

RVK, RVB, RVD THREE WAY ROTARY VALVE

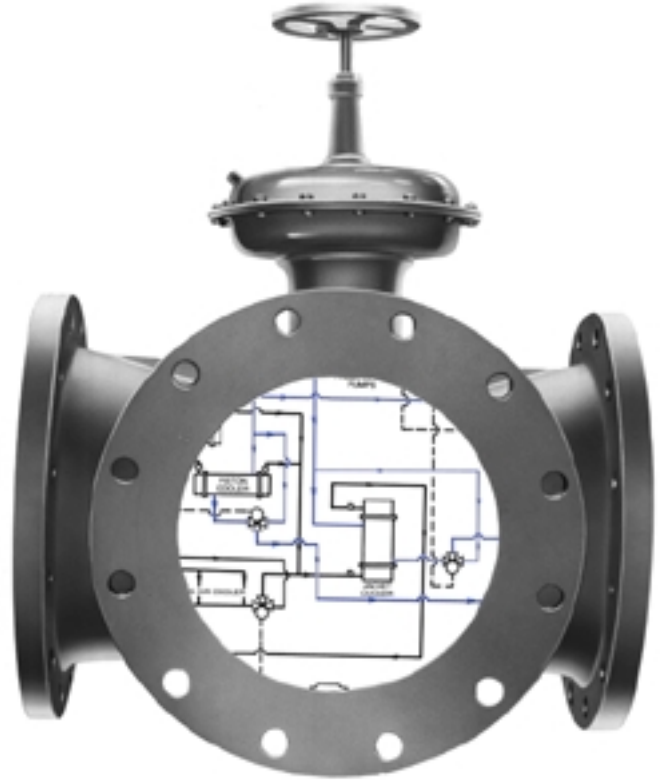
Compact, Efficient Mixing and Diverting Valve

Precisely designed and built, the valve requires very low operating forces. Consequently, smaller valve actuators may be used. In addition, the RV Series 3-way rotary valve boasts higher overall flow capacities—nearly double the Cv of same size globe types—resulting in extremely low pressure losses or reduced valve size. As a result of these two factors, systems using the RV Series 3-way rotary valve usually show lower initial cost than those using globe-type 3-way valves.

Additional features further enhance the RV Series 3-way valve's cost-effectiveness, operational reliability, and maintainability:

- Smoother Throttling
- Greater Accuracy
- Pneumatic/Electronic Instrument Control
- Non-Fouling, Non-Sticking Design
- Low Profile, Compact Size
- Converging or Diverging Flow Capability
- Reversible Valve Action

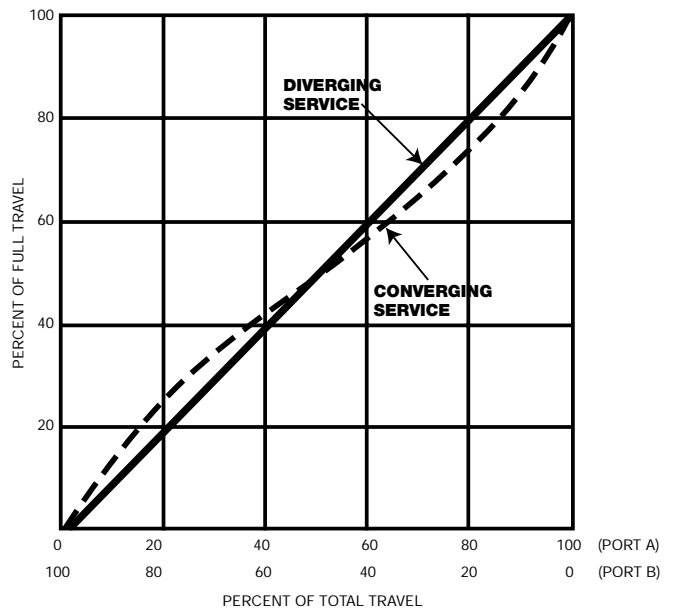
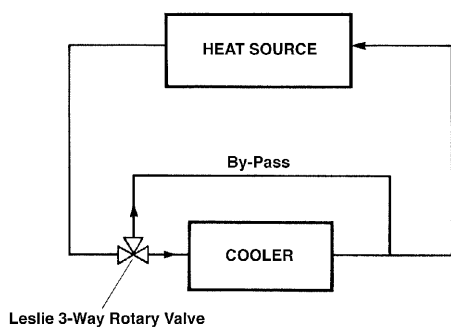
Lower cost plus reliable, long-life operation makes the RV Series 3-way rotary valve your best choice for almost all by-pass temperature control applications. Leslie Controls, Inc. can supply a full line of electronic and pneumatic control instrumentation, too.



THREE WAY

BY-PASS TEMPERATURE CONTROL

By-pass temperature control describes a simple method for controlling the temperature of one fluid with another fluid. A typical system consists basically of a heat source, a cooler, connecting piping and a means of controlling fluid direction: the Leslie 3-way rotary valve.



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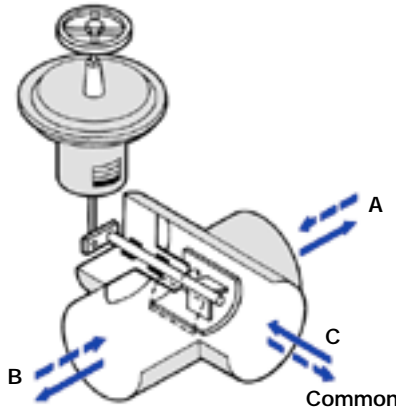
PRINCIPLES OF OPERATION

Operation of the 3-way rotary valve is simple and straightforward.

In diverging service, flow enters the common port and flows out of port A and/or B depending upon the position of the rotor.

In converging service, flow enters from A and/or B depending upon position of rotor and leaves through the common port.

All sizes have an external position indicator. Valve action can be reversed without removing the valve from the line and without additional parts.



--- Converging Service
 — Diverging Service

S P E C I F I C A T I O N S

Class:									
w/Pneumatic Actuator	RVB/RVBR	RVK/RVKR	RVD/RVDR						
w/Electric Actuator	ERVB/ERVBR	ERVK/ERVKR	ERVV/ERVVR						
Body Material:	Cast Bronze	Cast Iron	Ductile Iron						
Rotor Material:	Cast Bronze	Cast Bronze	Cast Bronze						
Shaft Material:	Monel	Stainless Steel	Stainless Steel						
Sizes:	150# ANSI Flanges: 4" - 16" ND10 DIN Flanges: 100 mm - 400 mm	125# ANSI Flanges: 4" - 16" ND10/16 DIN Flanges: 100 mm - 150 mm ND10 DIN Flanges: 200 mm - 400 mm ND16 DIN Flanges: 200 mm - 400 mm JIS 5K: 100 mm - 400 mm	150# ANSI Flanges: 4" - 16" ND10/16 DIN Flanges: 100 mm - 150 mm ND10 DIN Flanges: 200 mm - 400 mm ND16 DIN Flanges: 200 mm - 400 mm JIS 5K: 100 mm - 450 mm						
Temperature Range:	32°F - 220°F (0°C - 105°C)	32°F - 220°F (0°C - 105°C)	32°F - 220°F (0°C - 105°C)						
Maximum Inlet Pressure:	150 PSIG (10.34 Bar)	125 PSIG (8.62 Bar)	150(PSIG (10.34 Bar)						
Fluids:	Fresh Water Sea Water Non-Sulphur Containing Oils		Fresh Water Lube Oil Other Non-Corrosive Fluids						
Actuators:	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">Pneumatic</td> <td style="width: 35%;">4" - 6" Sizes: Leslie 55</td> <td style="width: 35%;">8" - 16" Sizes: Leslie 85</td> </tr> <tr> <td>Electrical</td> <td colspan="2">Wide range of RTK, Jordan, Rexa, Auma and other models available. Please specify your requirements.</td> </tr> </table>			Pneumatic	4" - 6" Sizes: Leslie 55	8" - 16" Sizes: Leslie 85	Electrical	Wide range of RTK, Jordan, Rexa, Auma and other models available. Please specify your requirements.	
Pneumatic	4" - 6" Sizes: Leslie 55	8" - 16" Sizes: Leslie 85							
Electrical	Wide range of RTK, Jordan, Rexa, Auma and other models available. Please specify your requirements.								
Maximum Through Valve ΔP:	Full Port: 4" & 5": 25 PSI 6" - 10": 15 PSI 12" - 16": 10 PSI	25 PSI Reduced Port: 4" & 5": 40 PSI 6" - 10": 25 PSI 12" - 16": 15 PSI							
Maximum Leakage Rate:	All Sizes:	1.5% Of Capacity for Diverging Service. 1.8% Of Capacity for Converging Service.							

ACCESSORIES & OPTIONS:

Hand Operating Devices (HOD's) are available on Pneumatic and Electric Actuators.

Pneumatic Actuators are available with aluminum yokes. Add "M" to valve class (RVB becomes RVMB; RVDR becomes RVMDR).

A Positioner or Limit Switches or a Pneumatic Position Transmitter is available on Pneumatic Actuators.

Electric Actuators are available with:

- Feedback Potentiometers
- SPDT or DPDT Limit Switches
- Weatherproof and/or explosion proof enclosures
- Different operating times for both modulating and on-off units.

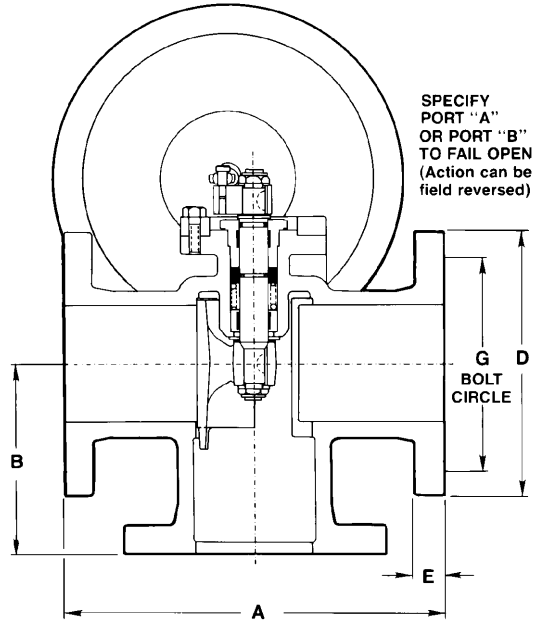
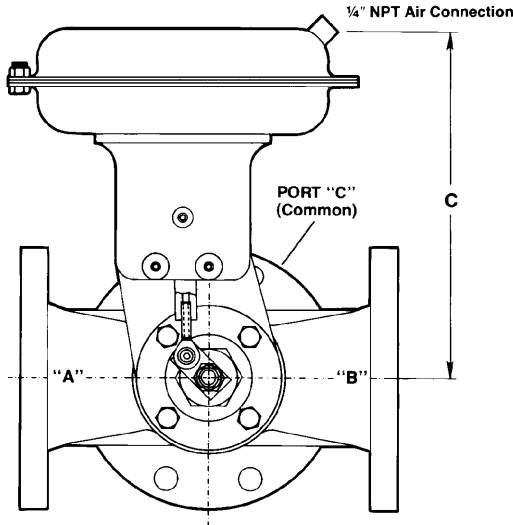
FLOW COEFFICIENTS:

Size	Full Port Cv	Reduced Port Cv
4"/100 mm	290	145
5"/125 mm	290	145
6"/150 mm	645	325
8"/200 mm	1150	575

FLOW COEFFICIENTS:

Size	Full Port Cv	Reduced Port Cv
10"/250 mm	1800	900
12"/250 mm	2590	1295
14"/350 mm	3500	1750
16"/400 mm	3500	1750

RVK, RVB, RVD DIMENSIONS



THREE WAY

150 Lb. ANSI Bronze (in.)

SIZE (in.)	A	B	C	D	E	G	NO. OF HOLES	HOLE SIZE
4	13	6½	14¼	9	11/16	7½	8	¾
5	15	7½	14¼	10	¾	8½	8	7/8
6	16	8	14¼	11	13/16	9½	8	7/8
8	18	9	18¼	13½	15/16	11¾	8	7/8
10	22	11	18¼	16	1	14¼	12	1
12	24	12	18¼	19	1 1/16	17	12	1 1/16
14	28	14	18¼	21	1 5/16	18¾	12	1 1/8
16	30	15	18¼	23½	1 3/8	21¼	16	1 1/8

ND10/16 DIN Cast Iron/Ductile Iron (mm)

SIZE (in.)	A	B	C	D	E	G	NO. OF HOLES	HOLE SIZE
100	330.2	165.1	362	219.9	24	180	8	18
125	385.8	192.9	362	250.0	26	210	8	18
150	408.0	204.0	362	285.0	26	240	8	23

125 Lb. ANSI Cast Iron (in.)

SIZE (in.)	A	B	C	D	E	G	NO. OF HOLES	HOLE SIZE
4	13	6½	14¼	9	15/16	7½	8	¾
5	15	7½	14¼	10	15/16	8½	8	7/8
6	16	8	14¼	11	1	9½	8	7/8
8	18	9	18¼	13½	1 1/8	11¾	8	7/8
10	22	11	18¼	16	1 3/16	14¼	12	1
12	24	12	18¼	19	1 1/4	17	12	1
14	28	14	18¼	21	1 3/8	18¾	12	1 1/8
16	30	15	18¼	23½	1 7/16	21¼	16	1 1/8

ND10 DIN Cast Iron/Ductile Iron (mm)

SIZE (in.)	A	B	C	D	E	G	NO. OF HOLES	HOLE SIZE
200	452.4	226.2	463	340.1	26	295	8	23
250	554.8	277.4	463	395.3	28	350	12	23
300	602.5	301.2	463	444.9	28	400	12	23
350	701.7	350.8	463	504.8	30	460	16	23
400	753.3	376.6	463	565.1	32	515	16	27

ND16 DIN Cast Iron/Ductile Iron Dimensions (mm)

SIZE (in.)	A	B	C	D	E	G	NO. OF HOLES	HOLE SIZE
200	460.4	230.2	463	340.1	30	295	12	23
250	562.8	281.4	463	404.8	32	355	12	27
300	610.4	305.2	463	460.0	32	410	12	27
350	713.6	356.8	463	519.9	36	470	16	27
400	765.2	382.6	463	580.2	38	525	16	30

150 Lb. ANSI Ductile Iron (in.)

SIZE (in.)	A	B	C	D	E	G	NO. OF HOLES	HOLE SIZE
4	13	6½	14¼	9	15/16	7½	8	¾
5	15	7½	14¼	10	15/16	8½	8	7/8
6	15 5/8	7 13/16	14¼	11	1	9½	8	7/8
8	18	9	18¼	13½	1 1/8	11¾	8	7/8
10	22	11	18¼	16	1 3/16	14¼	12	1
12	24	12	18¼	19	1 1/4	17	12	1
14	28	14	18¼	21	1 3/8	18¾	12	1 1/8
16	30	15	18¼	23½	1 7/16	21¼	16	1 1/8

ND10 DIN Cast Bronze Dimensions (mm)

SIZE (in.)	A	B	C	D	E	G	NO. OF HOLES	HOLE SIZE
100	322.6	161.3	362	219.9	20	180	8	18
125	382.9	191.5	362	250.0	20	210	8	18
150	409.6	204.8	362	285.0	22	240	8	23
200	454.0	227.0	463	340.1	22	295	8	23
250	555.6	277.8	463	395.3	24	350	12	23
300	603.3	301.7	463	444.9	24	400	12	23
350	704.9	352.5	463	504.8	27	460	16	23
400	755.6	377.8	463	565.1	32	515	16	27

RV Three Way Valve Specification Form



LESLIE CONTROLS, INC.
 A division of CIRCOR International, Inc.
 12501 Telecom Drive · Tampa, Florida 33637
 (813) 978-1000 · FAX: (813)-978-0984

CONTROL VALVE SPEC SHEET

Project/Job _____
 Unit/Customer _____
 P.O./LCO File # _____
 Item _____
 Contract _____
 MFR Serial# _____

Data Sheet _____ of _____
 Spec _____
 Tag _____
 Dwg _____
 Service _____

Fluid Liquid _____ Other _____ Crit Pres PC

Service Conditions

Flow #/hr gpm scfh _____

Inlet Pressure psig psia _____

Pressure Drop psi _____

Temperature °C °F _____

Max Press/Temperature: _____ / _____

Density/MW/SG _____

Viscosity _____

Vapor Pressure psia _____

Required C_v _____ ΔP = _____

Noise (dBA) Allowable _____

Max. Flow*	Norm. Flow	Min. Flow*

* NOTE: 3-Way Rotary Valves are normally used in cooling system with fixed speed pumps

Line Info Pipe Size In _____ /Sch _____ Pipe Size Out _____ /Sch _____

Valve, Body & Bonnet

Body Size in. 4 6 8 10 12 16

ANSI Class 125 150 ND _____ JIS 5K

Body/Bonnet Material: Cast Iron Bronze Ductile Iron Other _____

End Conn. Inlet/Outlet: Int. Flanges Other _____

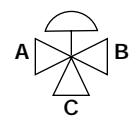
Packing Material: O-Ring/Buna-N Other _____

Trim Size 100% Reduced (Rotary 3-way only)

Flow Path

Mixing (Converging) (choose one outlet port)

Diverting (Diverging) (choose two outlet ports)



	A	B	C
Outlet Port	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close Port on Air Loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Actuator

55 85 Converging Diverting None

Available Air Supply Pressure: Max. _____ Min. _____

Manual Override: Yes No Type _____

Solenoid Yes No Type _____ Voltage _____

Positioner Yes No Type _____ Pneu I/P

Switch Yes No Type _____

Air Set Yes No Type: _____ Range: _____

Other Accessories Yes No Type _____

Test ANSI/FCI Leakage Class: 1.5% of Capacity for Diverting 1.8% of capacity for Converging

THREE WAY

QUESTIONS? CALL LESLIE CONTROLS @ (813) 978-1000 PLEASE FAX COMPLETED FORM TO: (813) 977-0174