RESUN[®] Rectangular Port, Regular Opening R-1431

UL SE CABORNAU







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200 PSI WOG-Flanged End 125 PSI SWP

Materials of Construction

Body: ASTM A 126 Class B Plug: ASTM A 126 Class B Baseplate: ASTM A 126 Class B Baseplate Spring: Stainless Steel 17-7 Sealant Screw: Commercial Steel Double Ball Check Valve: Commercial Steel Gasket: Glass Filled TFE Body Sealant Fitting: Commercial Steel (8", 10" & 12" only).



Fig.R-1431 Wrench-Operated Fig.R-1431 WGA Worm Gear-Operated

Dimensions - Regular Opening, Rectangular Port Valves R-1431

	DESCRIPTION	BOTTOM ENTRY											
	SIZE	1	1 ¹ /4	1 ¹ /2	2	2 ¹ /2	3	4	5	6	8	10	12
В	Face-to-Face Flanged	5 ¹ /2	6	6 ¹ /2	7	71/2	8	9	10	10 ¹ /2	111/2	13	14
H	Center of Port to Bottom of Valve	17/8	25/8	2 ³ /8	2 ⁵ /8	31/8	31/4	41/4	51/8	51/8	61/8	75/8	93/4
J	Extreme Width of Body	21/2	37/8	3	4	43/4	51/2	67/8	71/2	71/2	10	12	13 ¹ /2
L	Diameter of Sealant Stick	3/8	3/8	3/8	3/8	3/8	3/8	5/8	5/8	5/8	5/8	5/8	5/8
	FLANGE DATA												
C	Diameter of Flanges	41/4	45/8	5	6	7	71/2	9	10	11	13 ¹ /2	16	19
D	Thickness of Flanges	7/16	1/2	⁹ /16	5/8	11/16	3/4	15/16	15/16	1	1 ¹ /8	1 ³ /16	1 ¹ /4
Ε	No. and Size of Bolts	4-1/2	4-1/2	4-1/2	4-5/8	4-5/8	4-5/8	8-5/8	8-3/4	8-3/4	8-3/4	12-7/8	12-7/8
F	Diameter of Bolt Circle	31/8	31/2	37/8	43/4	5 ¹ /2	6	71/2	8 ¹ /2	9 ¹ /2	113/4	141/4	17
1	STEM DATA												
G	Center of Port to Top of Stem	35/8	37/8	35/8	37/8	5	5 ¹ /4	6 ⁵ /8	71/2	71/2	8 ¹ /2	10 ³ /4	13 ¹ /4
K	Clearance to Remove Lubricant Screw	57/8	6 ¹ /8	53/4	61/8	71/4	71/2	10 ¹ /8	107/8	107/8	117/8	14 ¹ /8	16 ⁵ /8
M	Width of Square of Stem	15/16	15/16	15/16	15/16	1 ¹ /4	1 ¹ /4	13/4	13/4	13/4	13/4	1 ³ /4	2
N	Height of Square of Stem	13/8	1 ¹ /8	11/8	1 1/8	1 ³ /8	1 ³ /8	17/8	17/8	17/8	17/8	21/8	2 ³ /8
	Wrench	А	А	А	А	С	С	F	H-24	H-24	H-30	H-36	K-36
	Wt. (lb.)	6	10	10	20	28	38	66	87	96	158	248	387
	WORM GEAR-OPERATED												
K	Clearance to Remove Lubricant Screw	2-7.5							13	13	14	16 ¹ /4	18 ³ /4
R	Center of Port to Handwheel Face								11	11	11	12 ¹ /4	12 ³ /4
S	Center of Port to Center of WGA Shaft								7	7	7 ¹⁵ /16	10 ³ /8	13 ⁵ /4
Т	Center of Plug Stem to Center of WGA Shaft								2 ⁹ /16	2 ⁹ /16	2 ⁹ /16	31/8	47/8
W	Diameter of WGA Handwheel								12	12	12	16	16

Flanges are drilled to ANSI 125 PSI Cast Iron Flange Standard unless otherwise specified. No deduction for valves faced only. Bolt holes are drilled ¹/8" larger than bolts.



Flow Control Equipment 10906 FM 2920 Tomball, Texas, U.S.A. 77375 (800) 654-5603 (281) 351-2222 • Fax: (281) 351-6557 FCE Flow Control Equipment, Ltd. 9830 - 45th Avenue Edmonton, Alberta, Canada T6E 5C5 (800) 661-5659 (403) 437-6316 • Fax: (403) 435-3074





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R&M Energy Systems[™] is a manufacturer of quality products committed to providing value and customer satisfaction. Our company is dedicated to continuous improvement, innovation and highest levels of quality.

It is the policy of R&M Energy Systems to:

Design, manufacture and market cost-effective products that consistently meet the customer's expectations. Create an atmosphere for employee participation at all levels focused on excellence and continuous improvement.

All employees of R&M Energy Systems shall abide by policies established to assure that products and services provided meet or exceed all customer specifications and requirements of our customers.

Each employee is ultimately responsible for the quality of the work he or she performs.

The RESUN plug valve, industry's "Old Reliable," is used in countless industrial and general utility applications. The following are a few major categories of the many specific applications in which the RESUN valve provides reliable, uninterrupted, leak-free service:

- · Chemical and petrochemical processing
- · Petroleum gathering and distribution
- · Gas distribution systems
- Water and wastewater
- · Heating, air conditioning (HVAC)
- · Food and beverage processing
- Pulp and paper
- · Paint, varnish, lacquer and ink
- · Asphalt and other viscous materials
- Cement and ore slurries

Standard material for RESUN plug valves is a high tensile cast iron made to RESUN specifications & in compliance with ASTM A-126 Class B standards. All specifications in this catalog are for valves of this material.

RESUN plug valves can be supplied in other metals, including ductile iron, bronze, aluminum bronze, stainless steel and other alloys on special orders.

UL, CGA, AGA, and FM approval is available on valve models so noted in this catalog when specified on the customer's purchase order.

Round port, full-opening, through-conduit RESUN plug valves are ideal for slurries or other services where only minimum flow restrictions can be tolerated or where any pressure drop is unacceptable.



Specific Advantages of the RESUN Plug Valve:

- **Rugged construction** Large RESUN plug valves can even shear a two-by-four board.
- Low cost
- · Readily available
- Maximum port openings Full pipe area is available to minimize turbulence, erosion and pressure drop.
- Ease of operation Unlike the tapered plugs of other plug valves, the RESUN cylindrical plug turns easily without binding or seizing, at the pressures and temperatures within its operating limits.
- Minimum maintenance Only a small initial charge of sealant is required with occasional recharging for easy operation. The basic construction of the valve simplifies any service or parts replacement which might become necessary.

See RESUN catalog CS for lubricated plug valves manufactured in carbon steel.

R&M Energy Systems will consider any reasonable modification of the plug valve that makes it more appropriate to the needs of the customer.



RESUN multi-port plug valves are available in many flow plans for blending and diverting services.



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A Unit of Robbins & Myers, Inc.

RESUN[®] Lubricated Plug Valves

The Cylindrical Plug Valve

The cylindrical plug of the RESUN valve turns easily on a film of sealant, providing a leak-free seal. This design permits maximum port openings through the plug, including full pipe area, a distinct advantage over tapered plugs. And, since tapered plug valves often "lock up" and require re-lubrication each time the valve is to be cycled, the RESUN valve requires only an occasional charge of sealant to operate efficiently.

The Key to the RESUN Plug Valve's Success: its Cylindrical Plug Design

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PRIMARY FEATURE- Excess sealant discharges around stem, not in the line. With no pressure build-up; no contamination of flow media or fouling of instruments.

> CYLINDRICAL PLUG- fits closely, yet turns as easily as a shaft in a journal bearing.

> > BODY is a one-piece casting.

SPRING thrusts plug and TFE head gasket against head seat.

SEALANT SCREW with giant buttonhead fitting for injection of either bulk or stick sealant.

HEAD GASKET gives tight stem seal.

SEATING SURFACES are not exposed to flow.

BASEPLATE seats tightly, is removable to permit disassembly. (Larger valves have bolted top cover plate).

COMPACT CONSTRUCTION

RESUN valve's compact construction permits installation in tight spaces. The valves install in any orientation without special tools.

PROTECTED SURFACES

All wear surfaces are constantly supplied with fresh sealant, protecting against corrosion and abrasion. Even in the open position, seating surfaces are protected from the flow media.

MINIMUM MAINTENANCE

A minimum of regular maintenance (charging with sealant) will keep a RESUN plug valve in top operating condition for long periods. If necessary, the valves can be disassembled, cleaned and reassembled quickly and easily. There are no dead pockets where sealant and contaminants can accumulate or solidify.

TIGHT HEAD SEAL

A specially contoured TFE head gasket, backed up by sealant and spring pressure, creates a tight head seal. The lubricity of the TFE contributes to the ease of operation.

Comparison of RESUN Cylindrical Plug Features with Conventional Tapered Plugs

RESUN Cyl	indrical Plug	Tapered Plug				
	Larger port open- ing, including full pipe area.	Restricted openings; no full area.	Ŧ			
ļ	Will not bind; operates easily at all pressures and temperatures within its stated limits.	Can bind under large pressure dif- ferential and under high or low tem- perature. At higher pressures, must be jacked-up to turn.	L			
	Requires only occasional lubri- cation for easy operation.	May require lubri- cation before each operation.				
	Lower consistent torque, smaller, less expensive actuator and less maintenance.	Inconsistent high- er torque requires difficult adjust- ments and larger, more expensive actuator.				



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R&M ENERGY SYSTEMS™ TERMS & CONDITIONS OF SALE

1. ACCEPTANCE

 All orders are subject to final acceptance by ROBBINS & MYERS ENERGY SYSTEMS L.P. (DBA and hereinafter referred to as R&M ENERGY SYSTEMS).

2. F.O.B. POINT

2.1 All shipments are F.O.B. R&M ENERGY SYSTEMS Point of Origin or other designated shipping point.

3. PRICES

- 3.1 All quotations are made for prompt acceptance and any terms quoted therein are subject to change without notice after thirty (30) days from the date of quotation unless specifically stated otherwise on the quotation. Prices or escalation formulas in effect at time of shipment will apply unless otherwise stated in writing.
- 3.2 Prices are F.O.B. Point of Origin. R&M ENERGY SYSTEMS reserves the right to invoice customer for any and all finished material ready for shipment, when held at customer's request or for other reasons beyond R&M ENERGY SYSTEMS' control. Seller reserves the right to place a service charge on past due accounts at the highest rate permitted by law. Every Sales, Use, Excise or other tax and any charge imposed by law or Common practice to include custom duties, consular fees, insurance charges and other comparable charges to be borne by customer. Prices are in U.S. Dollars.
- **3.3** All orders are subject to any Federal, State or other Government Regulation that may be in effect or later become effective.
- 3.4 Charges for Field Installation of Equipment not available during manufacturing process will be borne by Customer unless otherwise stated in writing.

4. MINIMUM BILLING

- 4.1 Minimum billing of \$25 net will be charged per order on any partial shipment requested by customer.
- 4.2 Change orders and/or "add on" supplements are subject to additional billings commensurate with the cost and will receive individual consideration insofar as minimum billing, freight allowance and discount are concerned.

5. DELIVERIES

- 5.1 All promises of shipment are estimated as closely as possible based on the availability of materials and capacity at the time and are expressly subject to change due to delays resulting from strikes, differences with workmen, labor troubles, acts of God, Governmental acts and regulations, war or war conditions, riots or civil commotion, sabotage, fires, floods, explosions or other accidents, or to delays to carriers or of subcontractors or in receipt of materials, or to delays occasioned by or arising in connection with obligations to other cause or causes (whether or not of the same general character as those herein specifically enumerated) beyond R&M ENERGY SYSTEMS' reasonable control.
- 5.2 If additional information or drawing approval is required, promise of shipment will date from receipt of same.

6. DESIGN

6.1 R&M ENERGY SYSTEMS reserves the right to make changes in design and/or materials without notice.

7. CANCELLATIONS

7.1 Orders accepted by R&M ENERGY SYSTEMS are not subject to cancellation by customer except with the consent of R&M ENERGY SYSTEMS and upon terms which will indemnify R&M ENERGY SYSTEMS against loss or damage occasioned by such cancellation.

8. INSPECTION

8.1 Final inspection and acceptance of products must be made at R&M ENERGY SYSTEMS' plant and shall be conclusive except as regards latent defects. 8.2 Customer's representatives may inspect at the plant during working hours prior to shipment in such manner as will not interfere with operations.

9. ENGINEERING AND SERVICE

- 9.1 Upon request, R&M ENERGY SYSTEMS may provide engineering and/or technical information about its products and their uses; and if feasible may provide personnel to assist buyer in effecting field installation and/or field service.
- 9.2 Such information service, or assistance so provided, whether with or without charge, shall be advisory only, and buyer agrees to hold R&M ENERGY SYSTEMS harmless from claims for loss from any cause resulting from such advisory or service activity.

10. WARRANTY

- 10.1 THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS.
- 10.2 R&M ENERGY SYSTEMS warrants that all products manufactured by it and all repair work performed by it shall be free from defects in workmanship and material when these products are used within the service and pressure range from which they were manufactured. Such warranty shall be binding upon R&M ENERGY SYSTEMS in respect to products for a period of one year from shipment of such products and in respect to repair work for a period of 60 days from completion of such repairs and applies only to materials furnished and work performed in the repair operation.
- 10.3 If, at any time within such periods, it is established to the satisfaction of R&M ENERGY SYSTEMS that any product manufactured by R&M ENERGY SYSTEMS was defective at time of shipment or any repair work performed by R&M ENERGY SYSTEMS was defective, R&M ENERGY SYSTEMS, at its option, shall repair or exchange such item, F.O.B. place of manufacture or repair or other R&M ENERGY SYSTEMS designated shipping point, or refund the price paid.
- 10.4 It is understood that the liability of R&M ENERGY SYSTEMS shall be limited to such repair or replacement and that R&M ENERGY SYSTEMS SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY DEFECTS OR FROM ANY CAUSE WHATSOEVER.
- 10.5 This warranty does not cover deterioration by corrosion or aging of non-metallic parts, including stress corrosion or any other cause of failure other than defects in workmanship and materials.
- 10.6 Unless repairs to, alterations of, or work done on said products by the buyer shall be specifically authorized in writing by R&M ENERGY SYSTEMS, any warranty applicable thereto shall become null and void.
- 10.7 R&M ENERGY SYSTEMS does not warrant the performance of any elastomer subjected to severe service due to temperature and/or chemical environment.

11. FREIGHT

11.1 Any freight allowance applies to materials manufactured only by R&M ENERGY SYSTEMS. Delivery by carrier will be at customer's risk.

12. PATENT INFRINGEMENT

12.1 The seller shall not be liable for any damage or costs for any infringement of patents for products which are produced to buyer's specifications and buyer shall assume all responsibility for and save seller harmless from any and all damages, cost, royalties and claims arising out of charges of any infringement.

13. GENERAL

13.1 Acceptance of buyer's order is expressly conditional upon buyer's acceptance of the foregoing terms and conditions of sale. Any additional or different terms proposed by customer are not acceptable unless expressly agreed to in writing by R&M ENERGY SYSTEMS.