

Series A-Pilotair®



AVENTICS™ Series A-Pilotair®

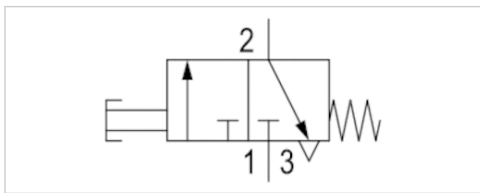


3/2-directional valve, Series A- Pilotair®

- For panel installation, manually operated, 2-BA-1
- Qn = 1308.72 l/min
- Compressed air connection output 1/4" NPTF



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	0.45 kg



Technical data

Part No.	Version	Compressed air connection Input	Compressed air connection Output
R431003427	NC	1/4" NPTF	1/4" NPTF
R431003429	NC	1/4" NPTF	1/4" NPTF
R431003430	NC	1/4" NPTF	1/4" NPTF

Part No.	Housing material
R431003427	Die-cast aluminum
R431003429	Die-cast aluminum chromated
R431003430	Die-cast aluminum black painted

Technical information

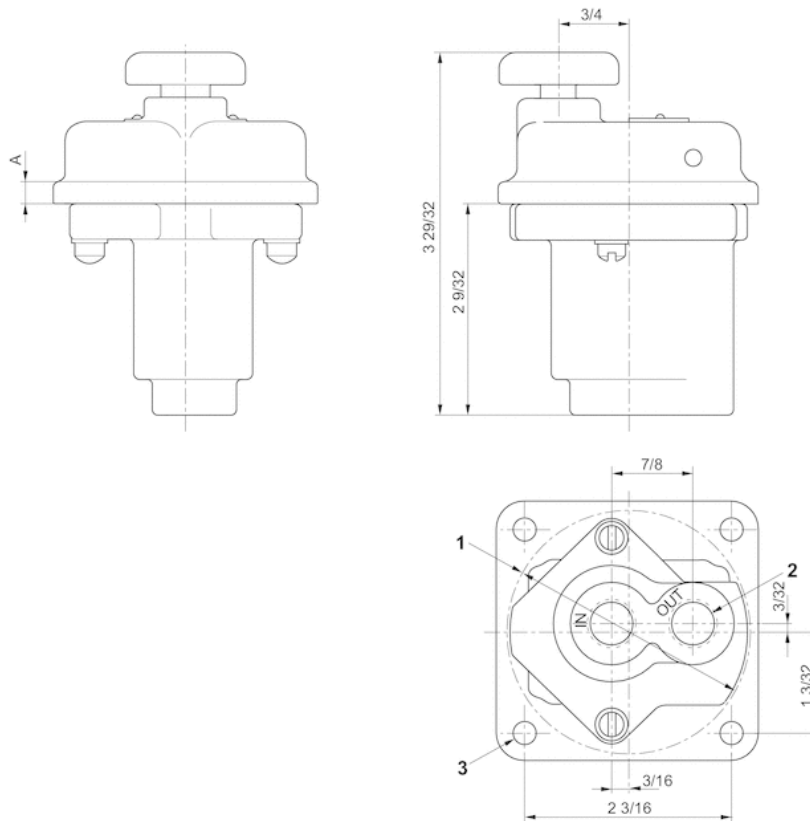
The model 2-BA-1 PILOTAIR Valve is a panel mounted, 2 position button operated 3-way valve with 1/4" NPT inlet and outlet ports.

Technical information

Material	
Housing	Die-cast aluminum Die-cast aluminum, chromated Die-cast aluminum, black painted

Dimensions

Dimensions in inches



- 1) Mounting hole $\varnothing 2 \frac{9}{16}$
- 2) $\frac{1}{4}$ - 18 NPTF 2 ports
- 3) $\frac{9}{32}$ diameter (4) places ports on bottom

3/2-directional valve, Series A- Pilotair®

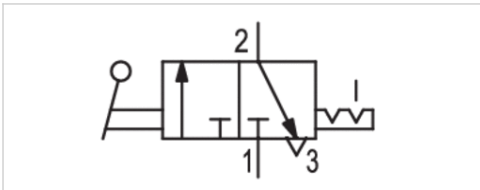
- 2-HA-1 2-HA-1L

- Qn = 1308.72 l/min

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Weight	0.68 kg



Technical data

Part No.	Type	Version	Compressed air connection Input	Compressed air connection Output
R431004994	with detent	2-HA-1	Ø 1/4"	Ø 1/4"
R431004996	with detent	2-HA-1	Ø 1/4"	Ø 1/4"
R431006456	with detent	2-HA-1	Ø 1/4"	Ø 1/4"
R431004997	With latch	2-HA-1L	Ø 1/4"	Ø 1/4"
R431004999	With latch	2-HA-1L	Ø 1/4"	Ø 1/4"
R431004998	With latch	2-HA-1L	Ø 1/4"	Ø 1/4"

Part No.	Housing material	
R431004994	Die-cast aluminum	-
R431004996	Die-cast aluminum chromated	-
R431006456	Die-cast aluminum	1)
R431004997	Die-cast aluminum	-
R431004999	Die-cast aluminum chromated	-
R431004998	Die-cast aluminum black painted	-

1) With long handle

Technical information

The model 2-HA-1 valve is a panel mounted, handle operated 3-way valve with 1/4" NPT inlet and outlet ports. It contains a spring opposed detent cam to hold the handle in either of its two extreme positions. The 2-HA-1L model is with an additional external handle latch which requires manual release to insure against unintentional operation.

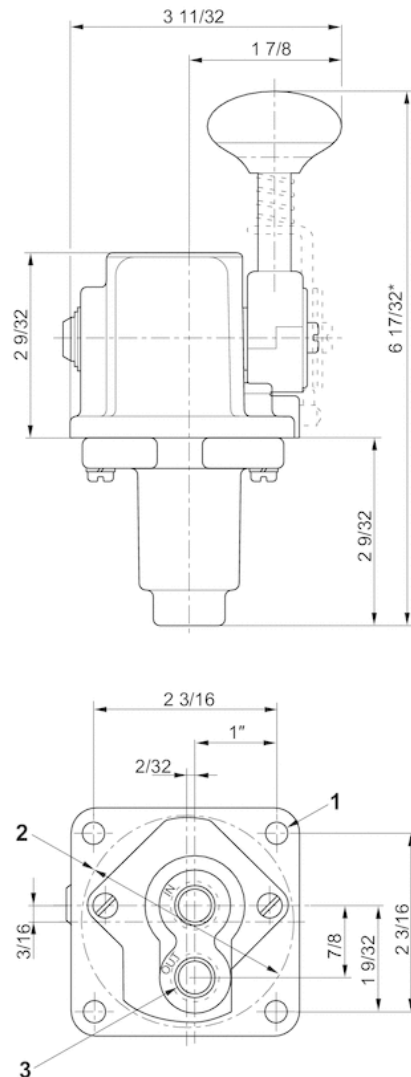
Technical information

Material

Housing	Die-cast aluminum Die-cast aluminum, chromated Die-cast aluminum, black painted
Front cover	chromated black painted

Dimensions

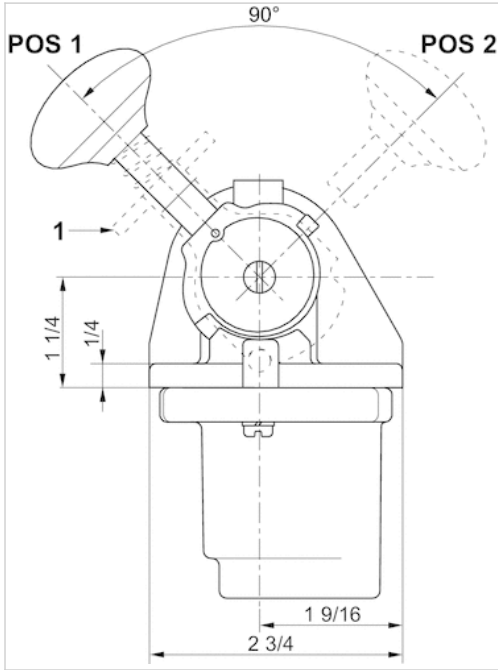
Dimensions in inches



1) 9/32 diameter (4) places

- 2) Mounting hole $\varnothing 2 \frac{9}{16}$
- 3) $\frac{1}{4}$ - 18 NPTF
- * *Also available with handle 2" longer

Handle position



1) Optional Handle Latch

Handle position

Handle position	Out Port Supplied
1	
2	X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

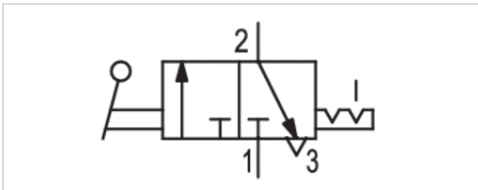
- 2-HA-1R 2-HA-1LR

- Qn = 1308.72 l/min

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Weight	0.68 kg



Technical data

Part No.	Type	Version	Compressed air connection Input	Compressed air connection Output
R431005000	with detent	2-HA-1R	Ø 1/4"	Ø 1/4"
R431006571	with detent	2-HA-1R	Ø 1/4"	Ø 1/4"
R431005001	With latch	2-HA-1LR	Ø 1/4"	Ø 1/4"
R431005002	With latch	2-HA-1LR	Ø 1/4"	Ø 1/4"

Part No.	Housing material
R431005000	Die-cast aluminum black painted
R431006571	Die-cast aluminum
R431005001	Die-cast aluminum chromated
R431005002	Die-cast aluminum

Technical information

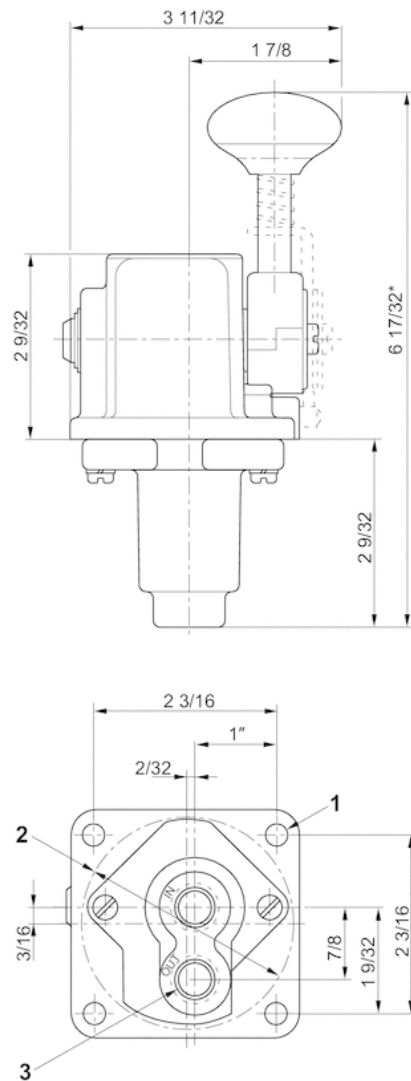
The model 2-HA-1R, 2-HA-1LR and 2-HA-1RW Valves are the same as the 2-HA-1 and 2-HA-1L models except that the cam is reversed to obtain pull instead of push operation. The 2-HA-1R model may also be mounted with the handle on the left-hand side for tandem push operation with the 2-HA-1 model.

Technical information

Material	
Housing	Die-cast aluminum, black painted Die-cast aluminum Die-cast aluminum, chromated
Front cover	black painted chromated

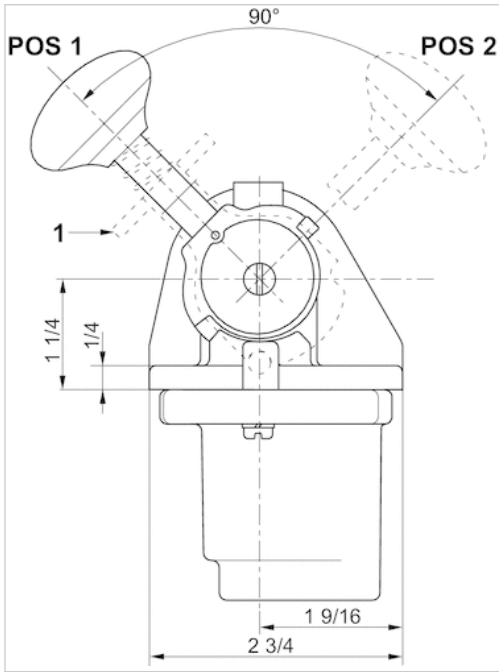
Dimensions

Dimensions in inches



- 1) 9/32 diameter (4) places
 - 2) Mounting hole $\varnothing 2 \frac{9}{16}$
 - 3) 1/4 - 18 NPTF
- * Also available with handle 2" longer

Handle position



1) Optional Handle Latch

Handle position

Handle position	Out Port Supplied
1	X
2	

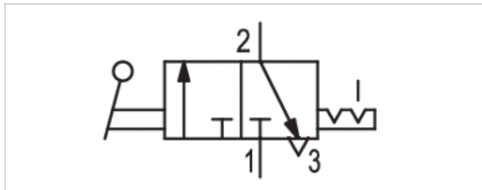
X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-1W, Spring returned to center position
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 10.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	0.68 kg



Technical data

Part No.	Version	Compressed air connection Input	Compressed air connection Output
R431005660	2-HA-1W	Ø 1/4"	Ø 1/4"

Technical information

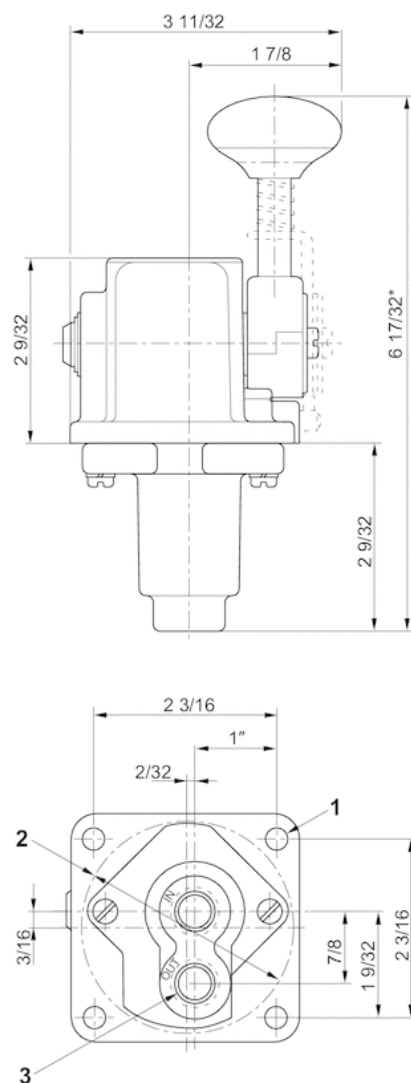
The 2-HA-1W model is spring returned from position 2 to center position, which is the same as position 1 (normally closed).

Technical information

Material	
Housing	Die-cast aluminum

Dimensions

Dimensions in inches



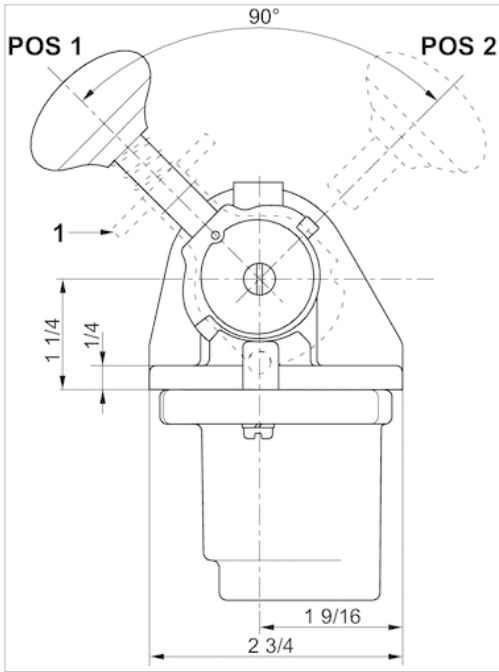
1) $\frac{9}{32}$ diameter (4) places

2) Mounting hole $\varnothing 2 \frac{9}{16}$

3) $\frac{1}{4}$ - 18 NPTF

* Also available with handle 2" longer

Handle position



1) Optional Handle Latch

Handle position

Handle position	Out Port Supplied
1	
Center	
2	X

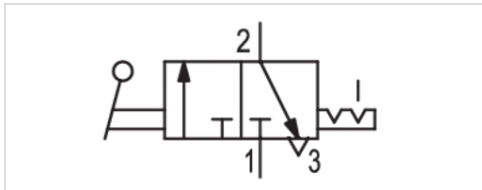
X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-1RW, Spring returned to center position
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 10.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	0.68 kg



Technical data

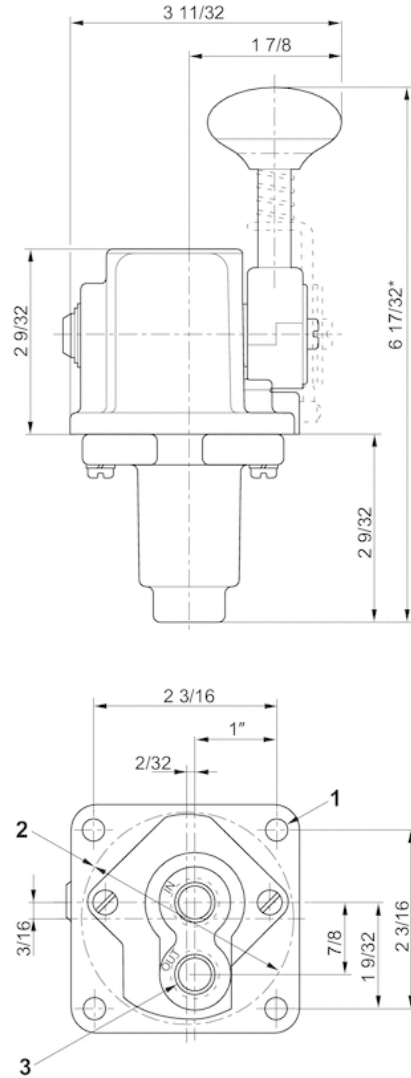
Part No.	Version	Compressed air connection Input	Compressed air connection Output
R431005661	2-HA-1RW	Ø 1/4"	Ø 1/4"

Technical information

Material	
Housing	Die-cast aluminum

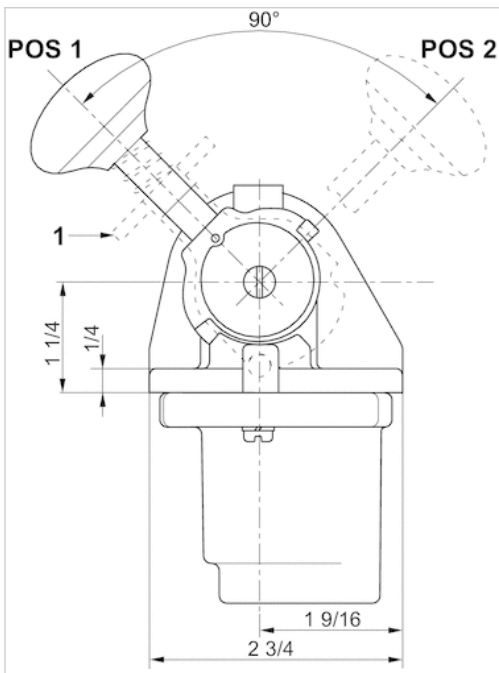
Dimensions

Dimensions in inches



- 1) 9/32 diameter (4) places
 - 2) Mounting hole \varnothing 2 9/16
 - 3) 1/4 - 18 NPTF
- * *Also available with handle 2" longer

Handle position



1) Optional Handle Latch

Dimensions

Handle position	Out Port Supplied
1	X
Center	
2	

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-2Y

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Max. input pressure	1308.72 bar
Weight	0.91 kg

Technical data

Part No.	Version	Type	Manual override	Compressed air connection Input
R431005016	exhausted center	2-HA-2Y	with detent	Ø 1/4"
R431005017	-	2-HA-2Y	with detent	Ø 1/4"
R431005018	-	2-HA-2Y	with detent	Ø 1/4"
R431005861	exhausted center	2-HA-2Y	with detent	Ø 1/4"
R431006195	-	2-HA-2Y	with detent	Ø 1/4"
R431006604	-	2-HA-2Y	with detent	Ø 1/4"
R431005019	pressurized center	2-HA-2LY	with detent	Ø 1/4"
R431006194	exhausted center	2-HA-2LY	with detent	Ø 1/4"

Part No.	Compressed air connection Output	Housing material	
R431005016	Ø 1/4"	-	-
R431005017	Ø 1/4"	-	-
R431005018	Ø 1/4"	chromated	1)
R431005861	Ø 1/4"	-	-
R431006195	Ø 1/4"	chromated	-
R431006604	Ø 1/4"	black painted	-
R431005019	Ø 1/4"	-	2)
R431006194	Ø 1/4"	-	2)

1) With long handle

2) With latch

Technical information

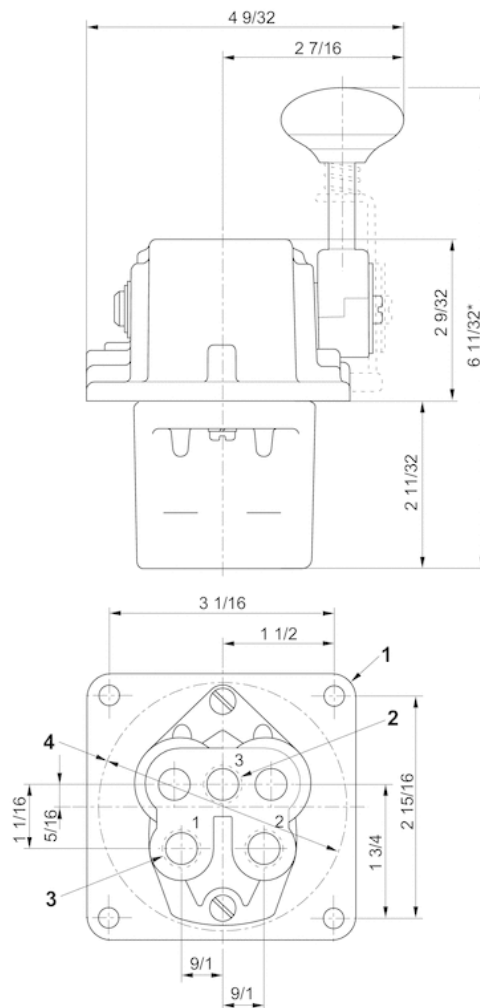
The 2-HA-2 PILOTAIR valves are panel-mounted, 2, 3 and 5 position valves with one inlet and two outlet ports. Available with detents in each handle position, a latching handle that requires manual release to insure against unintentional operation*, or spring return to center position. All ports are 1/4" NPT.

Technical information

Material	
Housing	chromated black painted
Front cover	chromated

Dimensions

Dimensions in inches



1) $\frac{9}{32}$ diameter (4) places

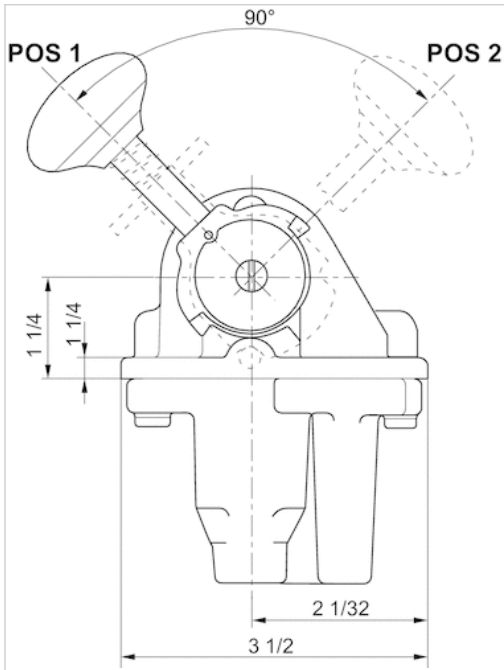
2) Air supply

3) panel mounting hole $\varnothing 3 \frac{3}{8}$

4) $1/4 - 18$ NPTF

*Also available with handle 2" longer

2-position handle, detented



Dimensions

Handle position	Out Port Supplied	Out Port Supplied
	OUT port 1	OUT port 2
1		X
2	X	

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-2X, 2-HA-2LX

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Max. input pressure	1308.72 bar
Weight	0.91 kg

Technical data

Part No.	Version	Manual override	Compressed air connection Input	Compressed air connection Output	
R431005020	2-HA-2X	with detent	Ø 1/4"	Ø 1/4"	-
R431005021	2-HA-2LX	with detent	Ø 1/4"	Ø 1/4"	1)

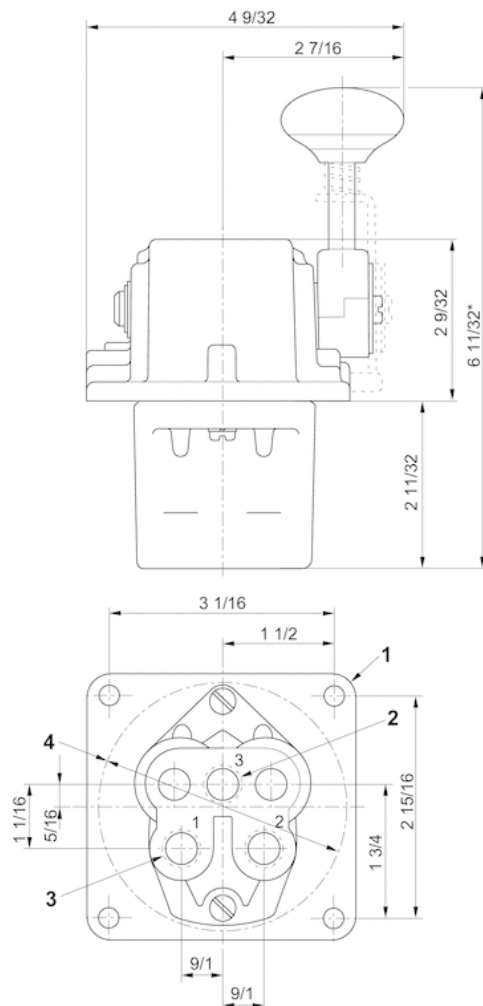
1) With latch 1 & 3

Technical information

The 2-HA-2 PILOTAIR valves are panel-mounted, 2, 3 and 5 position valves with one inlet and two outlet ports. Available with detents in each handle position, a latching handle that requires manual release to insure against unintentional operation*, or spring return to center position. All ports are 1/4" NPT.

Dimensions

Dimensions in inches



1) $\frac{9}{32}$ diameter (4) places

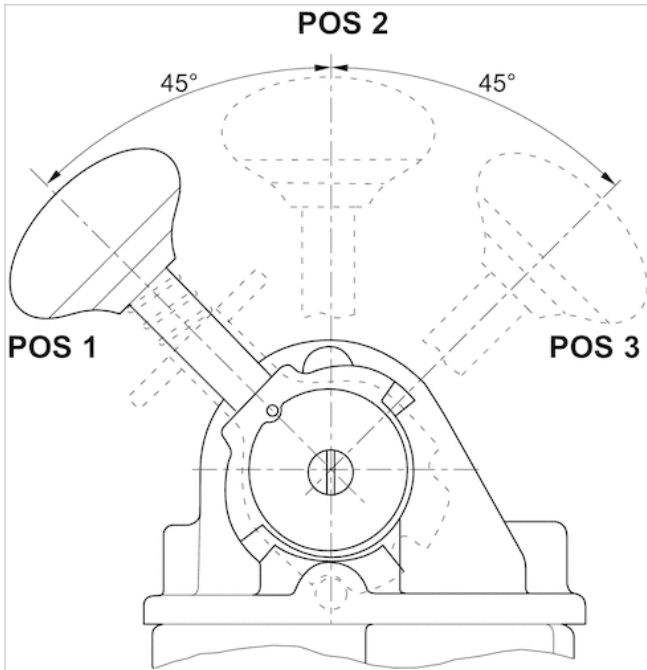
2) Air supply

3) panel mounting hole $\varnothing 3 \frac{3}{8}$

4) $\frac{1}{4}$ - 18 NPTF

*Also available with handle 2" longer

3-position handle, detented



Handle position

Handle position	Out Port Supplied	Out Port Supplied
	OUT port 1	OUT port 2
1		
2		X
3	X	X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-2U

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Max. input pressure	1308.72 bar
Weight	0.91 kg

Technical data

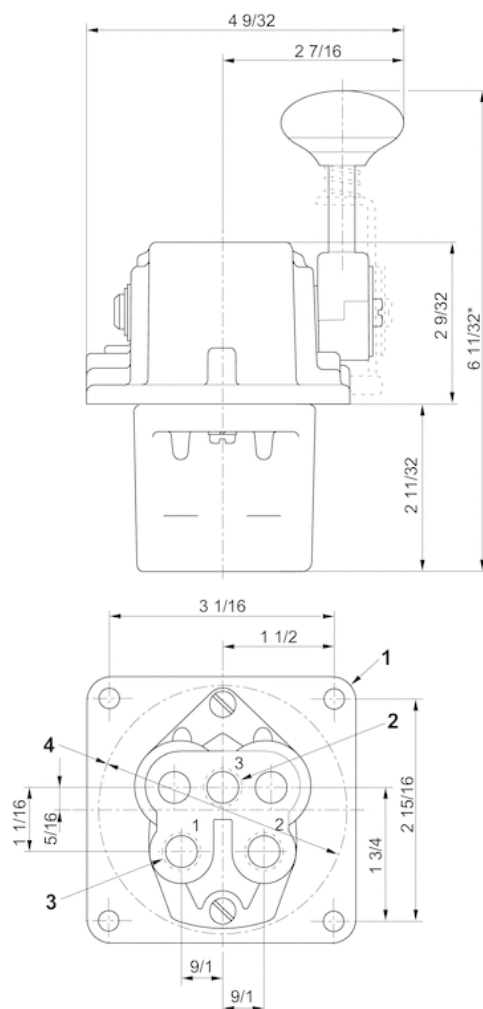
Part No.	Manual override	Compressed air connection Input	Compressed air connection Output
R431006413	with detent	Ø 1/4"	Ø 1/4"

Technical information

The 2-HA-2 PILOTAIR valves are panel-mounted, 2, 3 and 5 position valves with one inlet and two outlet ports. Available with detents in each handle position, a latching handle that requires manual release to insure against unintentional operation*, or spring return to center position. All ports are 1/4" NPT.

Dimensions

Dimensions in inches



1) 9/32 diameter (4) places

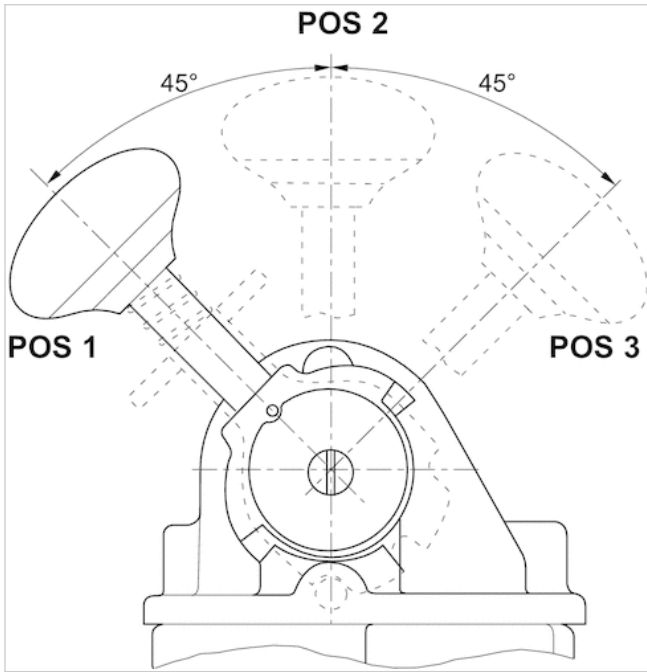
2) Air supply

3) panel mounting hole $\text{Ø}3 \frac{3}{8}$

4) 1/4 - 18 NPTF

*Also available with handle 2" longer

3-position handle, detented



Handle position

Handle position	Out Port Supplied	
	OUT port 1	OUT port 2
1		X
2	X	X
3		

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-2, 2-HA-2L, 2-HA-2Z

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Max. input pressure	1308.72 bar
Weight	0.91 kg

Technical data

Part No.	Type	Manual override	Compressed air connection Input	Compressed air connection Output
R431005003	2-HA-2	with detent	Ø 1/4"	Ø 1/4"
R431005005	2-HA-2	with detent	Ø 1/4"	Ø 1/4"
R431005004	2-HA-2	with detent	Ø 1/4"	Ø 1/4"
R431005820	2-HA-2	with detent	Ø 1/4"	Ø 1/4"
R431005006	2-HA-2L	with detent	Ø 1/4"	Ø 1/4"
R431005007	2-HA-2L	with detent	Ø 1/4"	Ø 1/4"
R431006008	2-HA-2L	with detent	Ø 1/4"	Ø 1/4"
R431006010	2-HA-2L	with detent	Ø 1/4"	Ø 1/4"
R431006009	2-HA-2L	with detent	Ø 1/4"	Ø 1/4"
R431005927	2-HA-2L	with detent	Ø 1/4"	Ø 1/4"
R431005013	2-HA-2Z	-	Ø 1/4"	Ø 1/4"
R431005015	2-HA-2Z	-	Ø 1/4"	Ø 1/4"
R431005014	2-HA-2Z	-	Ø 1/4"	Ø 1/4"

Part No.	Housing material	
R431005003	Die-cast aluminum chromated	-
R431005005	Die-cast aluminum black painted	-
R431005004	Die-cast aluminum	-
R431005820	Die-cast aluminum	1)
R431005006	Die-cast aluminum	2)
R431005007	Die-cast aluminum black painted	-
R431006008	Die-cast aluminum	-
R431006010	Die-cast aluminum black painted	-
R431006009	Die-cast aluminum black painted	-
R431005927	Die-cast aluminum	-
R431005013	Die-cast aluminum	3)

Part No.	Housing material	
R431005015	Die-cast aluminum chromated	3)
R431005014	Die-cast aluminum black painted	3)

- 1) With long handle
- 2) With latch 1 & 3
- 3) Spring returned to center position

Technical information

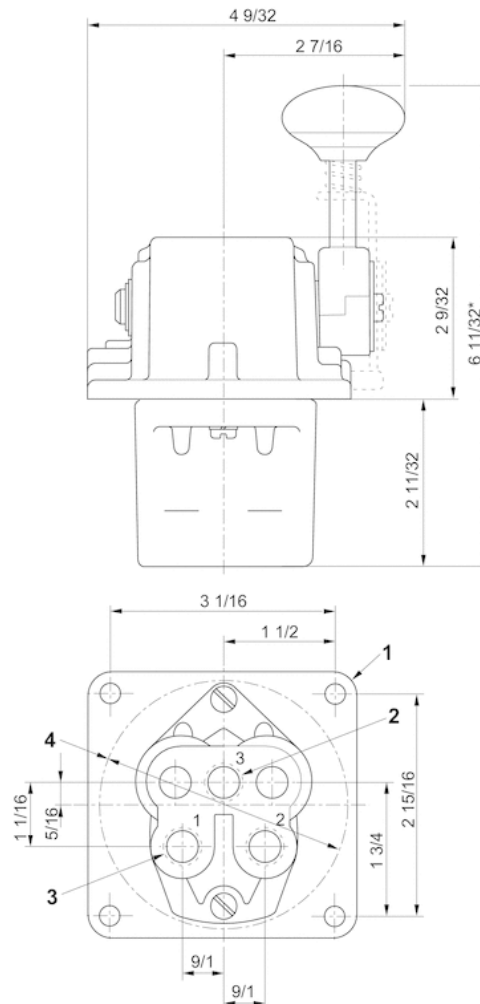
The 2-HA-2 PILOTAIR valves are panel-mounted, 2, 3 and 5 position valves with one inlet and two outlet ports. Available with detents in each handle position, a latching handle that requires manual release to insure against unintentional operation*, or spring return to center position. All ports are 1/4" NPT.

Technical information

Material	
Housing	Die-cast aluminum, chromated Die-cast aluminum, black painted Die-cast aluminum
Front cover	chromated

Dimensions

Dimensions in inches



1) $\frac{9}{32}$ diameter (4) places

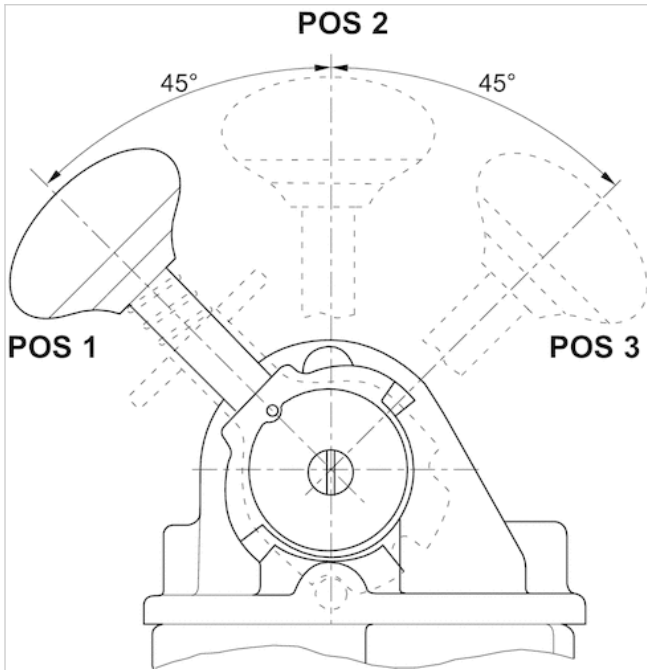
2) Air supply

3) panel mounting hole $\varnothing 3 \frac{3}{8}$

4) $\frac{1}{4}$ - 18 NPTF

*Also available with handle 2" longer

3-position handle, detented



Handle position

Handle position	Out Port Supplied	Out Port Supplied
	OUT port 1	OUT port 2
1		X
2		
3	X	

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-2R, 2-HA-2LR

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Max. input pressure	1308.72 bar
Weight	0.91 kg

Technical data

Part No.	Version	Type	Manual override	Compressed air connection Input
R431005008	pressurized center	2-HA-2R	with detent	Ø 1/4"
R431005009	pressurized center	2-HA-2R	with detent	Ø 1/4"
R431005010	pressurized center	2-HA-2R	with detent	Ø 1/4"
R431005754	pressurized center	2-HA-2R	with detent	Ø 1/4"
R431005011	pressurized center	2-HA-2LR	with detent	Ø 1/4"
R431005012	pressurized center	2-HA-2LR	with detent	Ø 1/4"

Part No.	Compressed air connection Output	Housing material	
R431005008	Ø 1/4"	Die-cast aluminum	-
R431005009	Ø 1/4"	Die-cast aluminum chromated	-
R431005010	Ø 1/4"	Die-cast aluminum black painted	-
R431005754	Ø 1/4"	Die-cast aluminum	1)
R431005011	Ø 1/4"	Die-cast aluminum	2)
R431005012	Ø 1/4"	Die-cast aluminum	3)

1) With long handle

2) With latch 1 & 3

3) With latch 1, 2 & 3

Technical information

The 2-HA-2 PILOTAIR valves are panel-mounted, 2, 3 and 5 position valves with one inlet and two outlet ports. Available with detents in each handle position, a latching handle that requires manual release to insure against unintentional operation*, or spring return to center position. All ports are 1/4" NPT.

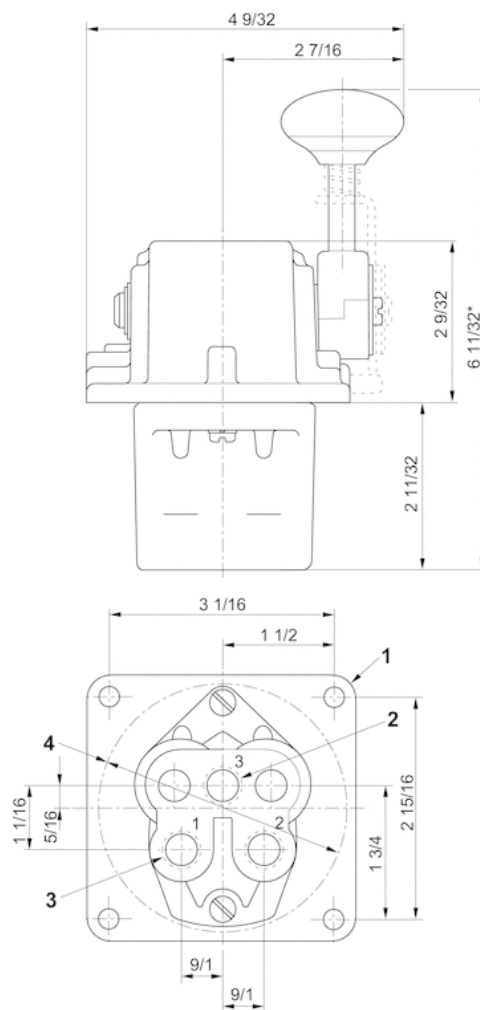
Technical information

Material

Housing	Die-cast aluminum Die-cast aluminum, chromated Die-cast aluminum, black painted
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Dimensions

Dimensions in inches



1) $\frac{9}{32}$ diameter (4) places

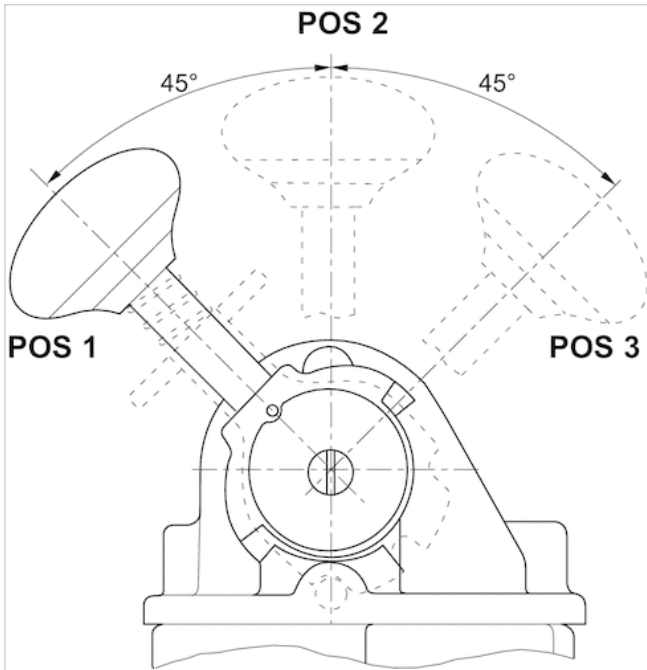
2) Air supply

3) panel mounting hole $\varnothing 3 \frac{3}{8}$

4) $\frac{1}{4}$ - 18 NPTF

*Also available with handle 2" longer

3-position handle, detented



Handle position

Handle position	Out Port Supplied	Out Port Supplied
	OUT port 1	OUT port 2
1		X
2	X	X
3	X	

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-2F

- Qn = 1308.72 l/min

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.3 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Max. input pressure	1308.72 bar
Weight	0.91 kg

Technical data

Part No.	Type	Manual override	Compressed air connection Input	Compressed air connection Output
R431003360	2-HA-2F	with detent	Ø 1/4"	Ø 1/4"

Technical information

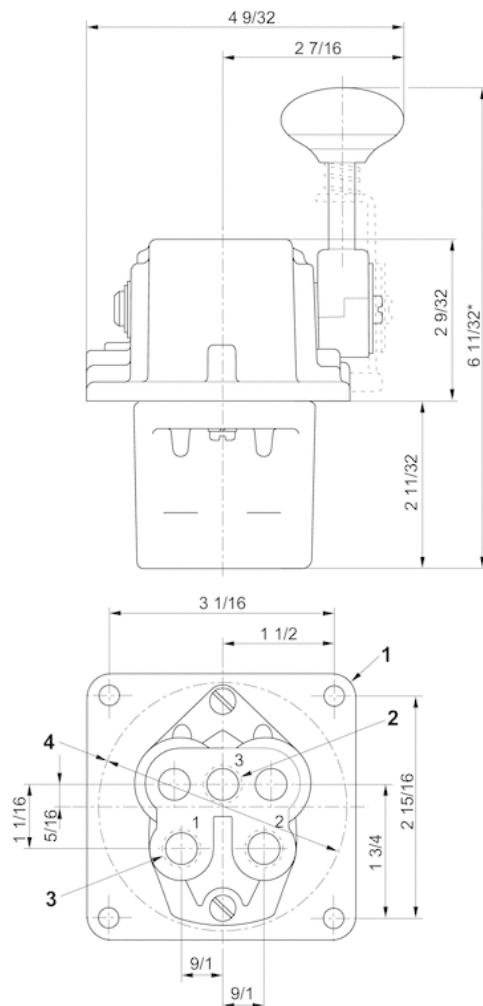
The 2-HA-2 PILOTAIR valves are panel-mounted, 2, 3 and 5 position valves with one inlet and two outlet ports. Available with detents in each handle position, a latching handle that requires manual release to insure against unintentional operation*, or spring return to center position. All ports are 1/4" NPT.

Technical information

Material	
Housing	Die-cast aluminum, black painted

Dimensions

Dimensions in inches



1) 9/32 diameter (4) places

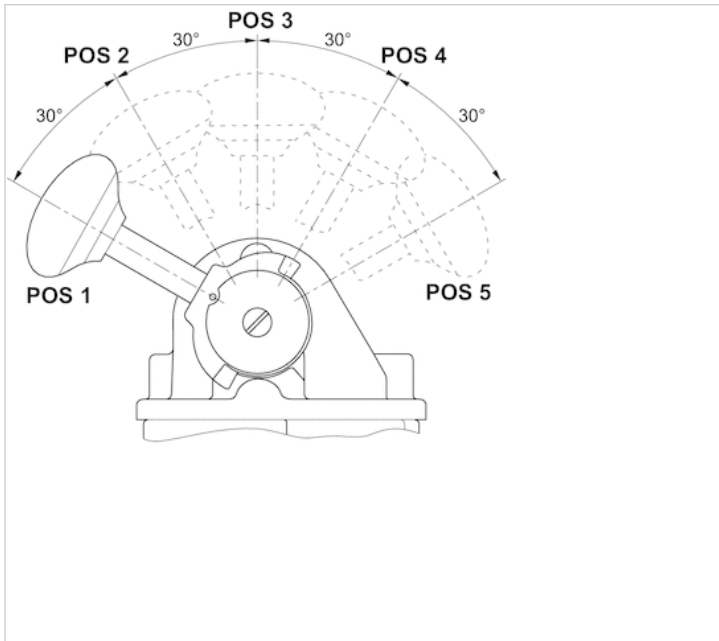
2) Air supply

3) panel mounting hole $\text{Ø}3 \frac{3}{8}$

4) 1/4 - 18 NPTF

*Also available with handle 2" longer

Double 3-way valves - 5 position handle, 5-position handle, detented



Handle position

Handle position	Out Port Supplied	Out Port Supplied
	OUT port 1	OUT port 2
1	X	X
2	X	
3		
4		X
5	X	X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-4, Quadruple 3-way valves - 2 position handle
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output
R431004543	2-HA-4	Ø 1/4"	Ø 1/4"

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

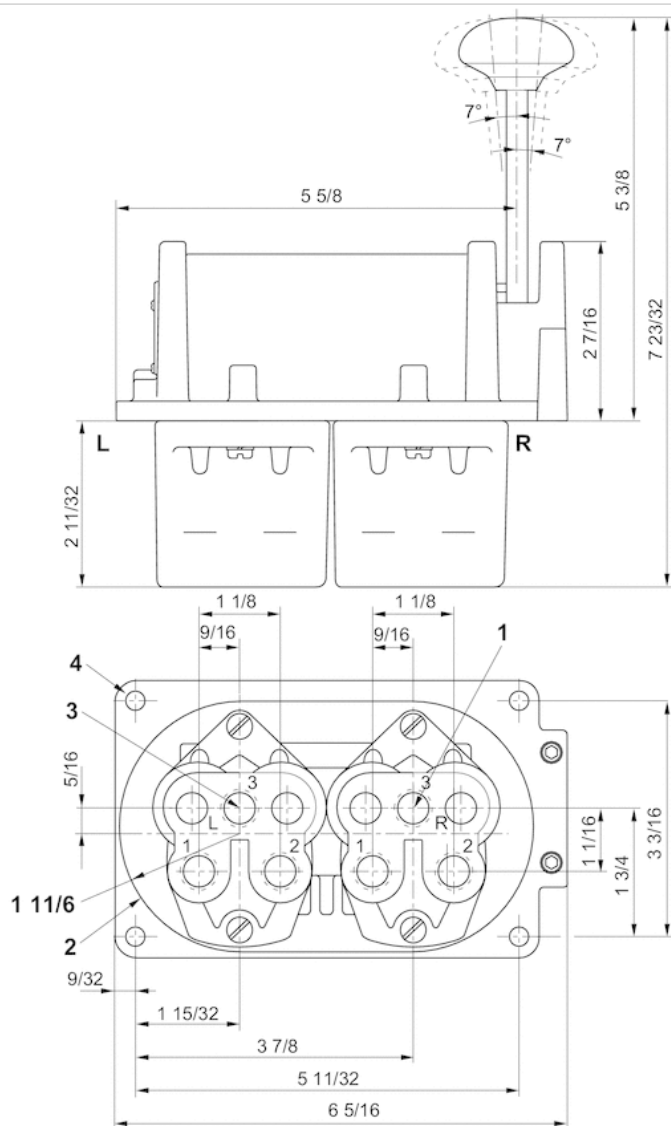
Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

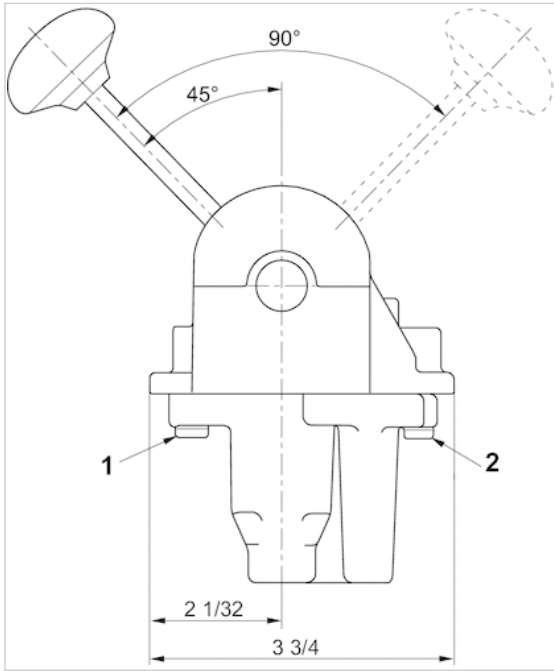
Material	
Housing	Die-cast aluminum

Dimensions

Dimensions in inches



- 1) Air supply
- 2) Mounting hole
- 3) 1/4 - 18 NPTF 6 ports
- 4) 9/32 diameter (4) places



- 1) Front
- 2) Rear

Handle position

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	X		X
2		X	

Out Port Supplied
OUT port 2R
X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- Qn = 1308.72 l/min

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output
R431004510	2-H-3	Ø 1/4"	Ø 1/4"
R431004511	2-HA-3	Ø 1/4"	Ø 1/4"
R431005485	2-HA-4	Ø 1/4"	Ø 1/4"

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

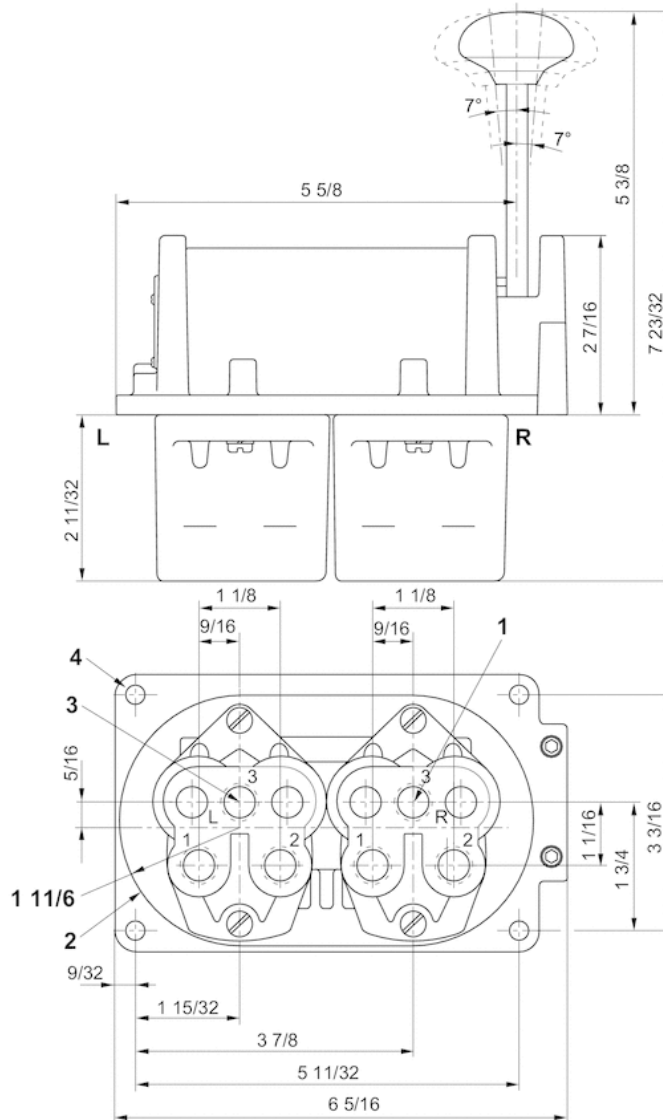
Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

Material	
Housing	Die-cast aluminum

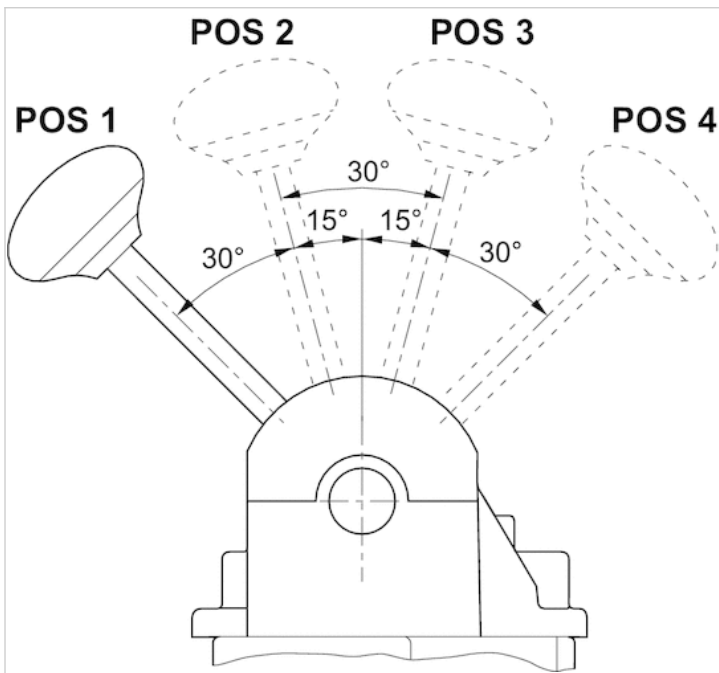
Dimensions

Dimensions in inches



- 1) Air supply
- 2) Mounting hole
- 3) 1/4 - 18 NPTF 6 ports
- 4) 9/32 diameter (4) places

3 positions both handles



2-H-3

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	Plugged		X
2	Plugged		X
3	Plugged	X	
4	Plugged	X	

Out Port Supplied			
OUT port 2R			
		X	
		X	

2-HA-3

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	Plugged	X	
2	Plugged		
3	Plugged		
4*	Plugged		X

Out Port Supplied			
OUT port 2R			
		X	

Out Port Supplied

*Spring-returned to position 3

2-HA-4

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1		X	
2			
3	X		
4			X

Out Port Supplied

OUT port 2R

X

3/2-directional valve, Series A-Pilotair®

- 2-HA-3, 5-position gated single handle
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output	
R431004512	2-HA-3	Ø 1/4"	Ø 1/4"	-
R431006034	2-HA-3	Ø 1/4"	Ø 1/4"	1)

1) *spring-returned to position 3 & 4

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

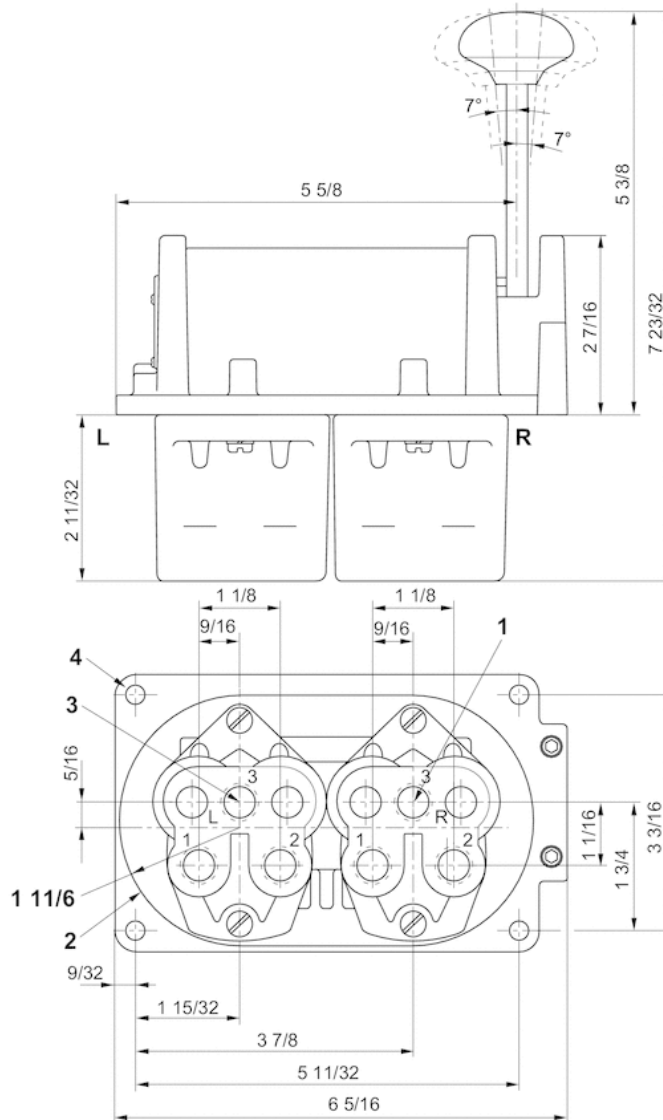
Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

Material	
Housing	Die-cast aluminum

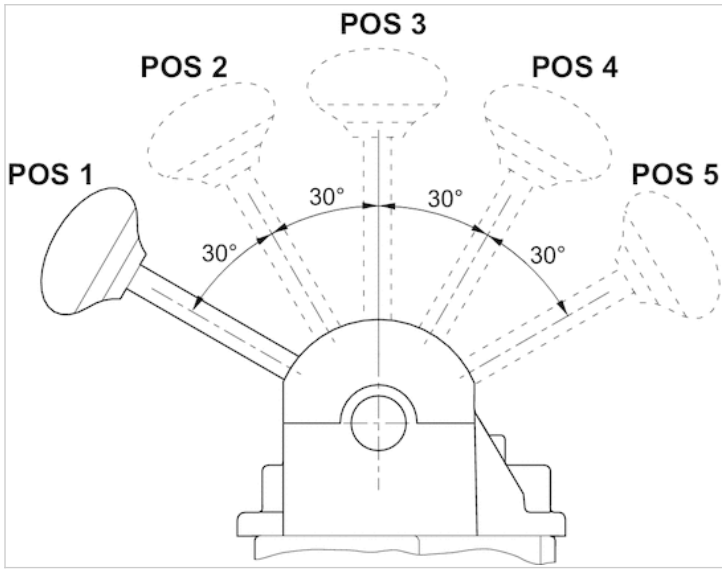
Dimensions

Dimensions in inches



- 1) Air supply
- 2) Mounting hole
- 3) 1/4 - 18 NPTF 6 ports
- 4) 9/32 diameter (4) places

Triple 3-way valve - 3 position handle, detented



Handle position

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	Plugged		
2	Plugged		
3	Plugged		X
4	Plugged		
5	Plugged	X	

Out Port Supplied
OUT port 2R
X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-3, Quadruple 3-way valves - 2 position handle
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output
R431009019	2-HA-3	Ø 1/4"	Ø 1/4"

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

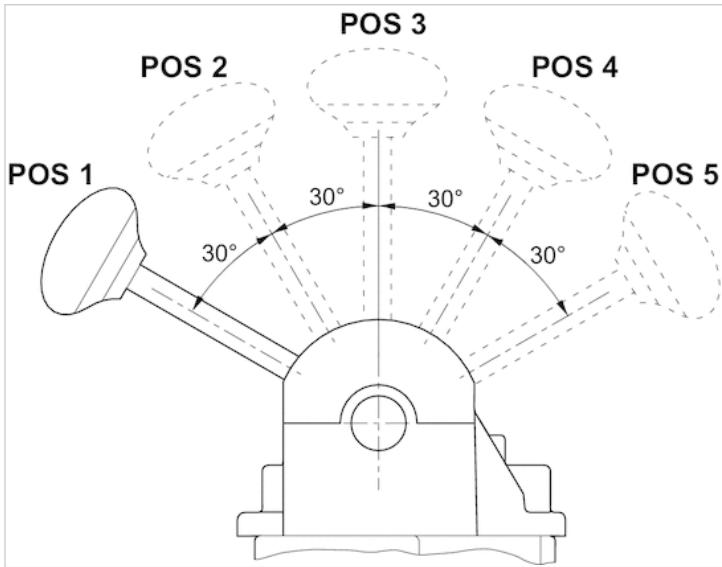
These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

Material	
Housing	Die-cast aluminum

Triple 3-way valve - 3 position handle, detented



Handle position

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	Plugged		X
2	Plugged		
3	Plugged	X	
4	Plugged		
5	Plugged		

Out Port Supplied
OUT port 2R
X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A- Pilotair®

- 2-HA-4, Quadruple three-way valves (2-HA-4) gated double handle, 5-position gated single handle 5-position gated single handle
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output
R431009113	2-HA-4	Ø 1/4"	Ø 1/4"
R431004542	2-HA-4	Ø 1/4"	Ø 1/4"
R431004801	2-HA-4	Ø 1/4"	Ø 1/4"
R431005403	2-HA-4	Ø 1/4"	Ø 1/4"
R431005803	2-HA-4	Ø 1/4"	Ø 1/4"
R431005386	2-HA-4	Ø 1/4"	Ø 1/4"
R431005740	2-HA-4	Ø 1/4"	Ø 1/4"
R431004540	2-HA-4	Ø 1/4"	Ø 1/4"
R431006038	2-HA-4	Ø 1/4"	Ø 1/4"
R431006000	2-HA-4	Ø 1/4"	Ø 1/4"

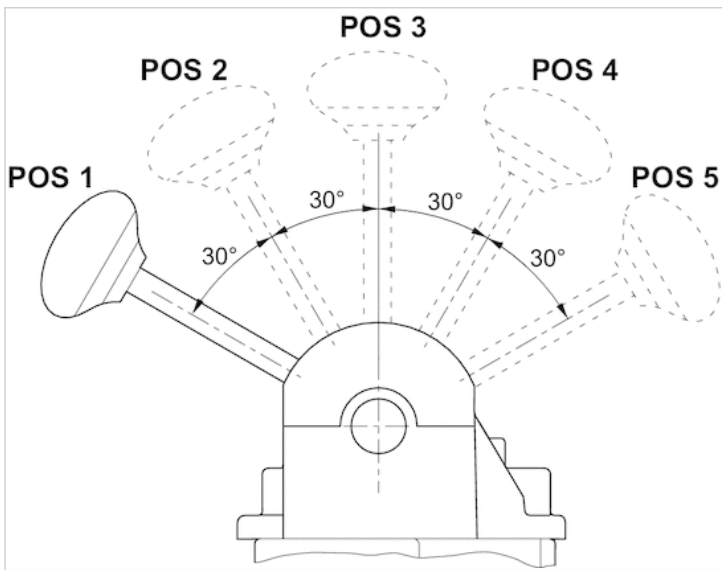
Technical information

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits. Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

Material	
Housing	Die-cast aluminum

Triple 3-way valve - 3 position handle, detented



R431009113

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1		X	
2			
3	X		
4	X		X
5	X		X

Out Port Supplied
OUT port 2R
X
X
X
X

R431004542

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1		X	X
2		X	
3			
4	X		X
5	X		

Out Port Supplied
OUT port 2R

Out Port Supplied	
	X
	X

R431005386

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	X	X	
2	X		
3			
4			X
5			X

Out Port Supplied	
	OUT port 2R
	X

R431005740

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	X		X
2	X		X
3	X		
4	X	X	
5		X	

Out Port Supplied	
	OUT port 2R
	X
	X
	X
	X

R431004801

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1			
2	X		
3	X	X	
4	X	X	X
5		X	X

Out Port Supplied			
OUT port 2R			
			X
			X
			X

R4310055403

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1			
2	X		
3		X	
4			X
5			

Out Port Supplied			
OUT port 2R			
			X

R431005803

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	X	X	X
2	X	X	
3	X	X	X
4	X		X
5		X	X

Out Port Supplied			
OUT port 2R			
			X

Out Port Supplied	
	X
	X
	X

R431006038

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	X		
2		X	
3			
4			X
5			

Out Port Supplied	
	OUT port 2R
	X

R431004540

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1		X	
2		X	
3			X
4	X		

Out Port Supplied	
	OUT port 2R
	X

R431006000

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	X		
2	X	X	
3		X	X
4			X

Out Port Supplied
OUT port 2R
X

3/2-directional valve, Series A-Pilotair®

- Triple (2-HA-3), 3-way valves - 5-position gated single handle, Short handle
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m ³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output
R431005632	2-HA-4	Ø 1/4"	Ø 1/4"

Short handle

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

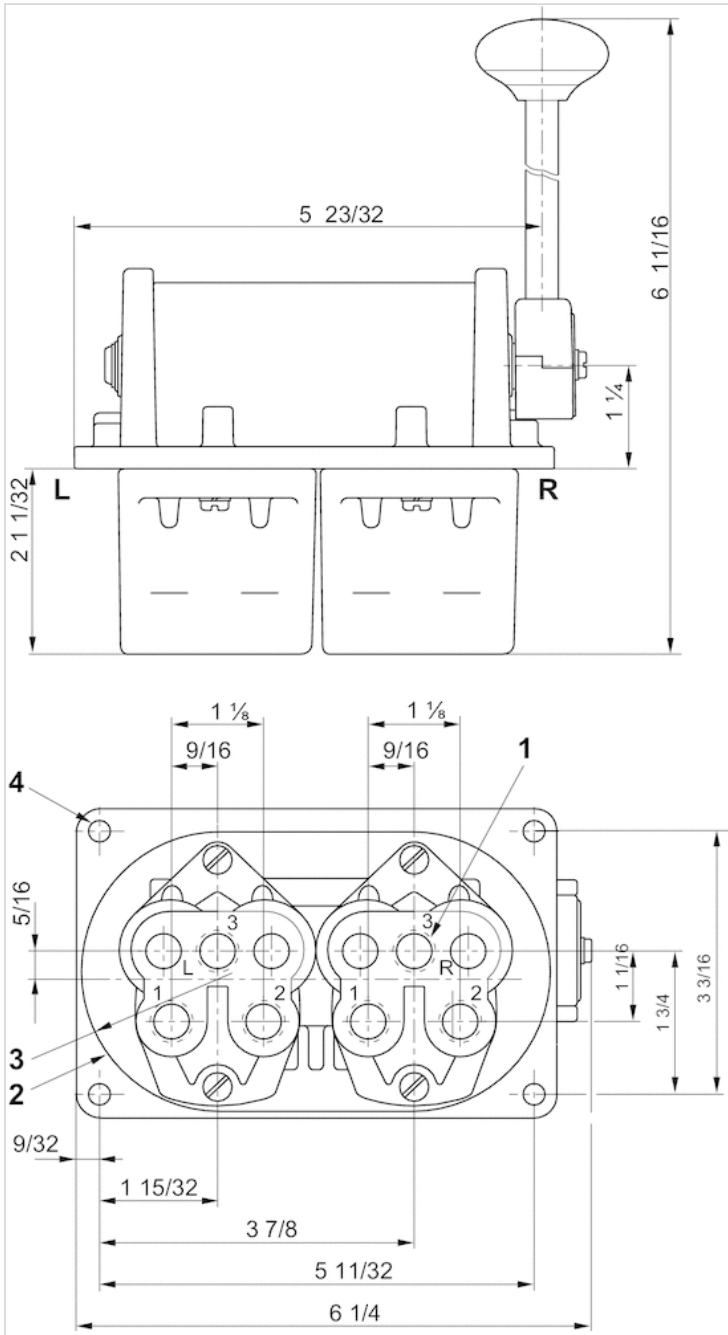
Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

Material	
Housing	Die-cast aluminum

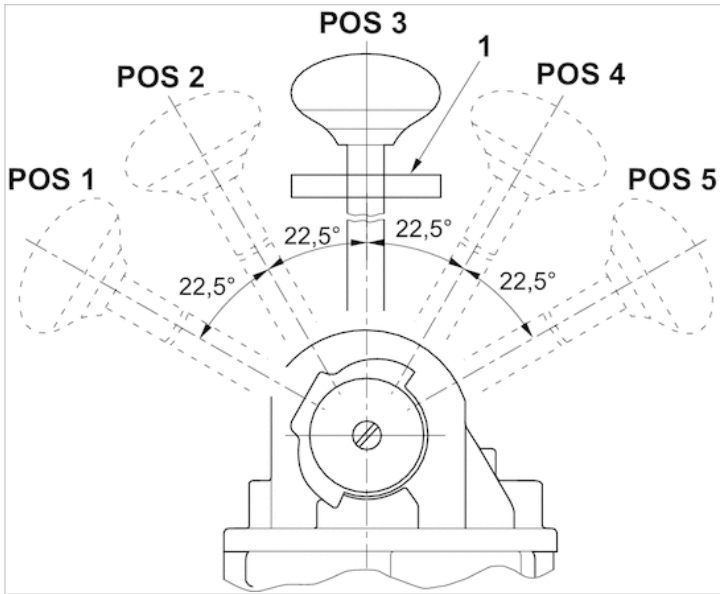
Dimensions

Dimensions in inches



- 1) Air supply
- 2) Mounting hole
- 3) 1/4 - 18 NPTF 6 ports
- 4) 9/32 diameter (4) places

3-position handle, detented



Handle position

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1		X	X
2		X	
3			
4	X		X
5	X		

Out Port Supplied
OUT port 2R
X
X

3/2-directional valve, Series A-Pilotair®

- Triple (2-HA-3), 3-way valves - 5-position gated single handle
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output
R431007396	2-HA-3	Ø 1/4"	Ø 1/4"

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

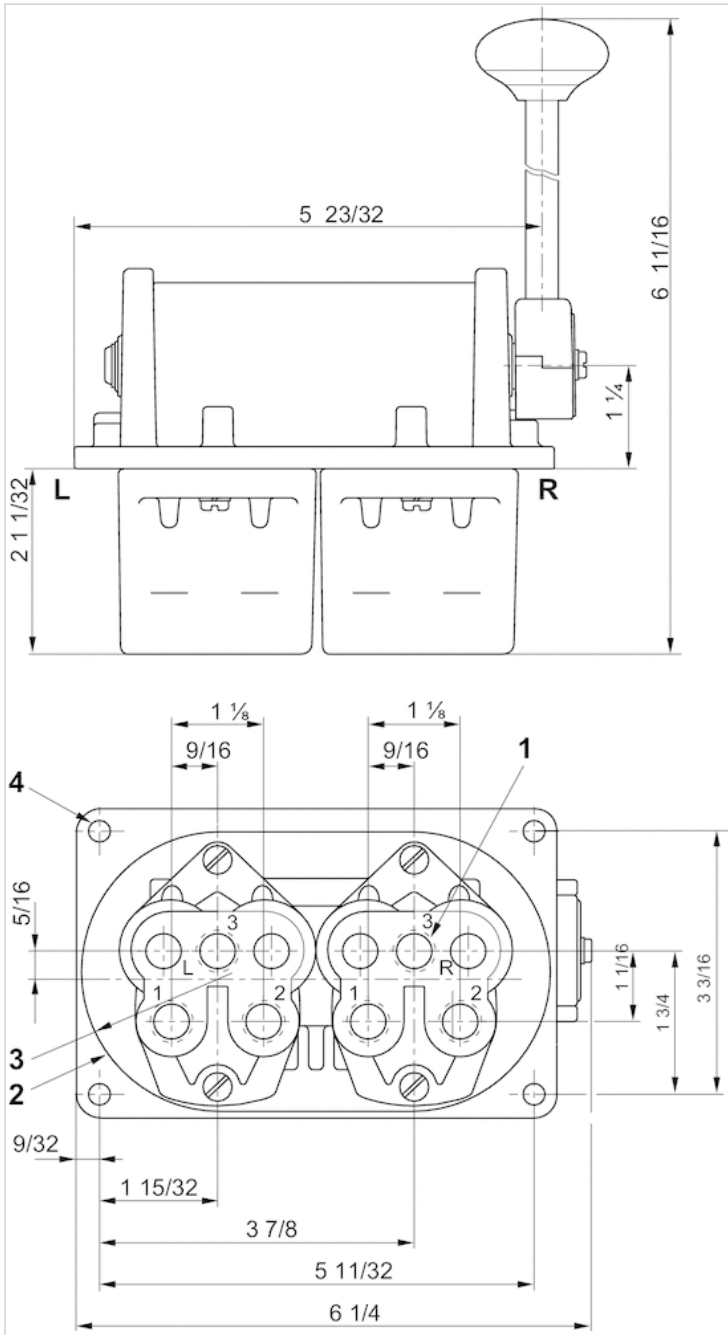
Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

Material	
Housing	Die-cast aluminum

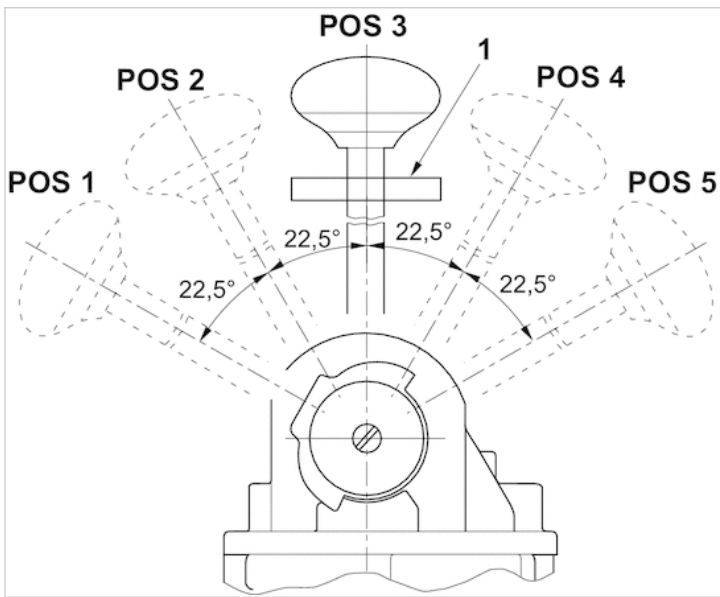
Dimensions

Dimensions in inches



- 1) Air supply
- 2) Mounting hole
- 3) 1/4 - 18 NPTF 6 ports
- 4) 9/32 diameter (4) places

3-position handle, detented



3/2-directional valve, Series A-Pilotair®

- 2 positions right handle, 3 positions left handle, 2-HA-3
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output
R431004513	2-HA-3	Ø 1/4"	Ø 1/4"

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

It is possible to operate all four valves with a single handle or in any combination from one to three valves with the left-hand handle or with the right-hand handle.

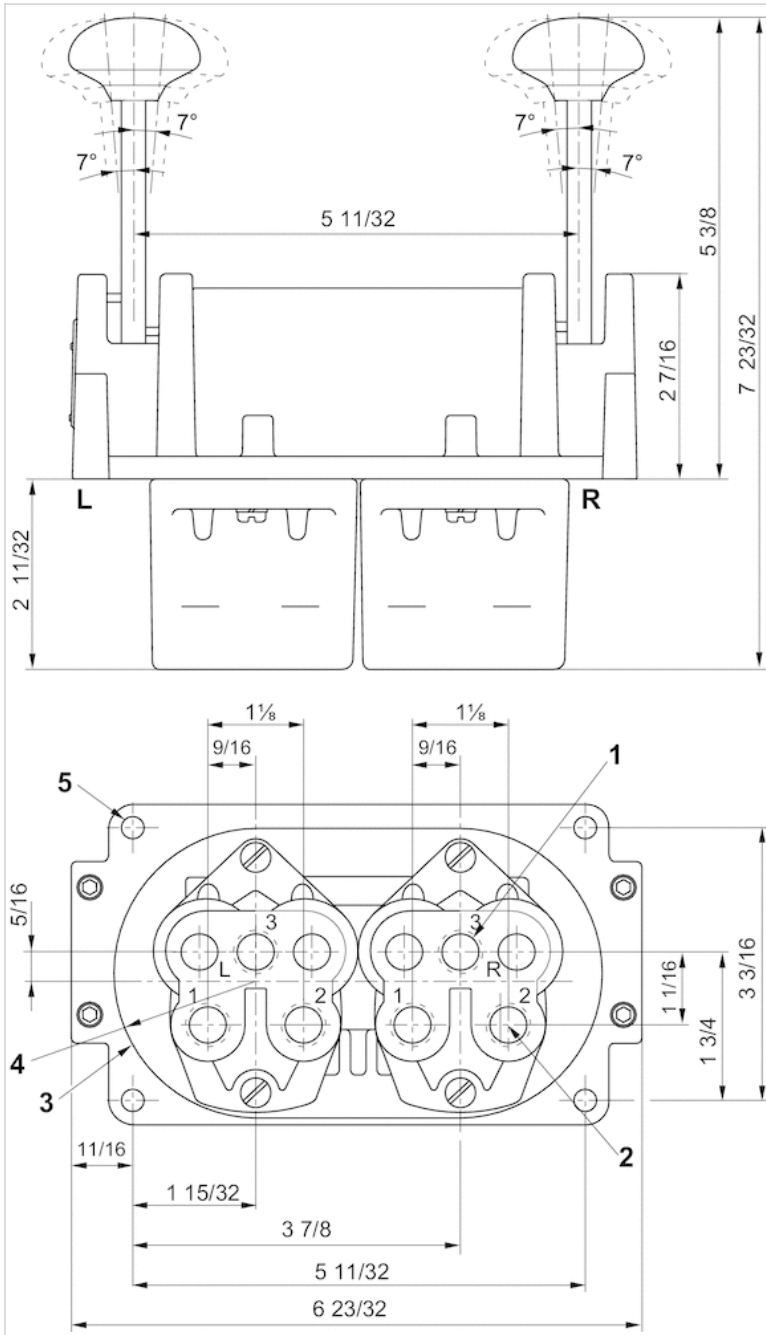
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Technical information

Material	
Housing	Die-cast aluminum

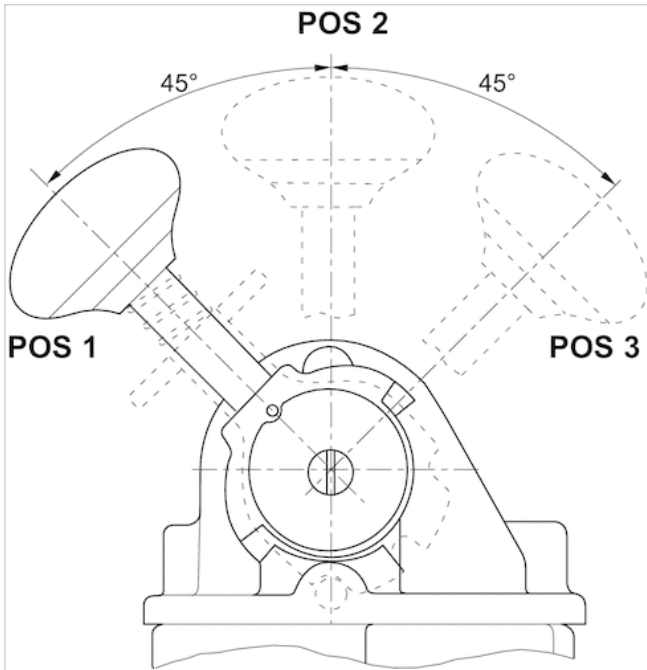
Dimensions

Dimensions in inches



- 1) Air supply
- 2) 1/4 - 18 NPTF 6 ports
- 3) panel mounting hole
- 4) 1 11/16 R
- 5) 9/32 NPTF 4 ports

3-position handle, detented



2 positions right handle, 3 positions left handle

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1		X	Plugged
2	X	X	Plugged
3			

Out Port Supplied
OUT port 2R
X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-3

- Qn = 1308.72 l/min

- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output	
R431005733	2-HA-3	Ø 1/4"	Ø 1/4"	1)
R431005734	2-HA-3	Ø 1/4"	Ø 1/4"	-

1) With long handle

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

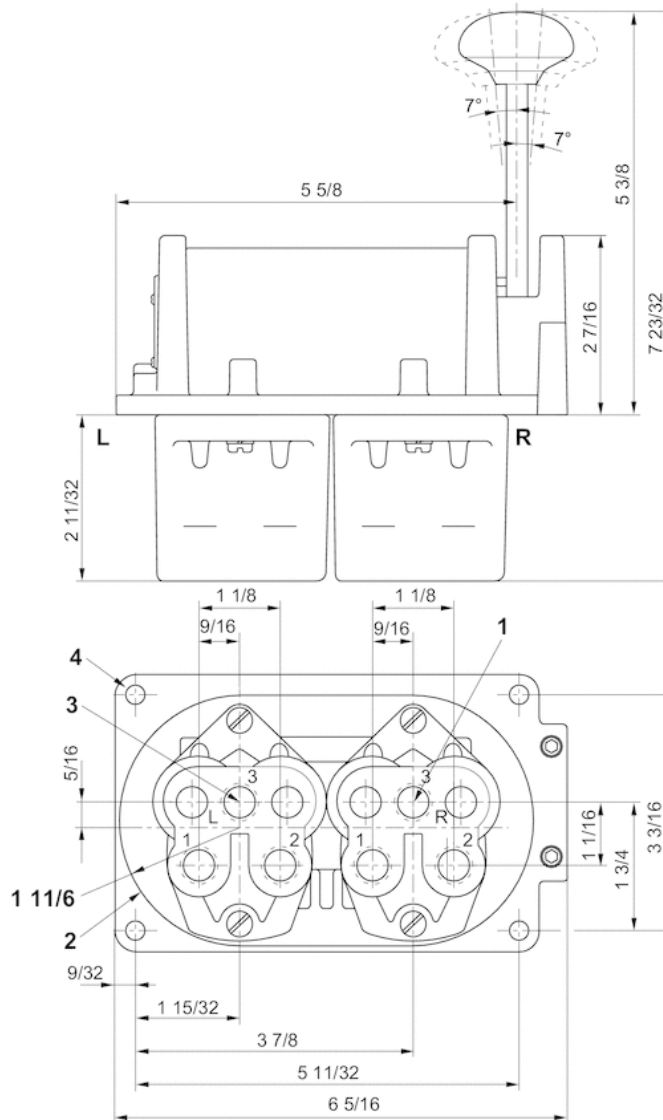
Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

Material	
Housing	Die-cast aluminum

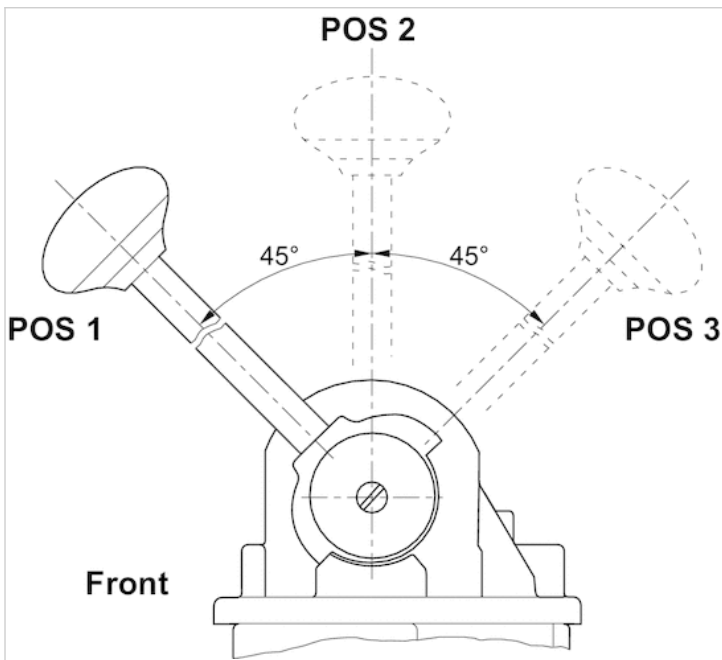
Dimensions

Dimensions in inches



- 1) Air supply
- 2) Mounting hole
- 3) 1/4 - 18 NPTF 6 ports
- 4) 9/32 diameter (4) places

Triple 3-way valve - 3 position handle, detented



R431005733

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	Plugged		X
2	Plugged	X	
3	Plugged		

Out Port Supplied
OUT port 2R
X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

R431005734

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1	Plugged	X	X
2	Plugged		
3	Plugged		X

Out Port Supplied
OUT port 2R
X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

3/2-directional valve, Series A-Pilotair®

- 2-HA-4, 3 positions both handles
- Qn = 1308.72 l/min
- Compressed air connection output Ø 1/4"



Version	Poppet valve
Activation	Manual
Sealing principle	Soft sealing
Nominal flow Qn	1308.72 l/min
Working pressure min./max.	0 ... 13.7 bar
Control pressure min./max.	0 ... 17.2 bar
Ambient temperature min./max.	-40 ... 71 °C
Medium temperature min./max.	-40 ... 71 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m³
Weight	1.81 kg

Technical data

Part No.	Type	Compressed air connection Input	Compressed air connection Output
R431004541	2-HA-4	Ø 1/4"	Ø 1/4"
R431004537	2-HA-4	Ø 1/4"	Ø 1/4"

Technical information

The 2-HA-3 and 2-HA-4 models are an extension of the 2-HA-2 models. They were created to furnish a housing that will operate up to four 3-way valves to provide a variety of functions.

These valves were designed primarily for use with multi position cylinders for Transmission Controls. They also meet the application requirements for two different supply pressures, selector functions and directional control of up to four different circuits.

It is possible to operate all four valves with a single handle or in any combination from one to three valves with the left-hand handle or with the right-hand handle.

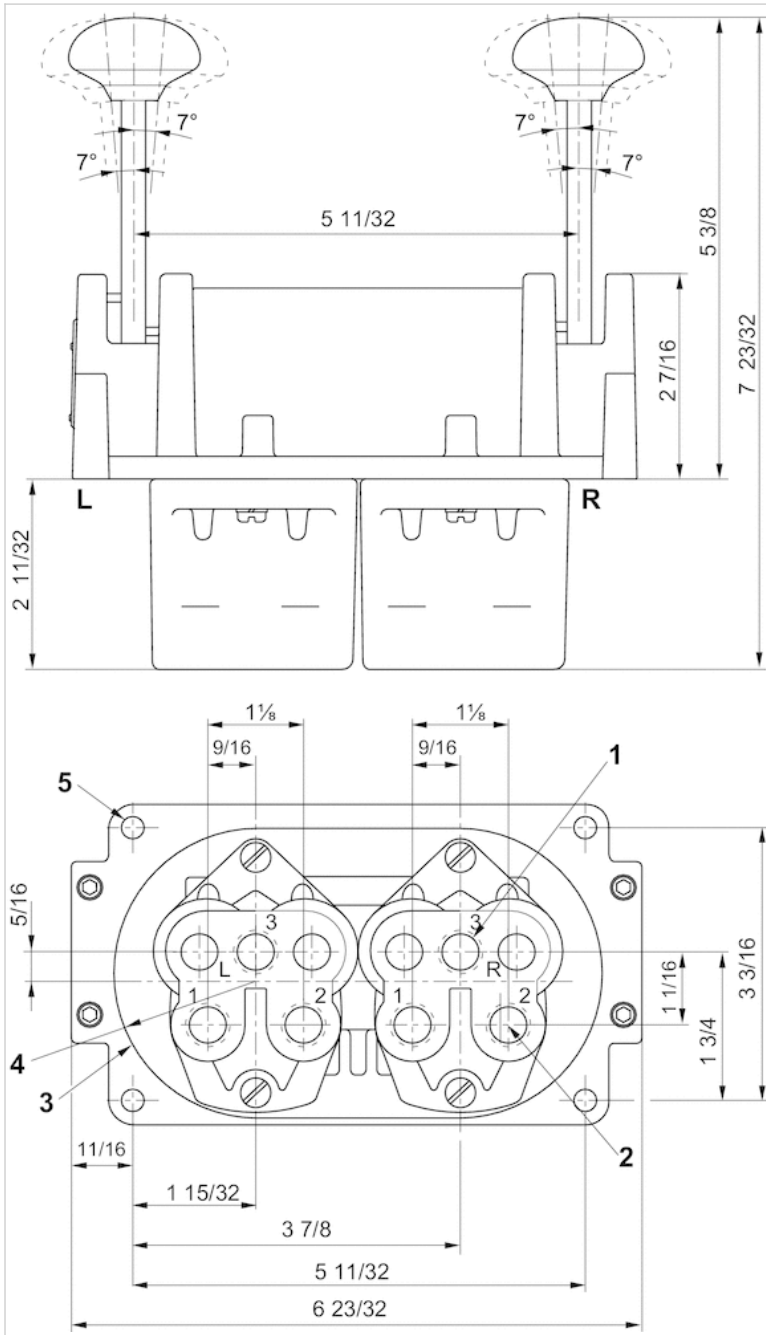
Double handle assemblies are provided for space conservation and for applications requiring two handles located adjacent to each other. Thus, two different functions can be controlled. As an example, the left handle can control direction (forward or reverse) and the right handle, range (1st, 2nd, 3rd and 4th gear).

Technical information

Material	
Housing	Die-cast aluminum

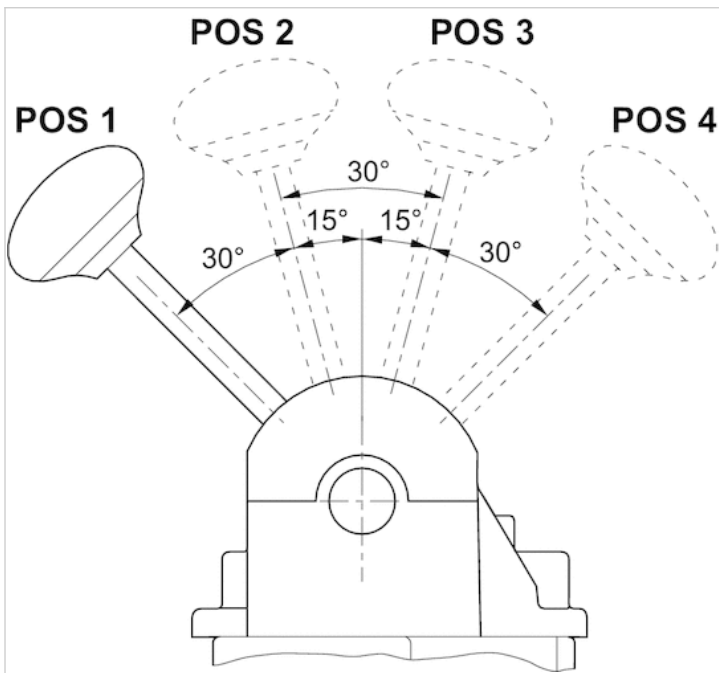
Dimensions

Dimensions in inches



- 1) Air supply
- 2) 1/4 - 18 NPTF 6 ports
- 3) panel mounting hole
- 4) 1 11/16 R
- 5) 9/32 NPTF 4 ports

3 positions both handles



Dimensions

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1		X	
2			
3	X		X

Out Port Supplied
OUT port 2R
X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

Dimensions

Handle position	Out Port Supplied	Out Port Supplied	Out Port Supplied
	OUT port 1L	OUT port 2L	OUT port 1R
1		X	
2		X	
3	X		X

Out Port Supplied
OUT port 2R
X

X denotes port supplied in that position. Empty block denotes port exhausted in that position.

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