

NP1/HPN – Valves



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Qualified solenoid valves for various NPP applications inside and outside of the containment. The installation and maintenance of the Green File valves are simple and efficient.



Valve Type NP1



Valve Type NP1

NP1 Valve

Qualifications

Safety class	1E
Seismic category	I
Qualified lifetime *	25 years
Qualification and design bases	IEC 60068-2-6; IEC 60068-2-30; IEEE 323-1974; IEEE 382; -2006 -1975/1987 IEEE 344-1975

* Maintenance cycle: up to 12 years, depending on use and ambient conditions

Harsh environment

DBE-conditions	181°C (358°F)
Pressure peak	2×10 ⁶ rad

Specification

Operating system	Direct or pilot operated with system media or auxiliary fluid
Function	2/2-way, 3/2-way, 5/2-way, and others NC or NO (where applicable); redundant valve block combinations
Fluid	Air/Nitrogen
Nominal diameter	From 2.2 to 25 mm (0.09 to 1 in)
Flow coefficient Kv (Cv)	0.15 to 11.1 (0.17 to 12.9)
Response time	Max. 50 ms
Ambient temperature	Normal operation: max. 55°C (131°F) Extreme operation: max. 90°C (194°F) for 8h
Pressure range	2 to 12 bar (0 to 174 psig)
Leakage	Max. 0.12 NI/h (2 scc/min)
Connection type	Thread-connection or flange
Weight	From 0.2 to approx. 8 kg (0.44 to 17.6 lbs)
Material	Body: Aluminum Ti-anodized (Stainless Steel on request) Elastomers: FKM

- More than 10'000 solenoid valves in operation since 1994
- No reported malfunction in 200'000 valve-years of continuous energized operation
- All Green File solenoid valves are of modular flanged design, mounted on base plates/manifolds which allow for quick disconnection

Seitz provides spare parts, replacement solenoids and maintenance services for all Green File valves.

HPN Valve

Qualifications

Safety class	1E
Seismic category	I
Qualified lifetime *	25 years
Qualification and design bases	IEC 60068-2-6; IEC 60068-2-30; IEEE 323-1974; IEEE 382-2006 -1975/1987 IEEE 344-1975

* Maintenance cycle: up to 12 years, depending on use and ambient conditions

Harsh environment

DBE-conditions	181°C (358°F)
Pressure peak	2×10 ⁶ rad

Specification

Operating system	Direct or pilot operated with system media or auxiliary fluid
Function	2/2-way, 3/2-way, 5/2-way, and others NC or NO (where applicable); redundant valve block combinations
Fluid	Air/Nitrogen
Nominal diameter	10 to 16 mm (0.4 to 0.63 in)
Flow coefficient Kv (Cv)	2.3 to 4.5 (2.7 to 5.23)
Response time	Max. 50 ms
Ambient temperature	Normal operation: max. 55°C (131°F) Extreme operation: max. 90°C (194°F) for 8h
Pressure range	2 to 32 bar (29 to 464 psig)
Leakage	Max. 0.12 NI/h (2 scc/min)
Connection type	Thread-connection or flange
Weight	From 0.2 to approx. 8 kg (0.44 to 17.6 lbs)
Material	Body: Aluminum Ti-anodized (Stainless Steel on request) Elastomers: FKM



With actuator 2A25

Order information

Specifications

Solenoid type 2A25

Rated voltage	12 to 250 V DC
Tolerance	+10%/-15% (typical)
Rated power	12 W
Ingress degree	IP 55 (NEMA 3/3S)
Weight	0.510 kg (1.12 lbs)

Harsh environment qualification

Solenoid type 2A25

DBE-conditions	181°C (358°F)
Radiation	2×10 ⁶ rad

Specifications

Solenoid type 6A59

Rated voltage	12 to 250 V DC
Tolerance	+10%/-15% (typical)
Rated power	25 W
Ingress degree	IP 67 (NEMA 6)
Weight	Approx. 0.8 kg (1.76 lbs)

Harsh environment qualification

Solenoid type 6A59

DBE-conditions	181°C (356°F)
Radiation	2.1×10 ⁷ rad

NPP references

Beznau 1 & 2	Switzerland
Forsmark 1, 2 & 3	Sweden
Oskarshamn 1, 2 & 3	Sweden
Ringhals 1, 2, 3 & 4	Sweden
Loviisa 1 & 2	Finland
Olkiluoto 1, 2 & 3	Finland
Paks 1	Hungary

Detailed dimensional drawings and 3D models are available on request, please contact us.

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Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specification given in this document.

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