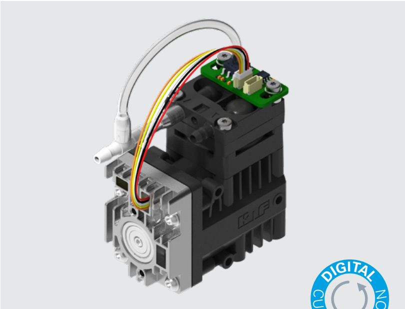
NVC830 HP - VACUUM CONTROL SERIES
MICRO DIAPHRAGM GAS PUMPS



NVC830KPDC-BI HP

ADVANTAGES

- Closed-loop vacuum control
- Configurable pump interface & performance
- Uncontaminated flow
- Customizing available
- Maintenance-free
- Can operate in any installed position
- Long product life
- High pneumatic performance
- Compact size/high power density
- High condensate resistance

POSSIBLE AREAS OF USE

- Medical
- Analytical equipment
- Emission measurement
- Reprographic
- Degassing
- Safety/Security

Please visit our website
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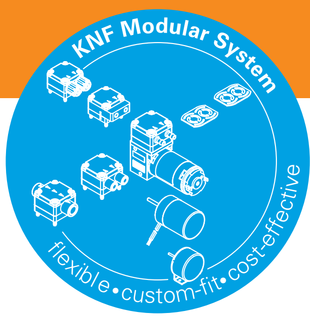
to get more information.



PERFORMANCE DATA			
Series Model	**NVC830 HP**		
Material design	**KPDC-BI_**		
Pump head	PPS		
Diaphragm	EPDM (FKM or PTFE on request)		
Valves	EPDM (FKM or PTFE on request)		
Flow rate at atm. pressure (l/min)	1.9	3.6	4.7
Ultimate vacuum (mbar abs.)	200	200	200
Sensor Accuracy / Drift	+/- 15 mbar / 1 % per year		
Permissible media and ambient temperature (° C / ° F)	+5° C to +40° C / 41° F to 104° F (extended temperature on request)		
Weight (g/oz)	180 / 6.40		
ELECTRICAL DATA			
Voltage (V)	6	12	24
Motor	Integrated brushless DC, 2- / 4-wire or 5-wire, 6 - 24V		
I_{max} (A)	0.60	0.70	0.55
Communication Interface	UART TTL 3.3V Level (UART RS232, I^2C or CAN Bus on request)		

NVC830KPDC-BI_ HP

PERFORMANCE DATA

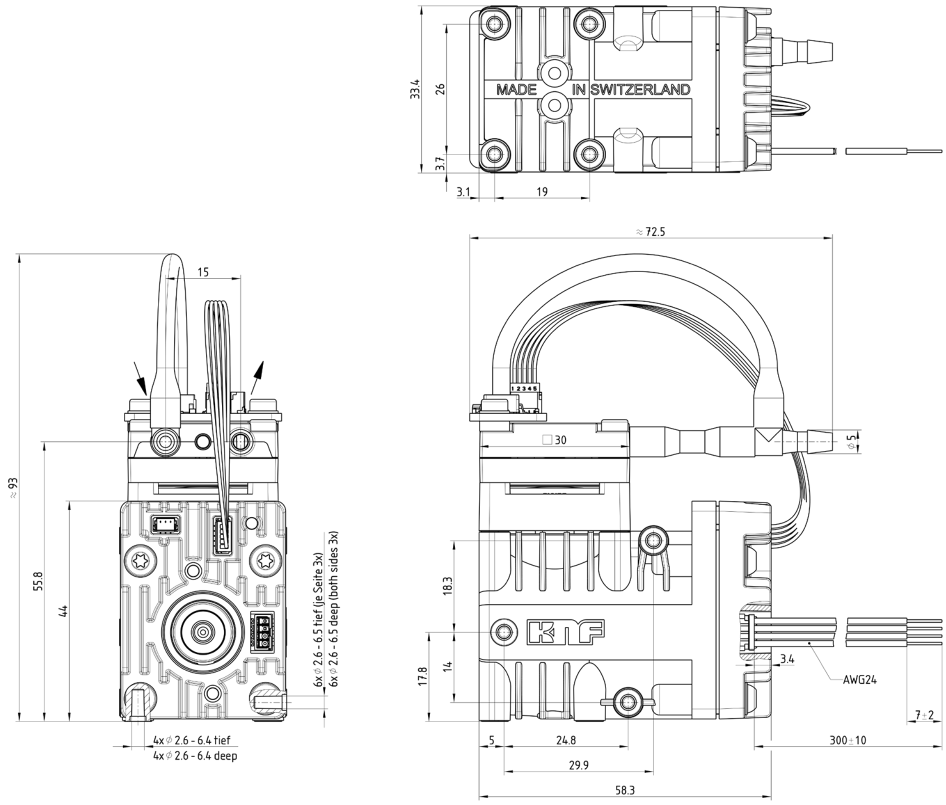
Series model	Flow rate at atm. pressure (l/min)	Max. operating pressure (bar rel)	Ultimate vacuum (mbar abs.)
NVC830KPDC-BI HP 6V	1.9	-	200
NVC830KPDC-BI4 HP 6V	1.9	-	200
NVC830KPDC-BI5 HP 6V	1.9	-	200

NVC830KPDC-BI_ HP

PERFORMANCE DATA

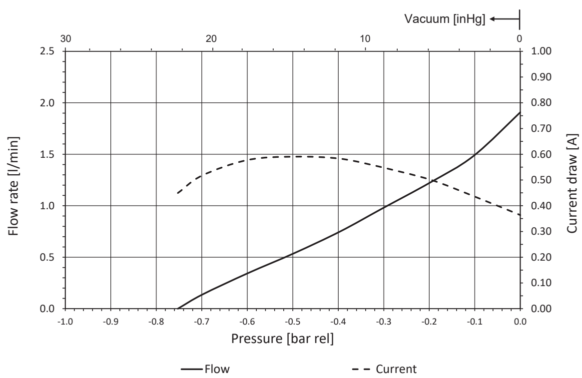
Series model	Flow rate at atm. pressure (l/min)	Max. operating pressure (bar rel)	Ultimate vacuum (mbar abs.)
NVC830KPDC-BI HP 12V	3.6	-	200
NVC830KPDC-BI4 HP 12V	3.6	-	200
NVC830KPDC-BI5 HP 12V	3.6	-	200

NVC830KPDC-BI_ HP

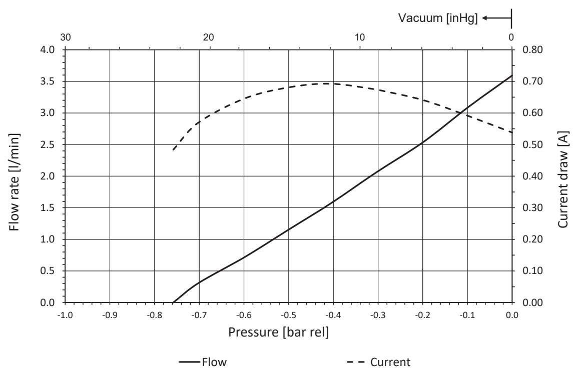


Dimensions in mm

NVC830KPDC-BI_ HP 6V



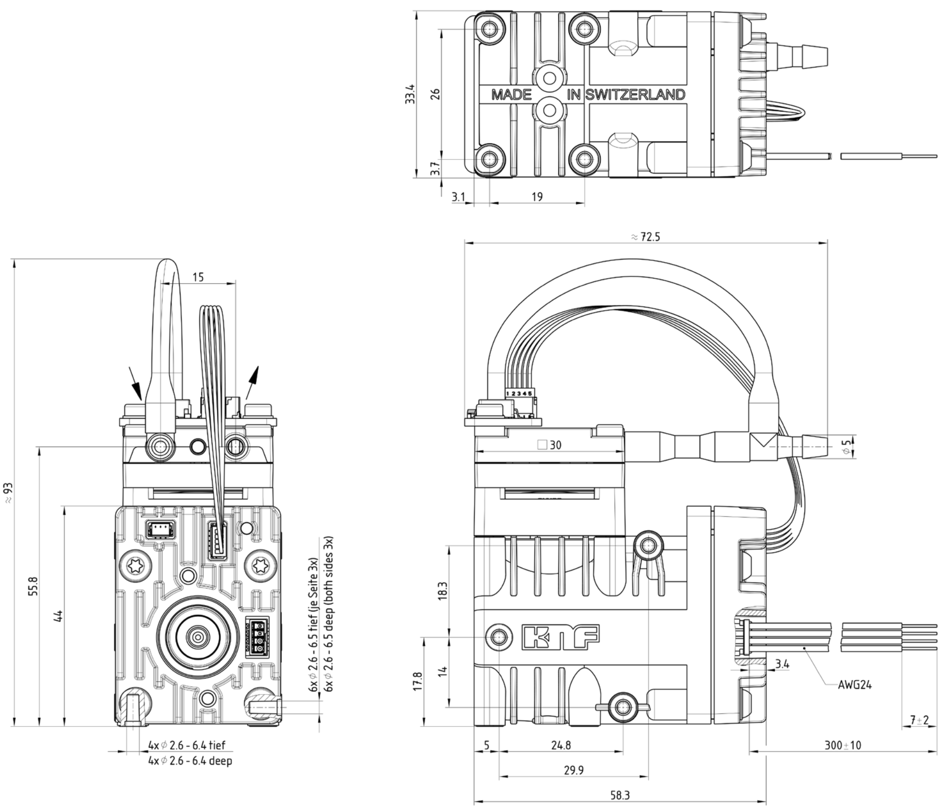
NVC830KPDC-BI_ HP 12V



NVC830KPDC-BI_ HP

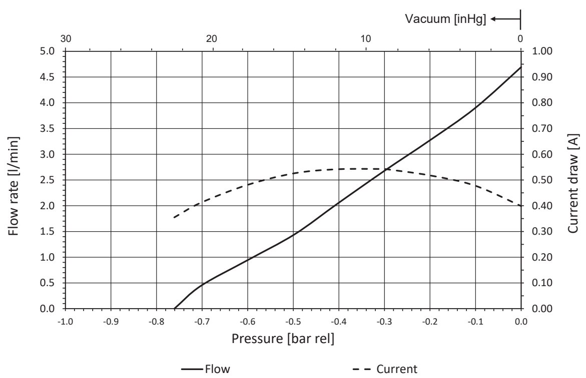
PERFORMANCE DATA			
Series model	**Flow rate at atm. pressure (l/min)**	**Max. operating pressure (bar rel)**	**Ultimate vacuum (mbar abs.)**
NVC830KPDC-BI HP 24V	4.7	-	200
NVC830KPDC-BI4 HP 24V	4.7	-	200
NVC830KPDC-BI5 HP 24V	4.7	-	200

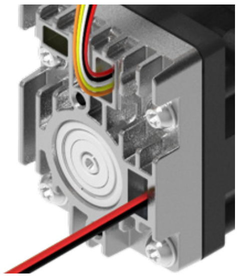
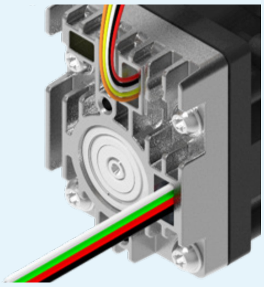
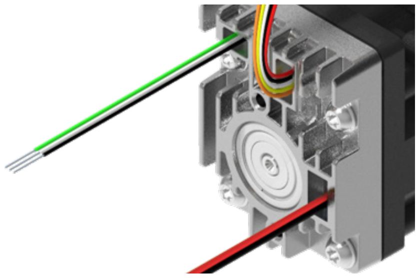
NVC830KPDC-BI_ HP



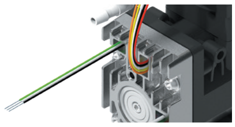
Dimensions in mm

NVC830KPDC-BI_ HP 24V

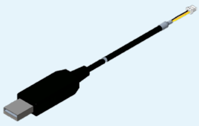


INTELLIGENT FEATURES		
Operation Modes	**Details**	**Description**
Fixed Set Point	Evacuation to a pre-programmed vacuum level 	The pump is preprogrammed to a defined vacuum level prior to order. The pump will generate and hold the programmed vacuum level with a closed loop control system during operation.
Controllable Set Point	Control and change vacuum level with analog signal 	The pump can change and control the vacuum level by changing the analog input signal (V_{CTRL}). e.g. 0V = 0 mbar rel / atmos. pressure 1V = -200 mbar rel 2V = -400 mbar rel ... 4V = -800 mbar rel The pump will generate and hold the vacuum level with a closed loop control system during operation. The effective vacuum level is output by a PWM signal.
Communicate	Pump is operated and controlled with UART TTL from an external Master System 	Allows communicating with the pump and changing parameter values in real time: e.g. Start, Stop, Set Points, PID-parameters. Command libraries available in various programming languages.

OPTIONS

Description	Illustration	Part No.	Details
Eccentric		On request	Other eccentricities are available to meet your operating point best.
Communcation Interface		On request	Various communcation interfaces available depeding on your systems preference:

ACCESSORIES

Description	Illustration	Part No.	Details
Silencer		338498	For hose barbs
Mounting plate		164313	Hole distance 43x22mm. Inner diameter of the sleeve is 3.5 mm, screws are not included.
Rubber-bonded metal		On request	
Serial-interface adapter		347669	USB-A cable to parameterize the pump with the KNF Connect webtool.
Filter		316422	KNF filters protect both the pumps and components from particles, crystals, and fibers that could impair their proper functioning.

SPARE PARTS

Description	Illustration	Part No.	Details
Spare part kit		On request	One kit per head containing valve and diaphragm.

DIGITAL CUSTOMIZATION

VACUUM CONTROL

Equipped with intelligent features, this pump introduces integrated vacuum control for precise and reliable performance. By continuously monitoring the vacuum level, it automatically adjusts to maintain your defined setpoint — ensuring optimal stability and efficiency.

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.
KNF reserves the right to make changes to the product and the associated documentation without prior notice to the customer.

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