

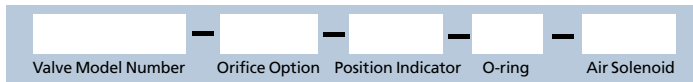
Isolation Valves

Genesis Stainless Steel Valve Options

SECTION 3.5



Follow this part tree to add one or more options to a Genesis valve.
Add options to the basic valve part number in the order shown.



Example: GNVSAI-302-ISO-P10-KT-A11

Orifice Option

Genesis stainless steel valves with Soft Start actuation come standard with no orifice. To order these valves with an orifice replace the "SO" part number suffix with one of the following options. Example: Change standard valve part number GNV5-072-NWB-SO to GNV5-072-NWB-S1.

ORIFICE OPTION	VALVE SIZE	ORIFICE SIZE	ORIFICE REPLACEMENTS	VALVE SIZE	ORIFICE SIZE
-S0	No orifice		GNV-075-S0-1	3/4 to 2 (19-50)	.070 (1.8)
-S1	3/4 to 2 (19-50)	.147 (3.7)	GNV-075-S0-2	3/4 to 2 (19-50)	.109 (2.8)
-S2	3/4 to 2 (19-50)	.109 (2.8)	GNV-075-S0-3	3/4 to 2 (19-50)	.147 (3.7)
-S3	3/4 to 2 (19-50)	.070 (1.8)	GNV-300-S0-1	3 & 4 (76 & 100)	.055 (1.4)
-S4	3 & 4 (76 & 100)	.055 (1.4)	GNV-300-S0-2	3 & 4 (76 & 100)	.093 (2.4)
-S5	3 & 4 (76 & 100)	.093 (2.4)	GNV-300-S0-3	3 & 4 (76 & 100)	.128 (3.3)
-S6	3 & 4 (76 & 100)	.128 (3.3)	GNV-300-S0-4	3 & 4 (76 & 100)	.201 (5.1)
-S7	3 & 4 (76 & 100)	.201 (5.1)	GNV-075-S0-K	3/4 to 2 (19-50)	Kit*
			GNV-300-S0-K	3 & 4 (76 & 100)	Kit*
			GNV-075-S0-T	3/4 to 4 (76 & 100)	Wrench

NOTE: Refer to diagrams for orifice option selection

* Kits include all orifice sizes and an installation wrench for the specified valve size

Open/Closed Position Indicator Option

Nor-Cal's CE certified, shielded, open/closed position indicators detect the piston position in the valve's air cylinder. The technician has a visual indication of power to the circuit (12 to 24 VDC) and the valve position, as does the operator watching the panel. With the soft start option only one position indicator can be provided for the fully open position. Operating temperature range is -25°C to 70°C for valves with position indicators. Call for more information on high temperature position indicators.

OPTION	VALVE ACTUATOR	DESCRIPTION
-P10	Soft Start/Standard	1 position indicator - main valve open only
-P1C	Standard	1 position indicator - main valve closed only
-P2	Standard	2 position indicators - main valve open & closed

O-ring Option

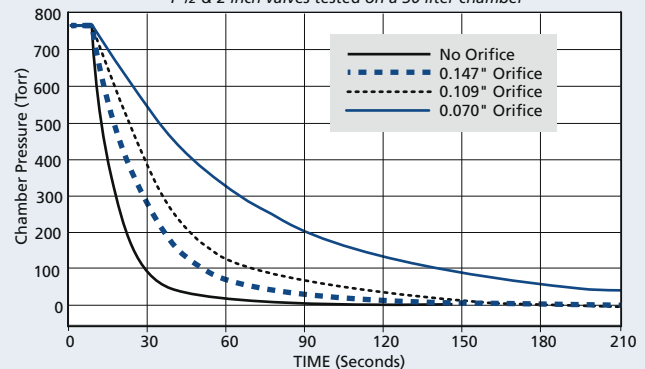
Standard Genesis valves are furnished with Viton O-rings which are resistant to most chemicals, but should not be heated to temperatures in excess 204°C. Even prolonged exposures of 150°C may degrade the O-rings. High temperature Kalrez O-rings allow the valve to be heated to 220°C intermittently or 170°C for prolonged periods.

OPTION	COMPOUND	APPLICATIONS
-KT	4079 Kalrez	High temperature
-KC	2037 Kalrez	Chemical resistant
-CR	513 Chemraz	Chemical resistant
-S	Silicone	Extreme temperatures

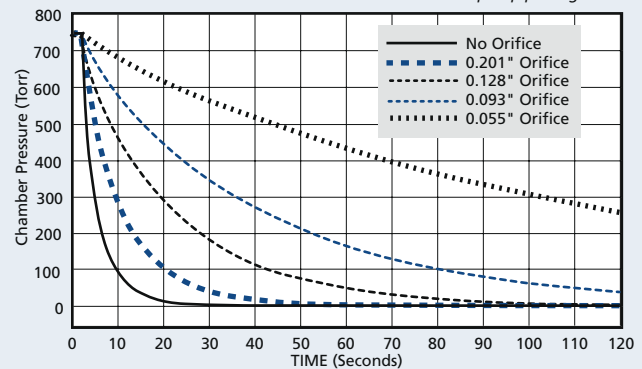


Valve/Orifice Pumpdown Curves Charts

1 1/2 & 2 inch valves tested on a 30 liter chamber



3 and 4 inch valves tested with various Soft-Start orifices on a 30 liter chamber and 232 CFM Edwards mechanical blower pump package.



Air Solenoid Option

Low 1.8 wattage, CE certified three-way air solenoids can be provided on the valve in several electrical current ratings, with 24 inch (610) quick disconnect electrical leads, and 5/32 inch (3.97) one-touch air fittings - ready to attach to the house air supply. One solenoid is required for standard Genesis stainless valves. Two solenoids are required for soft start versions. Remote mount is required on heated valves. Air solenoid kits with assembly hardware and instructions are available. Kit part numbers are in the second column below.

OPTION	KIT	ACTUATOR	DESCRIPTION	QUANTITY
-A11	A11-K	Standard	120 VAC, 50/60 Hz	1
-A21	A21-K	Standard	24 VDC	1
-A31	A31-K	Standard	240 VAC, 50/60 Hz	1
-A41	A41-K	Standard	24 VAC, 50/60 Hz	1
-B11	B11-K	Soft Start	120 VAC, 50/60 Hz	2
-B21	B21-K	Soft Start	24 VDC	2
-B31	B31-K	Soft Start	240 VAC, 50/60 Hz	2
-B41	B41-K	Soft Start	24 VAC, 50/60 Hz	2



Isolation Valves

Genesis Heaters & Replacement Kits

SPECIFICATIONS

Compatible Valves: Genesis Modular Valves
Heaters and controllers for stainless steel
Genesis Valves available. Call for details.

Insulator Body: 1/2 inch (13) thick, trimable,
molded silicone construction. Touch safe
exterior

Heater
Voltage: 120 or 240 VAC standard
Set points: 120°C or 150°C
Manual reset: 200°C with over temp shutoff
Low temperature alert: standard on
1 1/2 and 2 inch (38-50) valves

Connections
Power cord: 12 inch (305) with AMP
3-pin
Alert cords: Two 12 inch (305) with
AMP MR connectors standard
on 1 1/2 & 2 (38 & 50) inch valves

Certification
Insulators: UL 94 V-O
Heaters: UL listed. CE certification pending

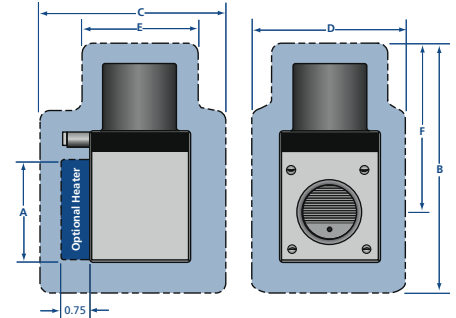
Genesis Modular Valve Heaters & Insulators

A unique, UL listed modular heater provides 120°C or 150°C internal temperatures in valves or fittings at a fraction of the cost of other heaters. Genesis heaters use thick film technology to provide uniform heat throughout the component. Each heater contains a control set point and a resettable high temperature shut off. The 1 1/2 and 2 inch (38.1 and 50.8) sizes also have a low temperature alert that can be connected to a remote alarm. Each thermostat can be replaced without destroying the heater. The same heater can be attached to a valve body or fitting with two screws. A trim-to-fit, molded insulator covers the heated component and mating flanges. These clean room compatible insulators are constructed of 1/2 inch (12.7) thick molded silicone. When in use, the exterior surface remains touch-safe. Insulators meet UL 94 V-O requirements. Insulators for other components are available upon request. Heater jackets and controllers for Genesis Stainless Steel Valves are available. Call for information and pricing.

Heaters

MODEL NUMBER	VALVE SIZE	SET POINT	WATTS	A
HT-GN-100-120-1	3/4 & 1 (19 & 25)	120°C	120	2.13 (54)
HT-GN-100-150-1	3/4 & 1 (19 & 25)	150°C	120	2.13 (54)
HT-GN-150-120-1	1 1/2 (38)	120°C	120	2.50 (63)
HT-GN-150-150-1	1 1/2 (38)	150°C	120	2.50 (63)
HT-GN-200-120-1	2 (50)	120°C	160	3.25 (83)
HT-GN-200-150-1	2 (50)	150°C	160	3.25 (83)

NOTE: Replace "-1" with "-2" for 240V heaters.

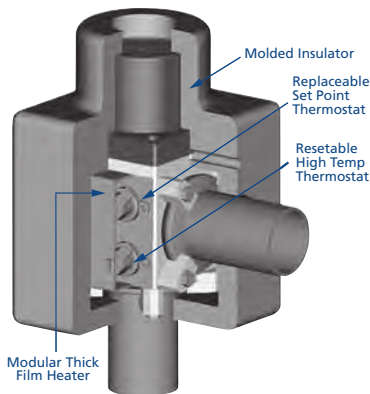


Heater Insulators

MODEL NUMBER	VALVE SIZE	B	C	D	E	F
HI-GNV-100	3/4 & 1 (19 & 25)	6.00 (152)	4.50 (114)	3.13 (80)	2.50 (63)	3.64 (92)
HI-GNV-150	1 1/2 (38)	6.63 (168)	5.00 (127)	3.63 (92)	2.88 (73)	4.25 (108)
HI-GNV-200	2 (50)	8.00 (203)	5.88 (149)	4.38 (111)	3.31 (84)	5.00 (127)

Heater Power Cords

MODEL NUMBER	LENGTH
HT-GN-PCD-6	6 ft.
HT-GN-PCD-12	12 ft.



Genesis Valve Assembly Kits and Replacement Hardware

The kits below are for use with Genesis modular valves and with Genesis stainless steel valves. First maintenance is recommended at one million cycles, depending on the cleanliness of the process. Typical valve service will require O-ring replacement.



Bellows assembly

Bellows Assembly Kits

Includes bellows, top flange and poppet weldment assembly. Requires O-ring kit to seal.

KIT NUMBER	VALVE SIZE	ACTUATOR
GNV-100-16	3/4 & 1 (19 & 25)	Standard
GNV-100-16-SO	3/4 & 1 (19 & 25)	Soft Start
GNV-150-16	1 1/2 (38)	Standard
GNV-150-16-SO	1 1/2 (38)	Soft Start
GNV-200-16	2 (50)	Standard
GNV-200-16-SO	2 (50)	Soft Start
GNV-300-16	3 (76)	Standard
GNV-300-16-SO	3 (76)	Soft Start
GNV-400-16	4 (100)	Standard
GNV-400-16-SO	4 (100)	Soft Start

All dimensions are in inches (mm) & weights are in pounds (kg), unless otherwise noted.

Viton O-Ring Kits

Includes bellows O-ring and poppet O-ring. Other O-ring compounds are available on request.

KIT NUMBER	VALVE SIZE	ACTUATOR
GNV-100-95	3/4 & 1 (19 & 25)	Standard
GNV-100-95-SO	3/4 & 1 (19 & 25)	Soft Start
GNV-150-95	1 1/2 (38)	Standard
GNV-150-95-SO	1 1/2 (38)	Soft Start
GNV-200-95	2 (50)	Standard
GNV-200-95-SO	2 (50)	Soft Start
GNV-300-95	3 (76)	Standard
GNV-300-95-SO	3 (76)	Soft Start
GNV-400-95	4 (100)	Standard
GNV-400-95-SO	4 (100)	Soft Start

Valve Rebuild Kits

Includes all standard parts except valve body and position indicator. Your valve's position indicator type must be specified when ordering. Example: GNV-150-99-SO-P10

KIT NUMBER	VALVE SIZE	ACTUATOR
GNV-100-99	3/4 & 1 (19 & 25)	Standard
GNV-100-99-SO	3/4 & 1 (19 & 25)	Soft Start
GNV-150-99	1 1/2 (38)	Standard
GNV-150-99-SO	1 1/2 (38)	Soft Start
GNV-200-99	2 (50)	Standard
GNV-200-99-SO	2 (50)	Soft Start
GNV-300-99	3 (76)	Standard
GNV-300-99-SO	3 (76)	Soft Start
GNV-400-99	4 (100)	Standard
GNV-400-99-SO	4 (100)	Soft Start