



CAMERA HOUSING WITH AIR CURTAIN

Datasheet

08/2018

atesystem 
FOCUSED ON **DETAIL**

ATEsystem s.r.o.
Studentská 6202/17
708 00 Ostrava-Poruba
Czech Republic

M +420 595 172 720
E atesystem@atesystem.cz
W www.atesystem.cz

DOCUMENT INFORMATION

Revision No.	Author	Revision date	Description
0	Navrátil J.	15 March 2018	Document creation
1	Navrátil J.	13 June 2018	Drawings of individual variants, order and technical information
2	Navrátil J.	16 July 2018	Protection increased from IP66 to IP67

Appendixes

Notes

Contact

ATEsystem s.r.o.	T	+420 595 172 720
Studentská 6202/17	F	+420 595 170 100
708 00 Ostrava 8 – Poruba	E	atesystem@atesystem.cz
Czech Republic	W	www.atesystem.cz

All rights reserved. No part of this document may be published, transmitted in any form on any medium, reproduced or translated into foreign languages without previous written approval of ATEsystem s.r.o.

ATEsystem s.r.o. does not assume any guarantees for the content of this document and any incidental misprints.

Names of products and companies used in this document may be trademarks or registered trademarks of their respective owners.

ATEsystem s.r.o. © 2018

TABLE OF CONTENTS

1 KEY FEATURES..... 4

2 PRODUCT VARIANTS 5

2.1 VNOK-A 6

2.2 VNOK-B 7

2.3 VNOK-C 8

2.4 VNOK-D 9

3 MOUNTING..... 10

4 COMPRESSED AIR CONNECTION 10

5 ORDER INFORMATION 11

6 ACCESSORIES 11

1 KEY FEATURES

- Using cameras under unfavourable conditions and in dirty environments.
- IP67 protection - against dust and other dirt, moisture, water and emulsions.
- Designed for Basler ace cameras and their dimensional equivalents.
- Robust mechanical design – made of aluminium.
- Basic variant without air curtain.
- Three advanced versions offer different air curtain designs for use with compressed air distribution (2 to 8 bar)
- The air curtain significantly prolongs cleaning periods, which reduce costs and maintenance time.
- The back of the housing contains an M25 thread, for example, for cable entry system.
(The type of entry system will affect the resulting IP protection.)
- Unified compressed air inlet G 1/8" for all variants.



Fig. 1 – Camera housing with protective air curtain (VNOK-D variant)

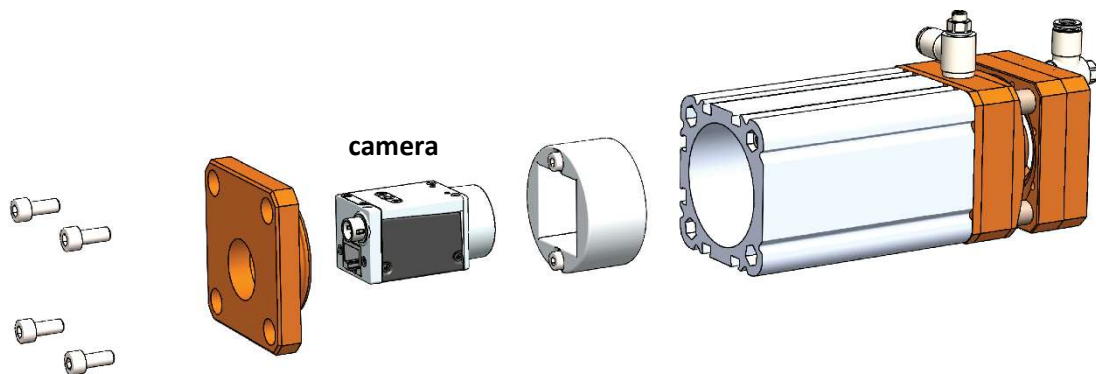


Fig. 2 – Position of the camera in the housing

2 PRODUCT VARIANTS

All variants of the housing include a body made of extruded aluminium profile and unified rear part with M25 thread. The front of the housing is different; VNOK-A includes only a glass window, higher variants also include air curtain. **The compressed air consumption applies at a pressure of 6 bar; the range is determined by adjusting the reducing valve according to the needs and demands of the environment.**



The body length is marked "A" in the drawings; the options are 90, 140 and 190 mm. The inside of the camera and lens housing is always a cylinder with a diameter of 50 mm and length A – 16 mm.

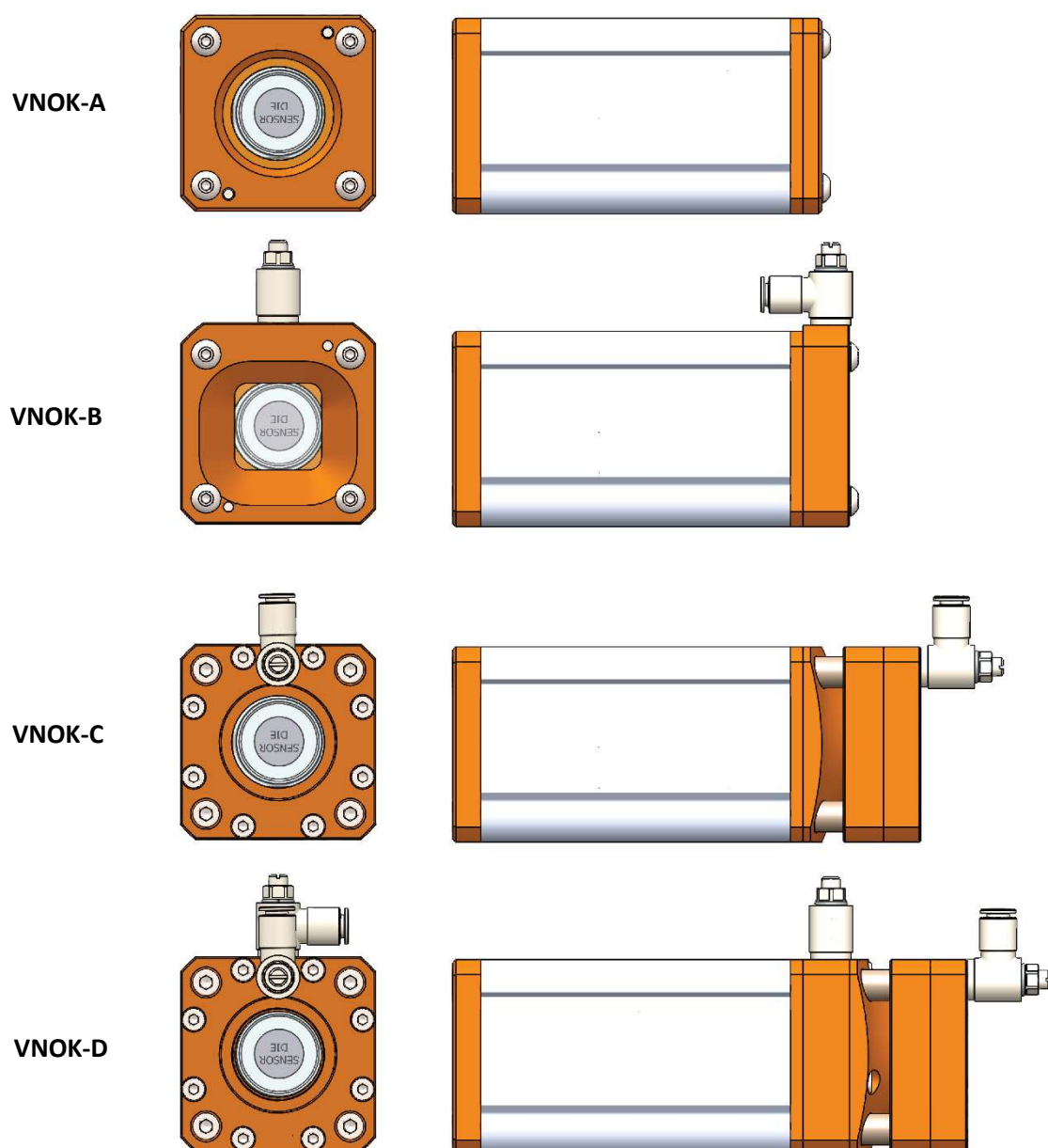


Fig. 3 Comparison of housing variants

2.1 VNOK-A

- Simple mechanical housing - basic variant without air curtain.
- Suitable for environments where there is no risk of rapid staining of the window.
- Easier installation - no air supply required.

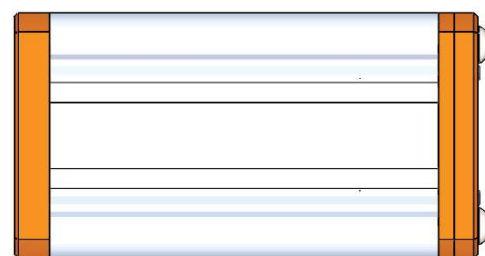
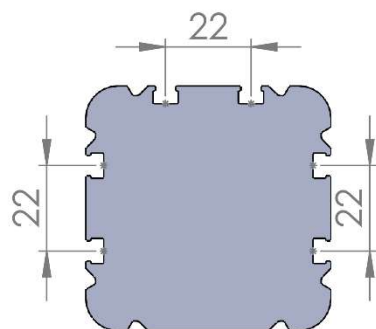
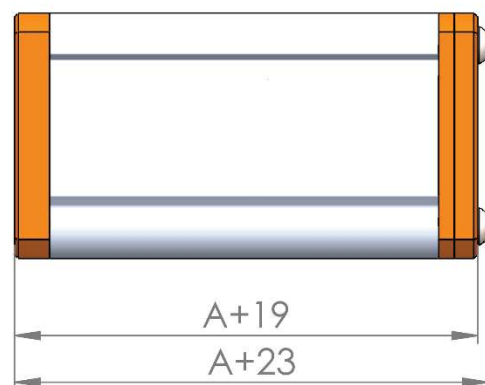
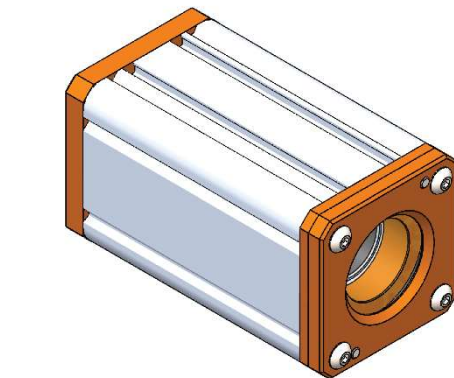
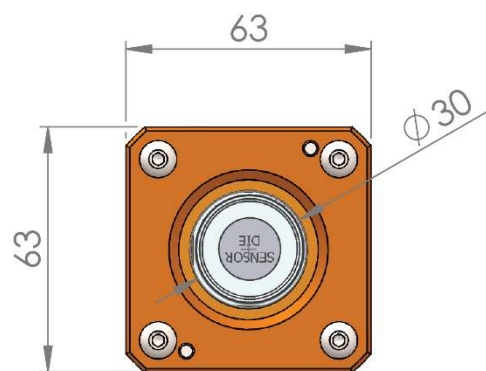


Fig. 4 Dimensions of the VNOK-A housing

2.2 VNOK-B

Camera protection in less demanding applications:

- Includes a basic air curtain to remove dirt from the glass covering the lens.
- In case of intermittent use, it is suitable for removing dry dust impurities.
- For permanent use, it is also effective against moist dust, oily smoke, and the like.
- Compressed air consumption: 55 up to 180 l_n/min
- Recommended supply hose (for a length of up to 5 m): PU 8/5 mm

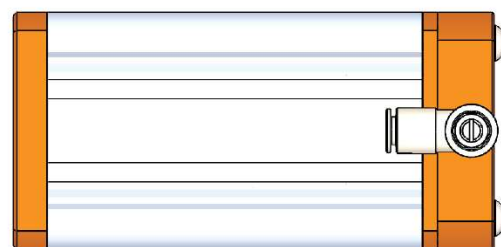
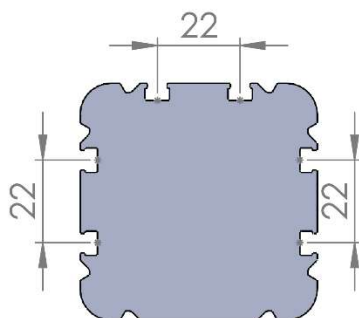
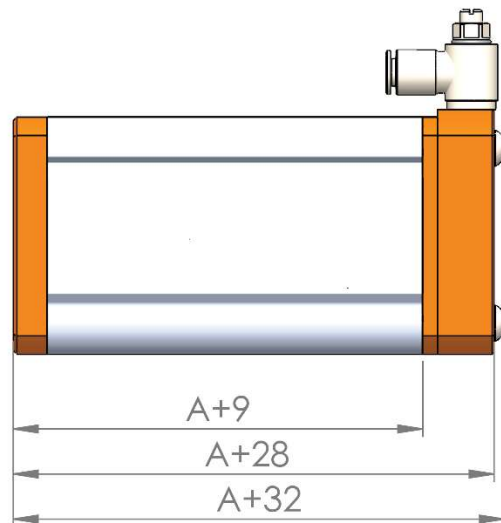
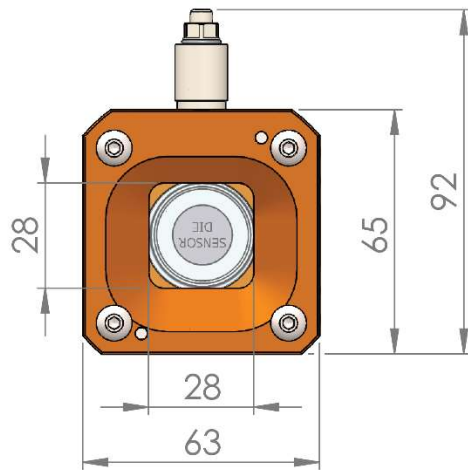
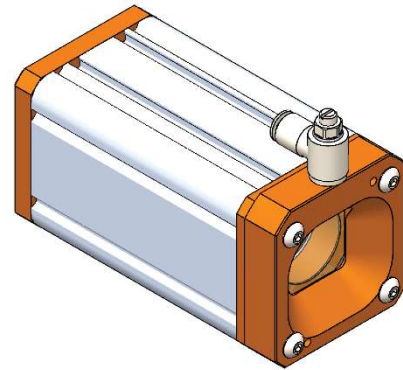


Fig. 5 Dimensions of the VNOK-B housing

2.3 VNOK-C

Camera protection in moderate applications:

- The camera housing with integrated active blowing - airflow cone is directed outwards from the lens cover glass, therefore prevents staining.
- Can also be used against lightly splashing fluids and larger impurities.
- Compressed air consumption: 170 up to 480 l_n/min
- Recommended supply hose (for a length of up to 5 m): PU 10/6.5 mm
- **To achieve the best possible performance, the reducing valve can be replaced with a standard screw fitting.**

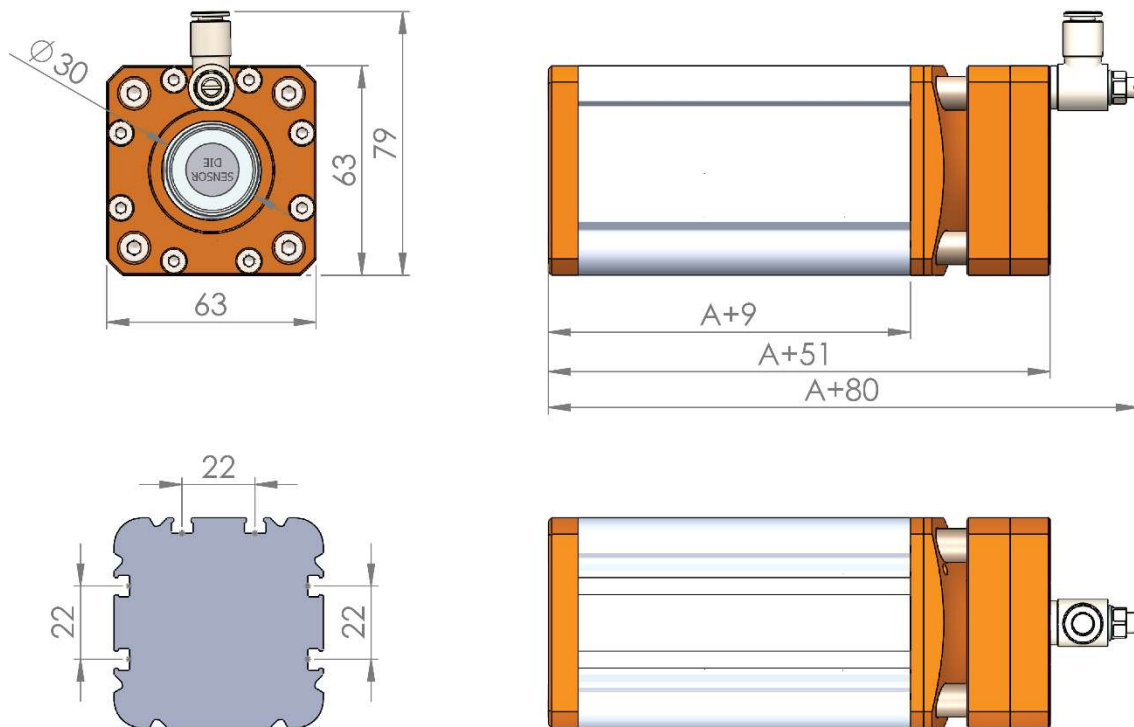
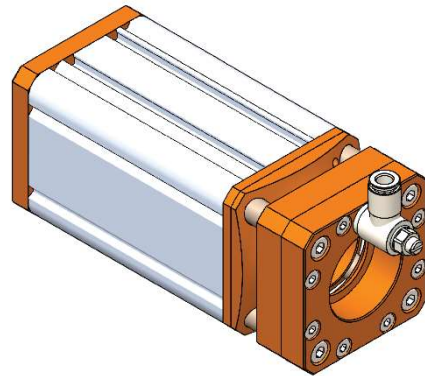


Fig. 6 Dimensions of the VNOK-C housing

2.4 VNOK-D

Variant for the most demanding applications:

- Camera housing with integrated multistage active blowing.
- Includes a combination of a cone nozzle, a transvector nozzle and front-mounted flat air curtain.
- Protection against splashing liquids.
- Suitable for use in CNC machines.
- Compressed air consumption: 420 up to 740 l_n/min
- Recommended supply hose (for a length of up to 5 m): PU 12/9 mm
- Recommended supply hose (for a length of up to 2 m): PU 10/6.5 mm
- **To achieve the best possible performance, the reducing valve can be replaced with a standard screw fitting.**

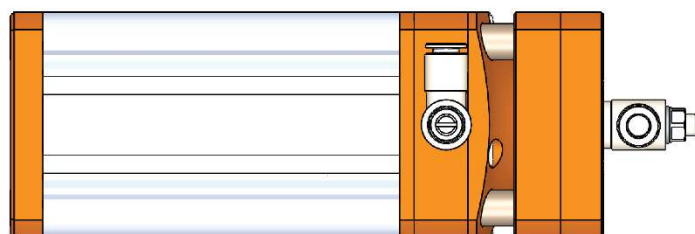
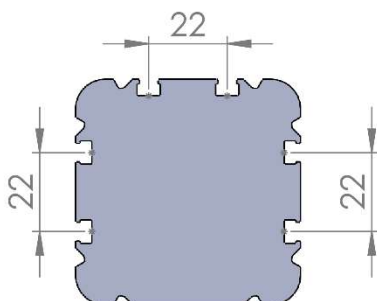
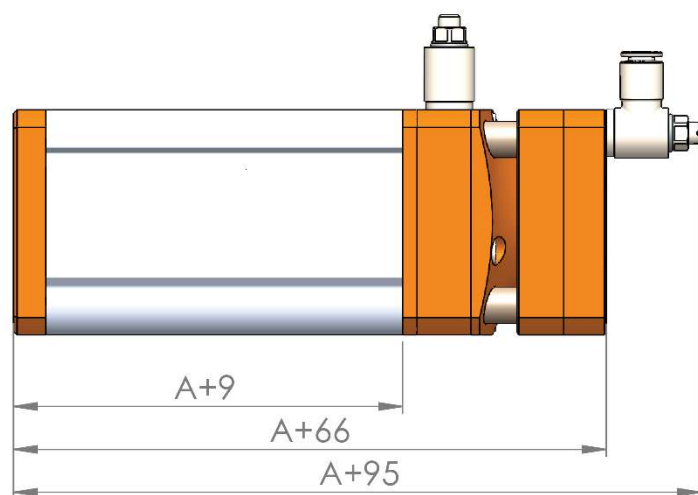
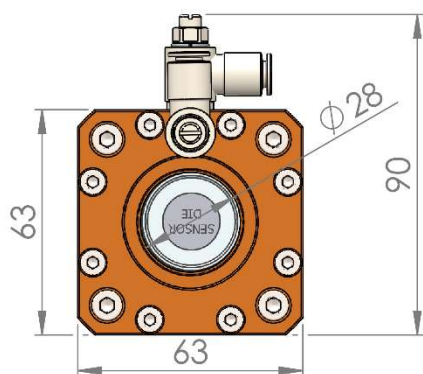
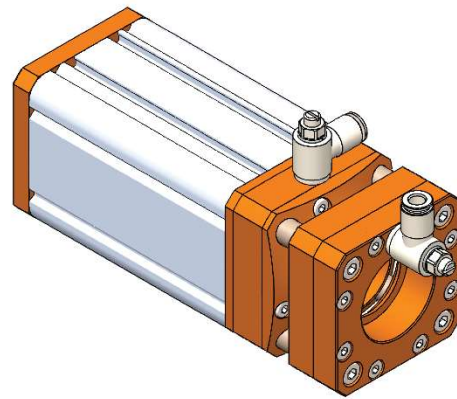
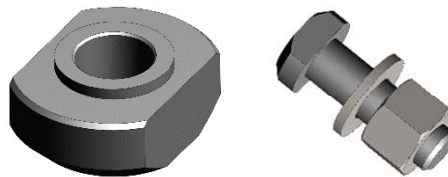


Fig. 7 Dimensions of the VNOK-D housing

3 MOUNTING

The T-slots, which are used for installation into the target device, are located on the three sides of the housing. For all variants, they are at an identical distance of 22 mm apart – see the drawings of each variant. Their length corresponds to the length "A" of the housing body.

We recommend using original mounting accessories – the VNOK-M nut or the VNOK-S screw that fit into the T-slots.



**Fig. 8 Mounting nut (left) and screw including nut
and washer (right)**

We can offer a complete custom mounting solution if required for a specific application.

4 COMPRESSED AIR CONNECTION

The standard quality of non-lubricated compressed air is sufficient for the camera housing with air curtain. It is advisable to have the housing connected after an air filter and regulator with a condensate separator with filtration of at least 25 µm. Air curtains can operate at a pressure of 2 to 8 bar depending on the environment (the more demanding the environment, the more pressure may be needed). The housing is designed to be able to operate with a standard pressure of 6 bar in compressed air distribution.

To connect the compressed air to the camera housing, we recommend using a reducing valve to ensure a simple connection of the plastic hose (preferably PU) to the push-in fittings while allowing the blowing intensity to be controlled as required by the particular application. Turning the reducing valve screw clockwise reduces blowing power and vice versa.

All inputs to air curtains are G 1/8". A reducing valve or 8-mm hose fitting usually come with them as standard. In some cases (described in each housing variant) it is necessary to bring the hose with a larger diameter to the curtain and reduce it to 8 mm in the close proximity of the curtain.

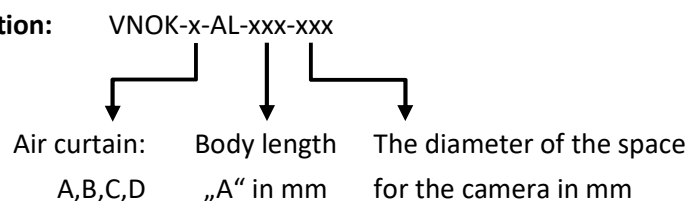


Caution:

The efficiency of the air curtain depends on the weight, speed and direction of the particles. The required blowing intensity and the compressed air consumption are also related to the environment.

5 ORDER INFORMATION

Product code information:



Order number	Product number	Air curtain	Body length „A“ (mm)
11400001	VNOK-A-AL-090-050	NO	90
11400002	VNOK-A-AL-140-050	NO	140
11400003	VNOK-A-AL-190-050	NO	190
11400004	VNOK-B-AL-090-050	basic	90
11400005	VNOK-B-AL-140-050	basic	140
11400006	VNOK-B-AL-190-050	basic	190
11400007	VNOK-C-AL-090-050	conical	90
11400008	VNOK-C-AL-140-050	conical	140
11400009	VNOK-C-AL-190-050	conical	190
11400010	VNOK-D-AL-090-050	two-stage	90
11400011	VNOK-D-AL-140-050	two-stage	140
11400012	VNOK-D-AL-190-050	two-stage	190

6 ACCESSORIES

Order number	Product number	Name
11400013	VNOK – M	mounting T-slot nut, M4 thread
11400014	VNOK – S	mounting T-slot screw, M5 thread, including washer and nut
11400015	SVKB-08-18	reducing valve, for screwdriver, 1/8" connection, hose 8 mm
11400016	KNB-08-18	elbow fitting for an 8-mm hose

**This product is a result of cooperation between ATEsystem s.r.o.
and MOS technik s.r.o.**