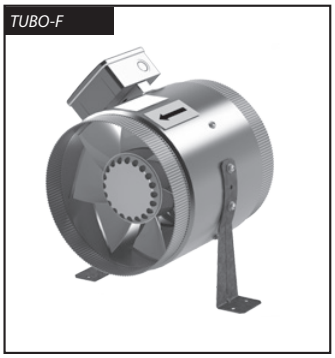

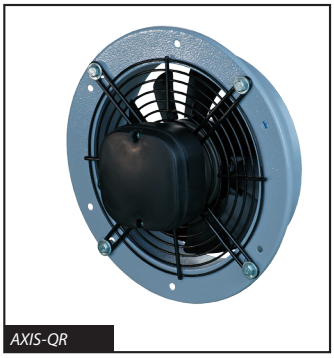

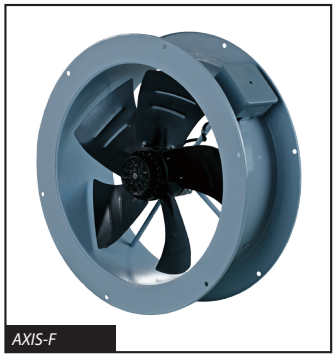

AXIAL FANS

Axis / Tubo

EN OPERATION MANUAL

BLAUBERG Ventilatoren

CONTENT

3	Introduction
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3	Safety rules
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BLAUBERG Company is happy to offer your attention the new high-quality axial fans Blauberg Axis and Blauberg Tubo. The solid team of high-qualified professionals with many years of working experience, technological innovations in design and production, high-quality components and materials from the top worldwide producers have become the precondition for the best fan in its class.

INTRODUCTION

The present operation manual contains technical description, technical data sheets, operation and mounting guidelines, safety precautions and warnings for safe and correct operation of the fan.

GENERAL

The axial fans Axis, Tubo are not a ready for use product. It is a component unit designed for integration into air conditioning and ventilation systems.

The fans Axis-Q, Axis-QR, Axis-QA, Axis-QRA are designed for direct air exhaust. The models Axis-F are designed for connection to Ø 205 mm up to 645 mm air ducts and the models Tubo-M, Tubo-MZ are designed for connection to Ø 160 mm up to 315 mm air ducts.

The fan has IEC Protection Class I and must be grounded.

The fans are allowed for operation only after final mounting, that includes installation of protecting devices in compliance with DIN EN ISO 13875 (DIN EN ISO 12100) as well as other construction safety equipment.

The fan design is regularly improved, so some models can slightly differ from those ones described in this service instruction.

SAFETY RULES

The fan complies with the requirements according to the EU norms and directives, to the relevant EU-Low Voltage Equipment Directives, EU-Directives on Electromagnetic Compatibility.

All operations related to the fan electrical connections, servicing and repair works are allowed only after the fan disconnection from power mains.

All mounting and servicing operations are allowed for duly qualified electricians with valid electrical work permit for electric operations at the units up to 1000 V after careful study of the present user's manual.

Please follow the safety regulations and working instructions (DIN EN 50 110, IEC 364).

Make sure the impeller and the casing are not damaged before connecting the fan to power mains. The casing internals must be free of any foreign objects which can damage the impeller blades.

Disconnect the fan from power mains prior to any operations related to the fan servicing and repair works.

Take measures to prevent contact with the fan to avoid physical damages during the fan step and start-up.

Misuse of the product or any unauthorized modification are not allowed.

The fan is designed for connection to ac single-phase or ac three-phase power mains, see „Technical Data". The fan is rated for permanent operation during non-stop power supply.

Take steps to prevent ingress of smoke, carbon monoxide and other combustion products into the room through open chimney flues or other fire-protection devices. Sufficient air supply must be provided for proper combustion and exhaust of gases through the chimney of fuel burning equipment to prevent back drafting. The maximum permitted pressure difference per living units is 4 Pa.

The transported air must not contain any dust or other solid impurities, sticky substances or fibrous materials.

The fan is not designed for use in an inflammable and explosive medium.

The transported medium must not have an aggressive effect on steel at the temperature stated on pages 5–8 of the section „Technical data".

Do not close or block the fan intake or exhaust vent not to disturb the normal air passage. Do not sit on the fan and do not put objects on the fan.

Follow the manual guidelines to ensure trouble-free operation and long service life of the product.

STORAGE AND TRANSPORTATION RULES

Store the delivered product in the manufacturer's original packing box in a dry ventilated premise with the ambient temperature from +5 °C up to +40 °C and relative humidity less than 80 % at the temperature +25 °C .

Store the fan in an environment with minimized risk of mechanical damages, temperature and humidity fluctuations. Store the fan inside a room or under a shelter.

Transport of the product is allowed by any vehicle in the manufacturer's original packing box. Use hoist machinery for handling and transportation to prevent possible mechanical damages of the product. Fulfil the requirements for transportation of the specified cargo type during cargo-handling operations.

Do not expose the product to extremely low or high temperatures.

MANUFACTURER'S WARRANTY

The fan complies with the requirements according to the EU norms and directives, to the relevant EU-Low Voltage Equipment Directives, EU-Directives on Electromagnetic Compatibility.

We hereby declare that the following product complies with the essential protection requirements of Electromagnetic Council Directive 2004/108/EC, 89/336/EEC and Low Voltage Directive 2006/95/EC, 73/23/EEC and CE-marking Directive 93/68/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. This certificate is issued following test carried out on samples of the product referred to above. Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards.

The manufacturer hereby warrants normal operation of the fan over the period of 2 years from the retail sale date provided observance of the installation and operation regulations.

In case of failure due to faulty equipment during the warranty period the consumer has the right to exchange it.

If case of no confirmation of the sale date, the warranty term shall be calculated from the manufacturing date.

The replacement is offered by the Seller.

The MANUFACTURER shall not be liable for any damage resulting from any misuse of or gross mechanic interference with the fan.

Please follow the operation guidelines always.

ATTENTION

The product is not allowed for use by children and persons with reduced physical, mental or sensory capacities, without proper practical experience or expertise, unless they are controlled or instructed on the product operation by the person(s) responsible for their safety. Supervise the children and do not let them play with the product.

WARNING

Do not dispose in domestic waste.

The unit contains in part material that can be recycled and in part substances that should not end up as domestic waste.

Dispose of the unit once it has reached the end of its working life according to the regulations valid where you are.

FAN DESIGN AXIS-Q / AXIS-QR / AXIS-QA / AXIS-QRA

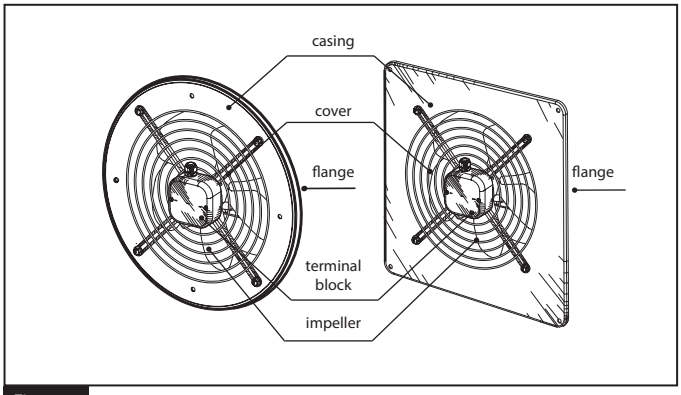

Fig. 1

DELIVERY SET

✓ fan – 1 item;
✓ operation manual.

MODIFICATIONS AND OPTIONS

AXIS-Q

Fan with a square mounting plate

AXIS-QR

Fan with a round mounting plate

FAN DESIGN AXIS-F

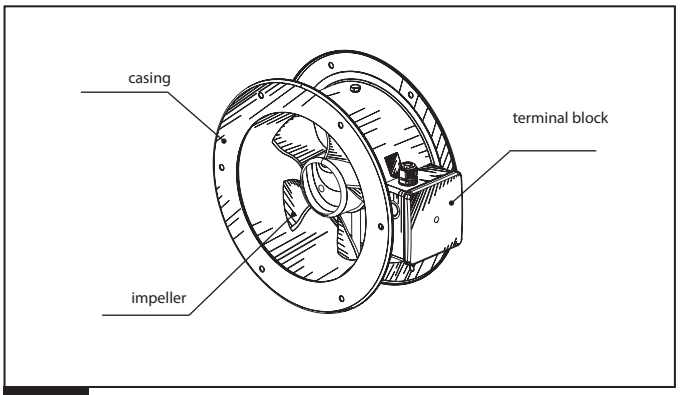

Fig. 2

DELIVERY SET

✓ fan – 1 item;
✓ operation manual.

FAN DESIGN TUBO-M / TUBO-MZ

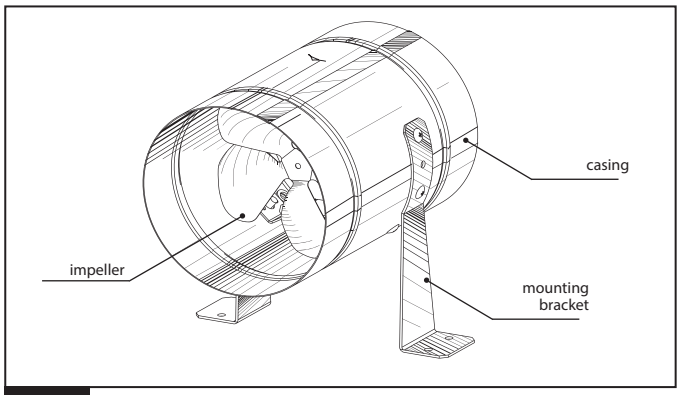

Fig. 3

DELIVERY SET

✓ fan – 1 item;
✓ screws and dowels - 4 items;
✓ mounting brackets – 2 items;
✓ operation manual.

MODIFICATIONS AND OPTIONS

TUBO-M

Fan made of polymer coated steel

TUBO-MZ

Fan made of galvanized steel

TECHNICAL DATA

AXIS-Q / AXIS-QR / AXIS-F

Technical data

	Axis-Q / Axis-QR / Axis-F 200 2E		Axis-Q / Axis-QR / Axis-F 250 2E		Axis-Q / Axis-QR / Axis-F 250 4E		Axis-Q / Axis-QR / Axis-F 300 2E	
Voltage	1~ 220-240		1~ 220-240		1~ 220-240		1~ 220-240	
Frequency [Hz]	50	60	50	60	50	60	50	60
Power [W]	55	61	80	91	50	56	145	178
Current [A]	0.26	0.28	0.4	0.42	0.22	0.24	0.66	0.79
Max. air flow [m^3/h]	860	875	1050	1150	800	865	2230	2280
RPM [min^{-1}]	2300	2550	2400	2990	1380	1730	2300	2410
Noise level, 3 m [dBA]	50	51	60	61	55	56	60	61
Max. transported air temperature [°C]	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50
Ingress Protection Rating	IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4	

	Axis-Q / Axis-QR / Axis-F 300 4E		Axis-Q / Axis-QR / Axis-F 350 4E		Axis-Q / Axis-QR / Axis-F 400 4E		Axis-Q / Axis-QR / Axis-F 450 4E	
Voltage	1~ 220-240		1~ 220-240		1~ 220-240		1~ 220-240	
Frequency [Hz]	50	60	50	60	50	60	50	60
Power [W]	75	92	140	147	180	240	250	325
Current [A]	0.35	0.4	0.65	0.66	0.82	1.08	1.2	1.46
Max. air flow [m^3/h]	1340	1475	2500	2650	3580	3890	4680	4790
RPM [min^{-1}]	1350	1405	1380	1700	1380	1655	1350	1600
Noise level, 3 m [dBA]	58	59	62	63	63	64	64	65
Max. transported air temperature [°C]	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50
Ingress Protection Rating	IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4	

	Axis-Q / Axis-QR / Axis-F 500 4E		Axis-Q / Axis-QR / Axis-F 550 4E		Axis-Q / Axis-QR / Axis-F 630 4E		Axis-Q / Axis-QR / Axis-F 630 6E	
Voltage	1~ 220-240		1~ 220-240		1~ 220-240		1~ 220-240	
Frequency [Hz]	50	60	50	60	50	60	50	60
Power [W]	420	455	550	654	750	979	540	610
Current [A]	1.95	2.05	2.55	2.88	3.5	4.26	2.4	2.74
Max. air flow [m^3/h]	7060	7130	8800	8970	11900	12100	10900	10990
RPM [min^{-1}]	1300	1630	1300	1580	1360	1625	850	1075
Noise level, 3 m [dBA]	69	69	70	71	75	76	72	72
Max. transported air temperature [°C]	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50
Ingress Protection Rating	IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4	

	Axis-Q / Axis-QR / Axis-F 250 2D		Axis-Q / Axis-QR / Axis-F 250 4D		Axis-Q / Axis-QR / Axis-F 300 2D		Axis-Q / Axis-QR / Axis-F 300 4D	
Voltage	3~ 400		3~ 400		3~ 400		3~ 400	
Frequency [Hz]	50	60	50	60	50	60	50	60
Power [W]	80	92	60	89	145	165	75	94
Current [A]	0.22	0.24	0.17	0.22	0.25	0.29	0.22	0.25
Max. air flow [m^3/h]	1060	1150	850	885	2310	2390	1310	1530
RPM [min^{-1}]	2600	3030	1400	1750	2350	2570	1380	1640
Noise level, 3 m [dBA]	60	62	55	55	60	61	58	60
Max. transported air temperature [°C]	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50
Ingress Protection Rating	IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4	

	Axis-Q / Axis-QR / Axis-F 350 4D		Axis-Q / Axis-QR / Axis-F 400 4D		Axis-Q / Axis-QR / Axis-F 450 4D		Axis-Q / Axis-QR / Axis-F 500 4D		Axis-Q / Axis-QR / Axis-F 550 4D		Axis-Q / Axis-QR / Axis-F 630 4D	
Voltage	3~ 400		3~ 400		3~ 400		3~ 400		3~ 400		3~ 400	
Frequency [Hz]	50	60	50	60	50	60	50	60	50	60	50	60
Power [W]	140	150	180	195	250	275	450	370	750	600	800	910
Current [A]	0.38	0.41	0.47	0.55	0.6	0.65	0.9	0.7	1.5	1.1	1.6	1.68
Max. air flow [m^3/h]	2520	2590	3740	3870	5280	5350	6570	6230	9700	7380	12200	12400
RPM [min^{-1}]	1380	1640	1380	1625	1360	1620	1300	1605	1350	1605	1320	1585
Noise level, 3 m [dBA]	62	63	64	65	65	66	72	67	73	69	78	79
Max. transported air temperature [°C]	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50	-30 +60	-30 +50
Ingress Protection Rating	IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4		IP24 Axis-F IPX4	

Overall dimensions

Type	Dimensions [mm]					Weight [kg]
	Ø D	Ø d	B	B1	L	
Axis-Q 200 2E	210	7	312	260	145	3.9
Axis-Q 250 2E / Axis-Q 250 2D	260	7	370	320	155	4.2
Axis-Q 250 4E / Axis-Q 250 4D	260	7	370	320	155	4.1
Axis-Q 300 2E	326	9	430	380	195	5.3
Axis-Q 2 300 D	326	9	430	380	155	5.3
Axis-Q 300 4E	326	9	430	380	195	5.1
Axis-Q 300 4D	326	9	430	380	155	5.1
Axis-Q 350 4E / Axis-Q 350 4D	388	9	485	435	200	7.1
Axis-Q 400 4E / Axis-Q 400 4D	417	9	540	490	240	8.8
Axis-Q 450 4E / Axis-Q 450 4D	465	11	576	535	250	10.6
Axis-Q 500 4E / Axis-Q 500 4D	520	11	655	615	260	14.2
Axis-Q 550 4E / Axis-Q 550 4D	570	11	725	675	280	16.6
Axis-Q 630 4E / Axis-Q 630 4D	650	11	800	710	295	22.6
Axis-Q 630 6E	650	11	800	710	295	22.6

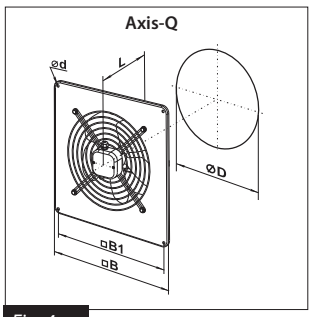

Fig. 4

Overall dimensions

Type	Dimensions [mm]					Weight [kg]
	Ø D	Ø D1	Ø D2	Ø d	L	
Axis-QR 200 2E	210	250	280	7	145	2.5
Axis-QR 250 2E / Axis-QR 250 2D	260	295	320	7	155	3.4
Axis-QR 250 4E / Axis-QR 250 4D	260	295	320	7	155	3.4
Axis-QR 300 2E	326	380	397	9	195	4.4
Axis-QR 300 2D	326	380	397	9	155	4.4
Axis-QR 300 4E	326	380	397	9	195	4.7
Axis-QR 300 4D	326	380	397	9	155	4.7
Axis-QR 350 4E / Axis-QR 350 4D	388	442	460	9	200	6.3
Axis-QR 400 4E / Axis-QR 400 4D	417	504	528	9	240	8.3
Axis-QR 450 4E / Axis-QR 450 4D	465	578	607	11	250	9.8
Axis-QR 500 4E / Axis-QR 500 4D	520	590	655	11	260	12.2
Axis-QR 550 4E / Axis-QR 550 4D	570	645	710	11	280	15.0
Axis-QR 630 4E / Axis-QR 630 4D	650	760	800	11	295	20.8
Axis-QR 630 6E	650	760	800	11	295	20.8

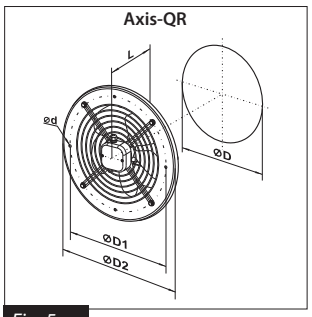

Fig. 5

Type	Dimensions [mm]						Weight [kg]
	Ø D	Ø D	Ø D	Ø d	B	L	
Axis-F 200 2E	205	235	255	7	290	120	1.95
Axis-F 250 2E / Axis-F 250 2D	260	286	306	7	340	150	3.84
Axis-F 250 4E / Axis-F 250 4D	260	286	306	7	340	150	3.96 / 3.84
Axis-F 300 2E / Axis-F 300 2D	310	356	382	7	410	160	5.31
Axis-F 300 4E / Axis-F 300 4D	310	356	382	7	410	160	5.59 / 5.31
Axis-F 350 4E / Axis-F 350 4D	362	395	421	9.5	450	160	6.37
Axis-F 400 4E / Axis-F 400 4D	412	438	465	9.5	500	170	8.39
Axis-F 450 4E / Axis-F 450 4D	462	487	515	9.5	550	200	10.65
Axis-F 500 4E / Axis-F 500 4D	515	541	570	9.5	600	220	12.65 / 11.0
Axis-F 550 4E / Axis-F 550 4D	565	605	636	11.5	660	230	17.3 / 13.9
Axis-F 630 4E / Axis-F 630 4D	645	674	715	11.5	740	250	20.13 / 16.4

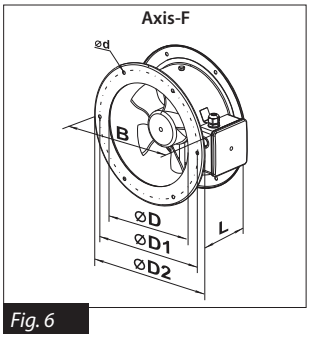

Fig. 6

AXIS-QA / AXIS-QRA / TUBO-MZ / TUBO-F

Technical data

	Tubo-F 200 2E*	Tubo-F 250 2E*	Tubo-F 250 4E*	Tubo-F 300 2E	Tubo-F 300 4E*	Tubo-F 350 4E
Voltage, 50 Hz [V]	230	230	230	230	230	230
Power [W]	55	80	50	145	75	140
Current [A]	0.26	0.4	0.22	0.66	0.35	0.65
Max. air flow [m^3/h]	860	1050	800	2230	1340	2500
RPM [min^{-1}]	2300	2400	1380	2300	1350	1380
Noise level, 3 m [dBA]	50	60	55	60	58	62
Max. transported air temperature [°C]	-30 +60	-30 +60	-30 +60	-30 +60	-30 +60	-30 +60
Ingress Protection Rating	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4

* Compliant to the ErP-regulation (EC) 327/2011, the power consumption at optimum efficiency is < 125 W.

	Axis-QA / Axis-QRA / Tubo-M / Tubo-MZ / Axis-QA G 150	Axis-QA / Axis-QRA / Tubo-M / Tubo-MZ/ Axis-QA G 200	Axis-QA / Axis-QRA / Tubo-M / Tubo-MZ/ Axis-QA G 250	Axis-QA / Axis-QRA / Tubo-M / Tubo-MZ 315
Voltage, 50 Hz [V]	230	230	230	230
Power [W]	36	43	68	110
Current [A]	0.26	0.28	0.48	0.75
Max. air flow [m^3/h]	200	405	1070	1700
RPM [min^{-1}]	1300	1300	1300	1300
Noise level, 3 m [dBA]	33	32	48	54
Max. transported air temperature [°C]	40	40	40	40
Ingress Protection Rating	IP24 Tubo-M IPX4	IP24 Tubo-M IPX4	IP24 Tubo-M IPX4	IP24 Tubo-M IPX4

Overall dimensions

Type	Dimensions [mm]					Weight [kg]
	Ø D	Ø d	B	B1	L	
Axis-QA 150	162	7	250	210	120	2.5
Axis-QA 200	208	7	312	260	120	3.0
Axis-QA 250	262	7	370	320	140	3.5
Axis-QA 315	312	9	430	380	170	6.1

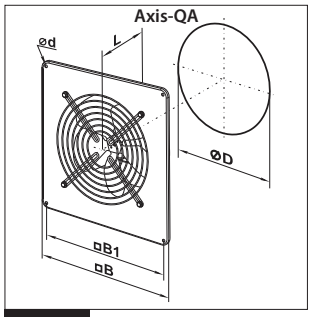

Fig. 7

Type	Dimensions [mm]					Weight [kg]
	Ø D	Ø D1	Ø D2	Ø d	L	
Axis-QRA 150	162	190	220	7	120	2.5
Axis-QRA 200	208	270	300	7	120	2.5
Axis-QRA 250	262	330	360	7	140	3.0
Axis-QRA 315	312	390	420	9	170	5.1

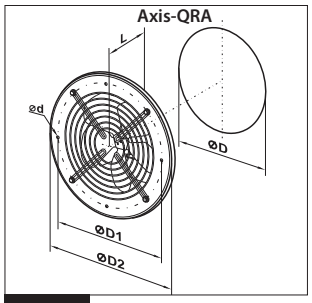

Fig. 8

Type	Dimensions [mm]					Weight [kg]
	Ø D	B	L	L1	L3	
Tubo-M 150 / Tubo-MZ 150	162	183	220	40	30	1.8
Tubo-M 200 / Tubo-MZ 200	208	228	220	40	30	2.4
Tubo-M 250 / Tubo-MZ 250	262	283	270	55	30	3.7
Tubo-M 315 / Tubo-MZ 315	315	337	278	55	40	4.9

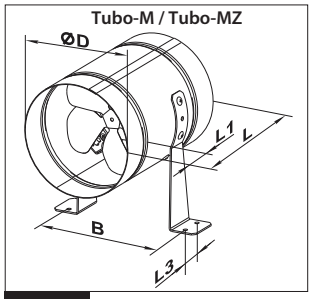

Fig. 9

Type	Dimensions [mm]					Weight [kg]
	Ø D	B	L	H	L1	
Tubo-F 2E 200	199	227	220	300	30	3.5
Tubo-F 250 2E	249	282	250	320	30	4.5
Tubo-F 250 4E	249	282	250	320	30	4.5
Tubo-F 300 2E	299	326	250	390	40	6.3
Tubo-F 4E 300	299	326	250	390	40	6.3
Tubo-F 350 4E	349	378	300	410	40	8.4

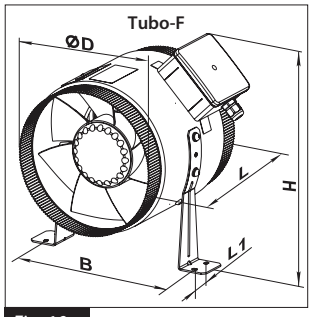

Fig. 10

Type	Dimensions [mm]					Weight [kg]
	Ø D	Ø d	B	B1	L	
Axis-QA 150 G	162	7	325	275	127	2.5
Axis-QA 200 G	208	7	325	275	127	3.0
Axis-QA 250 G	262	7	325	275	152	3.5

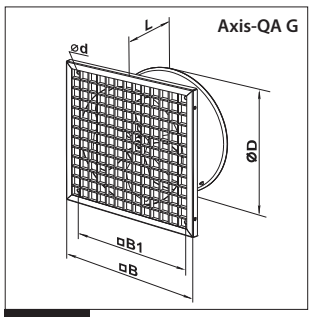

Fig. 11

Type	Dimensions [mm]				Weight [kg]
	Ø D	Ø D1	H	H1	
MD / MDZ 148/158	148	158	140	55	0.3
MD / MDZ 198/204	198	204	140	55	0.4
MD / MDZ 248/258	248	258	150	65	0.42

The Tubo-M fans are equipped with MD (polymer-coated steel) and MDZ … Zn (galvanised steel) reducers for connection to 150 mm, 200 mm and 250 mm air ducts. The reducers are not included in the delivery set and must be ordered separately.

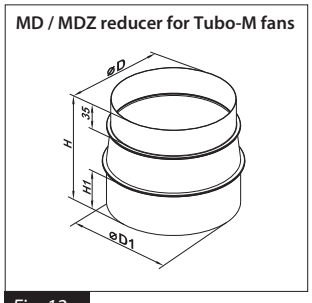

Fig. 12

MOUNTING AND OPERATION GUIDELINES

The air motion direction in the system must match the pointer on the fan casing.

Install the fan to ensure sufficient and quick access for servicing and repair operations.

The fan must be grounded.

While mounting protect the fan against water ingress in the following way:

1. Install an outer hood above in case of vertical mounting position, fig. 13.

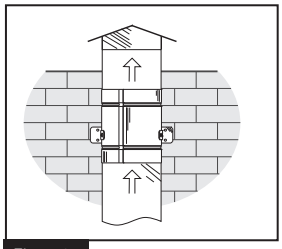

Fig. 13

MOUNTING SEQUENCE

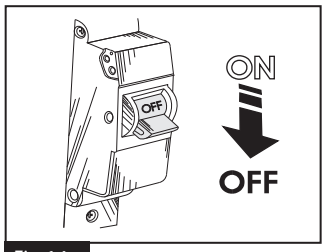

Fig. 14

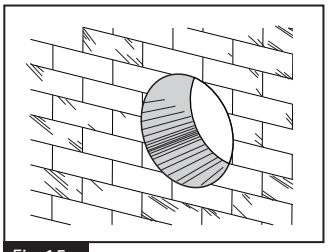

Fig. 15

AXIS-Q

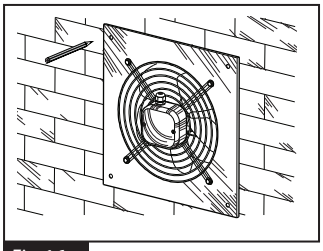

Fig. 16

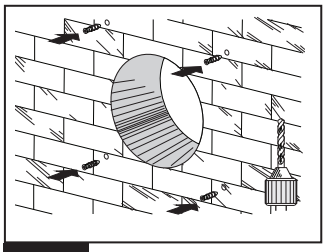

Fig. 18

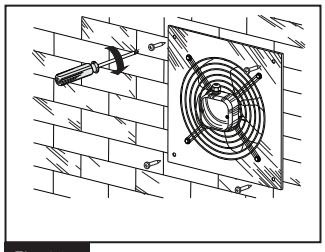

Fig. 20

AXIS-QR

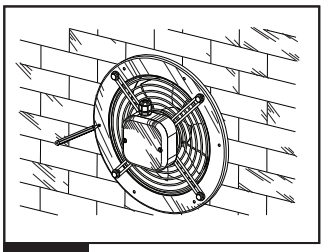

Fig. 17

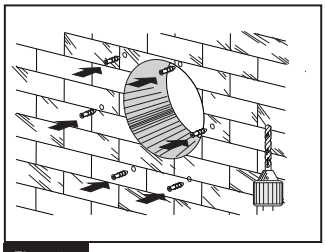

Fig. 19

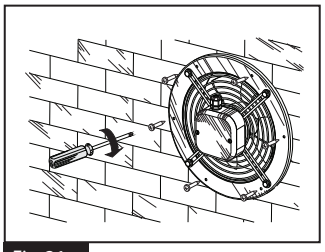

Fig. 21

AXIS-QA

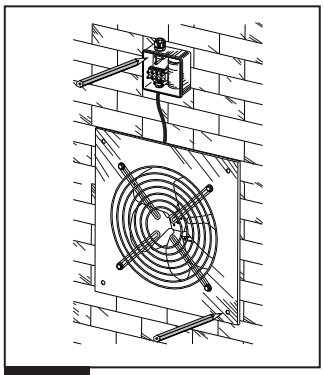

Fig. 22

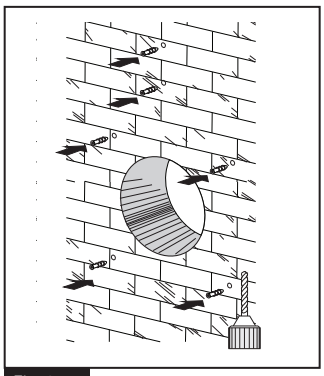

Fig. 24

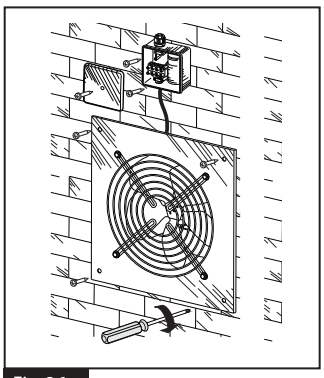

Fig. 26

AXIS-QRA

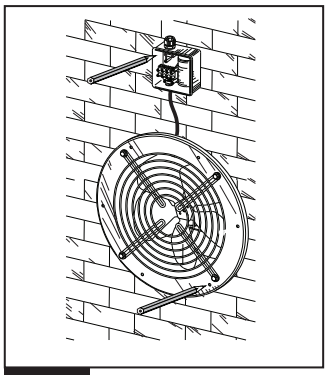

Fig. 23

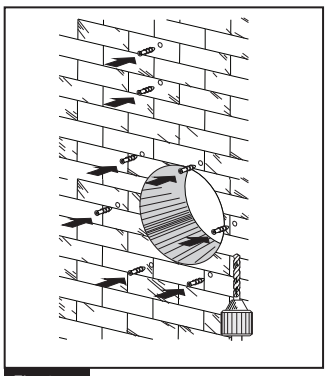

Fig. 25

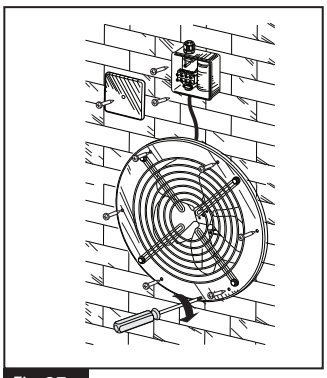

Fig. 27

MOUNTING SEQUENCE
AXIS-F

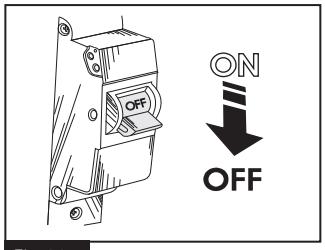

Fig. 28

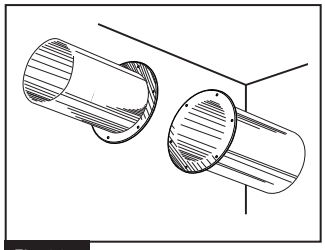
Fig. 29

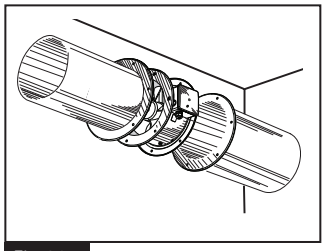
Fig. 30

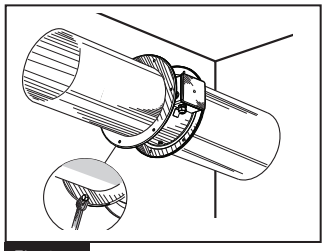
Fig. 31

MOUNTING SEQUENCE
TUBO-M / TUBO-MZ

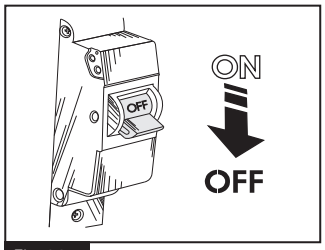

Fig. 32

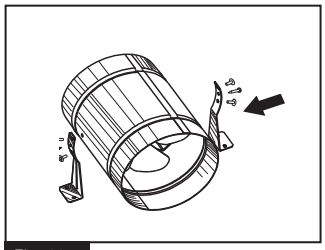
Fig. 33

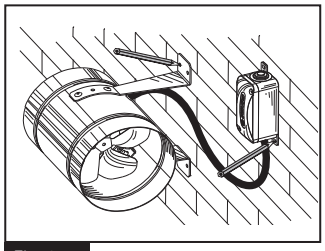
Fig. 34

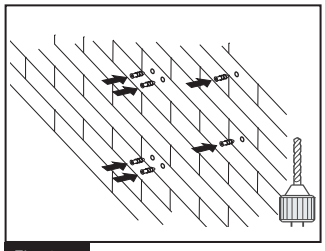
Fig. 35

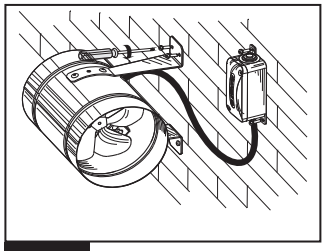
Fig. 36

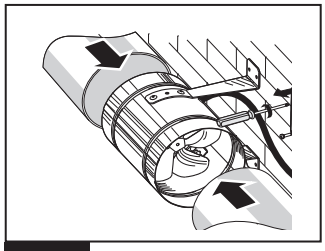
Fig. 37

INSTALLATION AND CONNECTION TO POWER MAINS

Connection of the fan to power mains is allowed by a qualified electrician only. The rated electrical parameter are stated on the rating plate.

No modifications of internal connections are allowed and will result in void warranty. Connect the fan only to power mains with valid electric standards.

The house cabling system must be equipped with an automatic switch at the external input. Connect the fan to power mains through the automatic switch.
The contact gap on all poles at least 3 mm. The automatic switch trip current must be in compliance with the fan current consumption, refer Table on pages 5–6. Install the automatic switch to ensure prompt access.

Cut power supply to the fan off by turning the automatic electric switch QF to OFF position (fig. 38). Take steps to prevent activation of the automatic switch.

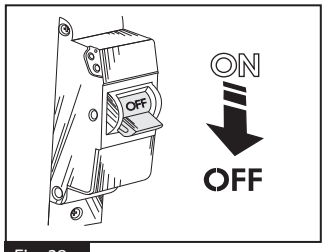

Fig. 38

The fan wiring diagram is shown in fig. 39–41.

Connection sequence of the fan, shown on fig. 42–56.

AXIS-Q
AXIS-QR
AXIS-F

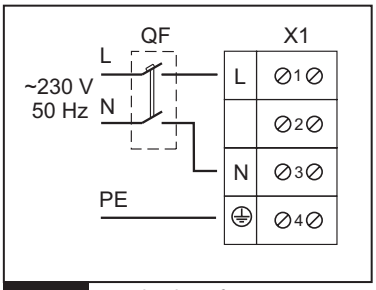

Fig 39 *Single-phase fans*

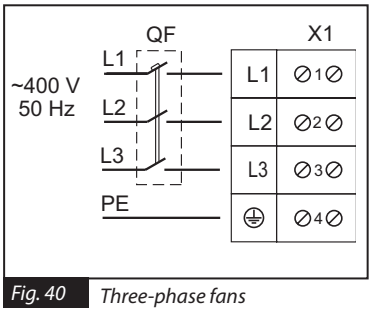

Fig. 40 *Three-phase fans*

AXIS-QA
AXIS-QRA
TUBO-M / TUBO-MZ
AXIS-QA G
TUBO-F

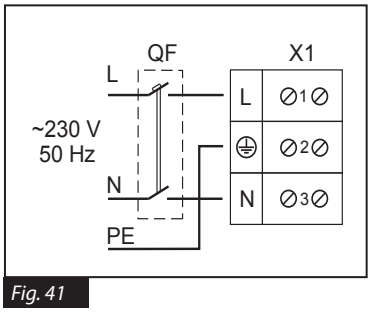

Fig. 41

INSTALLATION AND CONNECTION TO POWER MAINS

AXIS-Q
AXIS-QR

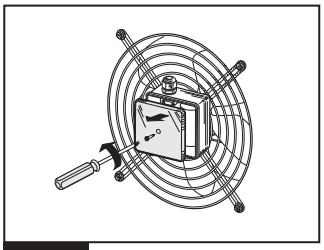
Fig. 42

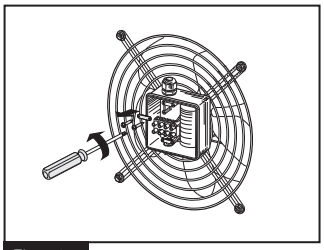
Fig. 43

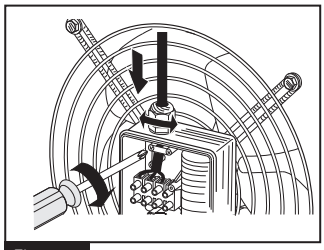
Fig. 44

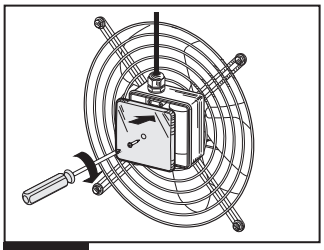
Fig. 45

AXIS-F

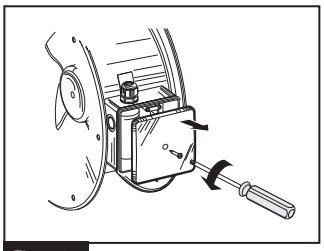
Fig. 46

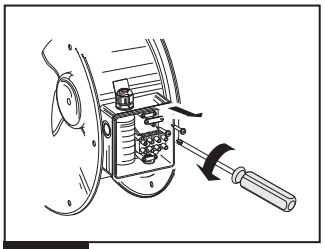
Fig. 47

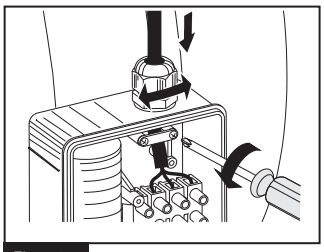
Fig. 48

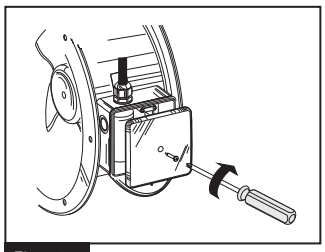
Fig. 49

AXIS-QA
AXIS-QRA

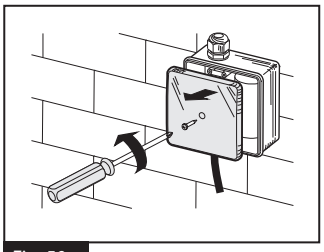
Fig. 50

AXIS-QA G

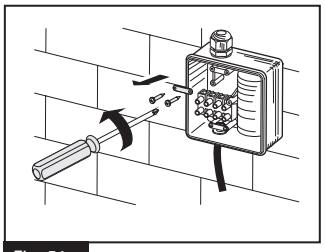
Fig. 51

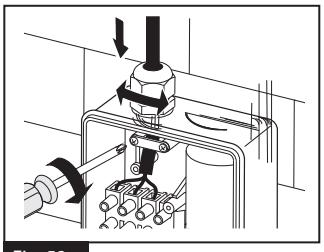
Fig. 52

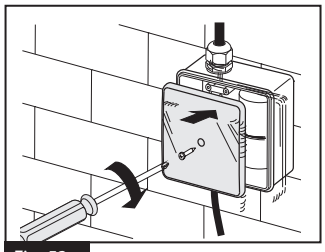
Fig. 53

TUBO-M / TUBO-MZ

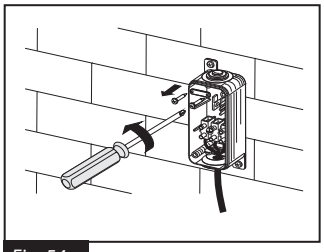
Fig. 54

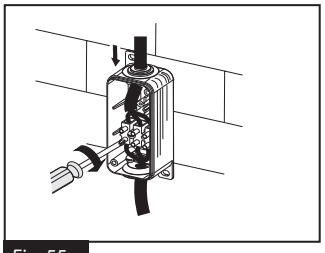
Fig. 55

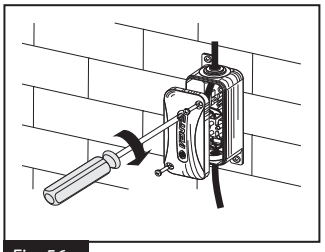
Fig. 56

MAINTENANCE

Regular technical supervision and maintenance of the fan are required to ensure the product long service life and non-stop operation.
Disconnect the fan from power mains prior to any maintenance operations, fig. 57.
Do not place the fan in water (fig. 58).

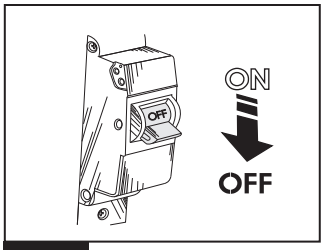

Fig. 57

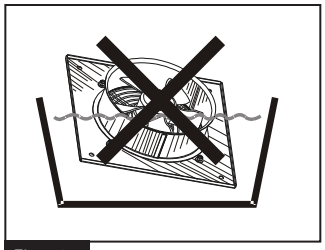
Fig. 58

Maintenance of the fan is required and means cleaning the fan surfaces from dust and dirt. Maintenance includes regular cleaning, control of the impeller, motor, impeller blades.

Mounting sequence of the fan is shown on fig. 59–70.

Clean the impeller blades with a soft cloth or a brush wetted in a mild soap solution. Avoid liquid splashing on the motor. Clean the impeller blades thoroughly at least once in 6 months.

Operation recommendations:

1. Clean the fan regularly from dust, dirt and foreign objects.

2. Check all fastening connections periodically.

3. Control generated noise and vibration. High vibration may indicate the bearing wear, sticking of the dirt particles contained in the transported air, the impeller blades wear, loose connection between the fan and the air duct.

4. Check periodically the fastening connections, impeller for possible blade damages, check connection of the fan to the air duct and coating.

AXIS-Q

AXIS-QR

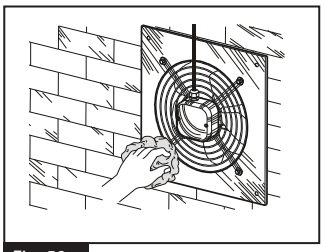
Fig. 59

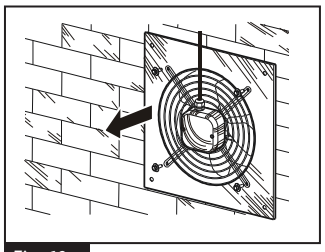
Fig. 60

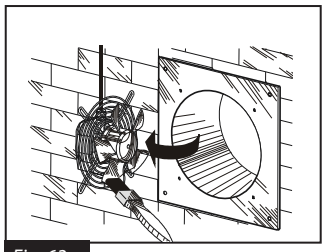
Fig. 63

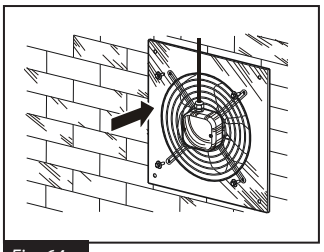
Fig. 64

AXIS-QA

AXIS-QRA

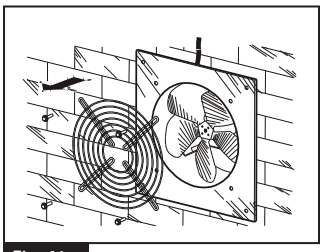
Fig. 61

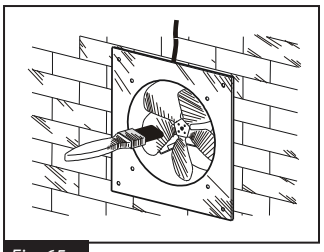
Fig. 65

AXIS-QA G

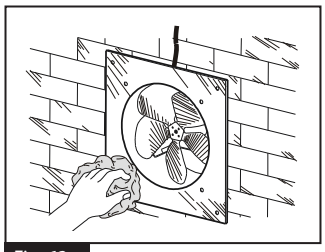
Fig. 62

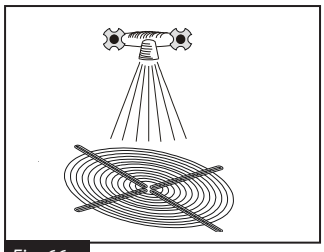
Fig. 66

AXIS-F

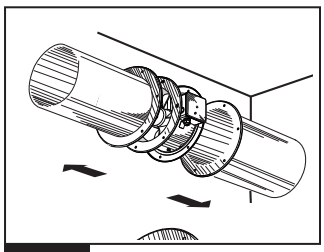
Fig. 67

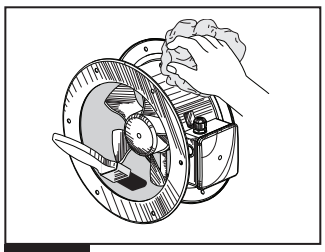
Fig. 68

TUBO-M / TUBO-MZ

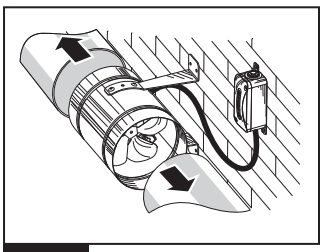
Fig. 69

TUBO-F

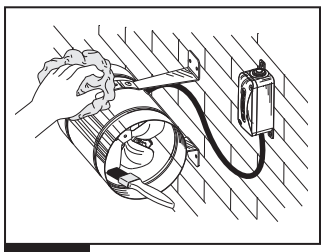
Fig. 70

ACCEPTANCE CERTIFICATE

Axial fans

Axis_____ TUBO_____

is recognized as serviceable.

The unit complies with the requirements according to the EU norms and directives, to the relevant EU-Low Voltage Equipment Directives, EU-Directives on Electromagnetic Compatibility.
We hereby declare that the unit complies with the essential protection requirements of Electromagnetic Council Directive 2004/108/EC, 89/336/EEC and Low Voltage Directive 2006/95/EC, 73/23/EEC and CE-marking Directive 93/68/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility, which relate to electrical appliances used in set voltage classes.
This certificate is issued following test carried out on samples of the product referred to above.

Quality Inspector's Stamp Manufacture Date _____

CONNECTION CERTIFICATE

Axial fans

Axis_____ TUBO_____

is connected to power mains in compliance with the operation manual requirements by the professional:

Company:_____

Expert's Full Name_____

Date_____Signature_____

WARRANTY CARD

Axis_____ TUBO_____

SELLER

PURCHASE DATE

REPRESENTATIVE IN EU

BLAUBERG Ventilatoren GmbH
Aidenbachstr. 52
D-81379 Munich, Germany

BLAUBERG
Ventilatoren

www.blaubergventilatoren.de
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