

DANFOSS CHECK VALVES TYPES NRV AND NR VH



INTRODUCTION

NRV check valves can be used in liquid, suction, and hot gas lines in refrigeration and air conditioning systems using fluorinated refrigerants. They allow flow in only one direction and have a built-in damping piston that makes the valve suitable for installation in lines where pulsation can occur. They are available in both angleway and straightway versions.

NRVH check valves can be used in liquid and hot gas lines in refrigeration and air conditioning systems using fluorinated refrigerants. They are supplied with a stronger spring than type NRV ($\Delta P = 4.3$ psi) and are especially suitable for installation in the discharge line of systems with compressors connected in parallel.

FEATURES

Two Versions available

- Type NRV: Requires a minimum ΔP of 0.6 to 1psi for 100% flow.
- Type NR VH: Includes a stronger spring that requires a minimum ΔP of 4.3 psi for 100% flow.

Refrigerants:

CFC, HCFC and HFC

Temperature of medium:

-60 → +285°F

Maximum working pressure:

MWP = 400 psig

Maximum test pressure:

$p' = 520$ psig

Ordering

NRV straightway, flare connection

PART NO	TYPE	Connection in	WEIGHT (LB)	PRESSURE DROP 2) ACROSS VALVE Δp psi	Cv VALUE 3) gal/min	OVERALL LENGTH in
020-1040	NRV 6	1/4	0.2	1	0.65	2.21
020-1041	NRV 10	3/8	0.4	1	1.65	2.36
020-1042	NRV 12	1/2	0.4	0.7	2.37	2.72
020-1043	NRV 16	5/8	0.7	0.7	4.16	3.15
020-1044	NRV 19	3/4	0.9	0.7	5.78	3.47



NRV / NR VH straightway, solder connection

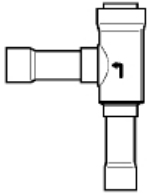
PART NO	TYPE	Connection in	WEIGHT (LB)	PRESSURE DROP 2) ACROSS VALVE Δp psi	Cv VALUE 3) gal/min	OVERALL LENGTH in
020-1010	NRV 6s	1/4	0.2	1.0	0.65	3.62
020-1057	NRV 6s *	3/8	0.4	1.0	0.65	3.62
020-1069	NRVH 6s *	3/8	0.4	1.0	0.65	3.62
020-1011	NRV 10s	3/8	0.4	1.0	1.65	4.29
020-1046	NRVH 10s	3/8	0.4	4.3	1.65	4.29
020-1058	NRV 10s *	1/2	0.4	1.0	1.65	4.29
020-1070	NRVH 10s *	1/2	0.4	4.3	1.65	4.29
020-1012	NRV 12s	1/2	0.4	0.7	2.37	5.16
020-1039	NRVH 12s	1/2	0.4	4.3	2.37	5.16
020-1052	NRV 12s *	5/8	0.4	0.7	2.37	5.16
020-1064	NRVH 12s *	5/8	0.4	4.3	2.37	5.16
020-1018	NRV 16s	5/8	0.7	0.7	4.16	5.43
020-1038	NRVH 16s	5/8	0.7	4.3	4.16	5.43
020-1059	NRV 16s *	3/4	0.7	0.7	4.16	5.43
020-1071	NRVH 16s *	3/4	0.7	4.3	4.16	5.43
020-1019	NRV 19s	3/4	0.9	0.7	5.78	6.50
020-1023	NRVH 19s	3/4	0.9	4.3	5.78	6.50
020-1054	NRV 19s *	7/8	0.9	0.7	5.78	6.50
020-1066	NRVH 19s *	7/8	0.9	4.3	5.78	6.50



DANFOSS CHECK VALVES

TYPES NRV AND NRVH

Ordering



NRV / NRVH angleway, solder connection

PART NO	TYPE	Connection in	WEIGHT (LB)	PRESSURE DROP 2) ACROSS VALVE Δp psi	Cv VALUE 3) gal/min
020-1020	NRV 22s	7/8	1.1	0.6	9.83
020-1032	NRVH 22s	7/8	1.1	4.3	9.83
020-1060	NRV 22s *	1 1/8	1.1	0.6	9.83
020-1072	NRVH 22s *	1 1/8	1.1	4.3	9.83
020-1021	NRV 28s	1 1/8	2.4	0.6	21.96
020-1029	NRVH 28s	1 1/8	2.4	4.3	21.96
020-1056	NRV 28s *	1 3/8	2.4	0.6	21.96
020-1068	NRVH 28s *	1 3/8	2.4	4.3	21.96
020-1026	NRV 35s	1 3/8	2.4	0.6	33.52
020-1034	NRVH 35s	1 3/8	2.4	4.3	33.52
020-1061	NRV 35s *	1 5/8	2.4	0.6	33.52
020-1073	NRVH 35s *	1 5/8	2.4	4.3	33.52

* Oversize connections

- 2) Δp = the minimum pressure at which the valve is completely open.
The NRVH with a stronger spring is used in the discharge line from compressors connected in parallel.
- 3) Cv value is the water flow in gal/min at a pressure drop across valve of 1 psi, $\rho = 10$ lb/gal.

Metric Conversions

- 1 psi = 0.07 bar
- 1 in. = 25.4 mm
- US gal/min = 0.86 m³/h