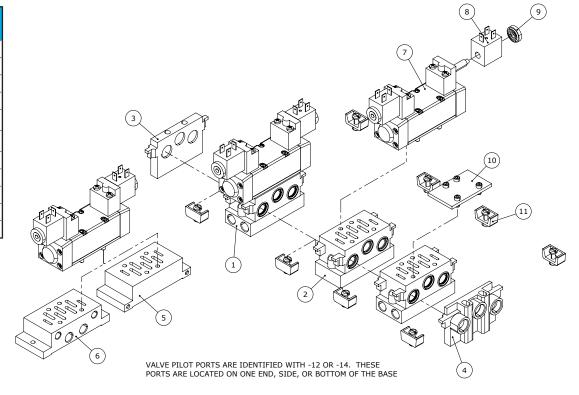


# ISO 5599 Solenoid Valves, Bases, Manifolds and Accessories

TO OPERATE THE VALVE AT AN OPERATING PRESSURE (PORT 1) BELOW THE MINIMUM

NITRA ISO 5599 valves and other components are a robust directional control solution that conforms to ISO 5599/1 standard. Components are available in size 1 or size 2 to deliver excellent performance for many industrial pneumatic systems. Valves and bases are interchangeable with other 5599/1 systems from other manufacturers. Bases and manifolds are available in either G-thread (BSPP) or NPT.

IS	O 5599 Manifolds/						
	Bases/Valves						
1	Manifold Side Orientation						
2	Manifold Bottom Orientation						
3	Manifold Blind End Plate						
4	Manifold Inlet						
5	Stand Alone Base Bottom Orientation						
6	Stand Alone Base Side Orientation						
7	Solenoid Valve						
8	Solenoid Coil						
9	Coil Nut						
10	Manifold Blank Plate						
11	Manifold Attaching Kit						





### NITRA ISO 5599 manifold components are easily assembled to meet your needs:

- Determine if bottom or side ports are needed.
- Join manifold sections with included clamps.
- Add inlet plate(s) and blind end plate (if needed).
- Install valves on the manifold sections. Blanking plates are available for unused stations.
- · Install solenoid coils in desired voltage.
- Connect solenoids to control system and plumb as required.

AND REVERSE THE PILOT GASKET

STEP 1

AS DELIVERED

STEP 2

DISASSEMBLED

PILOT GASKET
FACTORY

STEP 3

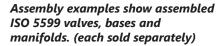
FLIPPING
GASKET
REVERSED (FLIPPED)
AND REINSTALLED

PILOT GASKET
REVERSED (FLIPPED)
AND REINSTALLED



### ISO 5599 Solenoid Valves



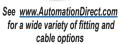




#### **Features**

- $\bullet$  ISO 5599/1 sizes 1 and 2 interchange with all other brands meeting ISO 5599/1
- 5-port / 2-position and 5/port / 3-position valves available
- Order stand-alone bases or manifolds separately
- Solenoid coils sold separately in 12 & 24 VDC and 24, 110 & 220 VAC







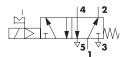


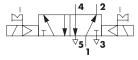
	ISO 5599 Solenoid Valves									
Model	<u>HVS-5211</u>	<u>HVS-5212</u>	<u>HVS-53C12</u>	HVS-53E12	<u>HVS-53P12</u>	<u>HVS-5221</u>	<u>HVS-5222</u>	HVS-53C22	HVS-53E22	<u>HVS-53P22</u>
Price	\$5gyp:	\$05gyq:	\$05gys:	\$;05gyt:	\$05gyu:	\$-05gyj:	\$05gyk:	\$-05gyl:	\$05gyn:	\$05gyo:
Drawing	PDF	PDF	PDF	PDF	PDF	PDF	PDF	PDF	PDF	PDF
Diagram	Α	В	С	D	Е	А	В	С	D	Е
Weight (lbs.)	0.76	0.86	0.82	0.82	0.82	1.58	1.63	1.59	1.59	1.59
Fluid			Filte	ered air without	lubrication; lubr	ication, if used,	must be continu	ious		
ISO Size		1 2								
Operating Pressure		Vacuum to 10 bar (vacuum to 145 psi)								
Min. Pilot Pressure	2.5 bar (36 psi)		1 bar (	15 psi)		2.5 bar (36 psi)		1 bar (	(15 psi)	
Operating Temp. Range		-10 to 60°C (14 to 140°F)								
Nominal Diameter			7.5 mm					12mm		
Sonic Conductance (C)		250 NI/i	min • bar (36.5 s	cfm/psi)		657.14 NI/min • bar (95.9 scfm/psi)				
Critical Pressure Ratio (b)			0.36				0.25			
Flow Rate at 6 bar @ delta-P 0.5 bar (87 psi @ delta-P 7 psi)		700	) NI/min (24.7 sc	cfm)		1800 NI/min (63.6 scfm)				
Flow Rate at 6 bar @ delta-P 1 bar (87 psi @ delta-P 15 psi)		110	0 NI/min (38.8 s	cfm)			270	0 NI/min (95.3 s	scfm)	
Min Response ON/OFF	24/50 ms		20/2	0 ms		39/60 ms		25/2	25 ms	
Installation	Any Vertical not recommended with vibration				ation	Any	Vert	ical not recomm	nended with vibr	ation
Assembly		On single and manifold bases according to ISO 5599/1								
Manual Override					Loc	king				
Coils			22m	nm Form B in Ac	ccordance with E	EN 175301-803-	B (11mm pin w	ridth)		
Max. Coil Nut Torque					1 Nm /	/ 9 lb-in				
Approvals					N	I/A				



### ISO 5599 Solenoid Valves

#### **ISO 5599 Valve Diagrams**





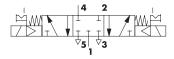
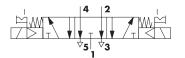


Diagram "A"

Diagram "B"

Diagram "C"



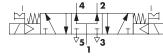
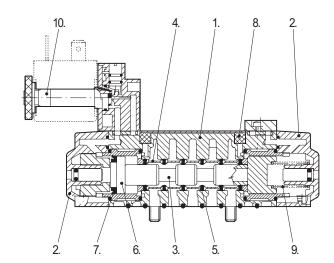


Diagram "D"

Diagram "E"

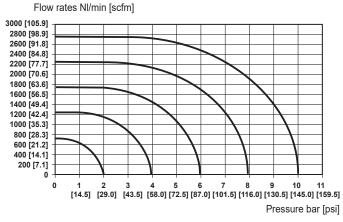
#### **ISO 5599 Valve Components**

- VALVE BODY: Aluminium
   END CAP: Hostaform®
- 3. SPOOL: chemically nickel-plated aluminium
- DISTANCE PLATES: plastic
   GASKETS: NBR (Buna-N)
   PISTONS: Hostaform®
- 7. PISTON GASKET: NBR (Buna-N)
- FILTER: sintered bronze
   SPRINGS: special steel
- 10. OPERATOR: Brass pipe Stainless steel core

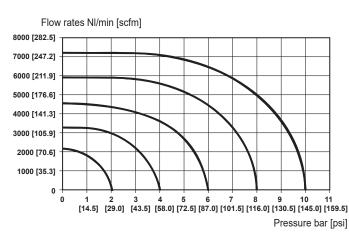


#### ISO 5599 Valve Flow Charts

ISO 1



ISO<sub>2</sub>





## **ISO 5599 Solenoid Valve Bases**

NITRA ISO 5599 Series Valve Bases allow mounting a single ISO 5599/1 solenoid valve. Bases will fit other brands of ISO 5599/1 valves.

#### **Features**

- Stand-alone bases compatible with all ISO 5599/1 valves in sizes 1 and 2
- · Available with side or bottom ports
- Available port threads in G-thread (BSPP) or NPT
- · Aluminum alloy





See <u>www.AutomationDirect.com</u> for a wide variety of fitting and cable options



			ISO 5599 Serie	es Valve Ba	ses				
Item Photo	Part No.	Pressure	Inlet(s) / Outlet(s)	Orientation	Usage	Weight (lbs.)	Price	Drawing Link	
in.	<u>HSB-1SG</u>		G1/4 female BSPP	Side		0.36	\$5gyv:	<u>PDF</u>	
· · · · · ·	<u>HSB-1SN</u>		1/4 in female NPT	Side	ISO 5599/1 size 1	0.36	\$5gyx:	<u>PDF</u>	
ijin.	<u>HSB-1BG</u>		G1/4 female BSPP	Bottom	solenoid valves	0.43	\$5gyy:	<u>PDF</u>	
ijin	<u>HSB-1BN</u>	145 psi (10 bar) maximum operating pressure	1/4 in female NPT	BOILOITI		0.43	\$5gyz:	PDF	
in the same	<u>HSB-2SG</u>		G3/8 female BSPP	Side		0.57	\$;5gy]:	PDF	
Sind.	<u>HSB-2SN</u>		3/8 in female NPT	Side		ISO 5599/1 size 2	0.57	\$;5gy[:	PDF
inin	<u> HSB-2BG</u>		G3/8 female BSPP	Bottom	solenoid valves	0.67	\$5gy_:	PDF	
inin	<u>HSB-2BN</u>		3/8 in female NPT	DULLUITI		0.67	\$5gy#:	PDF	



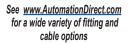
### **ISO 5599 Solenoid Valve Manifolds**

NITRA ISO 5599 Series pneumatic valve manifolds can be joined with included fasteners to build valve islands. These manifolds will fit other brands of ISO 5599/1 valves.

#### **Features**

- Manifolds compatible with all ISO 5599/1 valves
- · Available with side or bottom ports
- Available port threads in G-thread (BSPP) or NPT
- · Aluminum alloy







ISO 5599 Series Valve Size 1 Manifolds									
Item Photo	Part No.	Pressure	Inlet(s) / Outlet(s)	Orientation	Usage	Weight (lbs.)	Price	Drawing Link	
	<u>HM-1G</u>	145 psi (10 bar) maximum operating pressure	G3/8 female BSPP	- N/A		0.28	\$;5gy!:	<u>PDF</u>	
	<u>HM-1N</u>		3/8 in female NPT	IN/A		0.28	\$5gy?:	<u>PDF</u>	
600	<u>HM-1SG</u>		G1/4 female BSPP	- Side	ISO 5599/1 size 1 solenoid valves	0.29	\$;5gy,:	<u>PDF</u>	
1020 1020	<u>HM-1SN</u>		1/4 in female NPT	Side		0.29	\$5gz0:	<u>PDF</u>	
090	<u>HM-1BG</u>		G1/4 female BSPP	- Bottom		0.69	\$5gz1:	<u>PDF</u>	
000	<u>HM-1BN</u>		1/4 in female NPT	DOLLOM			0.69	\$5gz2:	<u>PDF</u>

ISO 5599 Series Valve Size 1 Manifold Accessories									
Item Photo	Part No.	Description	Weight (lbs.)	Price	Drawing Link				
	<u>HM-1B</u>	NITRA blind end, aluminum alloy. For use with ISO 5599/1 size 1 manifolds.	0.17	\$5gz3:	<u>PDF</u>				
	<u>HM-1BP</u>	NITRA blanking plate, aluminum alloy. For use with ISO 5599/1 size 1 manifolds. Assembly screws and seal included.	0.10	\$5gz4:	PDF				
000	<u>HM-1A</u>	NITRA manifold attaching kit, aluminum alloy. For use with ISO 5599/1 size 1 solenoid valves. Includes (2) assembly clamps and (3) o-rings.	0.10	\$5gz5:	PDF				



# **ISO 5599 Solenoid Valve Manifolds**

	ISO 5599 Series Valve Size 2 Manifolds									
Item Photo	Part No.	Pressure	Inlet(s) / Outlet(s)	Orientation	Usage	Weight (lbs.)	Price	Drawing Link		
	<u>HM-2G</u>		G1/2 female BSPP	N/A		0.45	\$5gz6:	<u>PDF</u>		
	<u>HM-2N</u>		1/2 in female NPT	N/A		0.45	\$5gz7:	<u>PDF</u>		
1000	<u>HM-2SG</u>	145 psi (10 bar) maximum	G3/8 female BSPP	Cida	ISO 5599/1 size 2 solenoid valves	0.69	\$5gz8:	<u>PDF</u>		
1000	<u>HM-2SN</u>	operating pressure	3/8 in female NPT	Side		0.69	\$5gz9:	<u>PDF</u>		
1000	<u>HM-2BG</u>		3/8 in female NPT	Bottom		1.11	\$5gza:	<u>PDF</u>		
1000	<u>HM-2BN</u>		3/8 in female NPT	Bottom			1.11	\$5gzb:	PDF	

	ISO 5599 Series Valve Size 2 Manifold Accessories									
Item Photo	Part No.	Description	Weight (lbs.)	Price	Drawing Link					
	<u>HM-2B</u>	NITRA blind end, aluminum alloy. For use with ISO 5599/1 size 2 manifolds.	0.29	\$5gzc:	PDF					
THE STATE OF THE S	<u>HM-2BP</u>	NITRA blanking plate, aluminum alloy. For use with ISO 5599/1 size 2 manifolds. Assembly screws and seal included.	0.21	\$5gzd:	PDF					
	<u>HM-2A</u>	NITRA manifold attaching kit, aluminum alloy. For use with ISO 5599/1 size 2 solenoid valves. Includes (2) assembly clamps and (3) o-rings.	0.10	\$5gze:	PDF					



### ISO 5599 Valve Coils

NITRA ISO 5599 Series pneumatic valve coils fit NITRA ISO 5599/1 solenoid valves.

#### **Features**

- Voltage tolerance: –10% to + 15%
- Insulation class: F155
- IP65 EN60529 protection with connector
- Coil temperature 100% ED: 55°C at 20°C ambient temperature
- In accordance to Atex 2014/34/EU rule, group 2, category 3 GD
- Coils have 11mm DIN style connector







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ISO 5599 Series Valve Coils									
Item Photo	Part No.	Description	Weight (lbs.)	Price	Drawing Link				
	<u>HVC-12D</u>	NITRA solenoid coil, 12 VDC, 2W. For use with HVS series solenoid valves.	0.1	\$;5gzf:	<u>PDF</u>				
	<u>HVC-24D</u>	NITRA solenoid coil, 24 VDC, 2W. For use with HVS series solenoid valves.	0.1	\$5gzg:	<u>PDF</u>				
0	HVC-24A	NITRA solenoid coil, 24 VAC, 3.5VA. For use with HVS series solenoid valves.	0.1	\$5gzh:	<u>PDF</u>				
	HVC-110A	NITRA solenoid coil, 110 VAC, 3.5VA. For use with HVS series solenoid valves.	0.1	\$-5gzi:	PDF				
	HVC-220A	NITRA solenoid coil, 220 VAC, 3.5VA. For use with HVS series solenoid valves.	0.1	\$-5gzj:	<u>PDF</u>				

# **ISO 5599 Valve Accessories**

ISO 5599 Series Valve Accessories									
Item Photo	Part No.	Description	Weight (lbs.)	Price					
50°°	<u>HS-NUT</u>	NITRA solenoid coil nut, replacement. For use with HVS series solenoid valves.	0.05	\$5gzk:					
	HVS-1SEAL	NITRA seal kit, replacement. For use with ISO 5599/1 size 1 solenoid valves. Includes o-rings, lip seals and valve bottom gasket.	0.05	\$-5gzl:					
, o	HVS-2SEAL	NITRA seal kit, replacement. For use with ISO 5599/1 size 2 solenoid valves. Includes o-rings, lip seals and valve bottom gasket.	0.05	\$5gzn:					