



## OPERATING AND MAINTENANCE INSTRUCTIONS WISTRO SERIES IL EXTERNAL FAN UNITS

**WISTRO** units are normally supplied ready for installation. The bearings are designed to be maintenance-free for a service life of 40,000 operating hours.

**Protection class IP66** according to EN 60529

**Certified** according to **cURus**

**The relevant safety regulation** with regard to protection from touching moving parts (DIN EN ISO 13857) is fulfilled.

**Using standard fans for hazardous areas** is not allowed. Therefore, special fans are available.

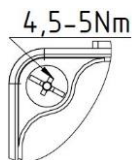
**Before installation** care must be taken that the fan wheel moves freely and the blades of the fan wheel are not deformed or bent. This may cause imbalance, which can have a negative effect on the operating life.

Safety as per DIN EN ISO 13857 at the air outlet side must be ensured by the operator at the place of use.

Wistro-fans can be operated and stored in a temperature range between -20°C and +60°C. Low temperature versions can be operated and stored between -40°C and +60°C.

**During installation** of the unit, care must be taken that this is carried out correctly, so that the unit is securely attached to the motor housing. The attached closing cap is only intended for transportation; for use as intended, this must be replaced with a suitable cable gland. The cable gland must at least correspond to IP 66 and must be suitable for the ambient conditions in the area of use.

**The electrical connection** is made according to the operating mode (single phase or three phase) in accordance with the connection diagram. The connection diagram is engraved or glued into the cover of the terminal box. The cables to be connected must be provided with insulated fork terminals or insulated eyelets. The nuts need to be tightened to a torque of 2Nm. If necessary, the fan can be protected with an external protection device (e.g. motor protection switch). Please refer to the type plate for the maximum permissible current.



After electrical connection is complete, the terminal box must be attached with screws tightened to a torque of 4.5 - 5Nm.

**After installation** a test run must be carried out. Care must be taken that the air flow is sucked through the ventilation grille and blown over the motor which is to be cooled (see the arrow indicating the direction of rotation on the inner surface of the ventilation grille). The fan grill must not be blocked by obstacles.

Caution: The cooling effect is considerably restricted if the direction of rotation is not correct.

With the low temperature versions (-40°C) starting may be more difficult at low ambient temperatures. This does not indicate that the motor is defective.

**During operation** care must be taken that especially in dusty atmospheres, excessive dust deposits do not accumulate on the the fan blades or between the hub and the motor housing, as this causes imbalance and rotating resistances, which will reduce the service life. This also applies to atmospheres containing particles, e.g. in the wood processing industry or in coal grinding mills. A protective cover or special fan variant is recommended for these, or similar applications.

A protective cover can easily be retrofitted by loosening the four flange screws (Instar screws), pushing in the fastening bracket and re-tightening the screws.

**For maintenance or repair work** it is essential that the connection is disconnected, and is secured against switching on again.

**The disposal of the fan unit** has to comply with the local waste legislation.

## Additional product information according to ERP327/2011

All of the product information stated in this product information has been determined under the operating conditions listed in Table 1.

Size	160/180/200 ILI	204/225/249 ILI	250/280/315 ILI	355/400/450/500/560 IL
Phase	3~	3~	3~	3~
Rated voltage [V]	400	400	400	400
Circuit	Y	Y	Y	Y
Frequency [Hz]	50	50	50	50
Type of data recording	Free-blowing	Free-blowing	Free-blowing	Free-blowing

Table 1: Measurement conditions

Size / Model number	160/180/200 ILI	204/225/249 ILI	250/280/315 ILI	355/400/450/500/560 IL
$\eta$ [%]	30,2/32,5/33,9	20,5/23,9/26,5	22,9/26,5/29,4	37,7/41,8/45,5/48,6/47,3
Measurement category	A	A	A	A
Efficiency category	Static	Static	Static	Static
Year of manufacture:	from 11/2022	from 2018	from 2018	from 2018
$\eta_{\max}$ [%]	34,8	32,1	35,9	48,7
$P_e$ [kW] @ $\eta_{\max}$	0,172	0,162	0,232	0,858
$dV/dt$ [m <sup>3</sup> /h] @ $\eta_{\max}$	1480	2280	3310	8350
$dP_s$ [Pa] @ $\eta_{\max}$	146	82	90	180
$n$ [1/min] @ $\eta_{\max}$	2866	1356	1374	1411
SFP	1	1	1	1

The fans described in these operating instructions have a modular structure. Removal of the fan can be carried out with normal tools.

For better cleaning the fan can be removed from the shaft by removing the circlip using light pressure. The force must be selected so that there is no excessive strain on the fan blades. Further disassembly results in the warranty becoming void. During cleaning care must be taken to avoid entry of dust or water through the shaft outlet.

The measurement was performed with a free-blowing fan with inlet nozzle according to ERP327/2011 and DIN EN 5801.