



Application

SMART-UL fans have been designed for general ventilation of buildings. They are meant for forwarding the dry air of maximum temperature 140 °F, and dustiness not exceeding 0,3 g/m³, without viscous, aggressive pollutants or substances that could cause explosion risk. The SMART-UL family of fans, as a series of eight sizes of motor rates, ranges from 1-4 HP and maximum volume flow 8010 cfm.

Structure

SMART-UL series of fans, as unique among the examples on the market, is featured by original construction of bent steel profiles, providing a skeleton of aerodynamic and, at the same, very robust properties. Inside is a motor with a radial impeller of aluminium and steel plate. The impeller is statically and dynamically balanced. The circumferential surface around the lower skeleton constitutes an openwork structure through which the air is discharged. The upper part of the fan is shielded by a plastic hood. The fan has to be mounted on a roof base. It is recommended to apply a sound absorbing roof base type TPD-N or TPDC-N of adequate size adapted to the given fan.

Acoustics

Low noise level was most crucial in the design process of the SMART-UL family of fans. This is the basic target of the KLIMAWENT Policy of Quality. Due to this, in the course of constructional activity, several impellers, varying in shape, size, blade quantity and blade inclination, have been designed and prepared. All these impellers were submit to tests in the company Research Development Laboratory. In this course, an impeller of the lowest noise level and optimum flow performances was finally selected.

Complementary elements:

- TPD-N or TPDC-N sound absorbing roof bases – on which the fans are mounted. The application of these roof bases reduces the noise getting to the room by 12 up to 18 d(A),
- TK silencers – which are suspended under the sound absorbing roof bases, inside the room (for details see catalogue page “Installation Elements”).

Stylistics

Could the fan additionally become decoration to the building, apart from its practical features? For sure, SMART-UL series is also fulfilling this aspect. The unique visual features consist in stylistics formed by the streamline shape and the four water drop-shape concaves in the plastic hood. Due to this, the fan experiences high approbation among the architects, being in harmony with the environment. As standard, the fan is in light-grey colour.

Efficiency adjustment

On demand, we offer inverters meant for adjustment of the rotational speed of the motors. The series of inverters types is represented in the section “Electrical Control Units”.

Installing

It is recommended to mount the SMART-UL fan on sound absorbing roof bases. The series of the roof bases matches the types of fans. The sound absorbing roof base is made of zinc-coated sheet. The inner surface is padded with a sound absorbing material.

We offer two sorts of sound absorbing roof bases, varying in the mode of mounting on the roof.

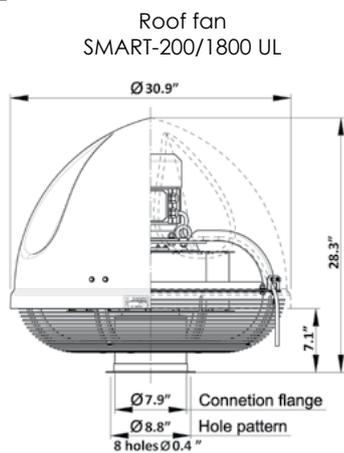
– TPD-N roof base – mounted directly on the roof. In order to facilitate its installing on a roof of various inclination angle (0° up to 18°), there are special support profiles placed rotatably on the opposite walls of the roof base, for levelling the mounting flange of the fan.

– TPDC-N roof base – mounted directly on a roof pedestal of the ventilation duct, by screwing it to the mounting flange of the base.

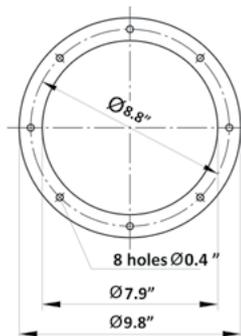
On demand, we deliver isolating switches, to cut off the power supply during the servicing and installing activities (see catalogue page “Electrical Accessories”).



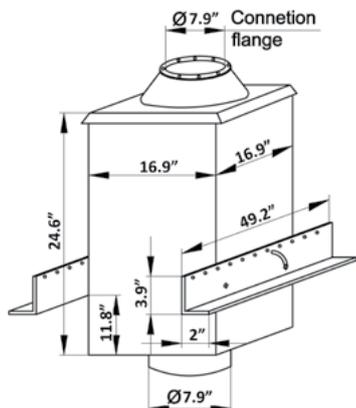
SMART-200/1800 UL



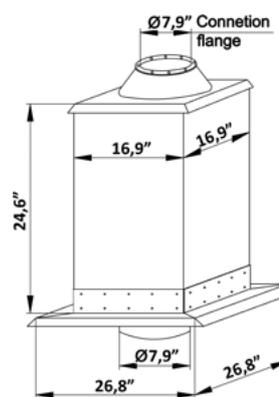
Connection flange



Sound absorbing roof base TPD-200-N



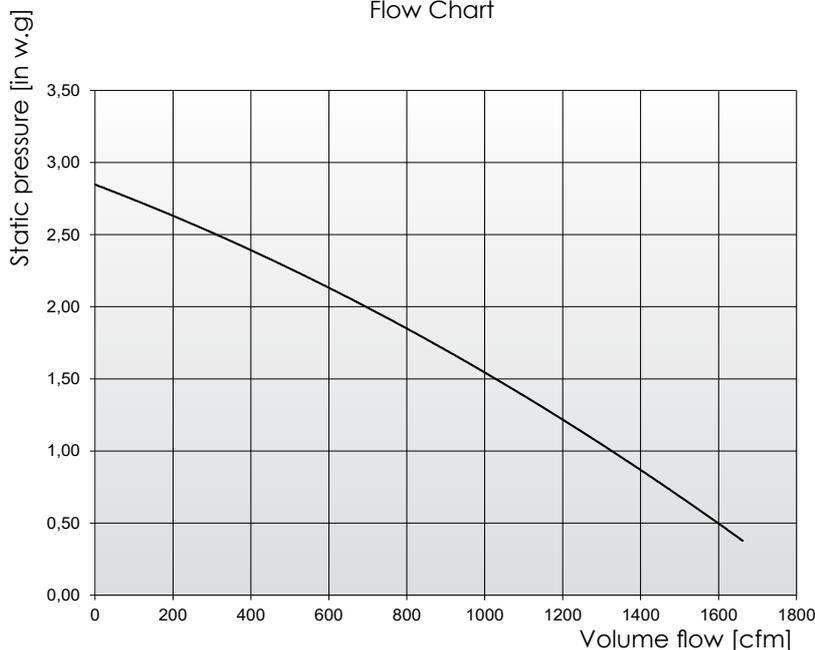
Sound absorbing roof base TPDC-200-N



Technical Data

Type	Part.No	Synchronous rotations [r.p.m.]	Supply voltage [V];60 Hz	Motor rate [HP]	Ingress protection IP	Acoustic pressure level [dB(A)]		Maximum volume flow [cfm]	Maximum vacuum [in w.g]	Weight [lb]
						1m	5m			
SMART-200/1800 UL	705W77	1800	3x230 3x460	1.0	54	79	65	1660	3	68
Roof base TPD-200-N	843P41	-	-	-	-	-	-	-	-	61
Roof base TPDC-200-N	843P51	-	-	-	-	-	-	-	-	66

Flow Chart

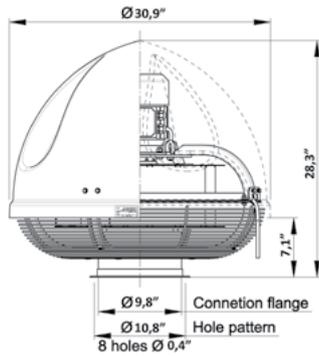


NOTE:
* The noise level measured with a silencer of 1.65 ft length installed on the fan inlet

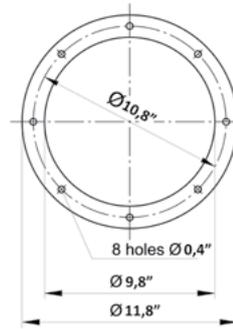


SMART-250/1800 UL

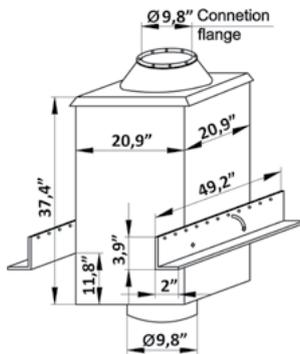
Roof fan
SMART-250/1800 UL



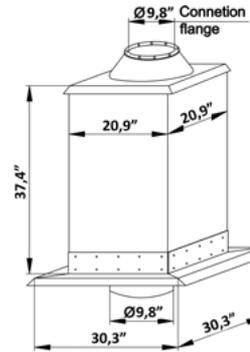
Connection flange



Sound absorbing roof base
TPD-250-N



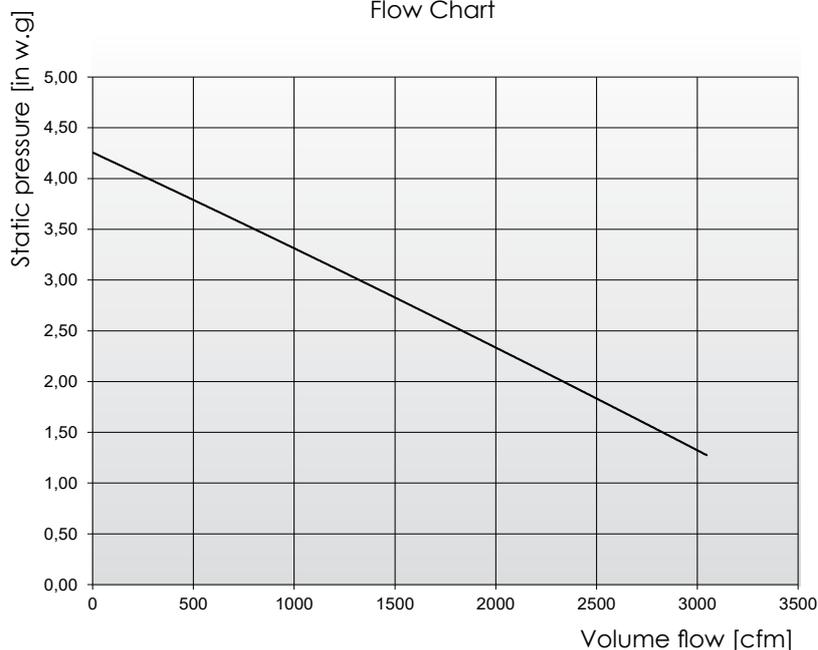
Sound absorbing roof base
TPDC-250-N



Technical Data

Type	Part.No	Synchronous rotations [r.p.m.]	Supply voltage [V]; 60 Hz	Motor rate [HP]	Ingress protection IP	Acoustic pressure level [dB(A)]*		Maximum volume flow [cfm]	Maximum vacuum [in w.g.]	Weight [lb]
						1m	5m			
SMART-250/1800 UL	705W78	1800	3x230 3x460	2.0	54	82	68	3045	4.4	85
Roof base TPD-250-N	843P42	-	-	-	-	-	-	-	-	90
Roof base TPDC-250-N	843P52	-	-	-	-	-	-	-	-	101

Flow Chart



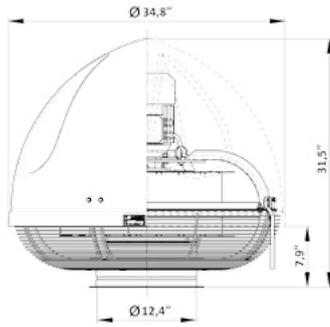
NOTE:

* The noise level measured with a silencer of 1.65 ft length installed on the fan inlet

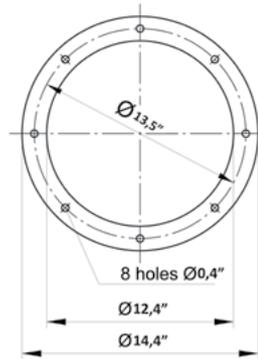


SMART-315/1800 UL

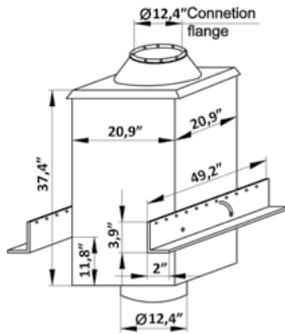
Roof fan
SMART-315/1800 UL



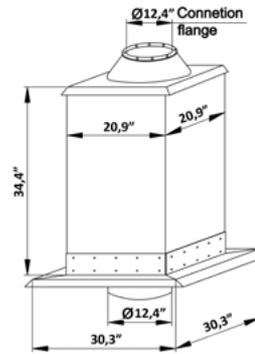
Connection flange



Sound absorbing roof base
TPD-315-N



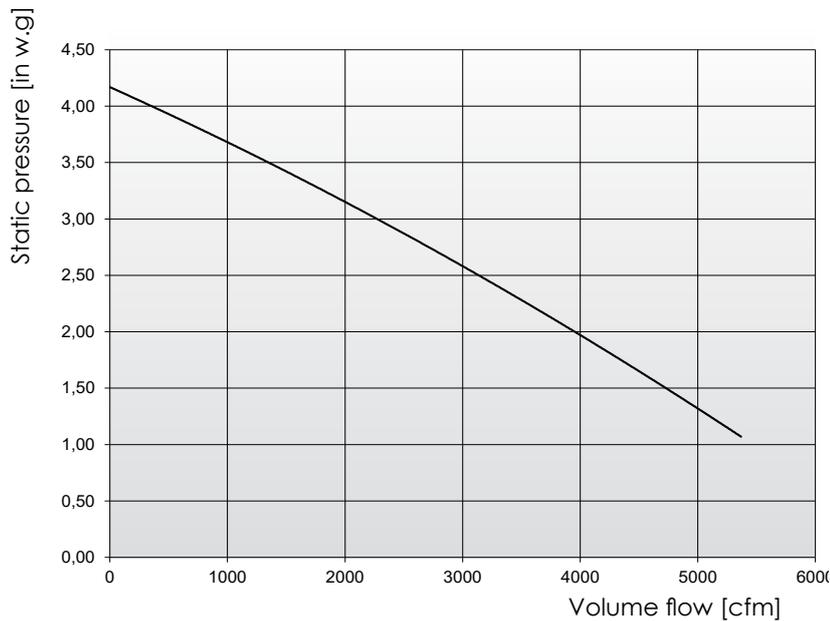
Sound absorbing roof base
TPDC-315-N



Technical Data

Type	Part.No	Synchronous rotations [r.p.m.]	Supply voltage [V]; 60 Hz	Motor rate [HP]	Ingress protection IP	Acoustic pressure level [dB (A)]*		Maximum volume flow [cfm]		Weight [lb]
						1m	5m			
SMART-315/1800 UL	705W79	1800	3x230 3x460	3.0	54	83	69	5370	4.3	127
Roof base TPD-315-N	843P43	-	-	-	-	-	-	-	-	90
Roof base .TPDC-315-N	843P53	-	-	-	-	-	-	-	-	101

Flow Chart



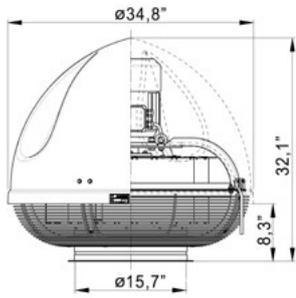
NOTE:

* The noise level measured with a silencer of 1.65 ft length installed on the fan inlet

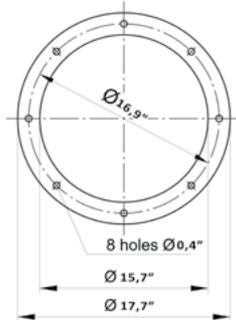


SMART-400/1200 UL

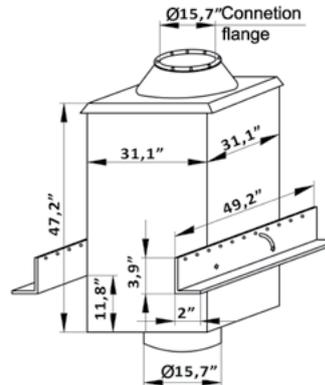
Roof fan
SMART-400/1200 UL



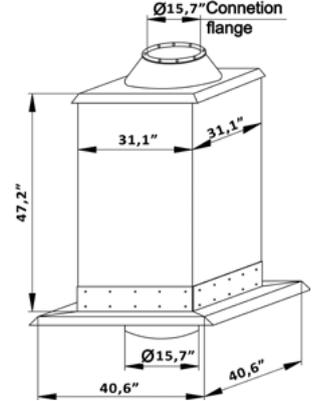
Connection flange



Sound absorbing roof base
TPD-400-N



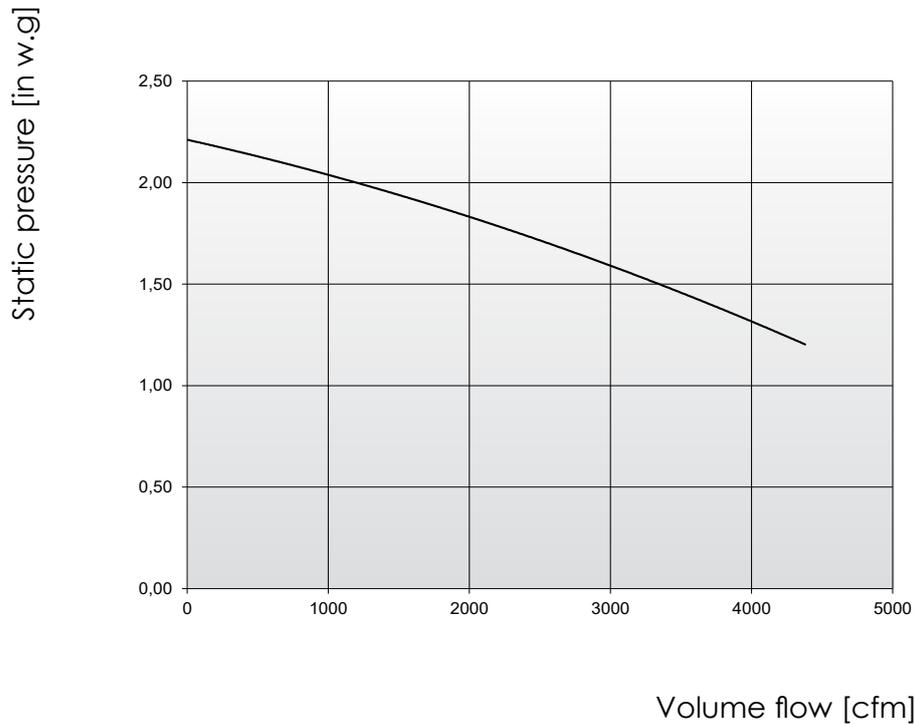
Sound absorbing roof base
TPDC-400-N



Technical Data

Type	Part.No	Synchronous rotations [r.p.m.]	Supply voltage [V]; 60 Hz	Motor rate [HP]	Ingress protection IP	Acoustic pressure level [dB (A)]*		Maximum volume flow [cfm]	Maximum vacuum [in. w.g]	Weight [lb]
						1m	5m			
SMART-400/1200 UL	705W80	1200	3x230 3x460	1.5	54	78.9	65	4380	2.3	119
Roof base TPD-400-N	843P44	-	-	-	-	-	-	-	-	165
Roof base TPDC-400-N	843P54	-	-	-	-	-	-	-	-	185

Flow Chart



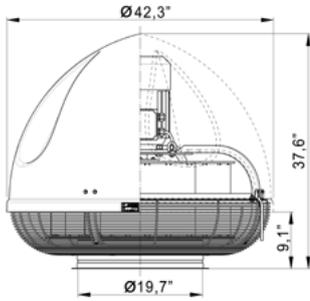
NOTE:

* The noise level measured with a silencer of 1.65 ft length installed on the fan inlet

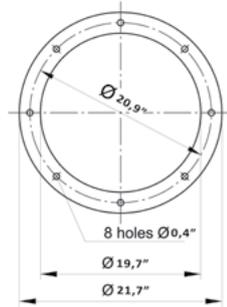


SMART-500/1200 UL

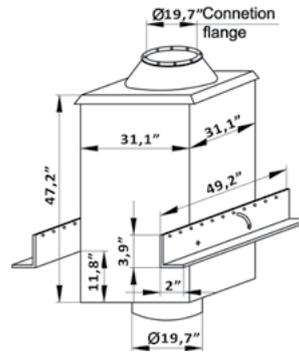
Roof fan
SMART-500/1200 UL



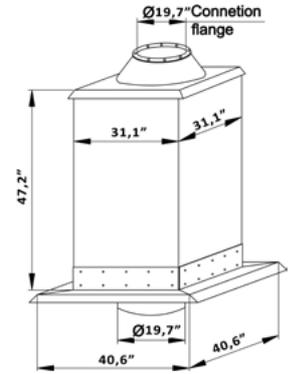
Connection flange



Sound absorbing roof base
TPD-500-N



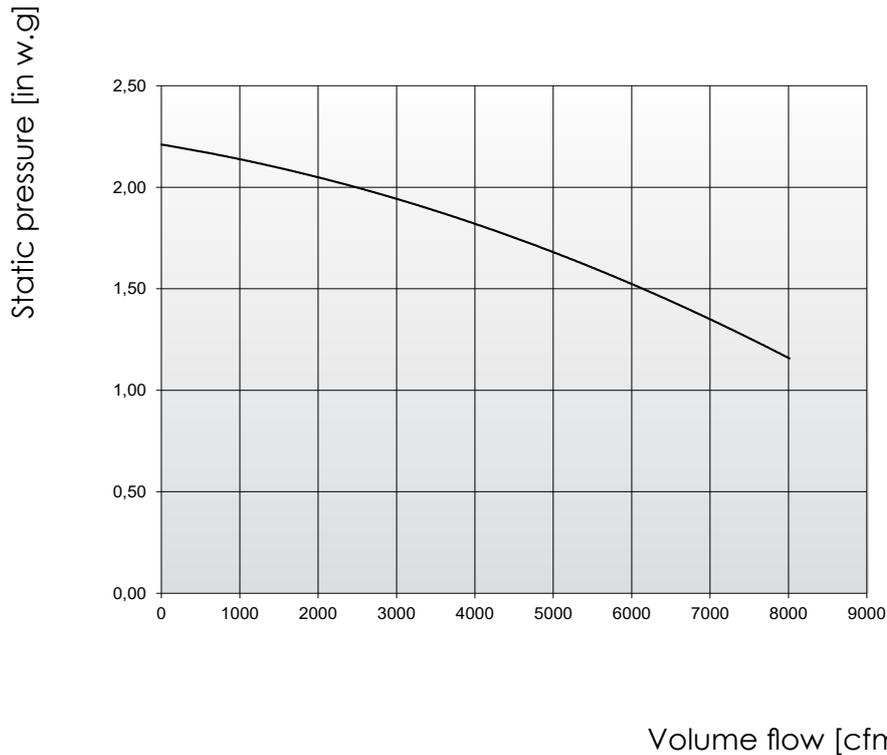
Sound absorbing roof base
TPDC-500-N



Technical Data

Type	Part.No	Speed [RPM]	Supply voltage [V]; 60 Hz	Motor rate [HP]	Ingress protection IP	Acoustic pressure level [dB (A)]*		Maximum volume flow [cfm]	Maximum vacuum [in.w.g]	Weight [lb]
						1m	5m			
SMART-500/1200 UL	705W81	1200	3x230 3x460	4.0	54	86	72	8010	2.2	231
Roof base TPD-500-N	843P45	-	-	-	-	-	-	-	-	165
Roof base TPDC-500-N	843P55	-	-	-	-	-	-	-	-	185

Flow Chart



NOTE:

* The noise level measured with a silencer of 1.65 ft length installed on the fan inlet