



**NORDfan**

KAPU – Roof fan – Technical brochure

## Product description and delivery content



KAPU roof fan is a CE-marked product for mechanical smoke extraction for roof installation. The product consists of a smoke extraction fan and roof hatch. The product is ready-made in the factory and is ready to use. KAPU is delivered on one pallet, ready to be lifted onto the roof. Internal cabling is ready-made in the factory; only supply cables for the fan and hatch opening device need to be installed and connected to the safety switches on site. The product also includes a limit switch for the hatch lid position information.

When smoke extraction is turned ON, the hatch starts to open immediately. After 30 seconds, the smoke extraction fan will be powered. All devices are tested before delivery. KAPU standard color is RR23. Other colors are also available.

KAPU can also be used as a supply unit for smoke extraction. Besides this, the product is suitable for overheating extraction in a short period. KAPU is not suitable for daily ventilation.

ETS NORD smoke control units (SPMK+SPOK) complete the KAPU roof unit as a one-functioning smoke extraction system.

## Product selection

KAPU product selection is presented in the table below. Maximum airflow for each fan size according to duct pressure can be found from the table which makes the product easy to select. The mounting hole size and weight of the products are also presented in the table. For further product selection information contact ETS NORD.

Mounting hole (mm) Hatch inner dimension	Product code	Maximum airflow (m <sup>3</sup> /s) according to duct pressure												Max weight (kg)	
		Free	100 Pa	200 Pa	300 Pa	400 Pa	500 Pa	600 Pa	700 Pa	800 Pa	900 Pa	1000 Pa	1100 Pa	Roof hatch	Fan
800 × 900	KAPU-400-015	2,1	2,0	1,8	1,7	1,5								160	49
	KAPU-400-030	2,3	2,3	2,1	2,0	1,8							60		
	KAPU-500-015	3,2	2,9	2,5	2,2	1,8	1,5	1,1					61		
	KAPU-500-055	4,7	4,5	4,3	4,1	3,9	3,7	3,4	3,0	2,8			85		
900 × 1000	KAPU-630-055	7,1	6,9	6,5	6,0	5,5	5,0	4,8	4,2	3,8	3,1	3,3		224	104
	KAPU-630-075	8,0	7,6	7,4	6,9	6,5	6,2	5,7	5,4	4,8	4,4	4,0	3,3		109
	KAPU-710-075	9,7	9,1	8,5	8,3	7,6	6,9	6,6	5,8	5,3	4,7				110
1000 × 1100	KAPU-800-075	11,5	10,7	9,8	8,8	8,4	7,4	6,4	5,9	5,3				224	119
1200 × 1300	KAPU-900-075	13,6	12,5	11,5	10,0	8,8								275	173
	KAPU-1000-075	15,7	14,4	12,5	11,0	9,6	7,8	6,4					233		
	KAPU-1000-110	17,4	16,5	15,1	13,5	12,3	11,0	9,1					244		
	KAPU-1000-150	19,3	18,5	17,2	16,1	14,6	13,2	11,1	10,3				286		
	KAPU-1000-220	21,6	20,7	19,7	18,5	16,7	14,9	13,8	13,0				390		
1450 × 1550	KAPU-1250-150	27,4	25,3	23,1	20,7	19,1	16,2							312	278
	KAPU-1250-220	31,3	29,3	27,9	25,6	23,1	21,4	19,3	16,5	15,0			432		
	KAPU-1250-300	34,4	33,2	31,0	29,5	27,8	25,2	23,2	21,1	19,7	17,0		428		

### KAPU - aaaa-bbb

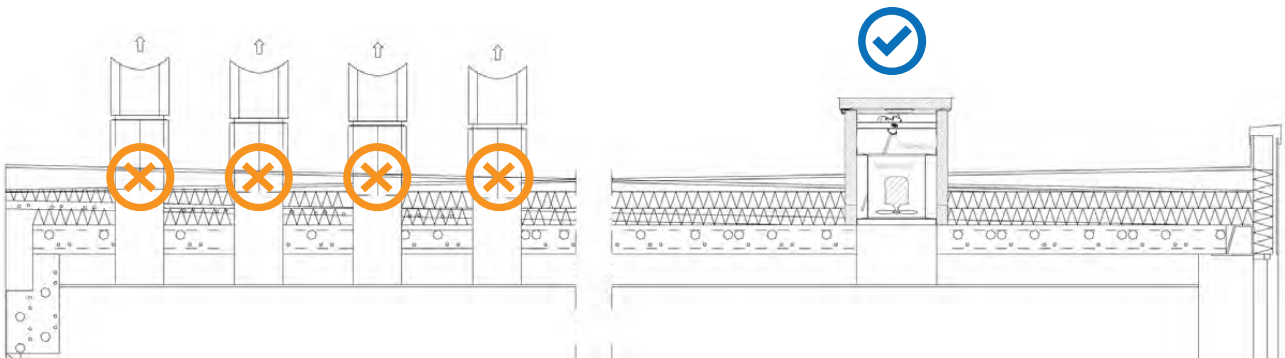
aaaa = Fan diameter (mm)

bbb = Motor power (kW)

(015 = 1,5 kW or 300 = 30 kW)

**KAPU roof fan benefits:**

- Fewer holes on the roof compared to natural smoke extraction which also means less installation work.
- Several fan selections for different smoke extraction airflows.
- Easy to install because the product is made installation ready in the factory and can be lifted on the roof straight away after delivery.
- Less installation work compared to natural smoke extraction. The roof is also looking more simple.
- Less maintenance compared to natural smoke extraction system. No condence problems occur.
- Tight, warm and solid product construction.
- Reliable and tested product.
- Several color and dimension options.



## Structure of the hatch



### Construction from the inside out

1. Hot dip galvanized metal sheet 0,7 mm.
2. Frame thermal insulation – mineral wool Paroc or PIR plate (100 mm or 700 mm).
3. Lid thermal protection – polyurethane plate 100 mm.
4. Opening device (1 or 2 pcs depending on size MULTIMAT B23). 230V power supply for the opening device.
5. Transformer 24V -> 230V for the opening device inside the hatch.
6. Polyester-coated hot dip galvanized metal sheet 0,5 mm.
7. Safety switches with position information for the fan and opening device.
8. Limit switch for the hatch lid information. The limit switch is not recommended to use for the fan control.
9. Hinges 2-4 pcs.
10. Outside color RR20 as standard. Other RR colors are also available.
11. The fan is attached to a solid metal sheet inside the hatch. In the bottom is a hole which has the same diameter as the fan inside. The bottom has also holes for the cables.
12. Accepted tests: reliability Re 50 (10 000 openings), snow load SL750, wind load WL1500 and fireproofing B600.
13. Manual opening device is also available.
14. The CE-marked product which is tested according to EN12101-2 and EN12101-3.



**Transformer**



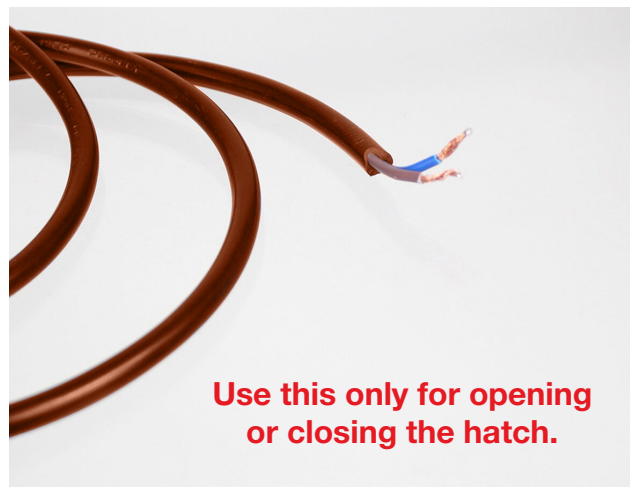
**Limit switch**



**Manual opener (not standard)**



**Possibility to open the hatch to facilitate installation**

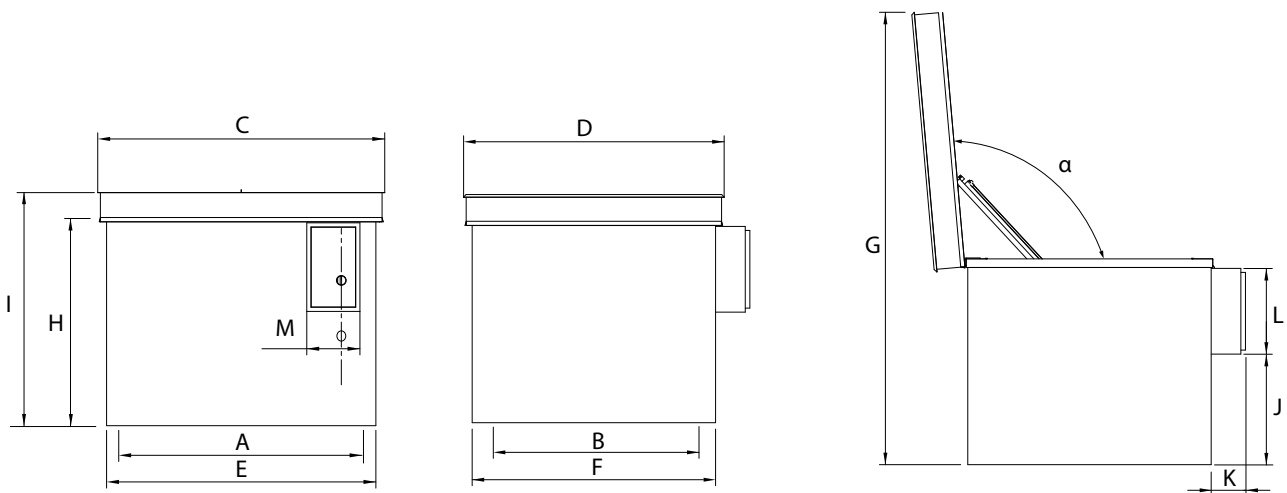


**Use this only for opening or closing the hatch.**

**KAPU Dimensions**

KAPU	Hatch	Fan diameter (mm)	Hatch inner width				Hatch outer width				Frame height (mm)					Hatch weight without the fan (kg)	Fan weight (kg)	Total weight (kg)*
			A	B	C	D	E	F	G	H		I	J	K	L			
KAPU-400	8 - 9	400	900	800	1220	1120	1120	1020	2040	1000	1110	650	150	300	95	160	58	218
KAPU-500	8 - 9	500	900	800	1220	1120	1120	1020	2040	1000	1110	650	150	300	95	160	78	238
KAPU-560	8 - 9	560	900	800	1220	1120	1120	1020	2040	1000	1110	650	150	300	95	180	87	267
KAPU-630	9 - 10	630	1000	900	1320	1220	1220	1120	2140	1000	1110	650	150	300	95	224	96	320
KAPU-710	9 - 10	710	1000	900	1320	1220	1220	1120	2140	1000	1110	650	150	300	95	224	107	331
KAPU-800	10-11	800	1100	1000	1420	1320	1320	1220	2240	1000	1110	650	150	300	95	224	162	386
KAPU-900	13-12	900	1300	1200	1620	1520	1520	1420	2440	1000	1110	650	150	300	95	224	275	499
KAPU-1000	13-12	1000	1300	1200	1620	1520	1520	1420	2640	1200	1310	650	200	500	95	275	330	605
KAPU-1250	14-15	1250	1550	1450	1870	1770	1770	1670	2890	1200	1310	650	200	500	95	312	370	682

\*Maximum weights with bigger motor sizes



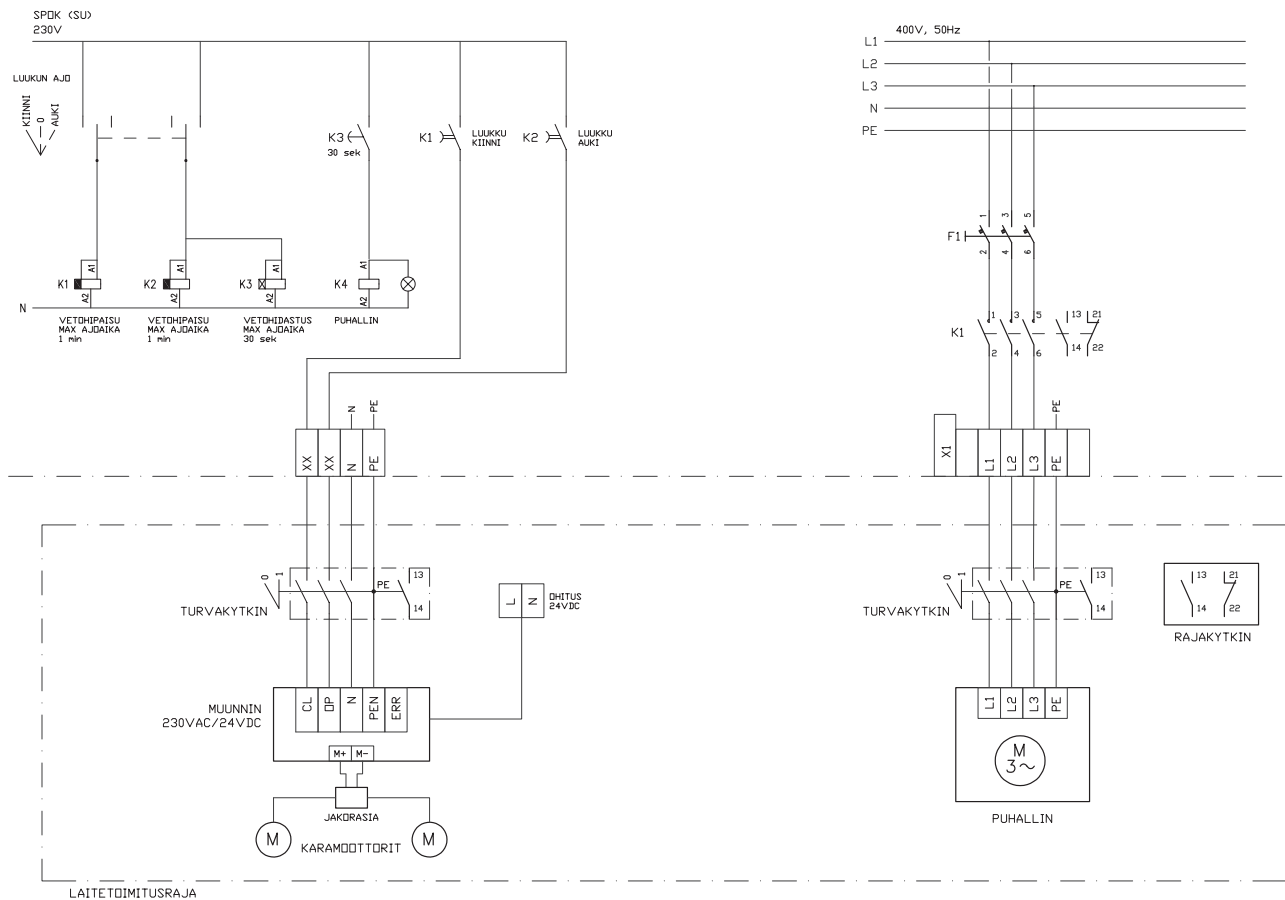
## Transport

KAPU is delivered in one pallet. Before unloading the product check possible transportation damages. If any damage is noticed, take contact immediately with ETS NORD.

## KAPU installation

Only trained personnel can install the product. Always follow the safety procedures. KAPU is attached to a roof load-bearing structure with separate angle irons (not included in the delivery). If the roof construction is very thick separate structure might be needed under the product so that the product can be installed higher. These constructions can also be asked from ETS NORD. For further installation instructions please check the installation manual.

## Electrical connections







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*Let's move the air together!*