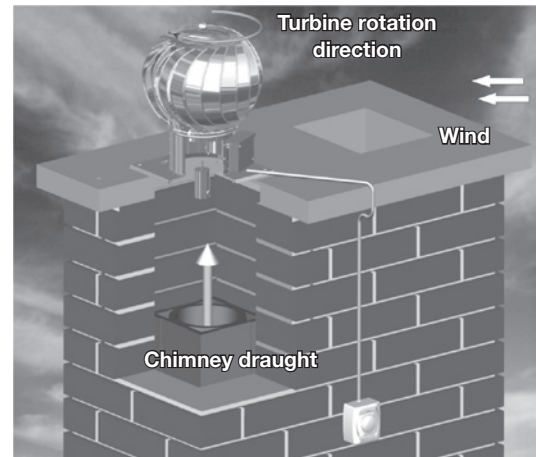


PICTURE



FUNCTION PRINCIPLE



DESCRIPTION

Hybrid Turbowent chimney cowls are devices, which, in a dynamic way, use force of the wind to increase chimney draught. They are also equipped with a low power brushless electric motor. When the wind speed is too small to achieve the desired efficiency, electric motor speeds the turbine up, when it is too strong it slows the turbine down.

When the wind speed is strong enough to achieve the rotation speed set on the steering device, motor does not work, and cowl works just like the ordinary Turbowent.

This solution is reserved in the RP Patent Office

Speed controller voltage

24VDC

Rotating unit

ball bearing system

Maximal power consumption

0,3A

Average power consumption

~0,13A

Average input power

3W

Adjusting range:

90-300 rev/min

Recommended power supply

24VDC, 1A

Ambient temperature

from -30 °C to +70°C

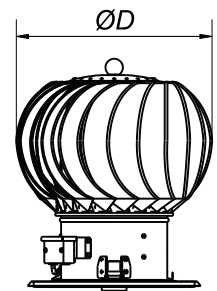
Sound pressure level A at a distance of 4 m from cowl (for rotation speed n)			Sound pressure level LWA (for min. rotation speed) acc. to PN-EN ISO 3741:2003	
Diameter	L _{pAmin} for n=90	L _{pAmax} for n=270	Diameter	L _{WA}
Ø150	8 dB	15 dB	Ø150	26 dB
Ø200	7 dB	14 dB	Ø200	25 dB

DESTINATION

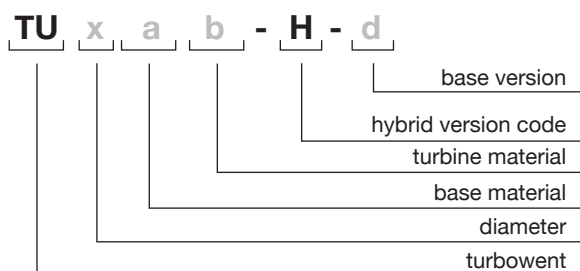
- when there are wind fluctuations on the chimney duct ending, caused by its bad location
- when there is an unfavorable terrain configuration, with strong and frequent winds
- when there is a lack of chimney draught or it is too weak
- in order to improve the natural (gravitation) ventilation.
- creating hybrid ventilation systems

MEASUREMENTS

Diameter	Turbine diameter D [mm]
Ø150	~ 260
Ø200	~ 320



DENOTATIONS / PRODUCT CODES

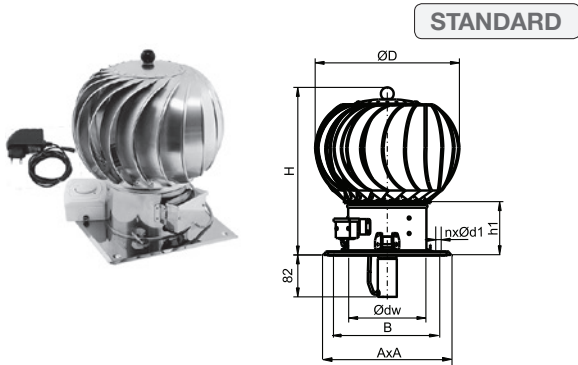


MATERIALS

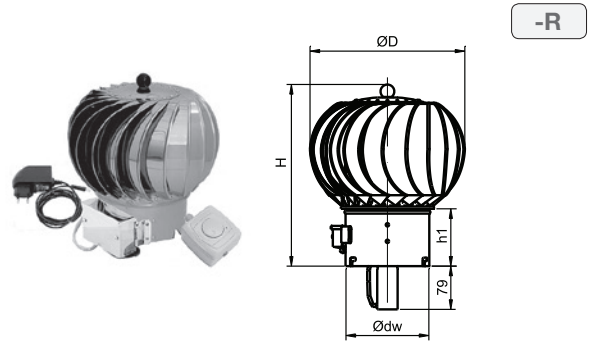
Destination	W	W	W	W - ventilation ducts
-	-	-	-	S - gas and oil exhaust ducts
-	-	-	-	D - smoke ducts
Base material	CH	CH	-	CH - chrome-nickel sheet 1.4301
	-	-	-	OC - galvanised steel sheet
	-	-	ML	ML - chrome-nickel powder coated
Turbine material	-	CH	-	CH - chrome-nickel sheet 1.4301
	-	-	ML	ML - powder coated
	AL	-	-	AL - aluminum

HYBRID TURBOWENT - VERSIONS OF BASES

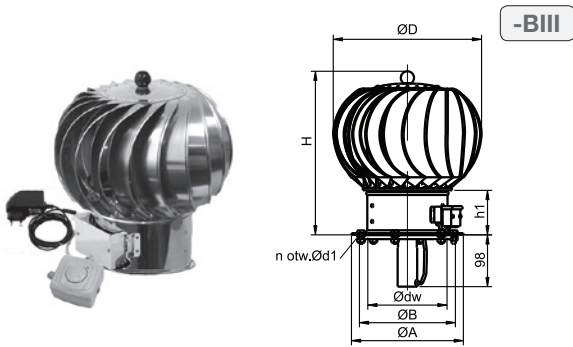
1. SQUARE BASE



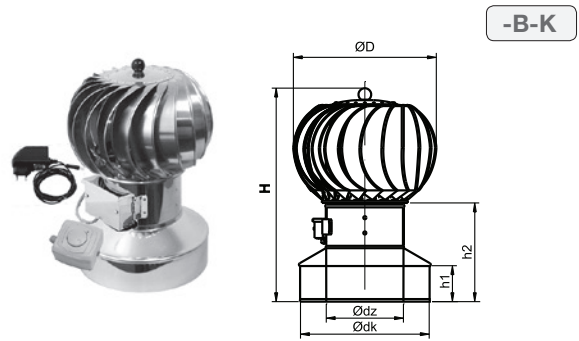
2. DISMOUNTABLE BASE



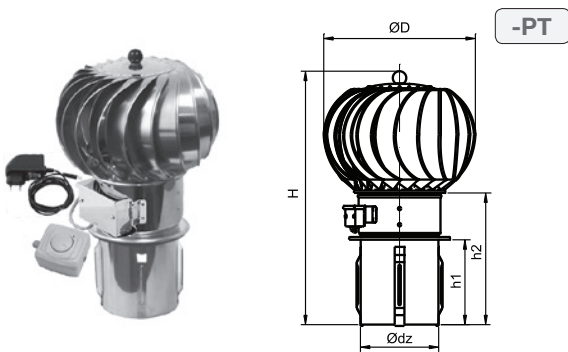
3. BASE WITH COLLAR



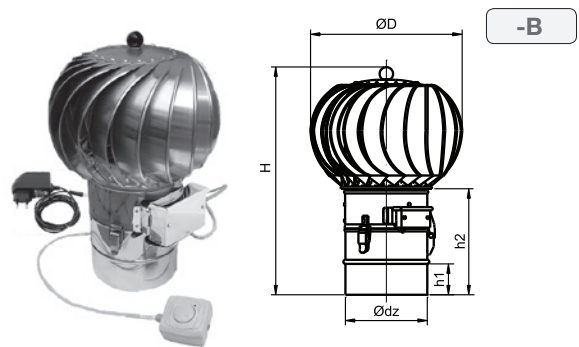
4. BASE WITH INSULATION CLOSING



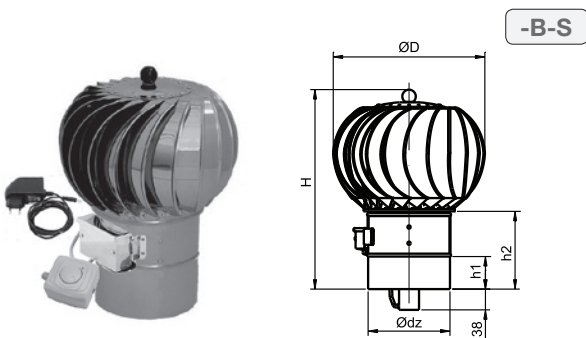
5. FORCE-IN MOUNTING BASE



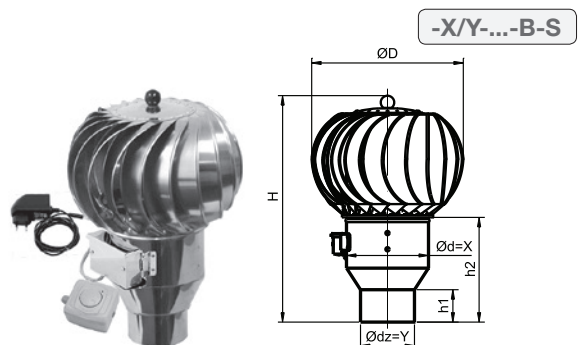
6. INLET PIPE OPENABLE



7. INLET PIPE NOT OPENABLE



8. INLET PIPE REDUCED

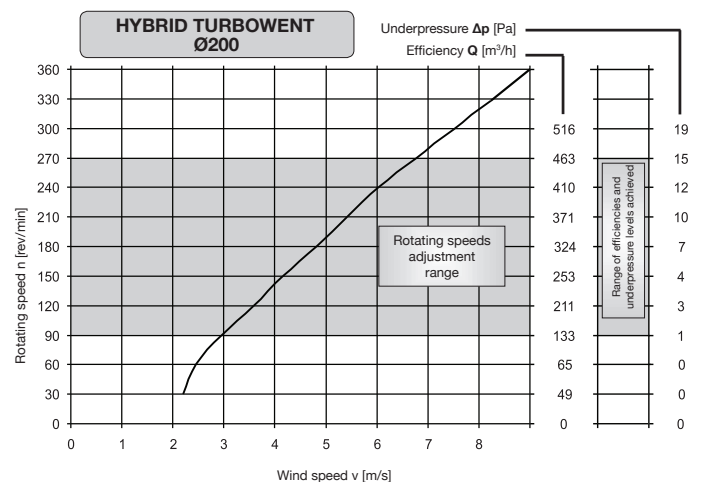
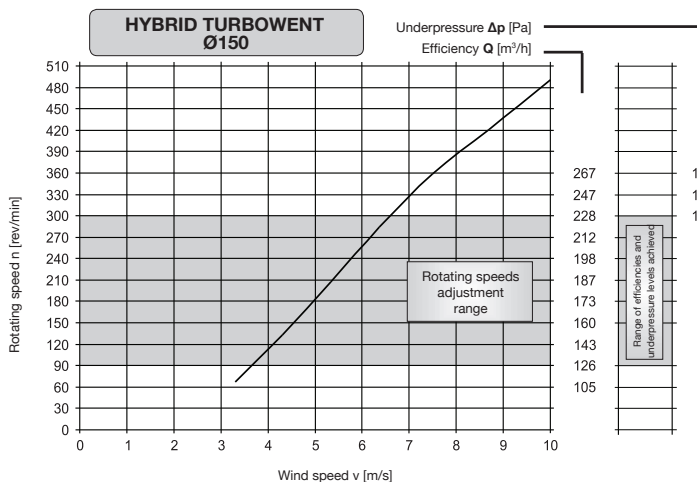


MEASUREMENTS TABLE FOR VARIOUS INLET DIAMETERS

Ø 150	Dimensions [mm]										Weight [kg]
Base version	D	dw	dz	H	h1	h2	A	B	d1	Amount n	CHAL
STANDARD	~260	150.4	-	326	100	-	250	208	6.2	4	2.60
-R	~260	150.4	-	330	105	-	-	-	-	-	2.45
-BIII	~260	150.1	-	292	90	-	212	182	9.5	6	2.85
-B-K	~260	253.4	151.7	399	70	194	-	-	-	-	3.20
-PT	~260	-	144.0	450	157	244	187	158	-	-	2.85
-B	~260	-	152.0	402	60	197	-	-	-	-	2.60
-B-S	~260	-	152.0	349	60	144	-	-	-	-	2.40
-X/Y-...-B-S	~260	-	Y	420	60	194	-	-	-	-	2.55

Ø 200	Dimensions [mm]										Weight [kg]
Base version	D	dw	dz	H	h1	h2	A	B	d1	Amount n	CHAL
STANDARD	~320	200.0	-	340	100	-	330	284.0	6.2	4	3.00
-R	~320	199.7	-	355	115	-	-	-	-	-	2.50
-BIII	~320	199.7	-	362	90	-	363	233	9.5	6	3.00
-B-K	~320	303.1	201.0	434	70	194	-	-	-	-	3.50
-PT	~320	-	194.0	494	167	254	237	208	-	-	3.20
-B	~320	-	201.0	471	60	197	-	-	-	-	2.90
-B-S	~320	-	201.0	410	60	144	-	-	-	-	2.60
-X/Y-...-B-S	~320	-	Y	454	60	194	-	-	-	-	2.80

AIRFLOW CHARTS

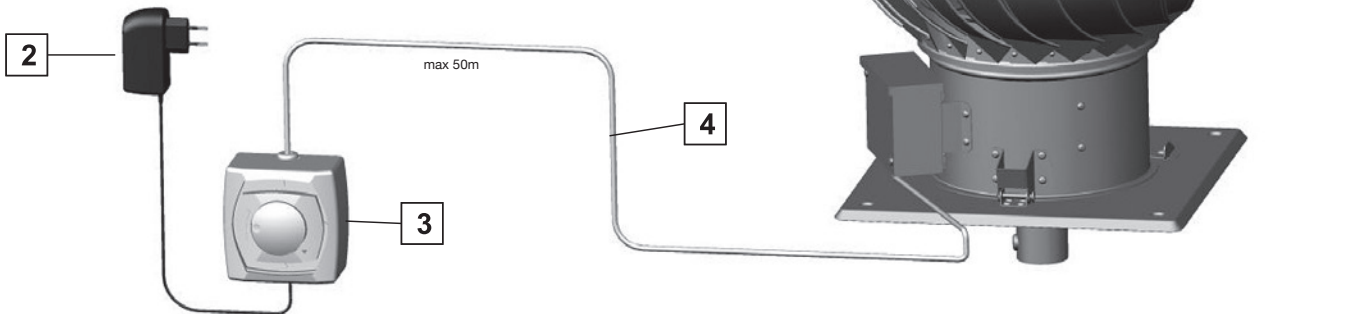


CONNECTING DIAGRAM

1. HYBRID TURBOWENT - STANDARD

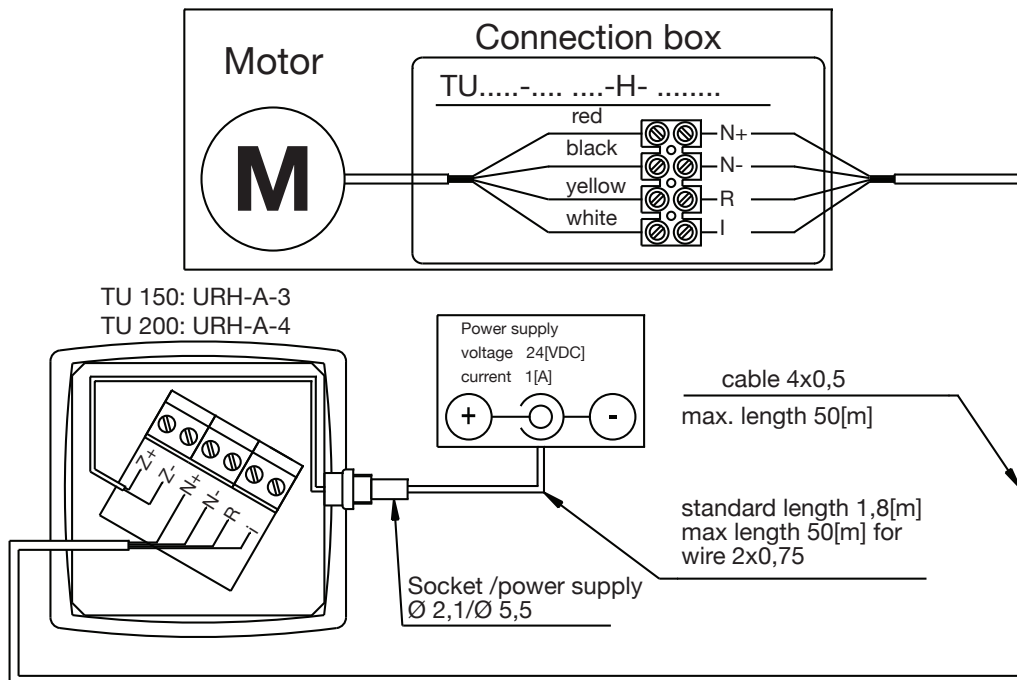
Lp	Symbol	Name
1	TU...CHAL-H	Hybrid Turbowent
2	TU-Z-24V/1A	Power supply
3	URH-A-...	Speed controller
4	LGY 4x0,5	Cable LGY 4x0,5

* Set does not include cables



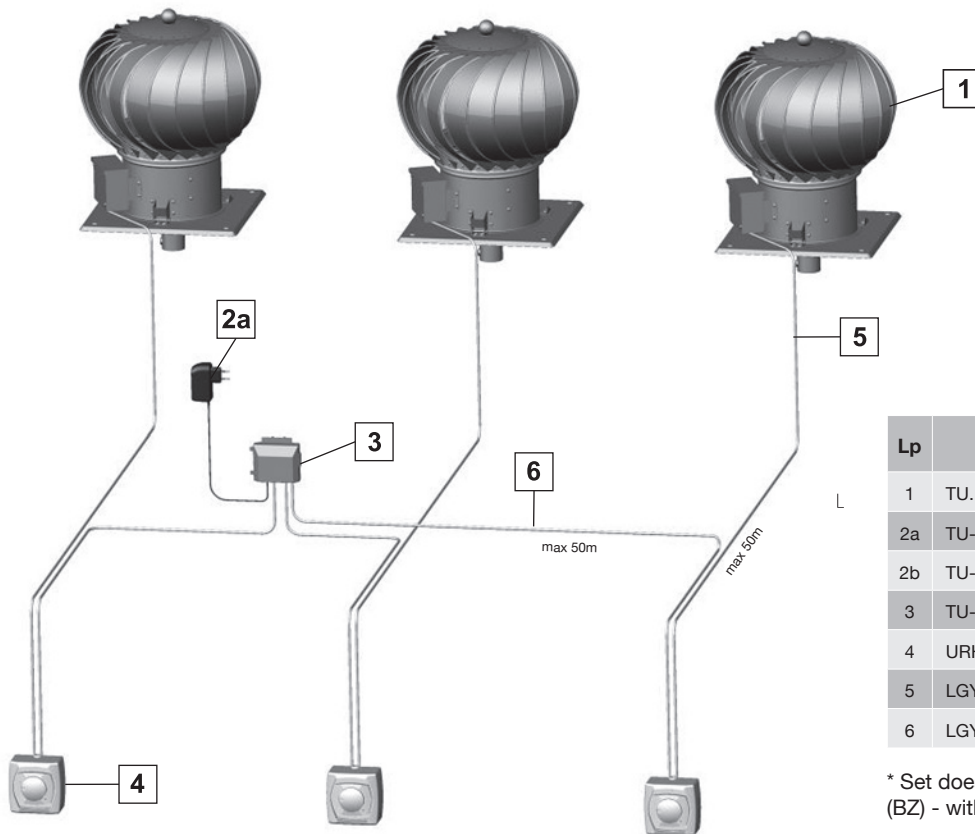
This set of elements is a standard equipment of a hybrid cowl.*

ELECTRICAL DIAGRAM



HYBRID TURBOWENT - rotary chimney cowl Ø150 - Ø200 - STANDARD

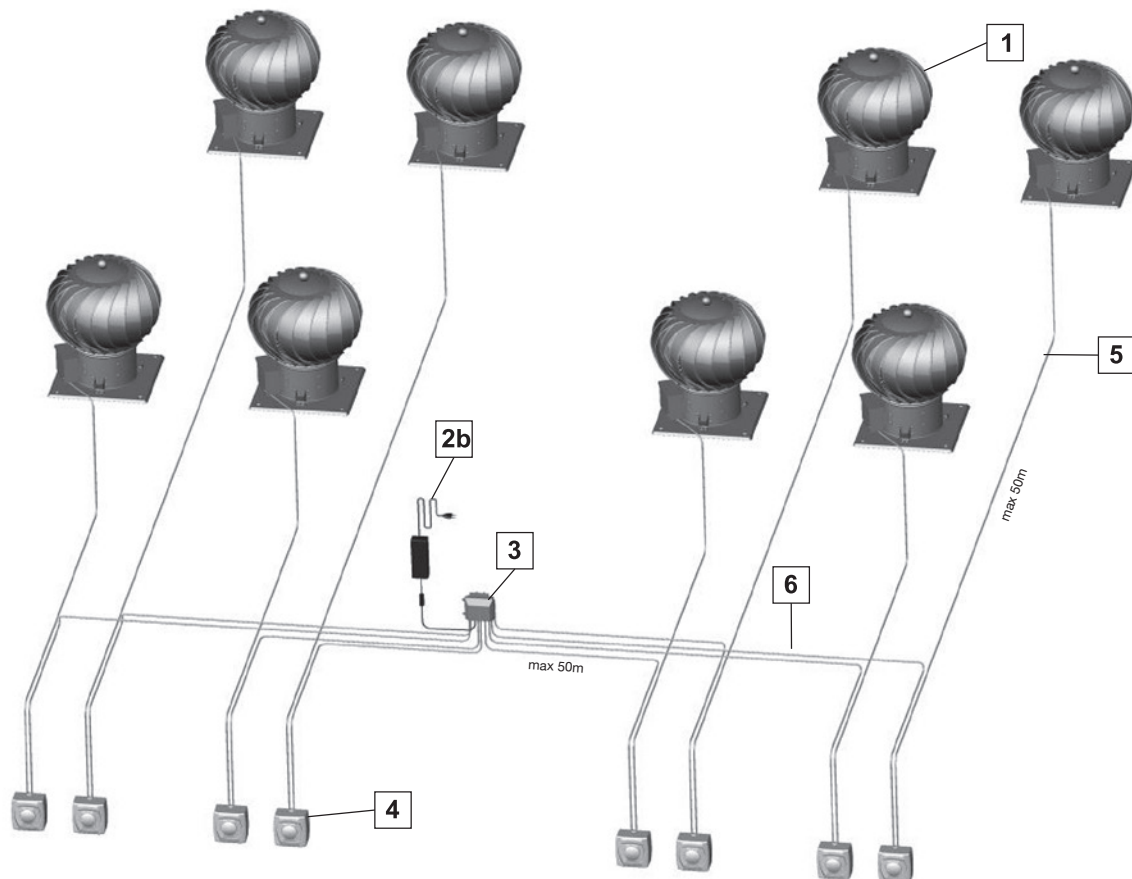
2. HYBRID TURBOWENTS - STANDARD - (FROM 1 TO MAX. 4 PIECES)



Lp	Symbol	Name
1	TU...CHAL-H-(BZ)	Hybrid Turbowent (BZ)
2a	TU-Z-24V/1A	Power supply [VDC] (draw.2)
2b	TU-Z-24V/2,7A	Power supply [VDC] (draw.3)
3	TU-RZ-(8wy)	Power splitter
4	URH-A-...	Speed controller
5	LGY4x0,5	LGY 4x0,5 cable
6	LGY2x0,75	LGY 4x0,5 cable

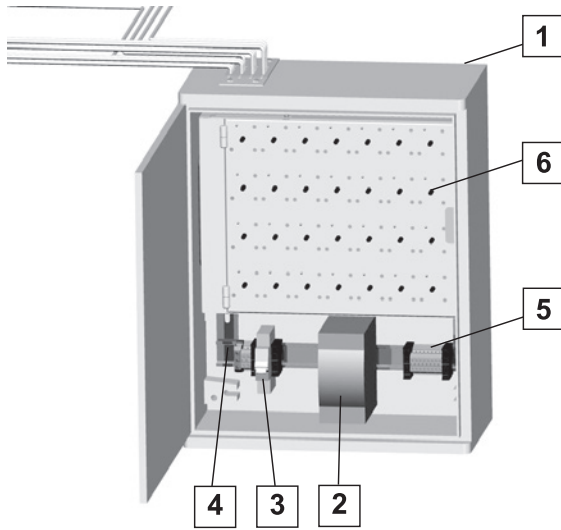
* Set does not include cables
(BZ) - without power supply

3. HYBRID TURBOWENTS - STANDARD - (FROM 1 TO MAX. 8 PIECES)



HYBRID TURBOWENT - rotary chimney cowl Ø150 - Ø200 - STANDARD

4. ELECTRIC CABINET



TU-SZSTER-I-(12)*

Lp	Symbol	Pieces
1	Cabinet /400x300x200/	1
2	Power supply SDR-120-24	1
3	Safety fuse 4A "C"	1
4	Terminal block 230V AC	1
5	Terminal block 24V DC	1
6	Cowl speed controller URH-A-...*	12 max

*amount of URH-A-... according to the order

TU-SZSTER-II-(28)*

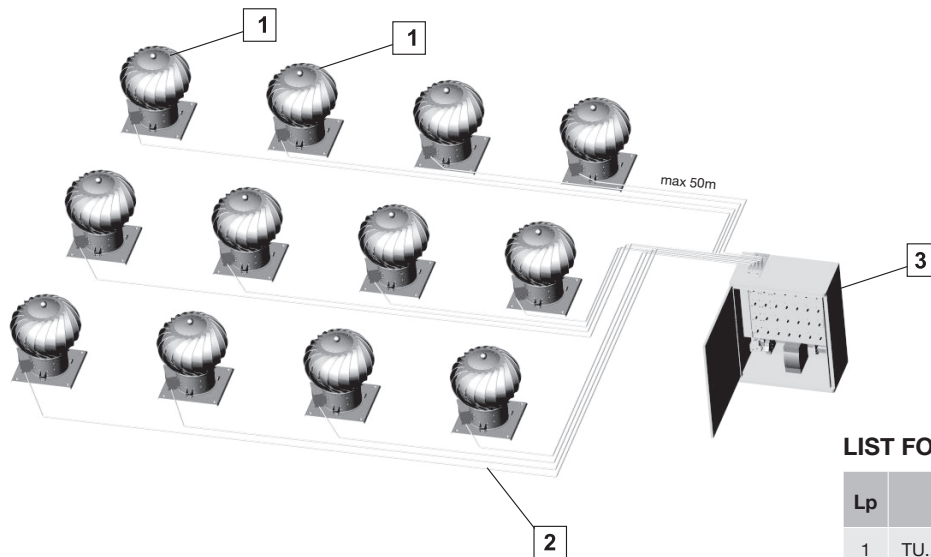
Lp	Symbol	Pieces
1	Cabinet /500x400x200/	1
2	Power supply SDR-240-24	1
3	Safety fuse 6A "C"	1
4	Terminal block 230V AC	1
5	Terminal block 24V DC	1
6	Cowl speed controller URH-A-...*	28 max

*amount of URH-A-... according to the order

TU-SZSTER-III-(54)*

Lp	Symbol	Pieces
1	Cabinet /700x500x250/	1
2	Power supply SDR-120-24	1
3	Safety fuse 10A "C"	1
4	Terminal block 230V AC	1
5	Terminal block 24V DC	1
6	Cowl speed controller URH-A-...*	54 max

*amount of URH-A-... according to the order



LIST FOR 2÷12 COWLS

Lp	Symbol	Name
1	TU...CHAL-H-...(BZ/BRO)	Hybrid turbowent
2	LGY 4x0,5	LGY 4x0,5 cable
3	TU-SZSTER-I-(12)	Electric cabinet

LIST FOR 2÷28 COWLS

Lp	Symbol	Name
1	TU...CHAL-H-...(BZ/BRO)	Hybrid turbowent
2	LGY 4x0,5	LGY 4x0,5 cable
3	TU-SZSTER-II-(28)	Electric cabinet

LIST FOR 2÷54 COWLS

Lp	Symbol	Name
1	TU...CHAL-H-...(BZ/BRO)	Hybrid turbowent
2	LGY 4x0,5	LGY 4x0,5 cable
3	TU-SZSTER-III-(54)	Electric cabinet