N 0150 SERIES
PROCESS VACUUM PUMPS

N 0150 SP.9 E

ADVANTAGES

- Twofold safety: The combination of a working diaphragm and an additional safety diaphragm prevents gas from escaping in the event of a fracture (.12)
- The robust design will hold up to challenging operating conditions
- High level of gas tightness Following leakage rates are available:
  .9 ≙ < 6 x 10^{-3} mbar l/s
  SP.13 ≙ < 6 x 10^{-6} mbar l/s
  ST.13 ≙ < 1 x 10^{-5} mbar l/s
  SP.12 ≙ < 6 x 10^{-6} mbar l/s

POSSIBLE AREAS OF USE

- Energy technology – especially in nuclear facilities
- Chemical industry
- Process industry
- Research and development

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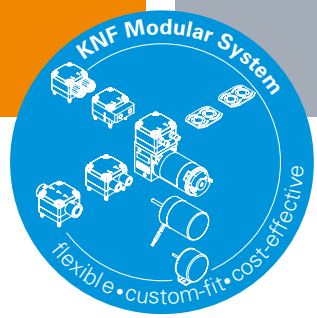


PERFORMANCE DATA												
Series model	**N 0150**											
Material design	**AP.9 E**		**SP.9 E**		**SP.13 E**		**ST.9 E**		**ST.13 E**		**SP.12 E**	
Pump head	Aluminum		Stainless steel									
Diaphragm	EPDM						PTFE-coated				EPDM	
Valves	Stainless steel											
Flow rate at atm. pressure (l/min)	130.0 ± 10 %						100.0 ± 10 %				130.0 ± 10 %	
Ultimate vacuum (mbar abs.)	120						130				120	
Max. operating pressure (bar rel./psig)	1.0/14.5											
Permissible ambient temperature (°C)	+5 ... +40											
Permissible media temperature (°C)	+5 ... +40											
Weight (kg/lbs)	34.5/ 75.9	40.5/ 89.1	40.5/ 89.1	46.5/ 102.3	40.5/ 89.1	46.5/ 102.3	40.5/ 89.1	46.5/ 102.3	40.5/ 89.1	46.5/ 102.3	43.0/ 94.6	48.5/ 106.7
ELECTRICAL DATA												
Voltage (V)	230	230/ 400	230	230/ 400	230	230/ 400	230	230/ 400	230	230/ 400	230	230/ 400
Motor	Capac-itor motor	Three-phase motor	Capac-itor motor	Three-phase motor	Capac-itor motor	Three-phase motor	Capac-itor motor	Three-phase motor	Capac-itor motor	Three-phase motor	Capac-itor motor	Three-phase motor
Protection class motor	IP 55											
Frequency (Hz)	50											
Power P_1 (W)	0.90											
I_{max} (A)	7.80	6.10/ 3.50	7.80	6.10/ 3.50	7.80	6.10/ 3.50	7.80	6.10/ 3.50	7.80	6.10/ 3.50	7.80	6.10/ 3.50

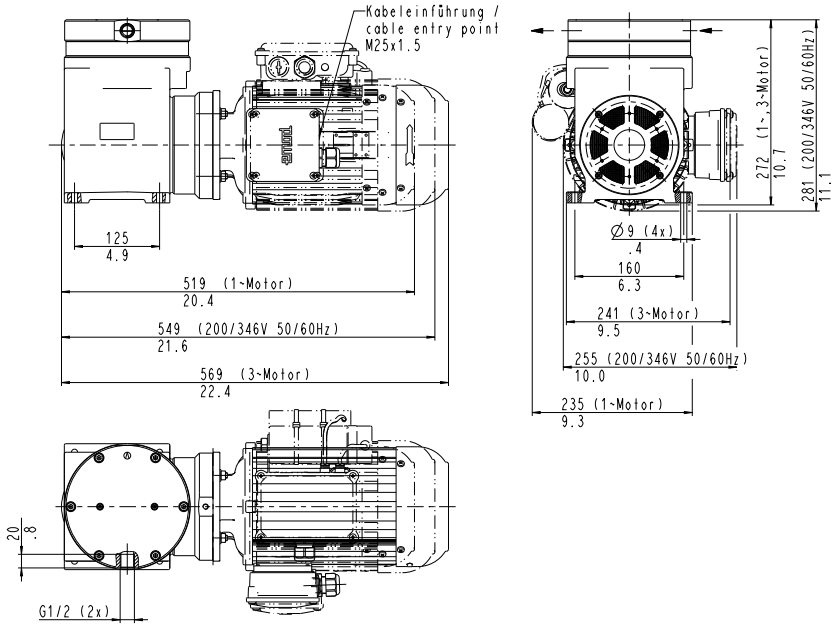
N 0150 AP.9 E | SP.9 E | SP.13 E | ST.9 E | ST.13 E

PERFORMANCE DATA

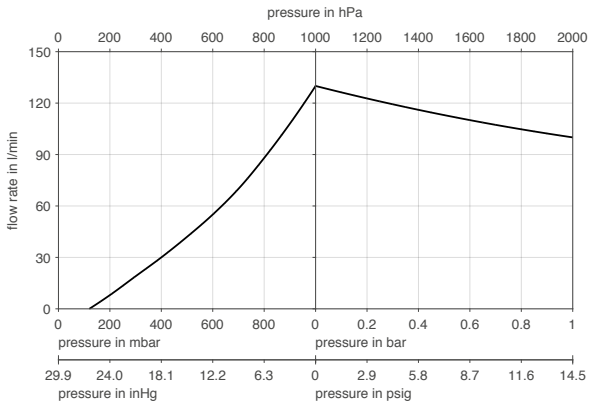
Series model	Flow rate at atm. pressure (l/min)[1]	Max. operating pressure (bar rel./psig)	Ultimate vacuum (mbar abs.)
N 0150 AP.9 E	130.0 ± 10 %	1.0/14.5	120
N 0150 SP.9 E	130.0 ± 10 %	1.0/14.5	120
N 0150 SP.13 E	130.0 ± 10 %	1.0/14.5	120
N 0150 ST.9 E	100.0 ± 10 %	1.0/14.5	130
N 0150 ST.13 E	100.0 ± 10 %	1.0/14.5	130

[1] Liter at STP

N 0150 __.9 E | S_.13 E



N 0150 _P.__ E



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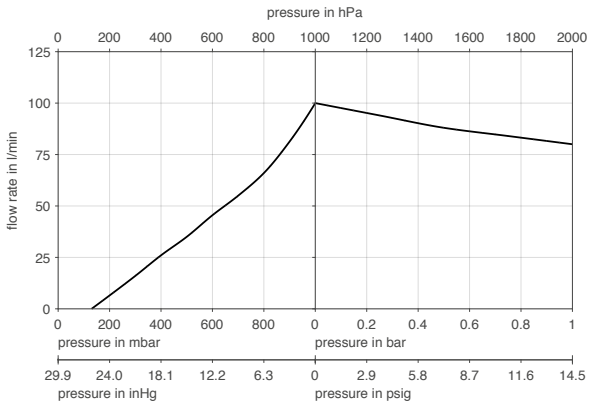
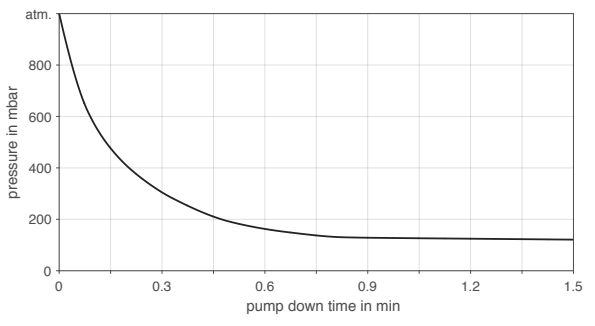
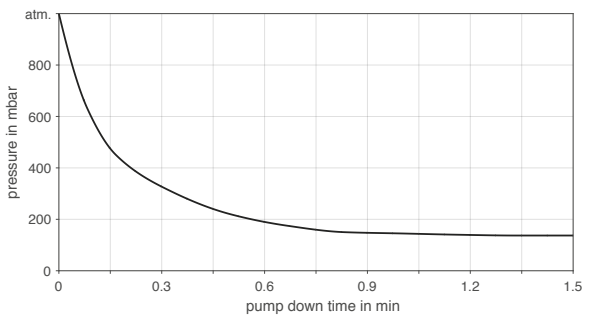


N 0150 _P.__ E | PUMP DOWN TIME FOR 20 LITER VESSEL



N 0150 _T.__ E | PUMP DOWN TIME FOR 20 LITER VESSEL



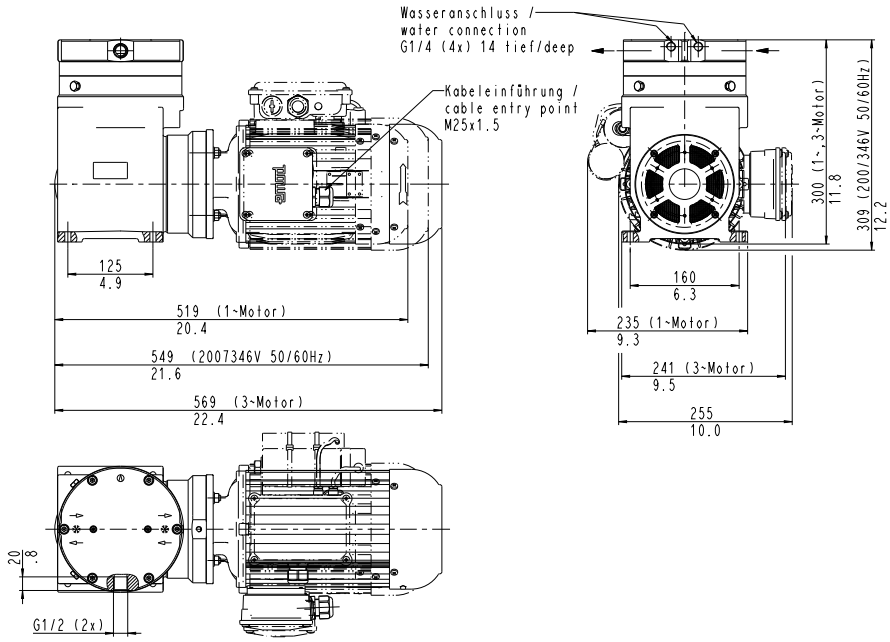
N 0150 SP.12 E

PERFORMANCE DATA

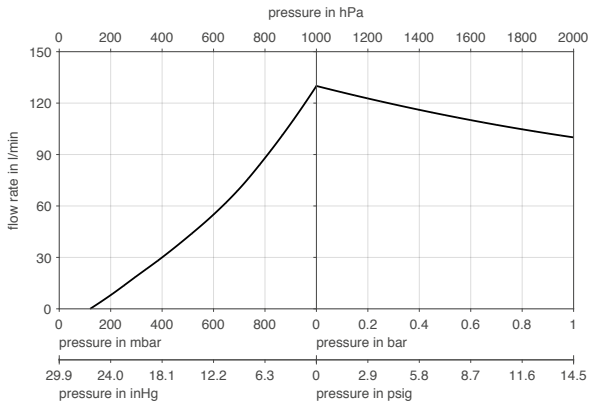
Series model	Flow rate at atm. pressure (l/min)[1]	Max. operating pressure (bar rel./psig)	Ultimate vacuum (mbar abs.)
N 0150 SP.12 E	130.0 ± 10 %	1.0/14.5	120

[1] Liter at STP

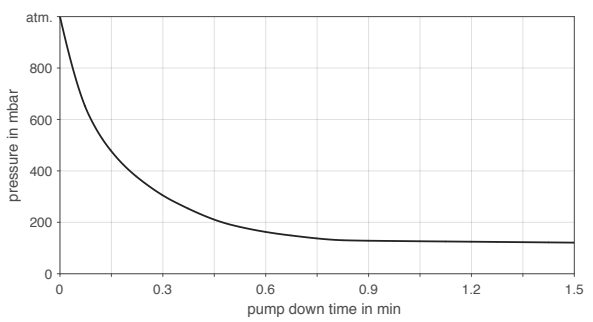
N 0150 SP.12 E



N 0150 SP.12 E



N 0150 SP.12 E | PUMP DOWN TIME FOR 20 LITER VESSEL



ACCESSORIES

Description	Part No.
Base plate with rubber-bonded metals	304463
Base plate with rubber-bonded metals N 0150 SP.12 E	304440
Connection water cooling (only in combination with stainless steel pump heads) N 0150 S_.9 E | S_.13 E | SP.12 E	305998
Wrench for retainer plate	018816
O-ring for lock screw (.12)	026056

SPARE PARTS

Description	Part No.
N 0150 _P.9 E | SP.13 E	
Diaphragm	047013
Reed valve for suction side	043951
Reed valve for pressure side	043949
O-ring D55x3.0 EPDM	047016
O-ring (.13 only) D150x3.0 EPDM	047372
O-ring (.13 only) D34x3.0 EPDM	047373
N 0150 ST.9 E | ST.13 E	
Diaphragm	116991
Reed valve for suction side	043951
Reed valve for pressure side	043949
O-ring D55x3.0 FPM	002458
O-ring (.13 only) D150x3.0 FPM	002461
O-ring (.13 only) D34x3.0 FPM	045499
N 0150 SP.12 E	
Working diaphragm	027252
Safety diaphragm	047379
Reed valve	003475
O-ring D55x3.0 EPDM	047016
O-ring D150x3.0 EPDM	047372
O-ring D34x3.0 EPDM	047373

The performance values for the series models shown on this data sheet were determined under test conditions.
The actual performance values may differ and depend in particular on the usage conditions and therefore on the specific application, on the parameters of the components involved in the user's system and on any technical modifications carried out which deviate from the standard configuration or the as delivered condition.

If individual designs have been created for specific customers on the basis of series models, other technical performance data may apply.
Before operation begins, the relevant operating instructions and/or assembly or installation instructions should be read and the safety information contained in these instructions should be noted.
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