Ceiling swirl diffuser SW11 / SW11.Q

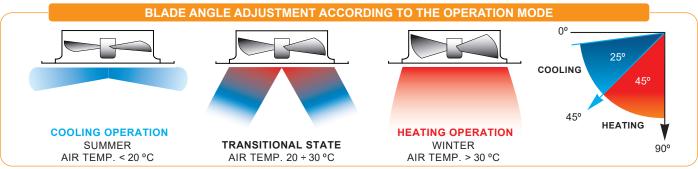




Ceiling diffusers \$

Swirl diffusers, type SW11, are designed for all types of air conditioning, ventilation and heating or cooling systems. Due to the high capacity of the air stream, they are used in areas with heights of 3 to 12 m, such as industrial buildings, theaters, airports, shopping centers, gyms, etc. They are ideal for large temperature difference between the supplied air and the air in the area we want to regulate. They are suitable for ceiling installation and are recommended for air supply systems. They consist of a cylindrical body made of aluminium powder painted in RAL 9016 and adjustable, converging blades, in a helical arrangement with grouped movement, made of galvanized steel, powder painted in RAL 9016. The special helical design of its blades offers the possibility to swirl the air stream, which in combination with the "Coanda" effect in the internal section of the diffuser, offers high comfort air conditioning. This is achieved by adjusting the angle of the blades from horizontal air supply to angled and finally to vertical supply as the air conditioning system switches between cooling operation, isothermal air supply and heating operation.





CONSTRUCTION OPTIONS

SW11

Aluminium cylindrical body powder painted in RAL 9016 and adjustable converging blades made of galvanized steel, powder painted in RAL 9016. The movement of the blades is grouped and the adjustment of the supply angle is done manually.

SW11+MO Aluminium cylindrical body powder painted in RAL 9016 and adjustable converging blades made of galvanized steel, powder painted in RAL 9016. The movement of the blades is grouped and the adjustment of the supply angle is done automatically via servomotor On / Off.

SW11+MA

Aluminium cylindrical body powder painted in RAL 9016 and adjustable converging blades made of galvanized steel, powder painted in RAL 9016. The movement of the blades is grouped and the adjustment of the supply angle is done automatically via 24V analog servomotor.

SW11+TP

Aluminium cylindrical body powder painted in RAL 9016 and adjustable converging blades made of galvanized steel, powder painted in RAL 9016. The movement of the blades is grouped and the adjustment of the supply angle is done automatically via thermodynamic mechanism (thermodynamic piston) which does not require power supply or additional automations and automatically adjusts the angle of the blades according the air supply temperature (as shown in the diagram). At temperatures below 20 °C (cooling operation) the angle of the blades remain at 35 degrees. At temperatures from 20 °C to 30 °C (transitional state) the angle of the blades changes from 35 to 75 degrees. At temperatures above 30 °C (heating operation) the angle of the blades remains at 75 degrees.

- ADDITIONAL COMPONENTS: (a) Plenum box, circular or rectangular. (b) Circular volume control damper, mounted on the plenum box. (c) Air duct thermostat for automatic blade angle adjustment.
- **DOUBLE FRAME DIFFUSER SW11.Q**

Swirl diffusers SW11.Q are specially designed with double frame in order to relieve the pressure that is increasing as the blades are closing during their angle adjustment from vertical air supply (heating operation) to horizontal air supply (cooling operation). As the blades are closing and the pressure is increasing, more and more air is escaping through the double frame opening. As a result, in cooling mode, the air stream's velocity at the diffuser's outlet is lower than in the corresponding SW11 types. Therefore we have better air velocity and lower noise levels within the comfort zone.

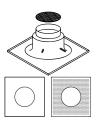
SW11.Q diffusers are available with manual and automatic blade movement (similar to SW11 types). For more information and size selection, please contact our sales department.

- FALSE CEILING PLATES WITH or WITHOUT PERFORATION & ROUND HOLE Swirl diffusers SW11.OP and SW11.O are compatible with false ceiling plates (with or without perforation respectively) made of galvanized steel 1 mm thick, with outer dimensions 595 x 595 mm and round hole. The diffuser and the plate
- SW11 & SW11.Q compatibility with false ceiling plates: SW11 = 200, 250, 300, 350, 400, 450

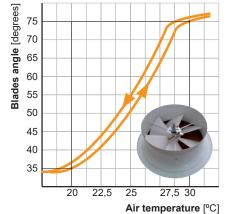
are powder painted in RAL color of your choise.

SW11.Q = 200, 250, 300, 350, 400

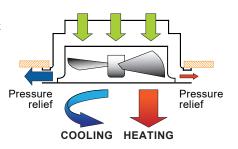
For more information, please contact our sales department.

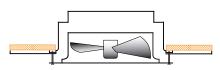


SW11...O SW11...OP







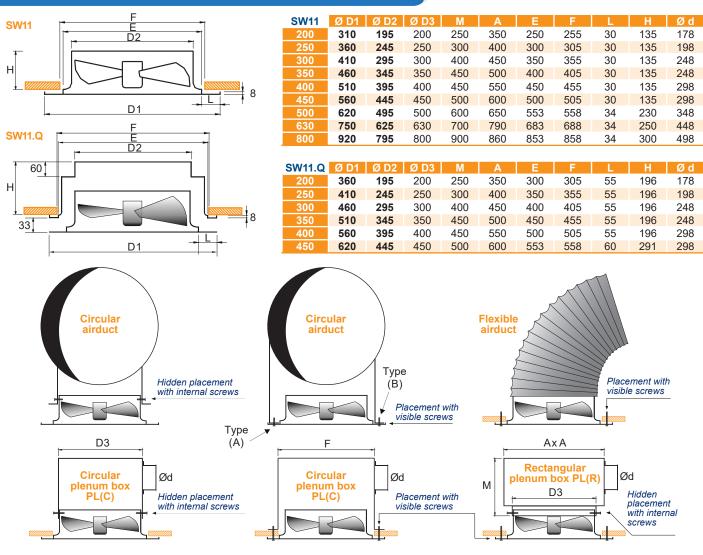


Types SW11.Q.OP & SW11.Q.O have the false ceiling plate pre-installed with the 2nd frame hidden. If the plate is ordered separately then the diffuser is placed with the 2nd frame visible as well.

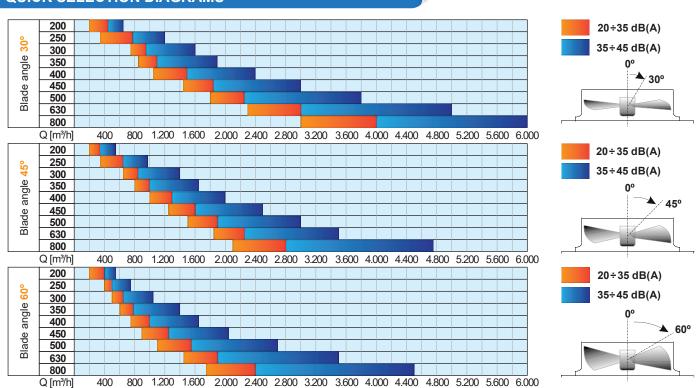




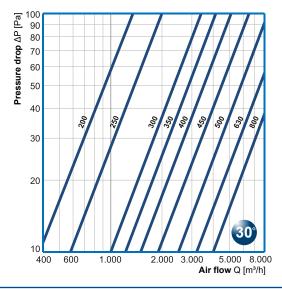
DIMENSIONS - PLACEMENT METHODS - PLENUM BOXES

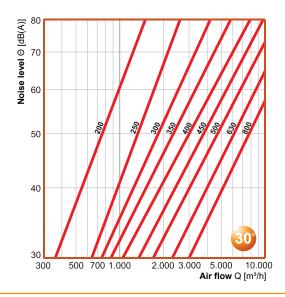


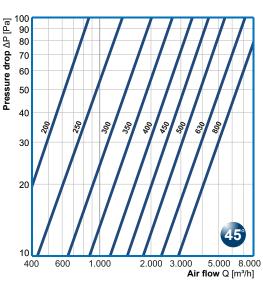
QUICK SELECTION DIAGRAMS

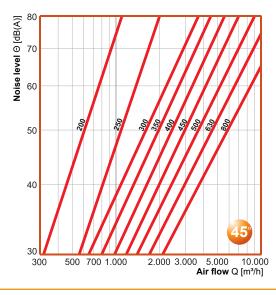


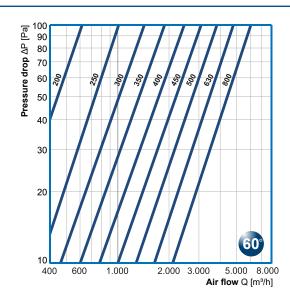
PRESSURE DROP & NOISE LEVEL CALCULATION for blade angle 30°, 45° & 60°

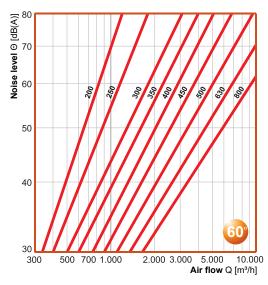








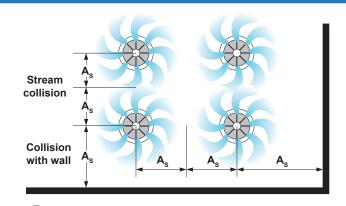


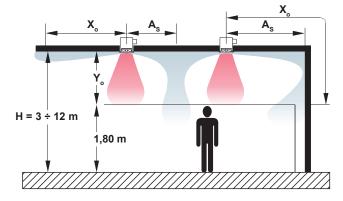






CEILING SWIRL DIFFUSERS SW11 PLACEMENT

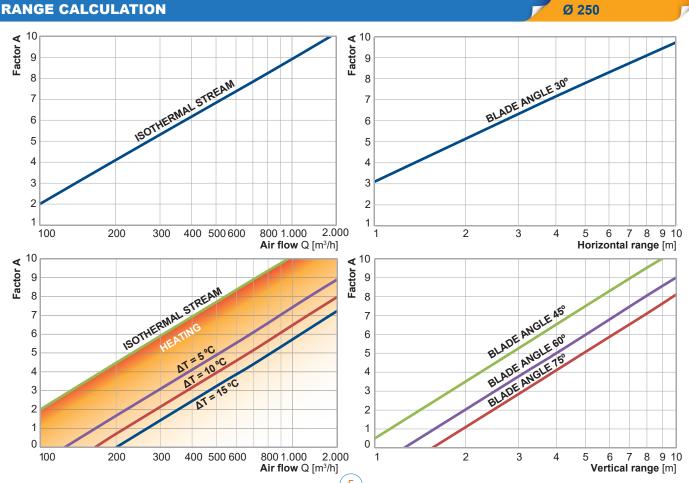




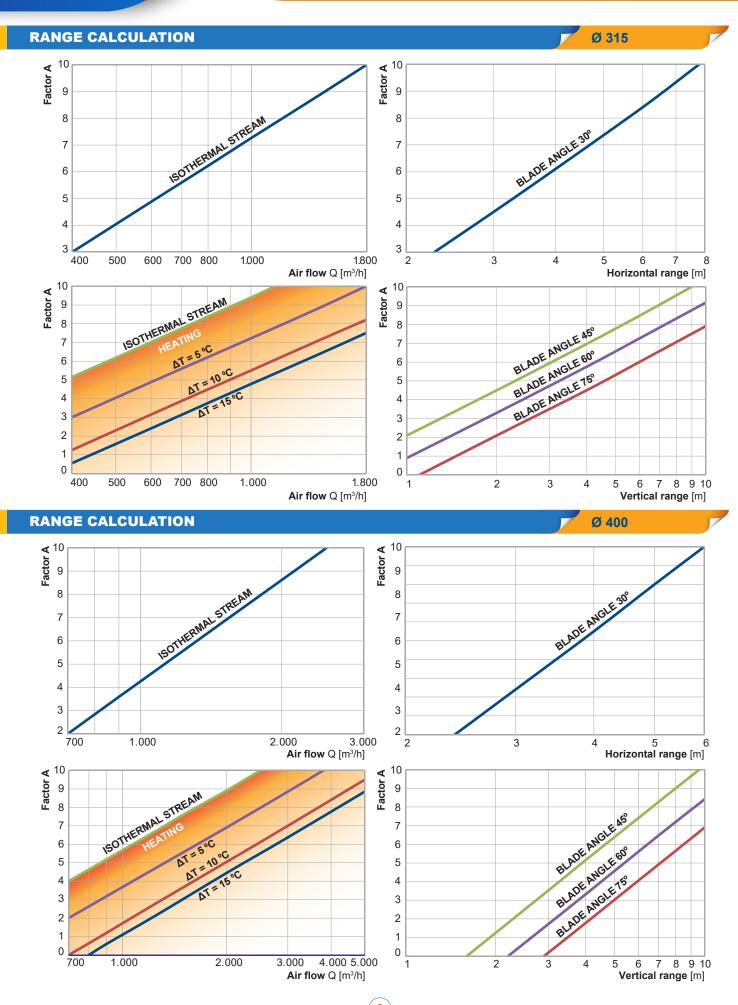
All diffusers can be powder painted in any RAL color, upon request. For the full range of RAL colors please contact us.

RAL 6024 **RAL 1007 RAL 2002 RAL 3017 RAL 5007** RAL 6003 **RAL 1011 RAL 2003 RAL 3018 RAL 5008 RAL 6004 RAL 6025 RAL 9001** Grey blue **RAL 1012 RAL 2004 RAL 3020 RAL 5009 RAL 6005 RAL 6026 RAL 9002** Grey white Color examples

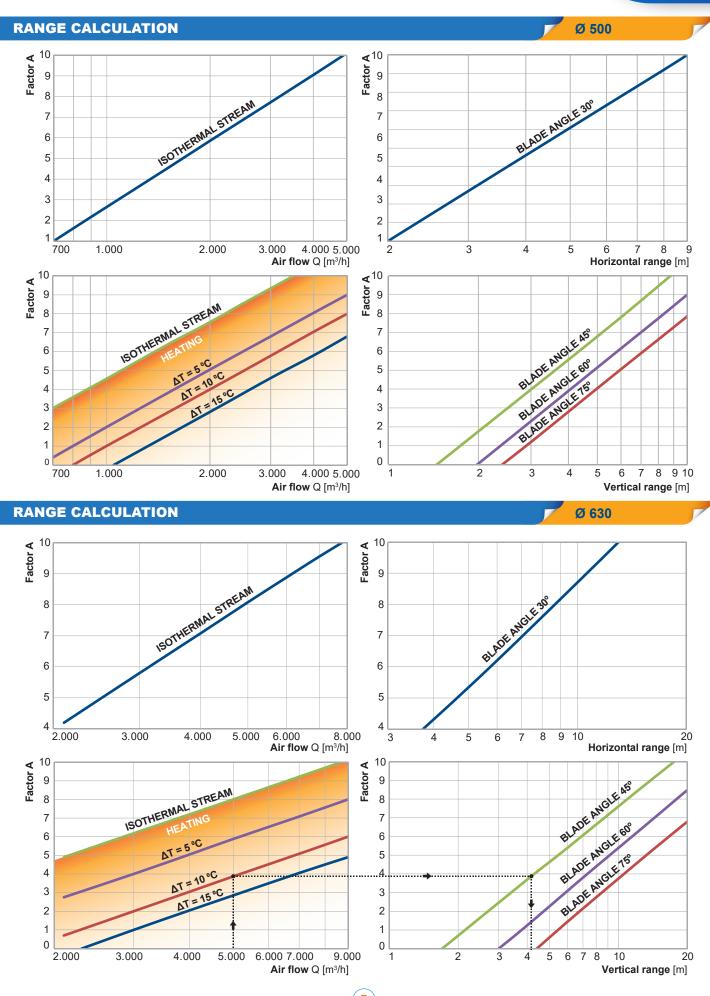
The diffuser selection is made with the following diagrams and in accordance with the normative document: CR 1752:1998 (Ventilation for buildings - Design criteria for the indoor environment). The diagrams are an approximate selection method for SW11 diffusers. For more precise calculation, please use the AIRTECHNIC air grilles calculation software or contact us.









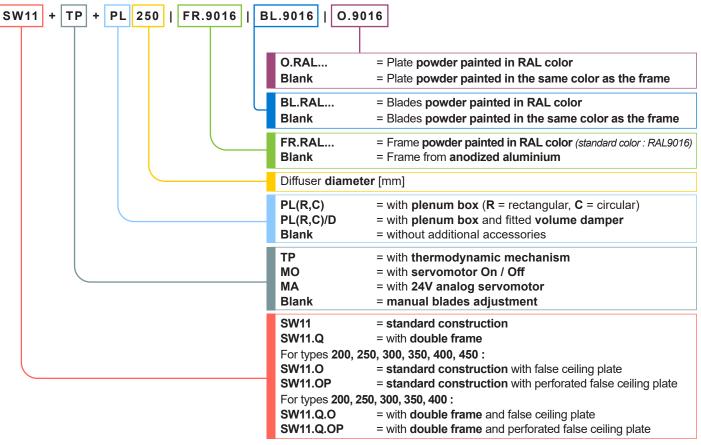






SW11 - ORDER

For the proper order of ceiling swirl diffusers SW11 please use the following code :



Examples

SW11+PL(C)/D 250 | FR.9016 =

Ceiling diffuser SW11 Ø250 mm in diameter with aluminium frame and blades from galvanized steel, all powder painted in RAL9016 and circular plenum box with volume damper mounted on the plenum box.

SW11.Q.O 400 =

Aluminium double frame ceiling diffuser SW11 Ø400 mm in diameter, blades from galvanized steel and factory installed, non-perforated false ceiling plate.

SPECIFICATIONS

Ceiling swirl diffuser with adjustable blades, SW11

Ceiling, swirl diffuser, indicative type **SW11** by **AIRTECHNIC**, with circular body manufactured of anodized aluminum / aluminum painted in RAL 9016 / in RAL... color and grouped, adjustable converging blades in a helical arrangement, manufactured of galvanized steel painted in RAL 9016 / in RAL... color. The angle adjustment will be achieved manually (**SW11**) / automatically via thermodynamic piston (**SW11+TP**) / automatically via servomotor On / Off 220V (**SW11+MO**) / automatically via analog servomotor 24V (**SW11+MA**). The manufacturer will have performed measurements of the technical characteristics of the diffuser, in an independent laboratory. It will have plenum box R rectangular / C circular [PL(R/C)] / plenum box R rectangular / C circular and volume damper on the box [PL(R/C)/D]. It will be suitable for ceiling or air duct placement and visible installation with screws / concealed installation with internal screws, on the side of the outer frame. The factory will be certified according to **ISO 9001:2015** (Quality Management Systems) and according to **ISO 14001:2015** (Environmental Management Systems).

It will be manufactured by AIRTECHNIC type SW11 / SW11 +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11+TP / SW11+TP +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11+MO / SW11+MO +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11+MA / SW11+MA +PL(R/C), +PL(R/C)/D







Ceiling swirl diffuser with adjustable blades and double frame, SW11.Q

Ceiling, swirl diffuser, indicative type **SW11.Q** by **AIRTECHNIC**, with circular, double wall, body manufactured of anodized aluminum / aluminum painted in RAL 9016 / in RAL... color and grouped, adjustable converging blades in a helical arrangement, manufactured of galvanized steel painted in RAL 9016 / in RAL... color. The angle adjustment will be achieved manually (**SW11.Q**) / automatically via thermodynamic piston (**SW11.Q+TP**) / automatically via servomotor On / Off 220V (**SW11.Q+MO**) / automatically via analog servomotor 24V (**SW11.Q+MA**). The manufacturer will have performed measurements of the technical characteristics of the diffuser, in an independent laboratory. It will have plenum box R rectangular / C circular [PL(R/C)] / plenum box R rectangular / C circular and volume damper on the box [PL(R/C)/D]. It will be suitable for ceiling or air duct placement and visible installation with screws / concealed installation with internal screws, on the side of the outer frame. The factory will be certified according to **ISO 9001:2015** (Quality Management Systems) and according to **ISO 14001:2015** (Environmental Management Systems).

It will be manufactured by AIRTECHNIC type SW11.Q / SW11.Q +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q+TP / SW11.Q+TP +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q+MO / SW11.Q+MO +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q+MA / SW11.Q+MA +PL(R/C), +PL(R/C)/D

Ceiling swirl diffuser with adjustable blades and false ceiling plate, SW11.0

Ceiling, swirl diffuser, indicative type **SW11.0** by **AIRTECHNIC**, with circular body manufactured of anodized aluminum / aluminum painted in RAL 9016 / in RAL... color and grouped, adjustable converging blades in a helical arrangement, manufactured of galvanized steel painted in RAL 9016 / in RAL... color and a factory installed false ceiling plate manufactured of galvanized steel 1 mm thick, with external dimensions 595 x 595 mm and round hole, painted in RAL 9016 / RAL... color. The angle adjustment will be achieved manually (**SW11.0**) / automatically via thermodynamic piston (**SW11.0+TP**) / automatically via servomotor On / Off 220V (**SW11.0+MO**) / automatically via analog servomotor 24V (**SW11.0+MA**). The manufacturer will have performed measurements of the technical characteristics of the diffuser, in an independent laboratory. It will have plenum box R rectangular / C circular [PL(R/C)] / plenum box R rectangular / C circular and volume damper on the box [PL(R/C)/D]. It will be suitable for false ceiling placement. The factory will be certified according to **ISO 9001:2015** (Quality Management Systems) and according to **ISO 14001:2015** (Environmental Management Systems). It will be manufactured by **AIRTECHNIC** type **SW11.0 / SW11.0 +PL(R/C), +PL(R/C)/D**

It will be manufactured by AIRTECHNIC type SW11.O+TP / SW11.O+TP +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.0+MO / SW11.0+MO +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.0+MA / SW11.0+MA +PL(R/C), +PL(R/C)/D

Ceiling swirl diffuser with adjustable blades and perforated false ceiling plate, SW11.0P

Ceiling, swirl diffuser, indicative type **SW11.OP** by **AIRTECHNIC**, with circular body manufactured of anodized aluminum / aluminum painted in RAL 9016 / in RAL... color and grouped, adjustable converging blades in a helical arrangement, manufactured of galvanized steel painted in RAL 9016 / in RAL... color and a factory installed perforated false ceiling plate manufactured of galvanized steel 1 mm thick, with external dimensions 595 x 595 mm and round hole, painted in RAL 9016 / RAL... color. The angle adjustment will be achieved manually (**SW11.OP**) / automatically via thermodynamic piston (**SW11.OP+TP**) / automatically via servomotor On / Off 220V (**SW11.OP+MO**) / automatically via analog servomotor 24V (**SW11.OP+MA**). The manufacturer will have performed measurements of the technical characteristics of the diffuser, in an independent laboratory. It will have plenum box R rectangular / C circular [PL(R/C)] / plenum box R rectangular / C circular and volume damper on the box [PL(R/C)/D]. It will be suitable for false ceiling placement. The factory will be certified according to **ISO 9001:2015** (Quality Management Systems) and according to **ISO 14001:2015** (Environmental Management Systems).

It will be manufactured by AIRTECHNIC type SW11.OP / SW11.OP +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.OP+TP / SW11.OP+TP +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.OP+MO / SW11.OP+MO +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.OP+MA / SW11.OP+MA +PL(R/C), +PL(R/C)/D

Ceiling swirl diffuser with adjustable blades, double frame and false ceiling plate, SW11.Q.O

Ceiling, swirl diffuser, indicative type **SW11.Q.O** by **AIRTECHNIC**, with circular, double wall, body manufactured of anodized aluminum / aluminum painted in RAL 9016 / in RAL... color and grouped, adjustable converging blades in a helical arrangement, manufactured of galvanized steel painted in RAL 9016 / in RAL... color and a factory installed false ceiling plate manufactured of galvanized steel 1 mm thick, with external dimensions 595 x 595 mm and round hole, painted in RAL 9016 / RAL... color. The angle adjustment will be achieved manually (**SW11.Q.O**) / automatically via thermodynamic piston (**SW11.Q.O+TP**) / automatically via servomotor On / Off 220V (**SW11.Q.O+MO**) / automatically via analog servomotor 24V (**SW11.Q.O+MA**). The manufacturer will have performed measurements of the technical characteristics of the diffuser, in an independent laboratory. It will have plenum box R rectangular / C circular [PL(R/C)] / plenum box R rectangular / C circular and volume damper on the box [PL(R/C)/D]. It will be suitable for false ceiling placement. The factory will be certified according to **ISO 9001:2015** (Quality Management Systems) and according to **ISO 14001:2015** (Environmental Management Systems).

It will be manufactured by AIRTECHNIC type SW11.Q.O / SW11.Q.O +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q.O+TP / SW11.Q.O+TP +PL(R/C) +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q.O+MO / SW11.Q.O+MO +PL(R/C) +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q.O+MA / SW11.Q.O+MA +PL(R/C) +PL(R/C)/D

Ceiling swirl diffuser with adjustable blades, double frame and perforated false ceiling plate, SW11.Q.OP

Ceiling, swirl diffuser, indicative type **SW11.Q.OP** by **AIRTECHNIC**, with circular, double wall, body manufactured of anodized aluminum / aluminum painted in RAL 9016 / in RAL... color and grouped, adjustable converging blades in a helical arrangement, manufactured of galvanized steel painted in RAL 9016 / in RAL... color and a factory installed perforated false ceiling plate manufactured of galvanized steel 1 mm thick, with external dimensions 595 x 595 mm and round hole, painted in RAL 9016 / RAL... color. The angle adjustment will be achieved manually (**SW11.Q.OP**) / automatically via thermodynamic piston (**SW11.Q.OP+TP**) / automatically via servomotor On / Off 220V (**SW11.Q.OP+MO**) / automatically via analog servomotor 24V (**SW11.Q.OP+MA**). The manufacturer will have performed measurements of the technical characteristics of the diffuser, in an independent laboratory. It will have plenum box R rectangular / C circular [PL(R/C)] / plenum box R rectangular / C circular and volume damper on the box [PL(R/C)/D]. It will be suitable for false ceiling placement. The factory will be certified according to **ISO 9001:2015** (Quality Management Systems) and according to **ISO 14001:2015** (Environmental Management Systems).

It will be manufactured by AIRTECHNIC type SW11.Q.OP / SW11.Q.OP +PL(R/C), +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q.OP+TP / SW11.Q.OP+TP +PL(R/C) +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q.OP+MO / SW11.Q.OP+MO +PL(R/C) +PL(R/C)/D

It will be manufactured by AIRTECHNIC type SW11.Q.OP+MA / SW11.Q.OP+MA +PL(R/C) +PL(R/C)/D







ISO 14001:2015























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