double Air Pilot	2-5/8 lbs.
2-position Lever	2-1/2 lbs.
3-position Lever	2-3/8 lbs.



FEATURES:

- **Subbase mounted four-way valves** for two and three position (spring centered) closed center operation and a selection of three operators.
- **Three-way function** can be obtained by plugging one delivery port to provide either normally open or closed operation.
- **Unique subbase** is designed to be mounted to the customer's equipment with only two mounting bolts, which saves labor and material during the initial installation.
- **Separate tapped exhaust ports**, in the subbase, for each delivery port allow exhaust air to be piped away for safety or noise reduction purposes and permit use of exhaust restrictors for cylinder speed control.
- **Minimum Number of Wearing Parts.** Lessens the chance of equipment downtime and reduces the cost of repair.
- **Low Pilot Pressure.** A low (15 psi without springs - 25 psi with springs) pilot pressure rating assures reliable operation. Fluctuating line pressures within the plant do not affect operation.
- **Continuous-Duty Solenoid.** Won't burn out...even when energized for extended periods. Pilot operated for fast response. Nonlocking manual override is standard.
- **Lightweight Aluminum Spool.** Aluminum spool is precision finished for faster response and optimum dependability.
- **Low Friction Spool Bore.** Bore is roller burnished for lower spool friction and longer seal life.
- **No-Leak Seals.** Specially treated Buna N seals assure low friction and long wear without leakage.
- **Easier Maintenance.** Simplified design offers quick access for maintenance through 3-bolt valve portion mounting and easy end cover removal.
- **U.L. listed.**

TaskMaster® Valve

Single and double solenoid operated



4 Way / 2 & 3 Position 1/4" & 3/8" NPTF Solenoid Operated Two Position Subbase Mounted Single or Double Solenoid Operated

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

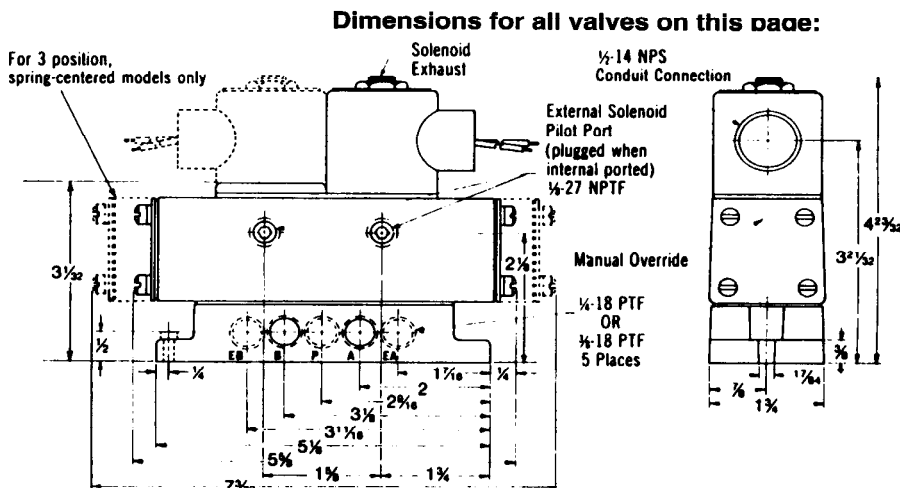


PORT SIZE	SINGLE SOLENOID		DOUBLE SOLENOID	
	INTERNAL	EXTERNAL	INTERNAL	EXTERNAL
1/4"	PJ-022711-00000	PJ-021711-00000	PJ-022771-00000	PJ-021771-00000
3/8"	PJ-032711-00000	PJ-031711-00000	PJ-032771-00000	PJ-031771-00000

Note: To order a valve "less subbase", change the first numerical digit on the above part numbers to a "1".

120VAC Single Solenoid Explosion Proof Part Number P-061772-00000

Three Position Subbase Moun Spring-Centered Double Soler Operated Closed Center



PORT SIZE	INTERNAL PILOT
1/4"	PJ-025771-00000
3/8"	PJ-035771-00000

Note: To order a valve "less subbase", change the first numerical digit on the above part numbers to a "1".

COIL VOLTAGES

The coil voltage of a solenoid operator is identified by the *last* digit of the valve part number. The last digit of all solenoid valve part numbers listed identifies a 120-volts AC, 60-Hz coil. Solenoid valves with other ratings may be ordered by using the table at right and substituting the appropriate digit.

COIL VOLTAGES		* Last Digit
**Primary	**Secondary	
120V AC, 60 Hz	38V DC	1
240V AC, 60 Hz	70V DC	2
480V AC, 60 Hz	145V DC	3
12V DC	42V, 60 Hz	4
24V DC	86V, 60 Hz	5

** Primary and secondary voltages will be stenciled on the solenoid date plate.

* See valve part numbers. (Does not apply to P-060681-00001 Hopper Dump Valve.)

Solenoid pilot pressure must be a minimum of 25 psi with return springs. 15 psi less return springs and a maximum of 150 psi. A flush, nonlocking manual override is standard for manual operation when the electric power is off.

Other optional features are available upon request, such as single explosion-proof solenoids, high pressure (200 psi) solenoids, etc.

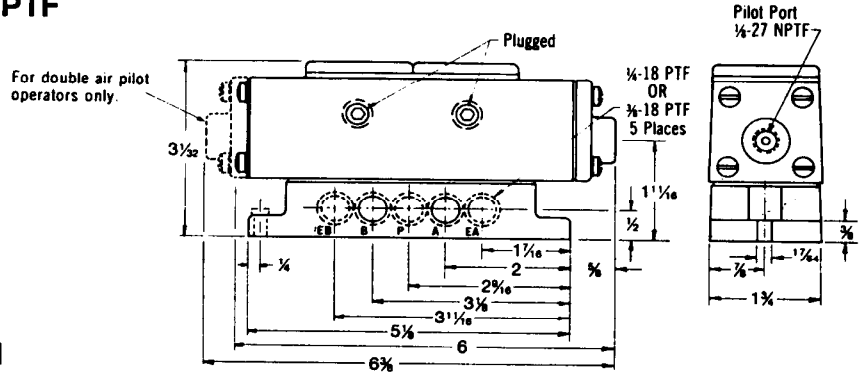
TaskMaster® Valve

Air pilot and lever operated

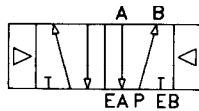
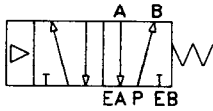
Rexroth
Bosch Group



4 Way / 2 & 3 Position 1/4" & 3/8" NPTF Air Pilot & Lever Operated



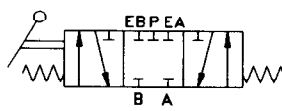
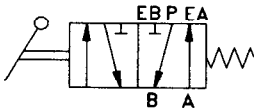
Two Position Subbase Mounted Single or Double Air Pilot Operated



PORT SIZE	SINGLE AIR PILOT	DOUBLE AIR PILOT
1/4"	PJ21610	PJ21660
3/8"	PJ31610	PJ31660

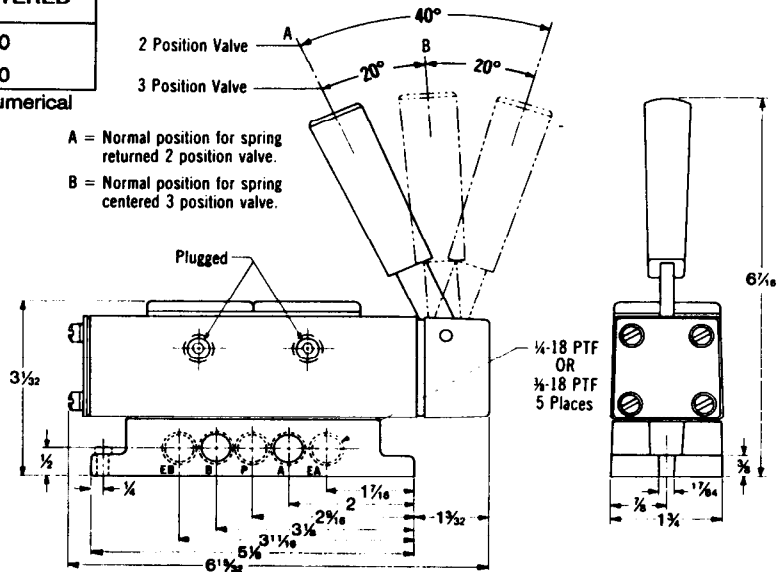
Note: To order a valve "less subbase", change the first numerical digit on the above part numbers to a "1".

Two and Three Position Subbase Mounted Lever Operated



PORT SIZE	TWO POSITION		THREE POSITION
	WITH SPRING	W/O SPRING	SPRING CENTERED
1/4"	PJ20210	PJ20200	PJ23210
3/8"	PJ30210	PJ30200	PJ33210

Note: To order a valve "less subbase", change the first numerical digit on the above part numbers to a "1".

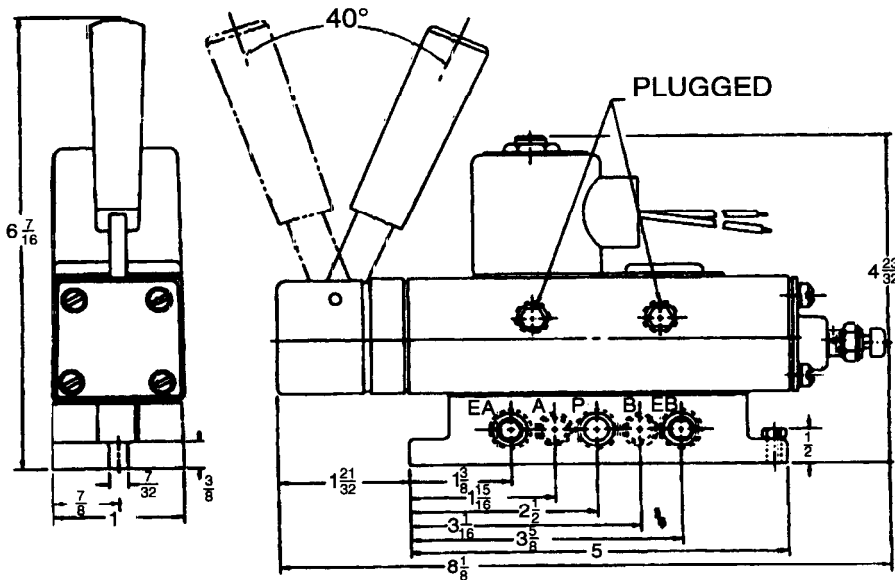
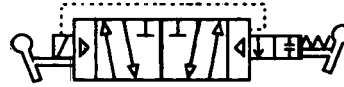




Hopper Dump Valve

Part No. P -060681-00001 (12 VDC)

This unique version is typically used for operating hoppers on many types of trailers hauling different types of aggregate. The valve has solenoid and handle operators. The solenoid permits remote operation of the valve. The handle operates in conjunction with a bleeder button which depressurizes the air spring return allowing the handle to be moved. Manual operation can only be obtained with the solenoid de-energized.



NOTE: All subbase ports are 3/8" NPT.

Repair Kits & Miscellaneous Parts

REPAIR KITS

Part Number	Description
P -060102-00000	Valve Body Kit
P -065481-00000	Valve Body Kit - Viton
P -060103-00000	Operator Kit
P -060103-00002	Operator Kit Viton
P -060969-00000	Solenoid Repair Kit (Includes Plunger, Spring & Gasket)
P -062459-00000	Solenoid Exhaust Filter
P -066673-00000	Solenoid Sleeve (Armature)

SOLENOID OPERATORS AND KITS

Last Digit*	Coil Voltage	Part Numbers		
		Solenoid Operator Kit		Solenoid
		External Pilot	Internal Pilot	
1	120 VAC 60 Hz	P -059447-00000	P -059432-00000	P -050861-00000
2	240 VAC 60 Hz	P -059450-00000	P -059435-00000	P -050861-00001
3	480 VAC 60 Hz	P -059451-00000	P -059436-00000	P -050861-00002
4	12 VDC	P -059448-00000	P -059433-00000	P -050861-00004
5	24 VDC	P -059449-00000	P -059434-00000	P -050861-00003

COILS

Last Digit*	Part Number	Coil Voltage
1	P -061920-00000	120 VAC - 60 Hz
2	P -061920-00001	240 VAC - 60 Hz
3	P -061920-00002	480 VAC - 60 Hz
4	P -061920-00004	12 VDC
5	P -061920-00003	24 VDC

SUBPLATES

Part Number	Description
P -059398-00001	1/4" subplate
P -059397-00001	3/8" subplate

*Does not apply to P -060681-00001 Hopper Dump Valve, requires 12 VDC kits.

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.

Bosch Rexroth Corporation
Pneumatics
1953 Mercer Road
Lexington, KY 40511-1021
Telephone (859) 254-8031
Facsimile (859) 254-4188
pneumatics@boschrexroth-us.com
www.boschrexroth-us.com

International offices:

Asia:

China	Russia
India	Singapore
Japan	South Korea
Malaysia	

Australia

Europe:

Austria	Netherlands
Belgium	Norway
Bulgaria	Poland
Czech Republic	Portugal
Denmark	Romania
Finland	Slovakia
France	Spain
Germany	Sweden
Greece	Switzerland
Hungary	Turkey
Italy	Ukraine
	United Kingdom

North America:

Canada	United States
Mexico	

South America:

Argentina	Venezuela
Brazil	

Factory Automation

Regional sales offices:

Central

Bosch Rexroth Corporation
5150 Prairie Stone Parkway
Hoffman Estates, IL 60192-3707
Telephone (847) 645-3600
Facsimile (847) 645-0804

Great Lakes

Bosch Rexroth Corporation
1701 Harmon Road
Auburn Hills, MI 48326-1549
Telephone (248) 393-3330
Facsimile (248) 393-2893

Northeast

Bosch Rexroth Corporation
99 Rainbow Road
East Grandby, CT 06026-0000
Telephone (860) 844-8377
Facsimile (860) 844-8595

Bosch Rexroth Corporation
2315 City Line Road
Bethlehem, PA 18017-2131
Telephone (610) 694-8300
Facsimile (610) 694-8467

Southeast

Bosch Rexroth Corporation
14001 South Lake Drive
Charlotte, NC 28273-5544
Telephone (704) 583-4338
Facsimile (704) 583-0523

West

Bosch Rexroth Corporation
11 Goddard
Irvine, CA 92618-4600
Telephone (949) 450-2777
Facsimile (949) 450-2790

North American offices:

Bosch Rexroth Corporation
Corporate Headquarters
5150 Prairie Stone Parkway
Hoffman Estates, IL 60192-3707
Telephone (847) 645-3600
Facsimile (847) 645-0804

Bosch Rexroth Corporation
Industrial Hydraulics
2315 City Line Road
Bethlehem, PA 18017-2131
Telephone (610) 694-8300
Facsimile (610) 694-8467

Bosch Rexroth Corporation
Electric Drives and Controls
5150 Prairie Stone Parkway
Hoffman Estates, IL 60192-3707
Telephone (847) 645-3600
Facsimile (847) 645-6201

Bosch Rexroth Corporation
Linear Motion and
Assembly Technologies
816 E. Third Street
Buchanan, MI 49107
Telephone (269) 695-0151
Facsimile (269) 695-5363

14001 South Lakes Drive
Charlotte, NC 28273
Telephone (800) 438-5983
Facsimile (704) 583-0523

Bosch Rexroth Corporation
Mobile Hydraulics
145 Southchase Boulevard
Fountain Inn, SC 29644-9018
Telephone (864) 967-2777
Facsimile (864) 962-5338

Bosch Rexroth Canada
3426 Mainway Drive
Burlington, Ontario L7M 1A8
Telephone (905) 335-5511
Facsimile (905) 335-4184
www.boschrexroth.ca

Bosch Rexroth, S.A. de C.V.
Calle Neptuno # 72
Unidad Industrial Vallejo
CP 07700 Mexico, D.F.
Telephone (555) 754-1711
Facsimile (555) 752-5943

Further contacts:
www.boschrexroth.com/addresses

The data specified herein only serves to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The given information does not release the user from obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

©This document, as well as the data, specifications and other information set forth in it, are the exclusive property of Bosch Rexroth Corp. Without their consent it may not be reproduced or given to third parties.

Printed in the United States