

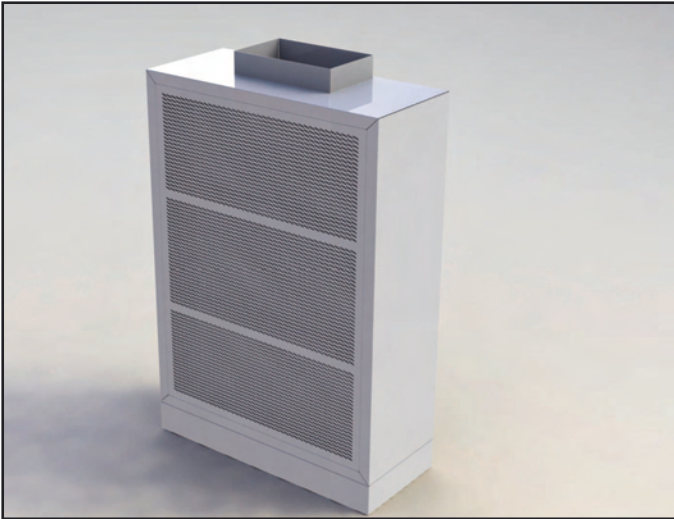
Displacement Diffuser Units

S-90 SERIES

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S-90 Series Displacement Diffusers

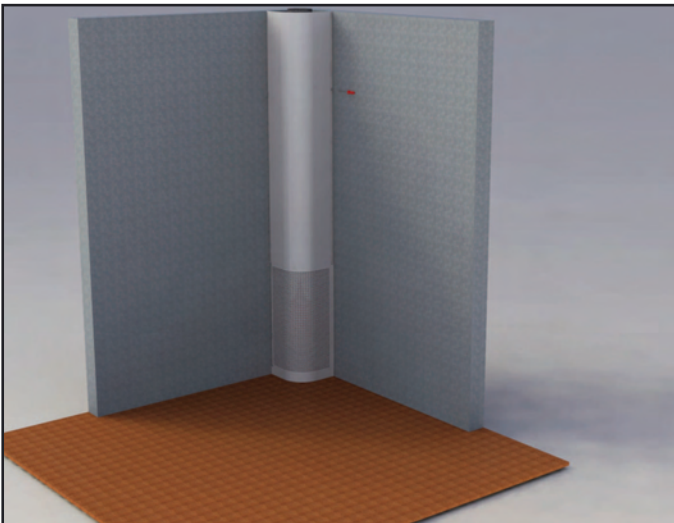


S-90 Series Overview

The S-90 diffusers are displacement units for floor installation. The unit includes upper and lower covers and a perforated air distribution face plate. Connections can be made through the upper or lower cover.

The units are of galvanised steel sheet construction with aluminium sections and include an air equalising plate (painted in black) in the interior, as well as static pressure measurement to obtain the supply flow rate. The standard finish is RAL 9010 white paint, although any RAL colour is available upon request.

Applications



The S-90 displacement diffusers can be used in both comfort and industrial environments. Air is supplied from the occupied area level at a slow outlet velocity (< 0.8 m/s) to minimise turbulence. Depending on the size, the units can also supply large air volumes. Air is supplied at a temperature difference of -1 to -6 °C with respect to the ambient temperature.

S-90 Series Models

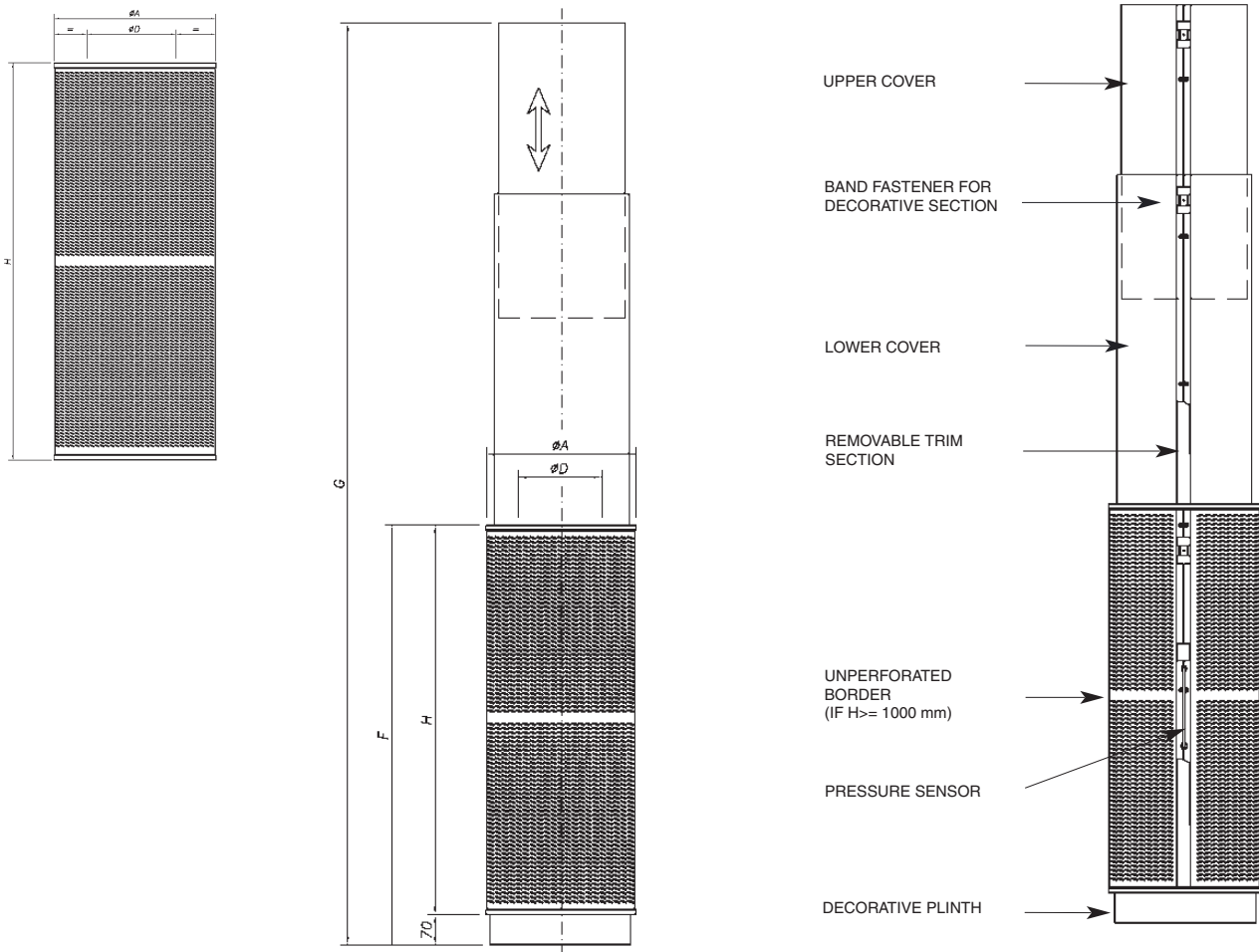
S-90-C	Round
S-90-SC	Semicircular
S-90-CC	Square
S-90-R	Rectangular
S-90-R-3	3-Way Rectangular
S-90-RT	Horizontal Rectangular
S-90-R-E	Flush-mounte Rectangular



S-90-C Model - Round

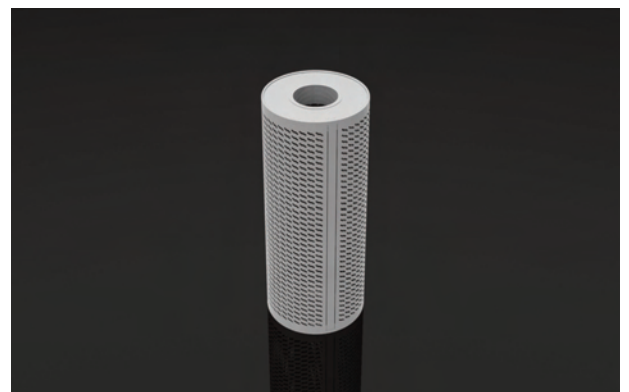
Dimensions

The S-90-C diffuser is a cylindrical displacement unit that supplies air at a low velocity to the habitable area. Optional accessories include a plinth and trim.



DIMENSIONS

Size	ϕA	F	G	ϕD	H
125	300	670	2400 - 3500	125	600
160	335	970		160	900
200	375			200	
250	430	1270	2750 - 3500	250	1200
315	495	1570		315	1500
400	580	1870		400	1800
500	680	2070	2800 - 3500	500	2000
630	810			630	



S-90-C Model - Round

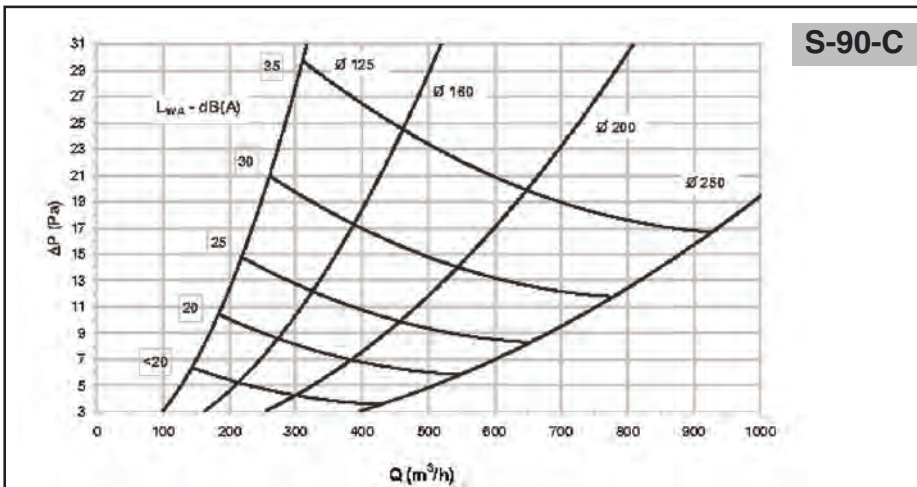
Technical data

The air flow, pressure drop and horizontal throw of the air jet are listed below for a velocity of 0.20 m/s in the occupied area, based on a specific sound level.

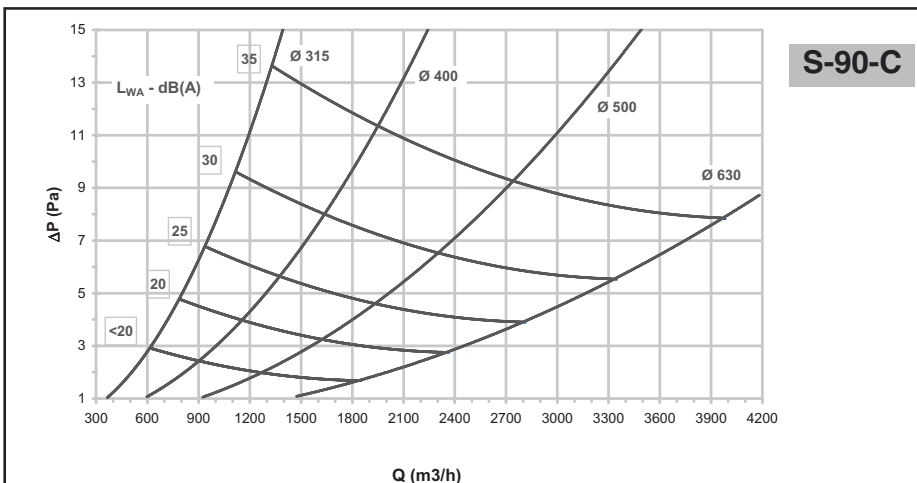
Quick selection table

S-90-C QUICK SELECTION TABLE				
FLOW RATE - SOUND LEVEL L_w - Pressure drop - THROW				
Model	m^3/h (Pa) [m]			
	20 dB(A)	25 dB(A)	30 dB(A)	35 dB(A)
125	170 (9) [2,3]	225 (15) [2,7]	270 (21) [3,5]	310 (30) [4,0]
160	270 (9) [2,3]	320 (13) [2,5]	380 (17) [3,0]	460 (25) [3,6]
200	380 (7) [3,0]	460 (10) [3,0]	550 (14) [4,0]	650 (20) [4,7]
250	540 (6) [3,2]	650 (9) [3,7]	770 (12) [4,6]	930 (17) [5,5]
315	800 (5) [2,3]	1000 (7) [2,8]	1100 (10) [3,1]	1350 (14) [4,8]
400	1150 (4) [3,6]	1400 (6) [3,3]	1650 (8) [3,8]	1950 (12) [4,5]
500	1620 (3) [3,4]	1950 (5) [4,1]	2300 (7) [5,9]	2800 (10) [6,0]
630	2350 (3) [4,6]	2800 (4) [5,5]	3400 (6) [6,9]	4000 (8) [8,0]

Pressure drop and sound level selection charts



These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.



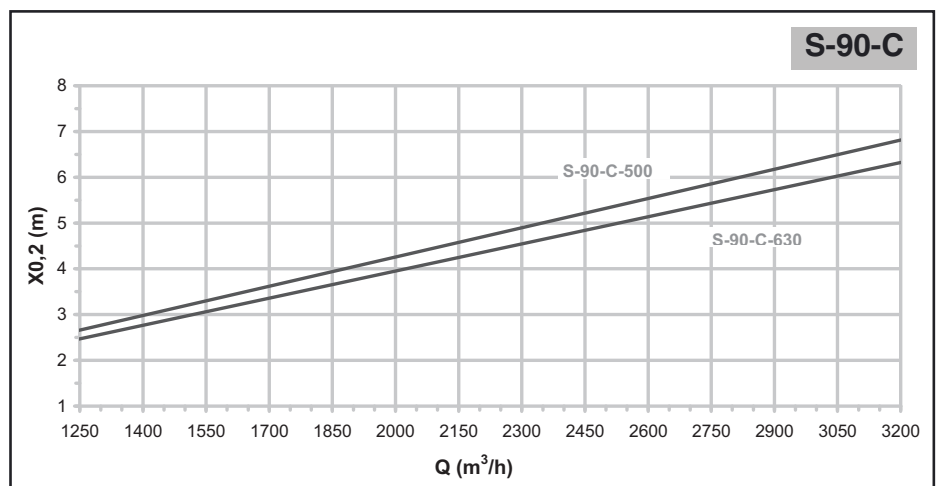
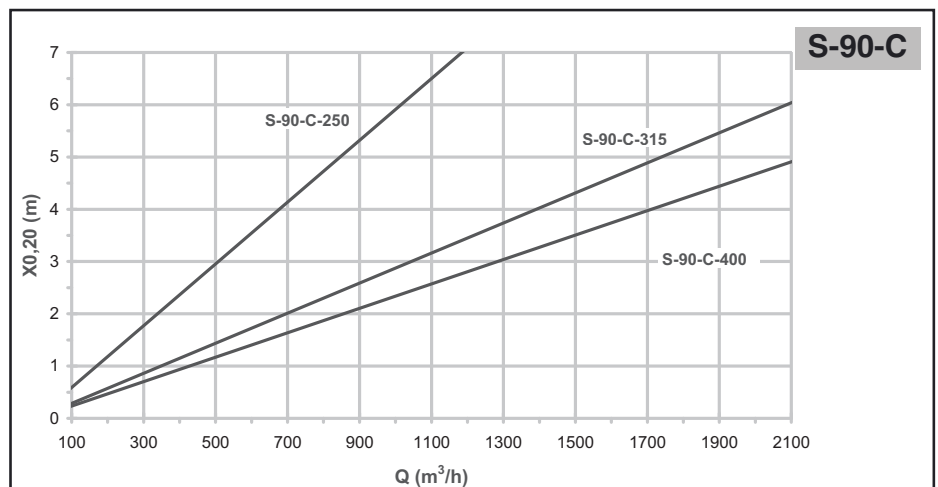
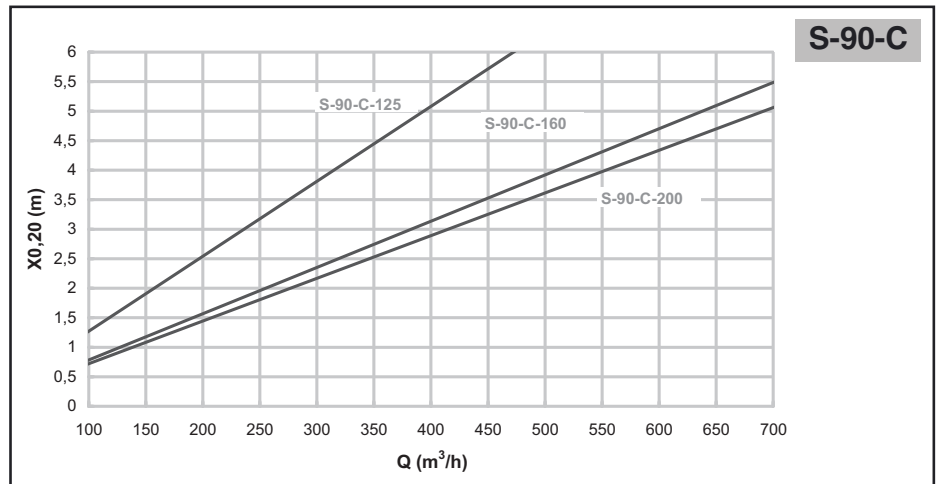
Symbols:

- Q (m³/h)** Air flow per displacement unit
- P (Pa)** Pressure drop
- L_{WA}(dBA)** Sound power level

S-90-C Model - Round

Selection charts. Throw data

The selection charts shown allow the horizontal throw of the air jet to be obtained from the supply flow rate, when the velocity in the occupied area is 0.20 m³/h.



Symbols:

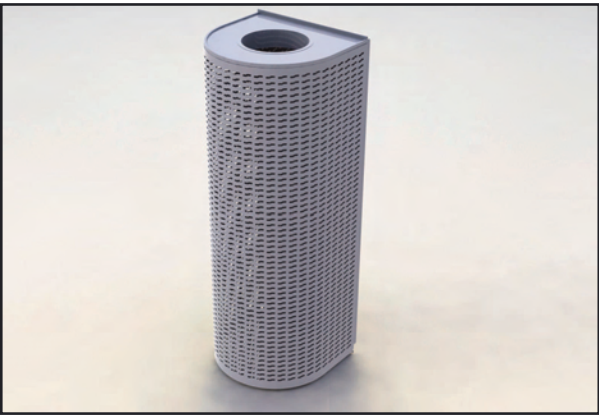
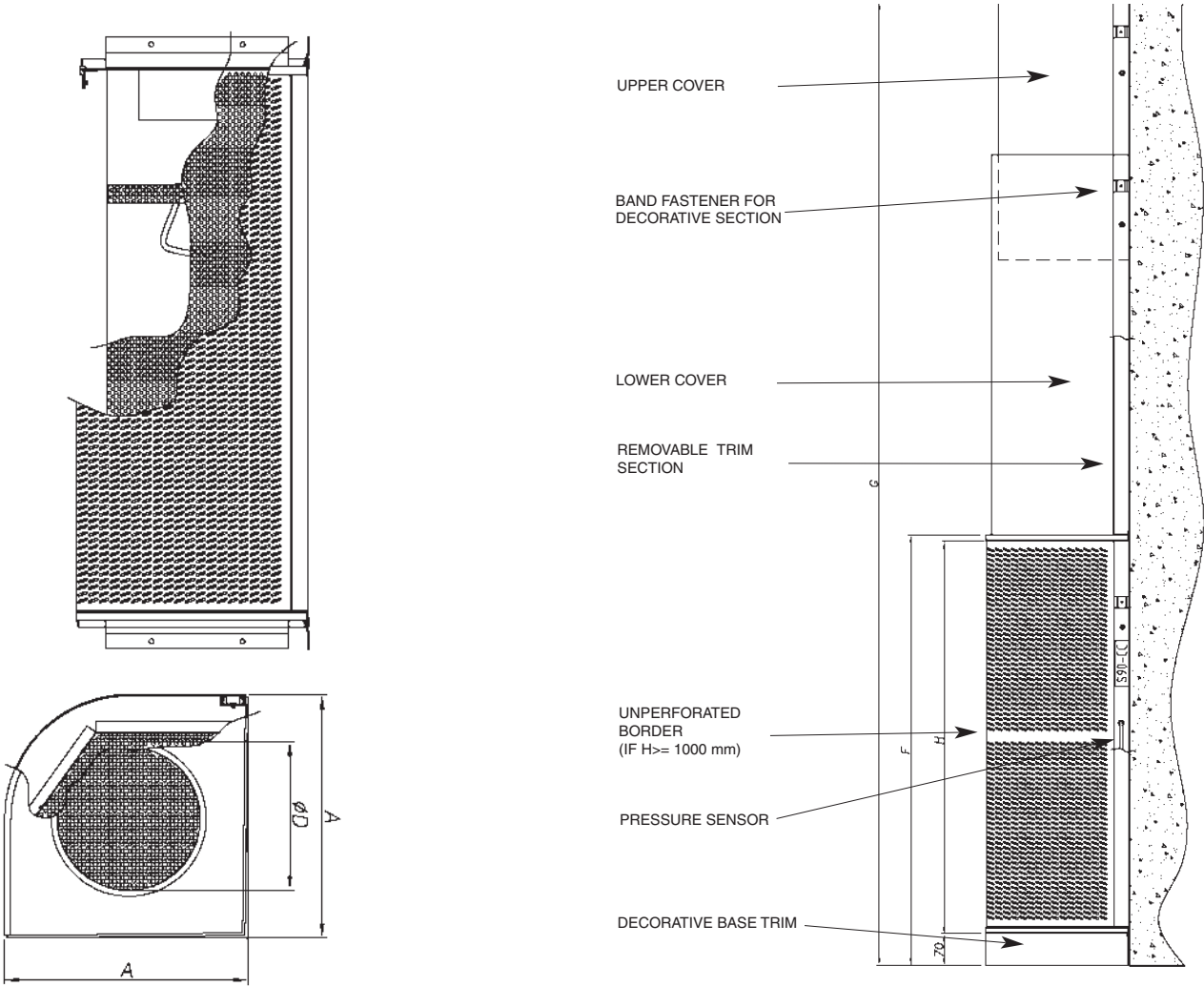
Q (m³/h) Air flow per displacement unit

X_{0,20}(m) Horizontal throw of the air jet, when the velocity in the occupied area is 0.20 m/s for a temperature difference of T = -3 °C

S-90-SC Model - Semicircular

Dimensions

The S-90-SC diffuser is a semicircular displacement unit that supplies the air at low velocity to the habitable area. Optional accessories include a plinth and trim.



DIMENSIONS

Size	A	H	G	ØD	F
160	335	900	2400 - 3500	160	970
200	375			200	
250	430	1200		250	
315	495	1500	2750 - 3500	315	1570
400	580	1800		400	1870
500	680	2000	2800 - 3500	500	2070
630	810			630	

S-90-SC Model - Semicircular

Technical data

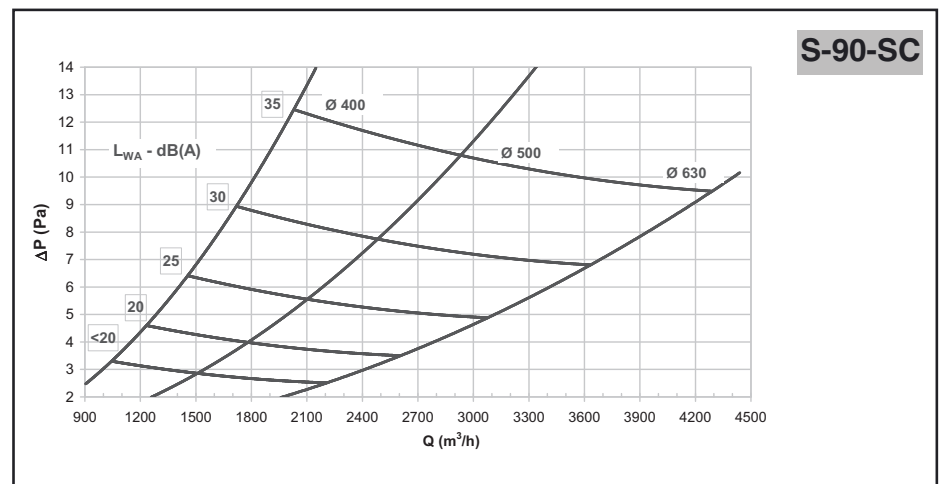
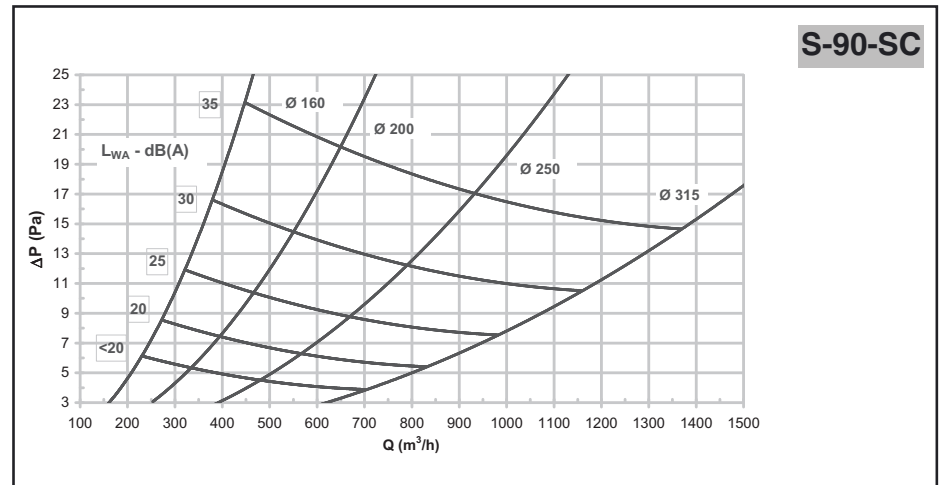
The air flow, pressure drop and horizontal throw of the air jet are listed below for a velocity of 0.20 m/s in the occupied area, based on a specific sound level.

Quick selection table

S-90-SC QUICK SELECTION TABLE				
FLOW RATE - SOUND LEVEL L _w - Pressure drop - THROW				
Model	m ³ /h (Pa) [m]			
	20 dB(A)	25 dB(A)	30 dB(A)	35 dB(A)
160	270 (8) [4,5]	320 (12) [5,4]	380 (17) [6,3]	450 (23) [7,5]
200	390 (7) [6,1]	460 (10) [7,1]	550 (14) [8,0]	650 (20) [9,5]
250	560 (6) [5,6]	660 (9) [6,4]	800 (13) [7,1]	950 (18) [7,0]
315	840 (6) [3,0]	980 (8) [3,7]	1150 (10) [4,1]	1350 (14) [4,7]
400	1250 (5) [3,7]	1450 (6) [4,4]	1700 (9) [5,5]	2000 (12) [5,9]
500	1800 (4) [5,3]	2100 (5) [6,1]	2450 (8) [7,2]	2900 (11) [8,0]
600	2600 (3) [6,8]	3100 (5) [7,5]	3600 (7) [8,0]	4350 (10) [9,5]

Pressure drop and sound level selection charts

These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.

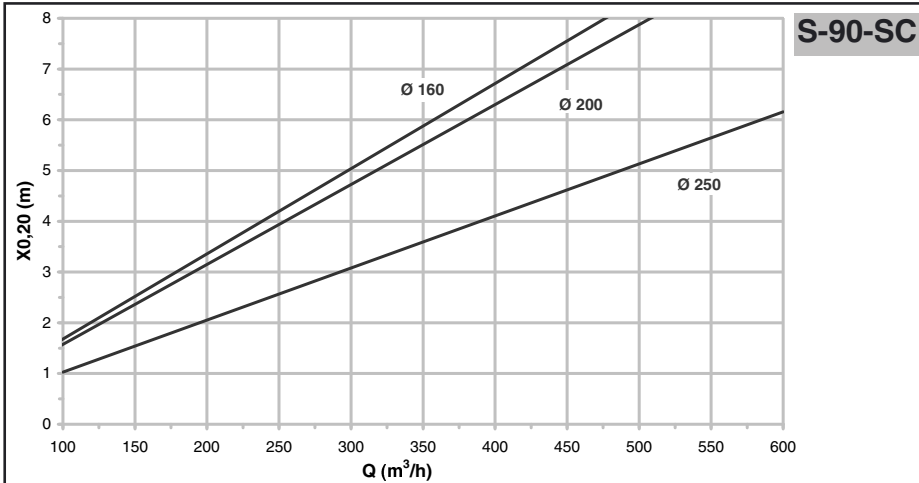


Symbols:

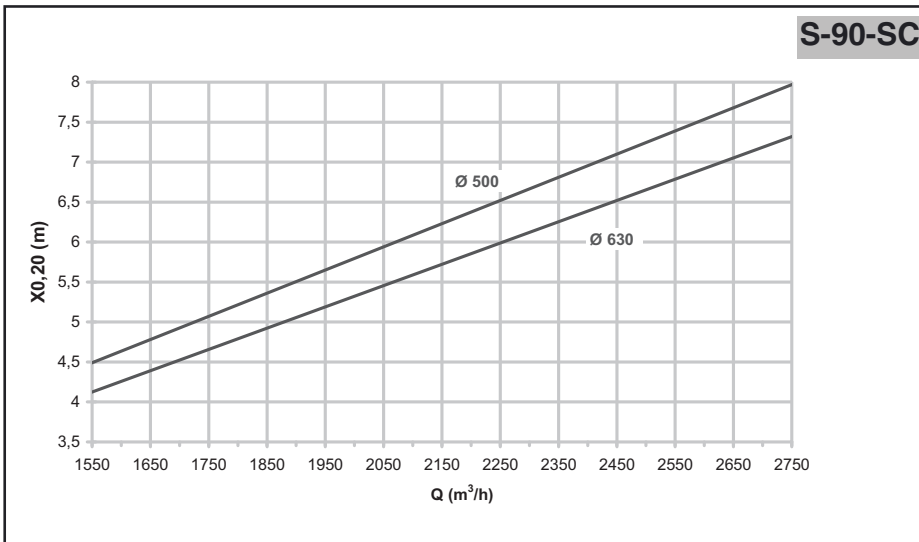
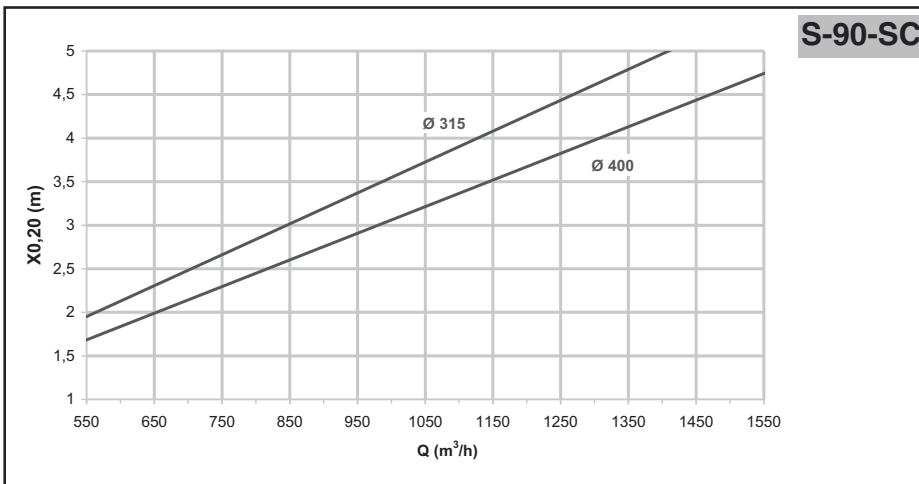
- Q (m³/h) Air flow per displacement unit
- P (Pa) Pressure drop
- L_{WA}(dBA) Sound power level

S-90-SC Model - Semicircular

Selection charts. Throw data



The selection charts shown allow the horizontal throw of the air jet to be obtained from the supply flow rate, when the velocity in the occupied area is 0.20 m³/h.



Symbols:

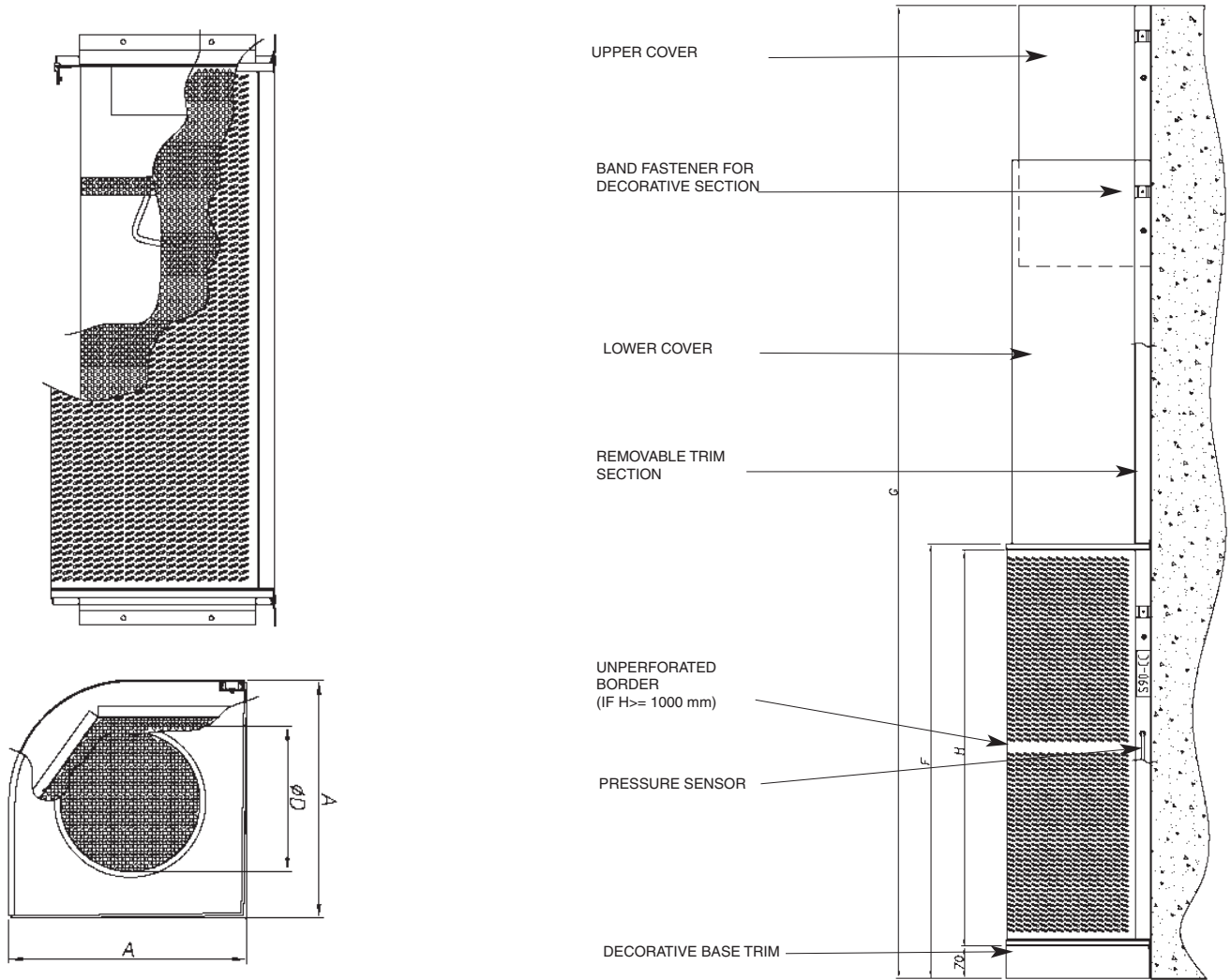
Q (m³/h) Air flow per displacement unit

X_{0,20}(m) Horizontal throw of the air jet, when the velocity in the occupied area is 0.20 m/s for a temperature difference of T = -3 °C

S-90-CC Model - Square

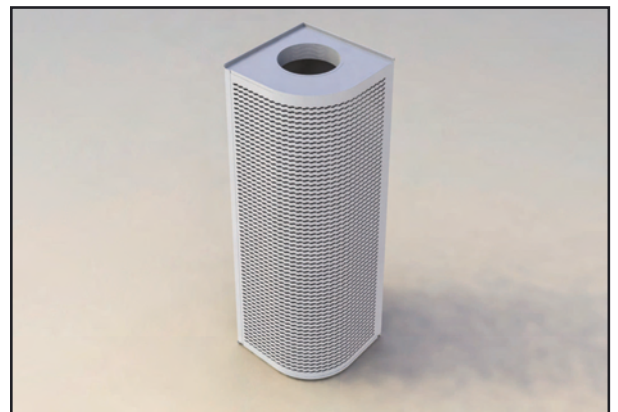
Dimensions

The S-90-CC diffuser is a square displacement unit that supplies the air at low velocity to the habitable area. Optional accessories include a plinth and trim.



DIMENSIONS

Size	A	H	G	ØD	F
160	335	900	2400 - 3500	160	970
200	375			200	
250	430	1200		250	1270
315	495	1500	2750 - 3500	315	1570
400	580	1800		400	1870
500	680	2000	2800 - 3500	500	2070
630	810			630	



S-90-CC Model - Square

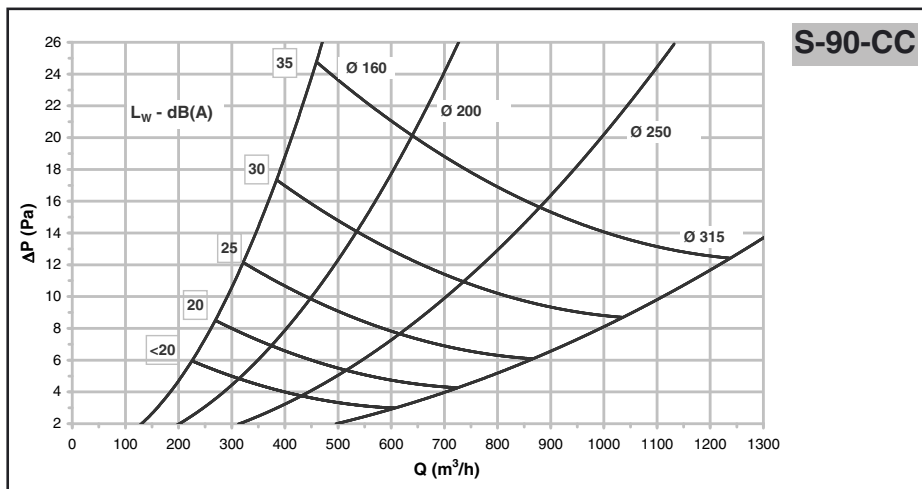
Technical data

The air flow, pressure drop and horizontal throw of the air jet are listed below for a velocity of 0.20 m/s in the occupied area, based on a specific sound level.

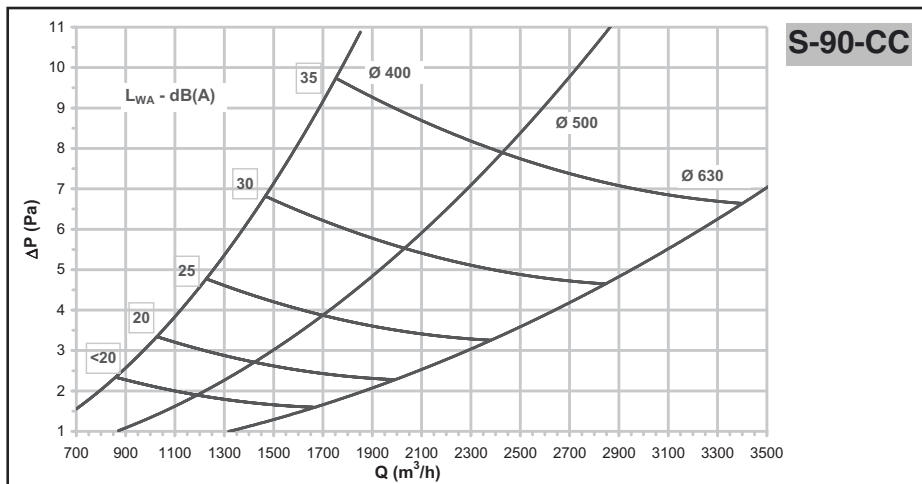
Quick selection table

S-90-CC QUICK SELECTION TABLE				
FLOW RATE - SOUND LEVEL Lw - Pressure drop - THROW				
Model	m³/h (Pa) [m]			
	20 dB(A)	25 dB(A)	30 dB(A)	35 dB(A)
160	270 (9) [4,5]	320 (12) [5,4]	390 (18) [6,5]	460 (25) [7,5]
200	370 (7) [6,0]	450 (10) [7,0]	540 (14) [8,2]	630 (20) [9,5]
250	520 (5) [5,2]	620 (8) [6,1]	740 (11) [7,0]	880 (13) [7,7]
315	730 (4) [3,7]	860 (6) [4,5]	1040 (9) [5,5]	1230 (13) [7,7]
400	975 (4) [4,2]	1250 (5) [5,4]	1450 (7) [6,5]	1770 (10) [7,3]
500	1400 (4) [6,6]	1700 (4) [6,8]	2000 (6) [8,2]	2400 (8) [9,5]
630	2000 (2) [7,5]	2400 (4) [8,7]	2850 (5) [9,8]	3400 (7) [11,2]

Pressure drop and sound level selection charts



These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.



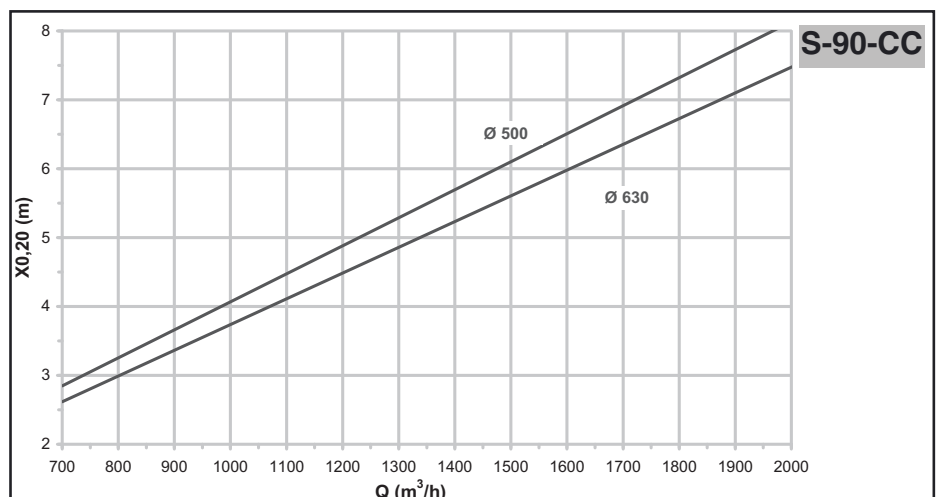
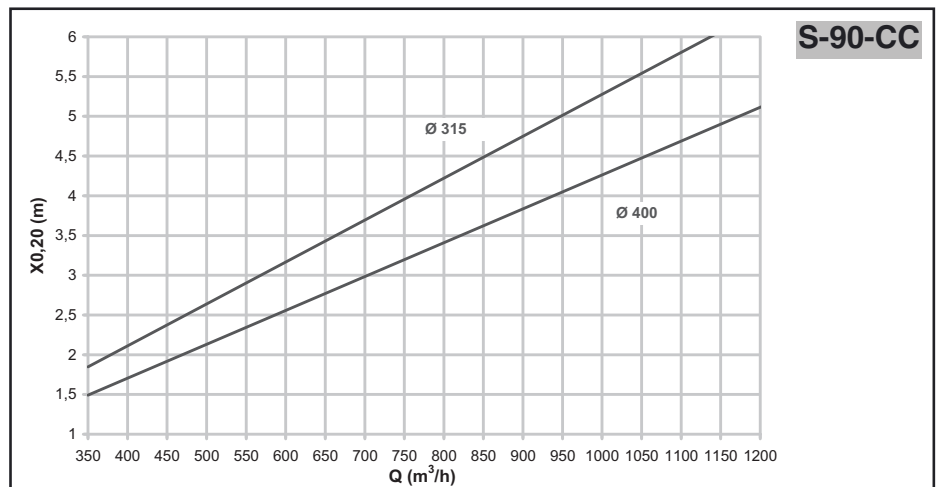
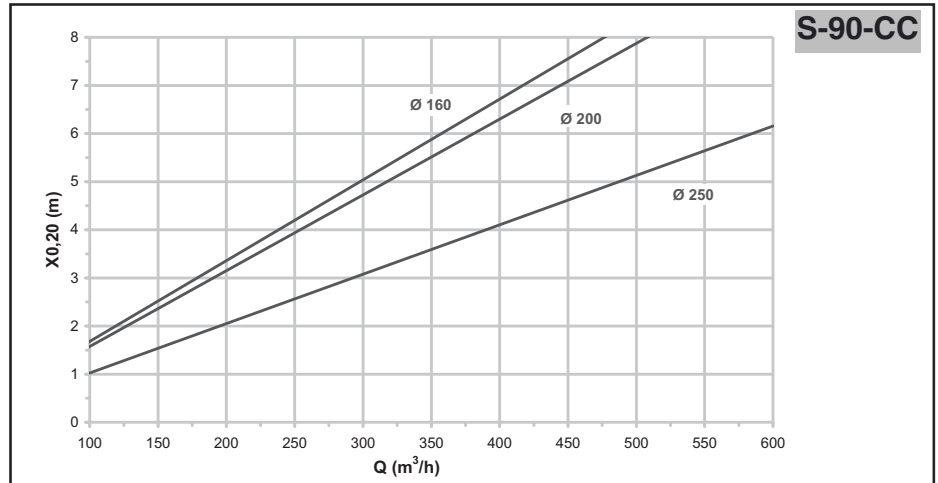
Symbols:

- Q (m³/h) Air flow per displacement unit
- P (Pa) Pressure drop
- Lw_A(dBA) Sound power level

S-90-CC Model - Square

Selection charts. Throw data

The selection charts shown allow the horizontal throw of the air jet to be obtained from the supply flow rate, when the velocity in the occupied area is 0.20 m³/h.



Symbols:

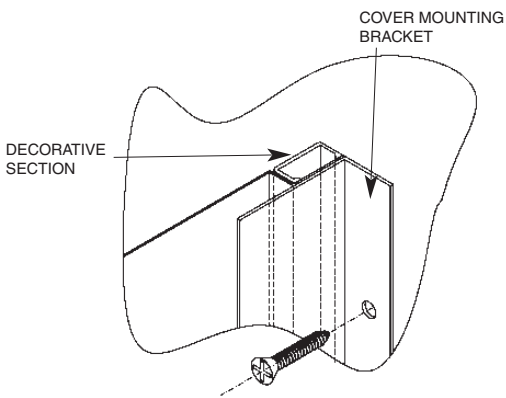
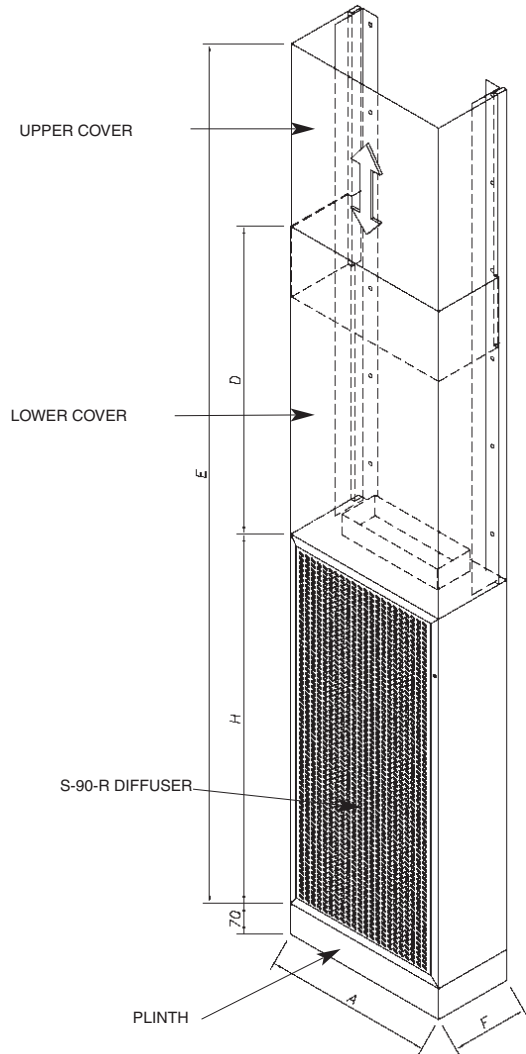
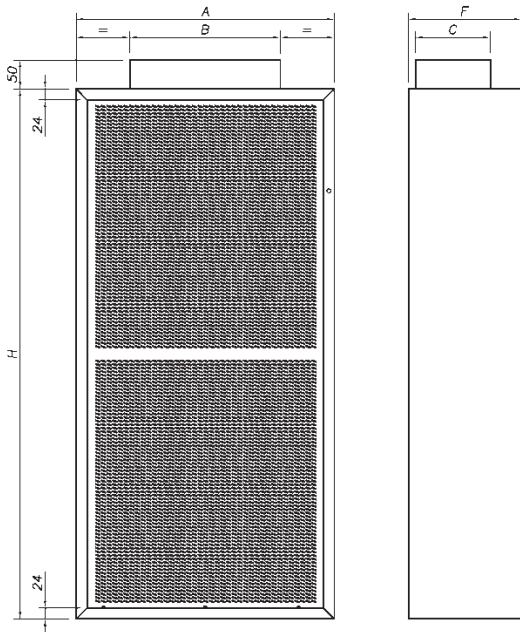
Q (m³/h) Air flow per displacement unit

X_{0,20}(m) Horizontal throw of the air jet, when the velocity in the occupied area is 0.20 m/s for a temperature difference of T = -3 °C

S-90-R Model - Rectangular

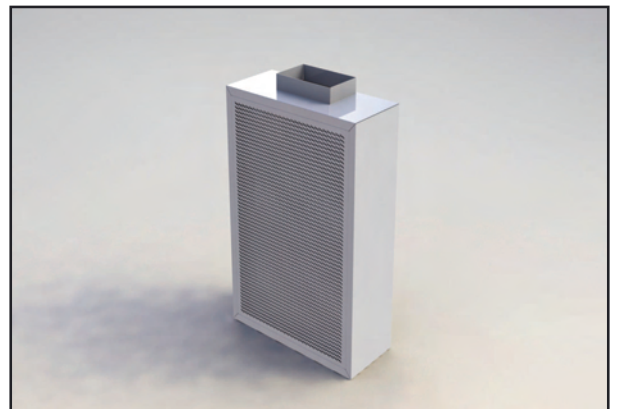
Dimensions

The S-90-R diffuser is a rectangular displacement unit that supplies the air at low velocity to the habitable area. Optional accessories include a plinth and trim.



DIMENSIONS

Size	A	H	F	D	E
600x800 - 25	600	800	300	1600	2400 - 3500
600x1200 - 30		1200		1200	
600x1500 - 30		1500		900	
1000x1500 - 30	1000	2000		750	2800 - 3500
1200x2000 - 30	1200				



S-90-R Model - Rectangular

Technical data

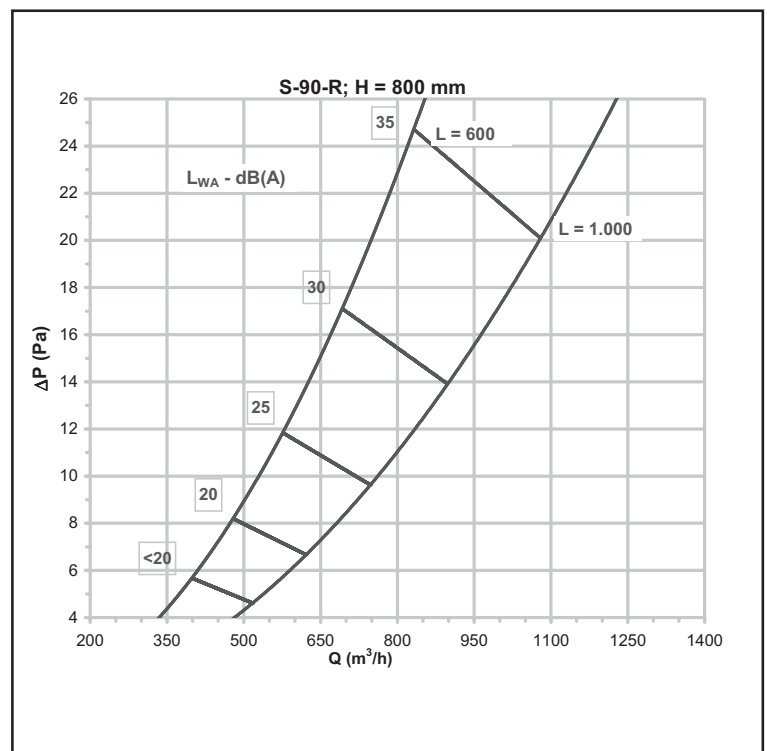
Quick selection table

The air flow, pressure drop and horizontal throw of the air jet are listed below for a velocity of 0.20 m/s in the occupied area, based on a specific sound level.

S-90-R QUICK SELECTION TABLE				
FLOW RATE - SOUND LEVEL L_w - Pressure drop - THROW				
Model	m^3/h (Pa) [m]			
	20 dB(A)	25 dB(A)	30 dB(A)	35 dB(A)
600x800-25	480 (8) [4,6]	570 (12) [5,5]	680 (17) [6,7]	820 (24) [7,8]
600x1200-30	650 (7) [3,6]	750 (10) [4,5]	920 (14) [5,3]	1100 (21) [6,4]
600x1500-30	870 (6) [4,3]	1050 (9) [4,7]	1270 (13) [6,3]	1500 (18) [8,0]
1000x1500-30	1250 (5) [4,0]	1500 (7) [5,0]	1800 (10) [5,5]	1170 (15) [7,0]
1200x2000-30	1600 (4) [6,0]	1950 (6) [7,3]	2330 (8) [8,5]	2800 (12) [10,1]

Pressure drop and sound level selection charts

These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.

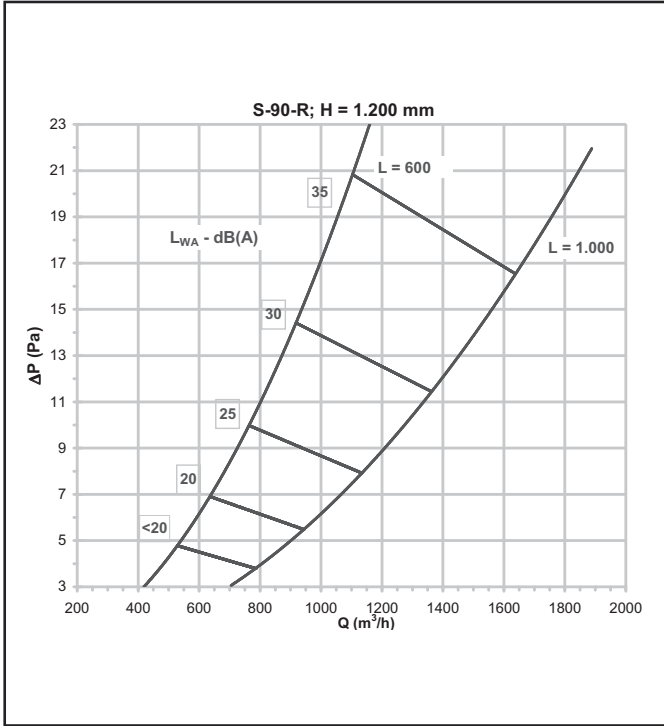


Symbols:

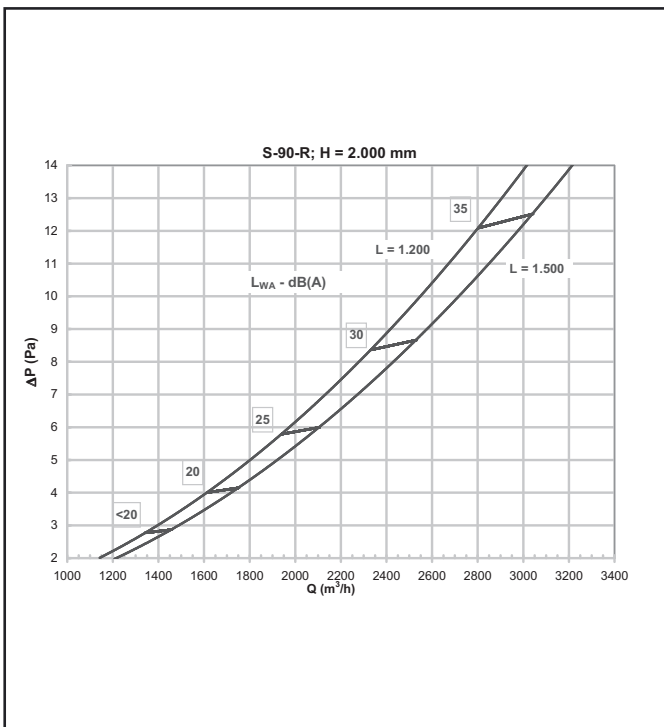
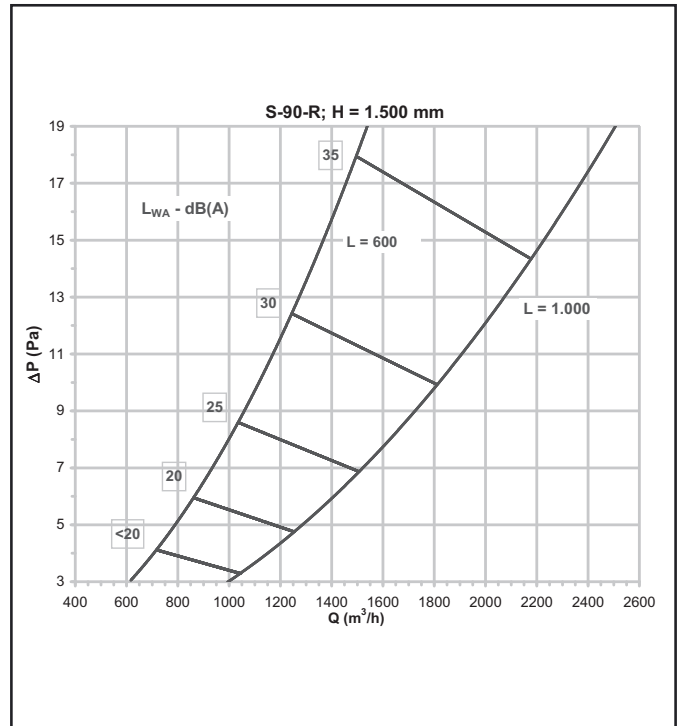
- Q (m^3/h)** Air flow per displacement unit
- P (Pa)** Pressure drop
- L_{wA} (dBA)** Sound power level

S-90-R Model - Rectangular

Pressure drop and sound level selection charts (continuation)



These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.



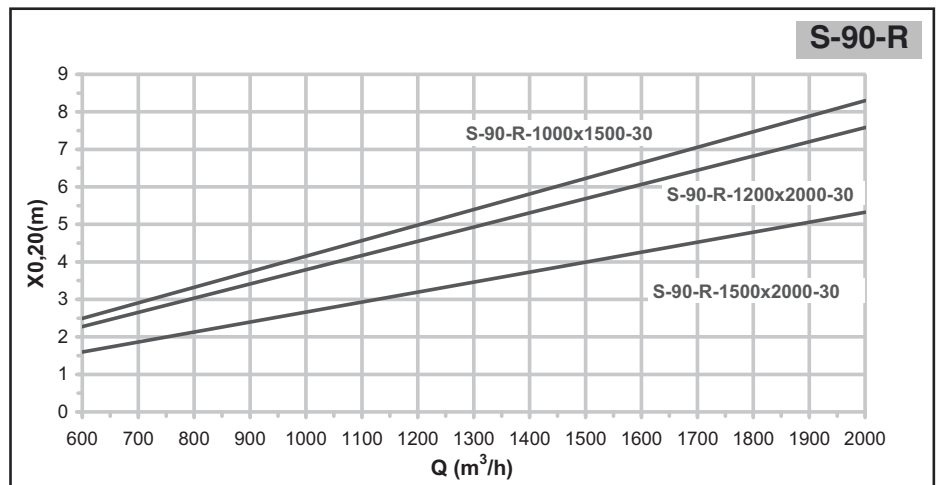
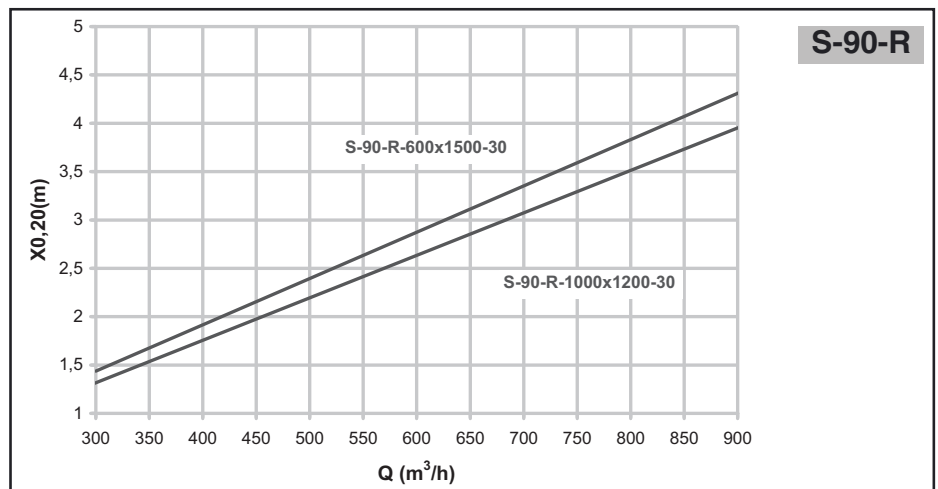
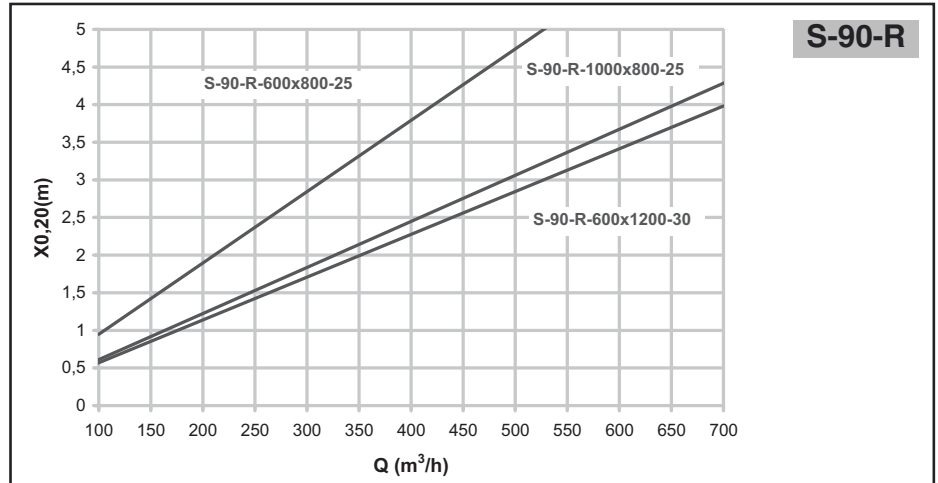
Symbols:

- Q (m^3/h) Air flow per displacement unit
- P (Pa) Pressure drop
- L_{WA} (dBA) Sound power level

S-90-R Model - Rectangular

Selection charts. Throw data

The selection charts shown allow the horizontal throw of the air jet to be obtained from the supply flow rate, when the velocity in the occupied area is 0.20 m³/h.



Symbols:

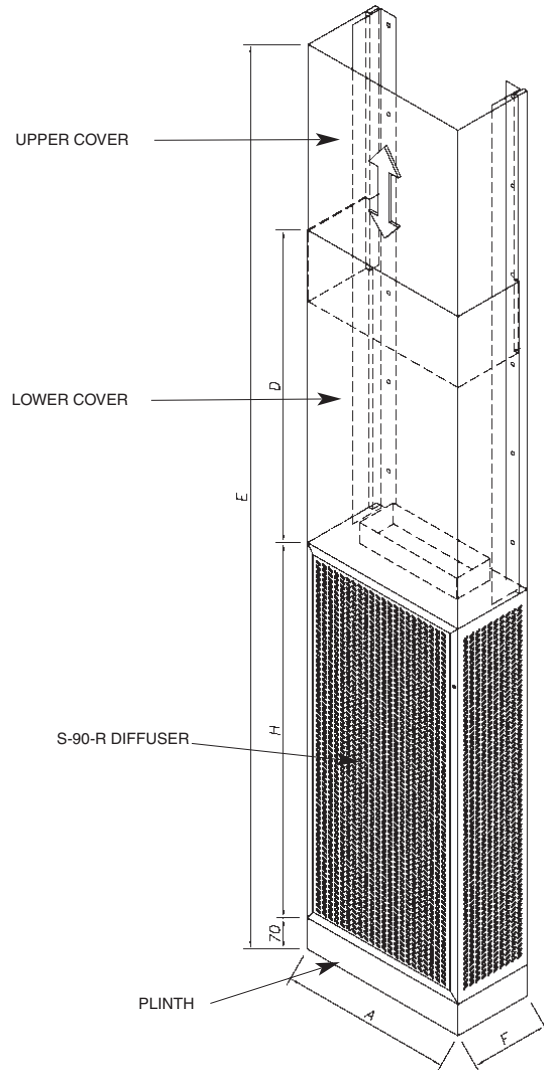
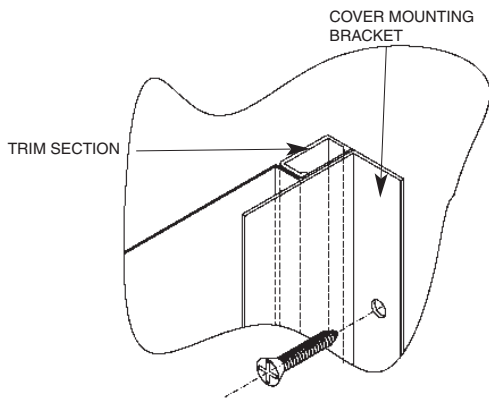
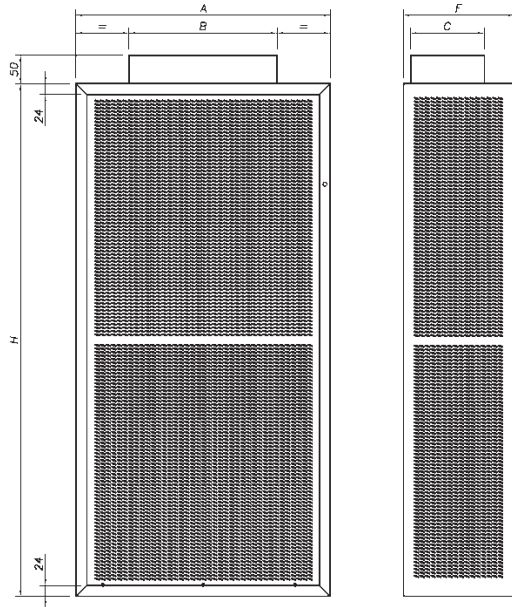
Q (m³/h) Air flow per displacement unit

X_{0,20}(m) Horizontal throw of the air jet, when the velocity in the occupied area is 0.20 m/s for a temperature difference of T = -3 °C

S-90-R3 Model - 3-Way Rectangular

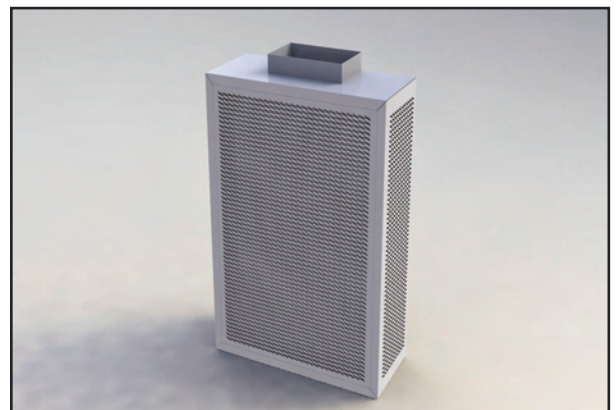
Dimensions

The S-90-R3 diffuser is a rectangular displacement unit that supplies the air at low velocity to the habitable area in three directions. Optional accessories include a plinth and trim.



DIMENSIONS

Size	A	H	F	D	E
600x800 - 25	600	800	300	1600	2400 - 3500
600x1200 - 30		1200		1200	
600x1500 - 30		1500		900	2750 - 3500
1000x1500 - 30	1000	2000	300	750	2800 - 3500
1200x2000 - 30	1200			750	



S-90-R3 Model - 3-Way Rectangular

Technical data

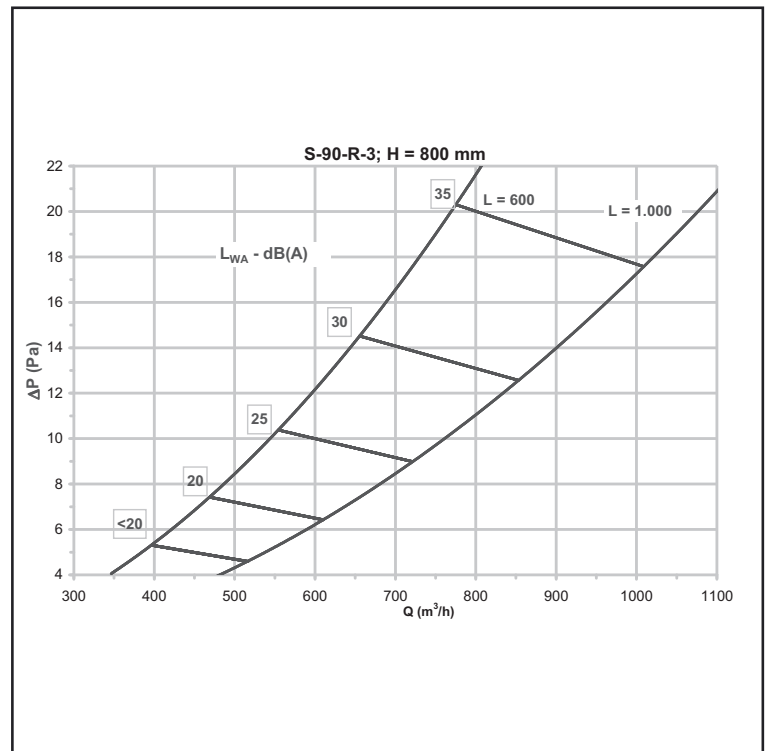
Quick selection table

The air flow, pressure drop and horizontal throw of the air jet are listed below for a velocity of 0.20 m/s in the occupied area, based on a specific sound level.

S-90-R QUICK SELECTION TABLE				
FLOW RATE - SOUND LEVEL L _w - Pressure drop - THROW				
Model	m ³ /h (Pa) [m]			
	20 dB(A)	25 dB(A)	30 dB(A)	35 dB(A)
600x800-25	470 (7) [2,5]	560 (11) [3,1]	650 (14) [3,3]	780 (21) [4,0]
600x1200-30	630 (6) [2,4]	750 (9) [2,7]	870 (12) [3,3]	1020 (17) [3,8]
600x1500-30	850 (5) [1,9]	1000 (7) [2,2]	1200 (11) [2,7]	1400 (15) [3,3]
1000x1500-30	1250 (4) [2,0]	1450 (6) [2,3]	1750 (9) [2,7]	2050 (15) [3,3]
1200x2000-30	1620 (4) [1,6]	1900 (5) [1,8]	2250 (7) [2,2]	2650 (10) [2,6]
1200x2000-35	1940 (4) [1,7]	2250 (5) [2,3]	2650 (8) [2,6]	3200 (10) [3,5]

Pressure drop and sound level selection charts

These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.

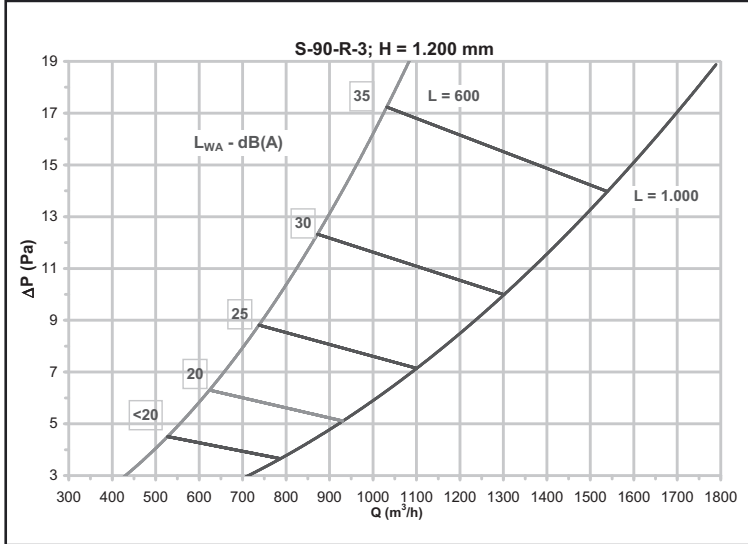


Symbols:

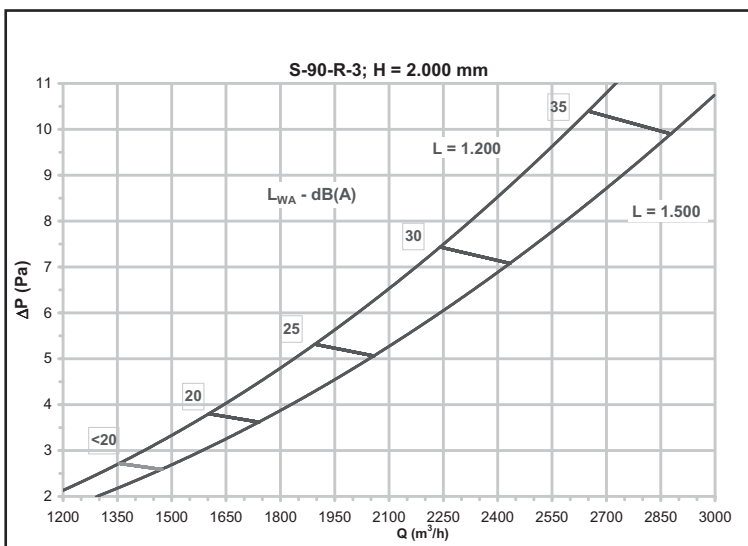
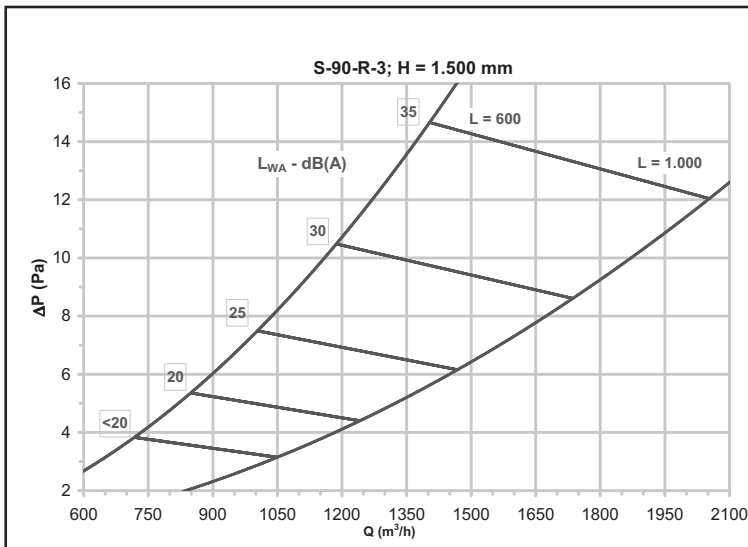
- Q (m³/h) Air flow per displacement unit
- P (Pa) Pressure drop
- L_{wA}(dBA) Sound power level

S-90-R3 Model - 3-Way Rectangular

Pressure drop and sound level selection charts (continuation)



These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.



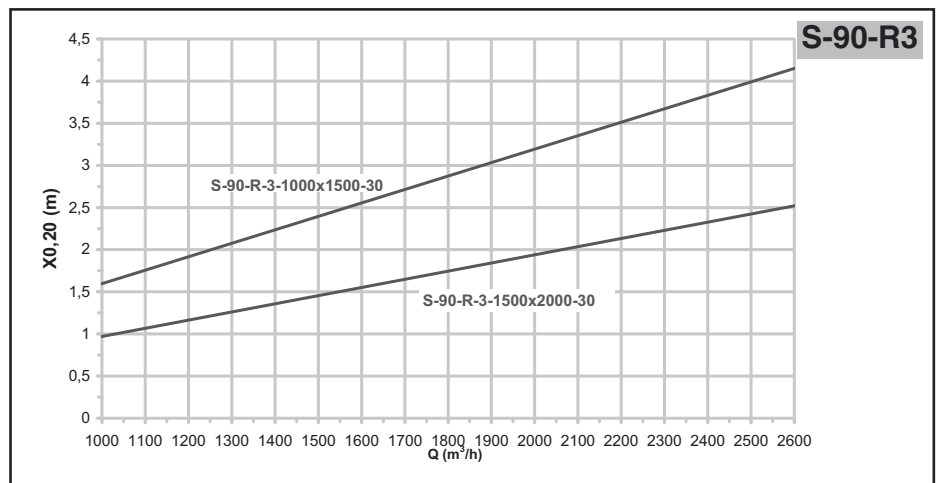
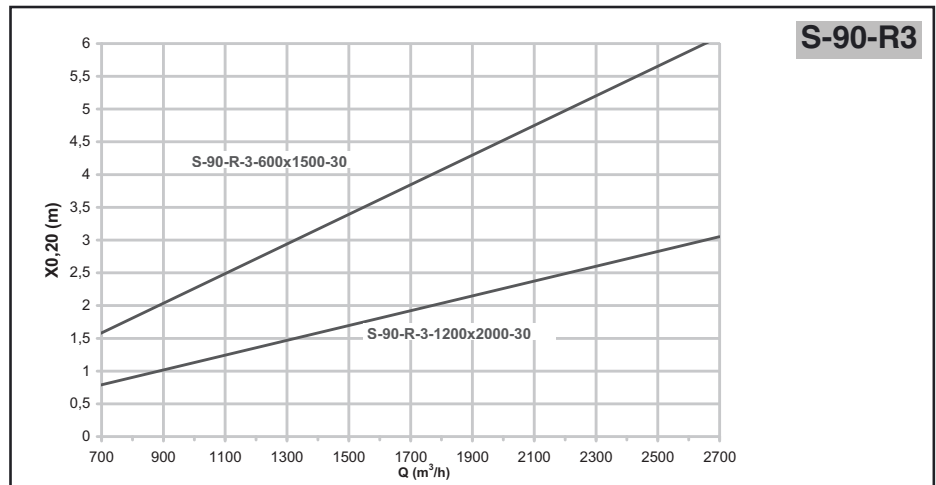
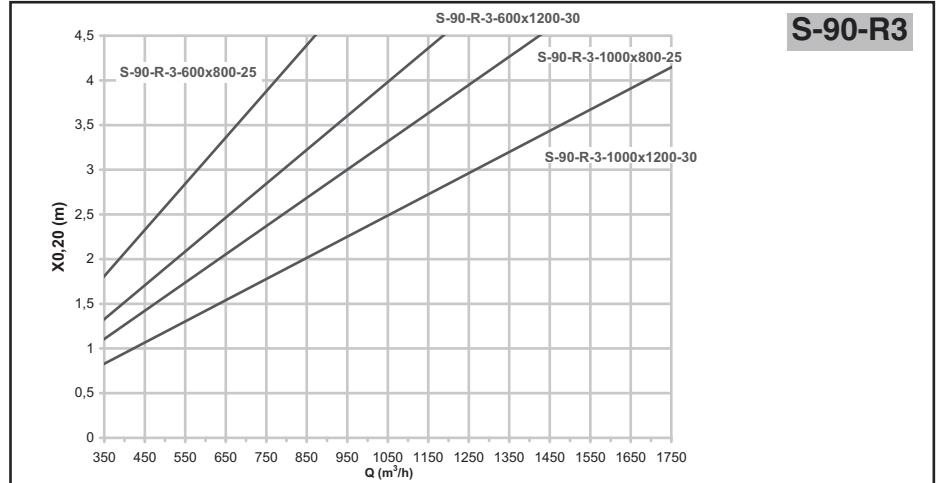
Symbols:

- Q (m³/h) Air flow per displacement unit
- P (Pa) Pressure drop
- L_{WA} (dBA) Sound power level

S-90-R3 Model - 3-Way Rectangular

Selection charts. Throw data

The selection charts shown allow the horizontal throw of the air jet to be obtained from the supply flow rate, when the velocity in the occupied area is 0.20 m³/h.



Symbols:

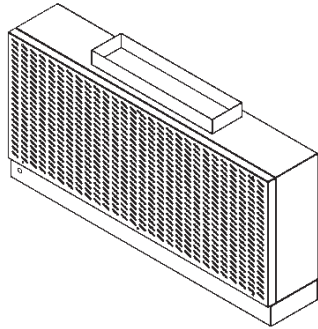
Q (m³/h) Air flow per displacement unit

X_{0,20}(m) Horizontal throw of the air jet, when the velocity in the occupied area is 0.20 m/s for a temperature difference of T = -3 °C

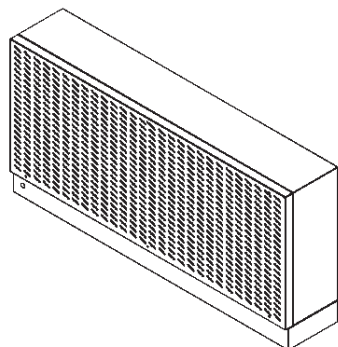
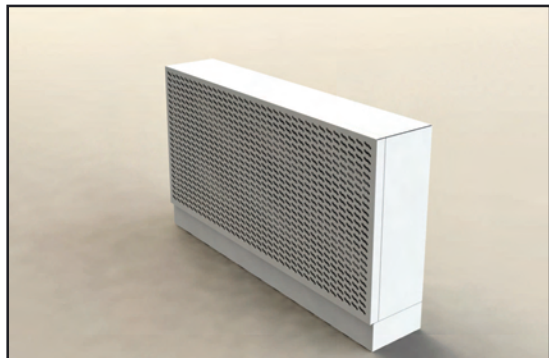
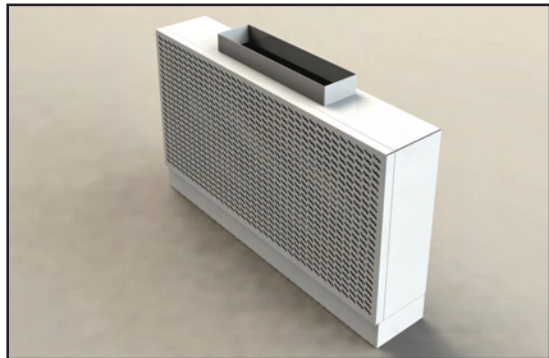
S-90-RT Model - Horizontal Rectangular

Dimensions

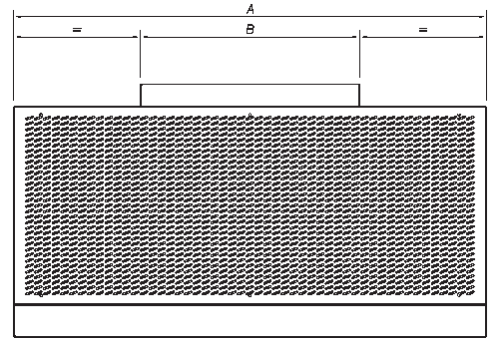
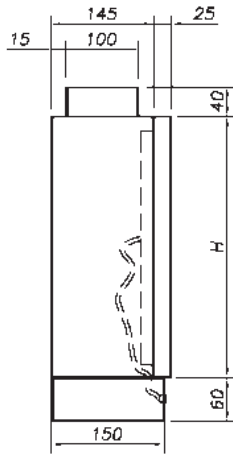
The S-90-RT diffuser is a horizontal rectangular displacement unit that supplies the air at low velocity to the habitable area. Optional accessories include a plinth and trim.



S-90-RT TOP DISCHARGE

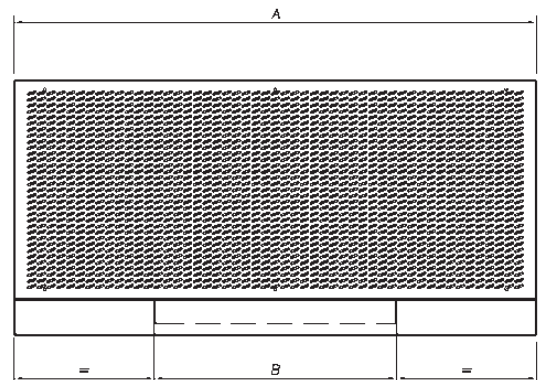
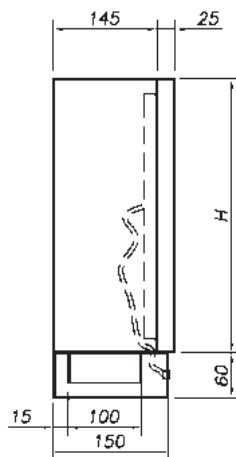


S-90-RT BOTTOM DISCHARGE



DIMENSIONS

Size	A	H	B
850x200	850	200	350
1250x200	1250	200	350
1650x200	1650	200	350
850x350	850	350	400
1250x350	1250	350	400
1650x350	1650	350	400
1050x500	1050	500	500
1450x500	1450	500	500
1850x500	1850	500	500
1050x650	1050	650	700
1450x650	1450	650	700
1850x650	1850	650	700
1250x800	1250	800	850
1650x800	1650	800	850
2050x800	2050	800	850



S-90-RT Model - Horizontal Rectangular

Technical data

Quick selection table

The air flow, pressure drop and horizontal throw of the air jet are listed below for a velocity of 0.20 m/s in the occupied area, based on a specific sound level.

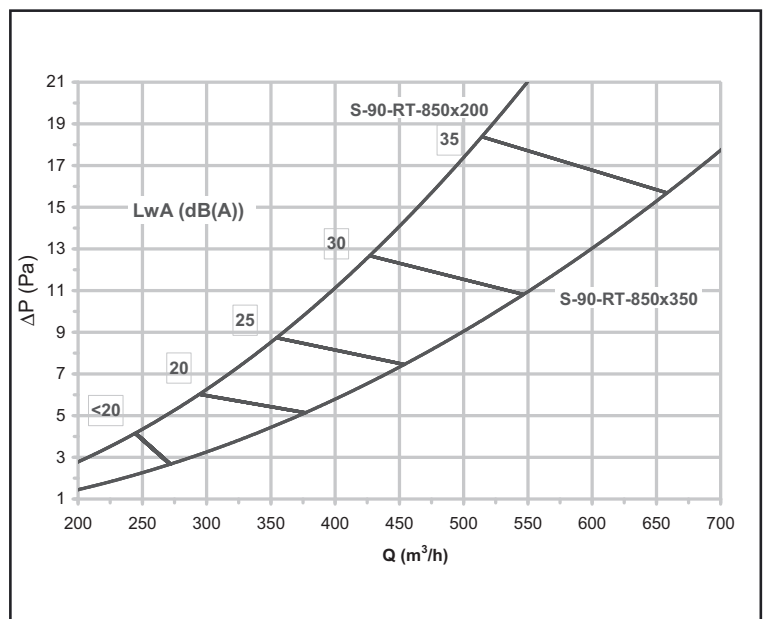
Model	S-90-RT			
	Air Flow - Pressure Drop			
	m ³ /h (Pa)			
	Vk = 0.3 m/s	Vk = 0.5 m/s	Vk = 0.7 m/s	LwA (dBA)
850x200	50 (1)	90 (2)	120 (2)	<25
1250x200	90 (1)	120 (2)	180 (2)	
1650x200	120 (1)	180 (2)	250 (2)	
850x350	100 (1)	150 (1)	220 (2)	
1250x350	150 (1)	220 (2)	300 (3)	
1650x350	180 (1)	300 (3)	400 (5)	
1050x500	180 (1)	300 (2)	400 (3)	
1450x500	260 (1)	350 (1)	500 (5)	
1850x500	300 (1)	500 (2)	650 (8)	
1050x650	220 (1)	350 (2)	500 (3)	
1450x650	250 (1)	500 (3)	650 (4)	
1850x650	400 (1)	650 (4)	850 (7)	
1250x800	350 (1)	500 (2)	700 (3)	
1650x800	400 (1)	700 (2)	900 (5)	
2050x800	500 (2)	900 (5)	1200 (10)	

Pressure drop and sound level selection charts

These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.

Symbols:

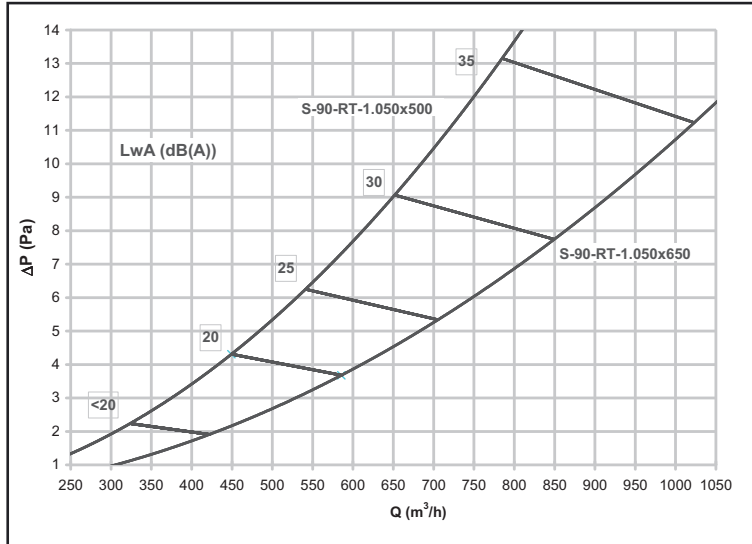
- Q (m³/h)** Air flow per displacement unit
- P (Pa)** Pressure drop
- Lw_A(dBA)** Sound power level



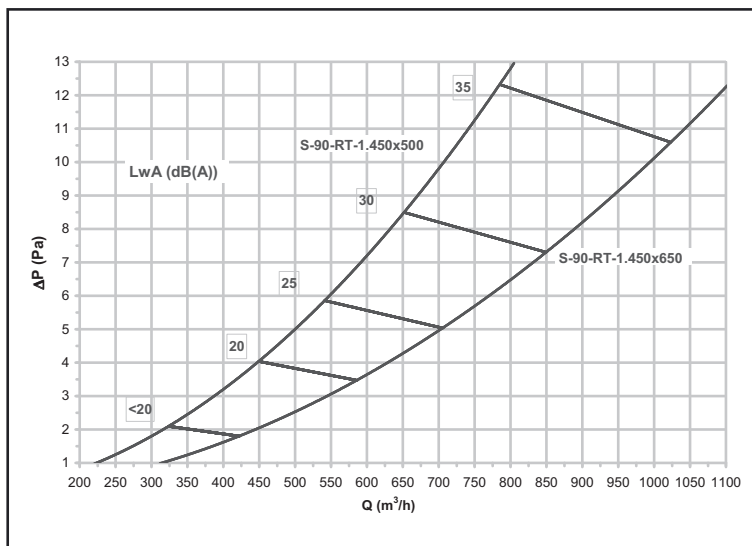
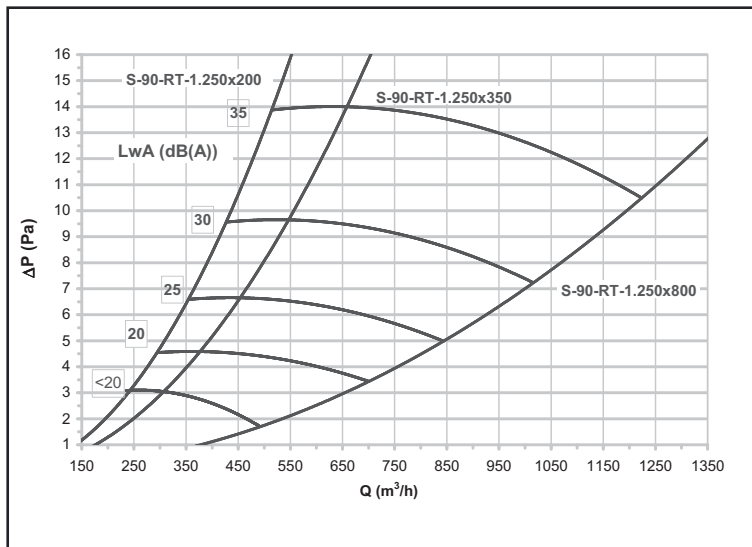
Continues on page 22

S-90-RT Model - Horizontal Rectangular

Pressure drop and sound level selection charts (continuation)



These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.



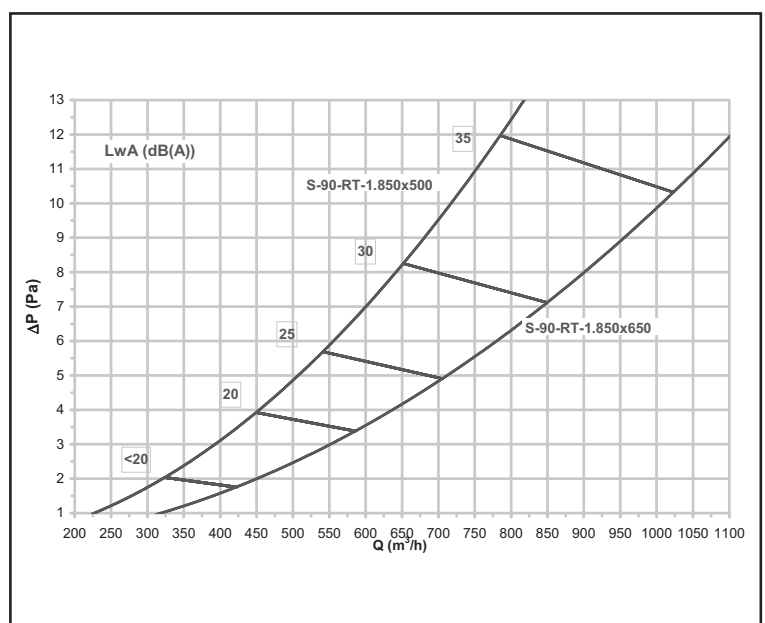
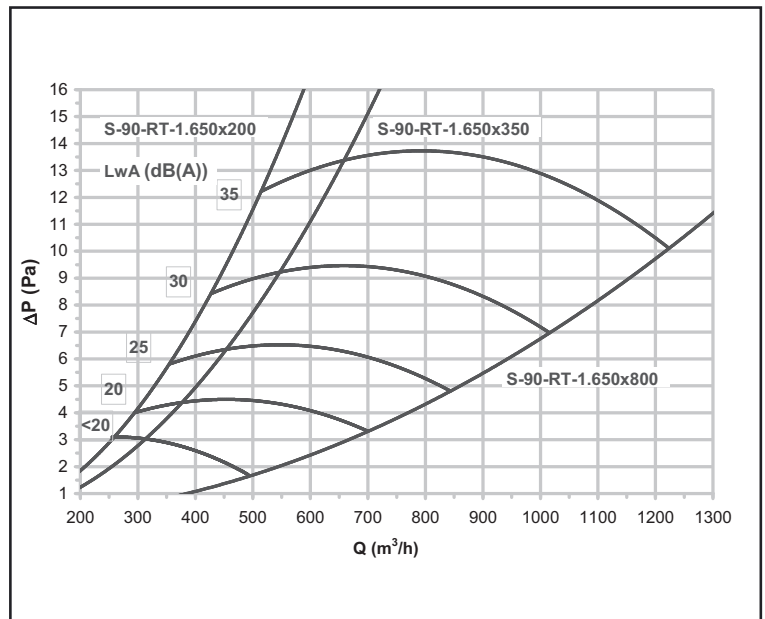
Symbols:

- Q (m³/h)** Air flow per displacement unit
- P (Pa)** Pressure drop
- Lw_A(dBA)** Sound power level

S-90-RT Model - Horizontal Rectangular

Pressure drop and sound level selection charts (continuation)

These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.

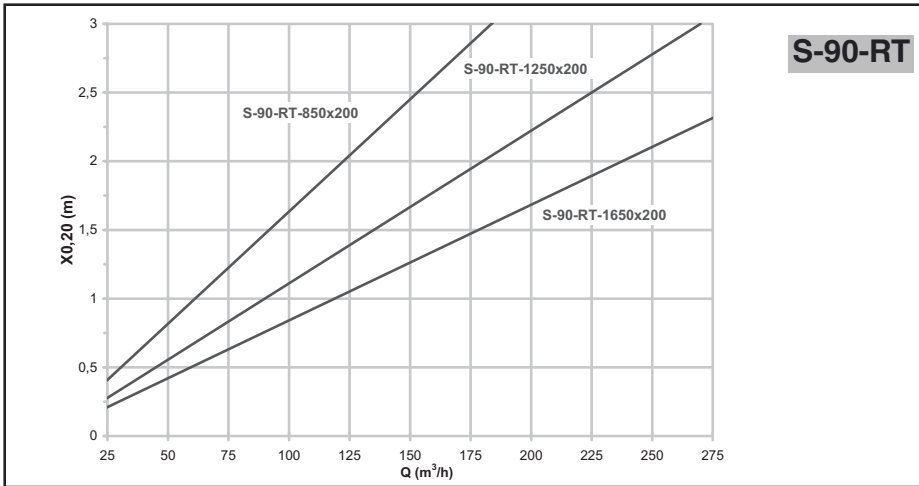


Symbols:

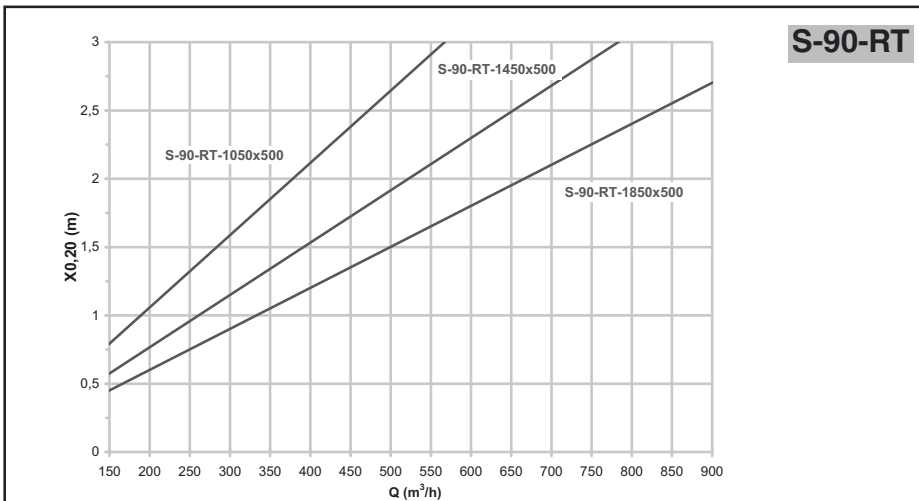
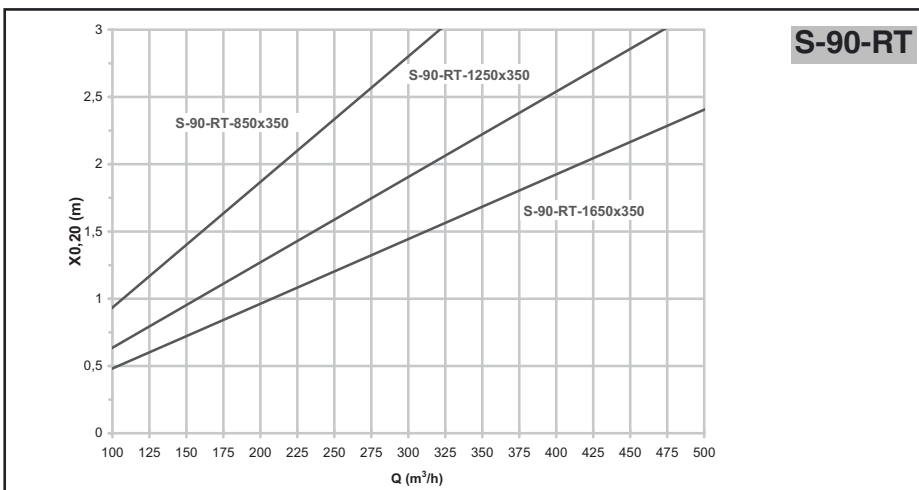
- Q (m³/h)** Air flow per displacement unit
- P (Pa)** Pressure drop
- L_{wA}(dBA)** Sound power level

S-90-RT Model - Horizontal Rectangular

Selection charts. Throw data



The selection charts shown allow the horizontal throw of the air jet to be obtained from the supply flow rate, when the velocity in the occupied area is 0.20 m³/h.



Symbols:

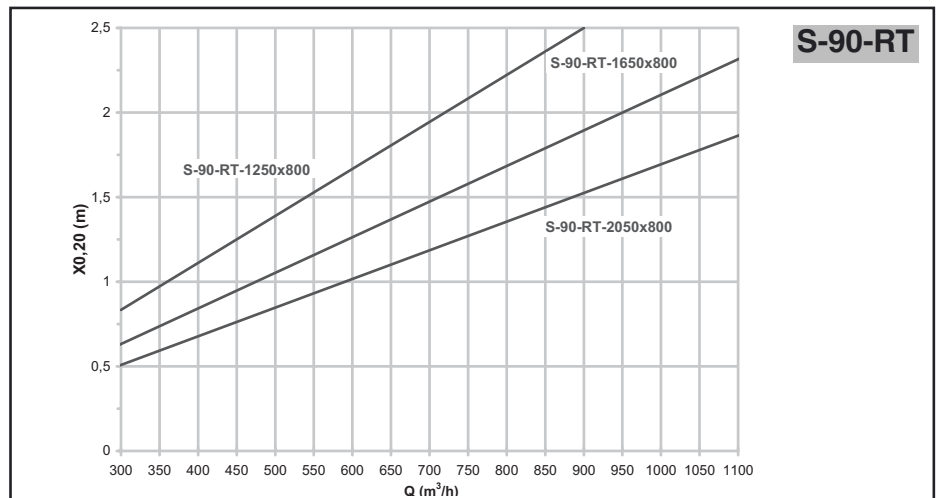
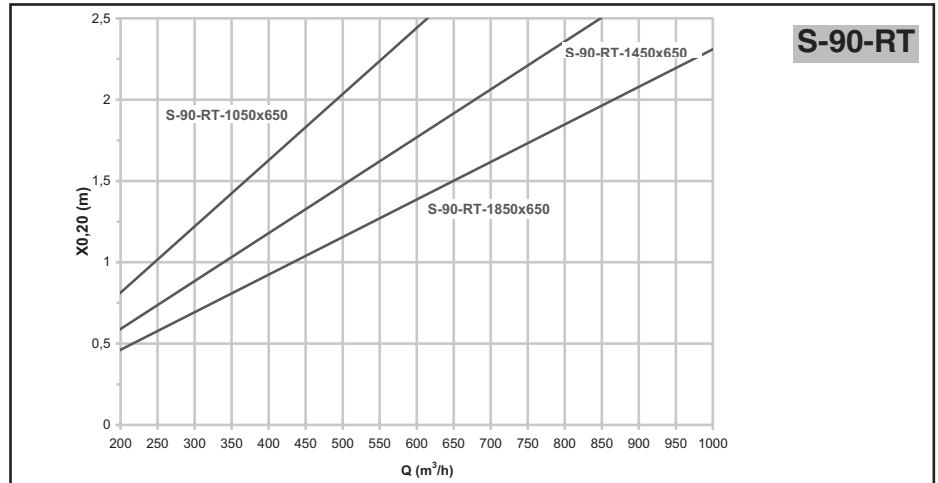
Q (m³/h) Air flow per displacement unit

X_{0,20}(m) Horizontal throw of the air jet, when the velocity in the occupied area is 0.20 m/s for a temperature difference of T = -3 °C

S-90-RT Model - Horizontal Rectangular

Selection charts. Throw data

The selection charts shown allow the horizontal throw of the air jet to be obtained from the supply flow rate, when the velocity in the occupied area is 0.20 m³/h.



Symbols:

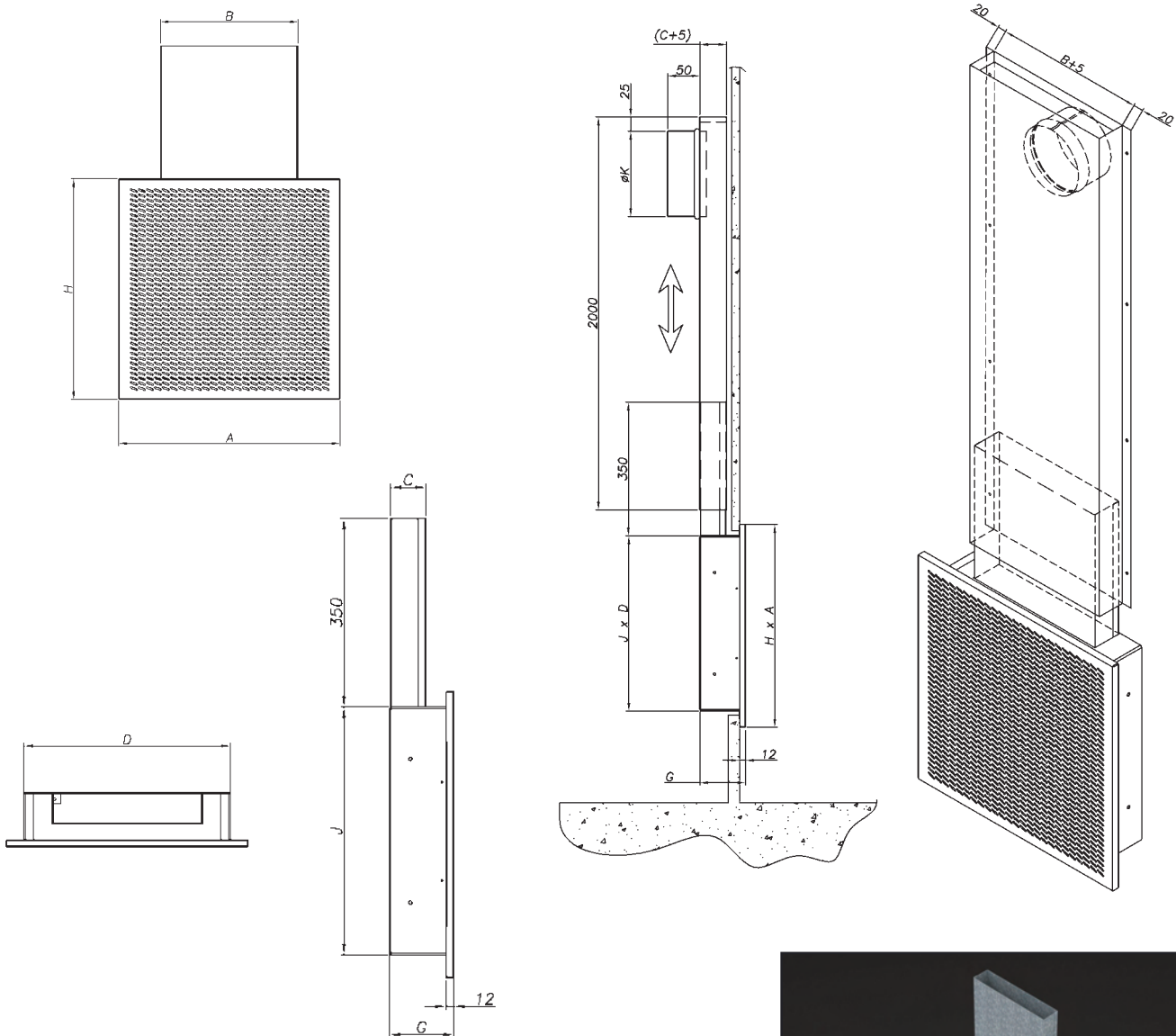
Q (m³/h) Air flow per displacement unit

X_{0.20}(m) Horizontal throw of the air jet, when the velocity in the occupied area is 0.20 m/s for a temperature difference of T = -3 °C

S-90-RE Model - Flush-mounted Rectangular

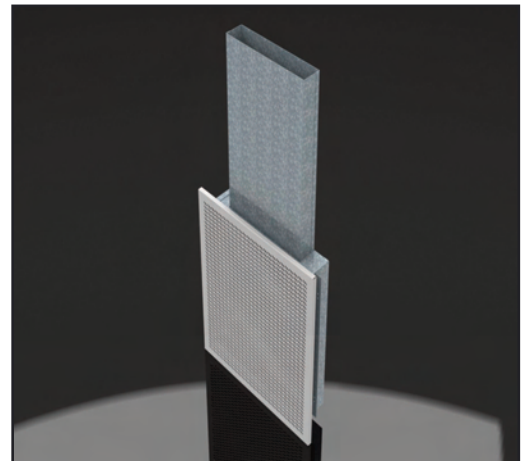
Dimensions

The S-90-R-E diffuser is a wall flush-mounted rectangular displacement unit that supplies the air at low velocity to the habitable area. Optional accessories include a collapsible plenum.



DIMENSIONS

Size	A	H	J	D	B	C	G	ØK
400x400	402	402	345	345	250	50	92	99
500x500	502	502	445	445	350			124
600x600	602	602	545	545	450			159
900x600	902			845	600	60	102	199



S-90-RE Model - Flush-mounted Rectangular

Technical data

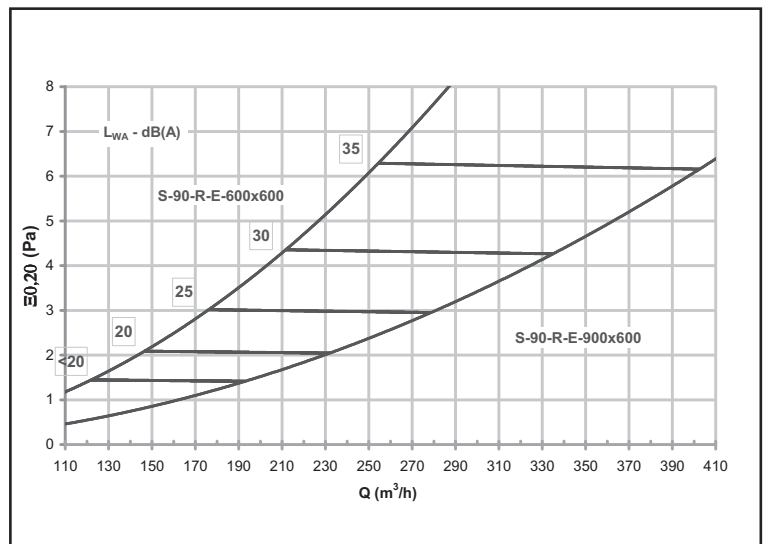
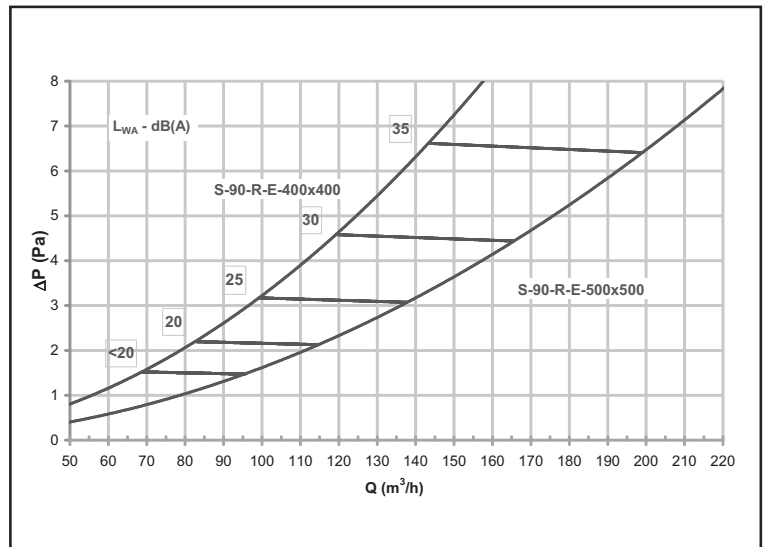
Quick selection table

The air flow, pressure drop and horizontal throw of the air jet are listed below for a velocity of 0.20 m/s in the occupied area, based on a specific sound level.

S-90-R-E				
Air flow - Pressure drop				
Model	m ³ /h (Pa)			LwA (dBA)
	Vk = 0.3 m/s	Vk = 0.5 m/s	Vk = 0.7 m/s	
400 x 400	50 (1)	80 (2)	120 (2)	<25
500 x 500	90 (1)	120 (2)	180 (5)	
600 x 600	130 (2)	180 (3)	250 (6)	
900 x 600	180 (1)	260 (3)	380 (5)	

Pressure drop and sound level selection charts

These charts allow the sound level and pressure drop data to be obtained from the supply flow rate.

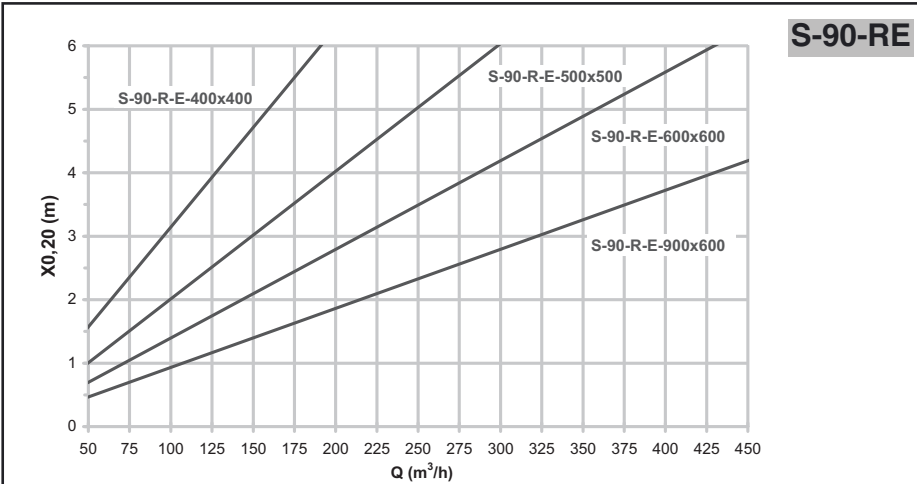


Symbols:

- Q (m³/h)** Air flow per displacement unit
- P (Pa)** Pressure drop
- Lw_A (dBA)** Sound power level

S-90-RE Model - Flush-mounted Rectangular

Selection charts. Throw data



The selection charts shown allow the horizontal throw of the air jet to be obtained from the supply flow rate, when the velocity in the occupied area is 0.20 m/s.

Symbols:

Q (m³/h) Air flow per displacement unit

X_{0,20}(m) Horizontal throw of the air jet, when the velocity in the occupied area is 0.20 m/s for a temperature difference of T = -3 °C

Long-Throw Displacement Unit LADES

Overview

The LADES diffuser was designed to be installed in rooms with high ceilings (not higher than 5 or 6 m) such as industrial facilities, large stores, etc. The diffuser is octagonal, and the upper section of the terminal is fitted with multiple nozzles for hot air supply.

The lower section has a perforated detachable front housing for cold air supply. For even distribution of air, the interior is equipped with an equalising plate.

The multiple nozzle section and the perforated section are separated by a volume control damper controlled by an electric motor, a manual control or a thermal component.

Finish

The LADES diffuser is manufactured of galvanised steel sheet. The multiple nozzles are manufactured of class V0 ABS material, in accordance with UL 94. The entire terminal is painted in RWMZ-60 grey. By special order, the unit can be painted in other colours.

Models

LADES Flush nozzle plate diffuser

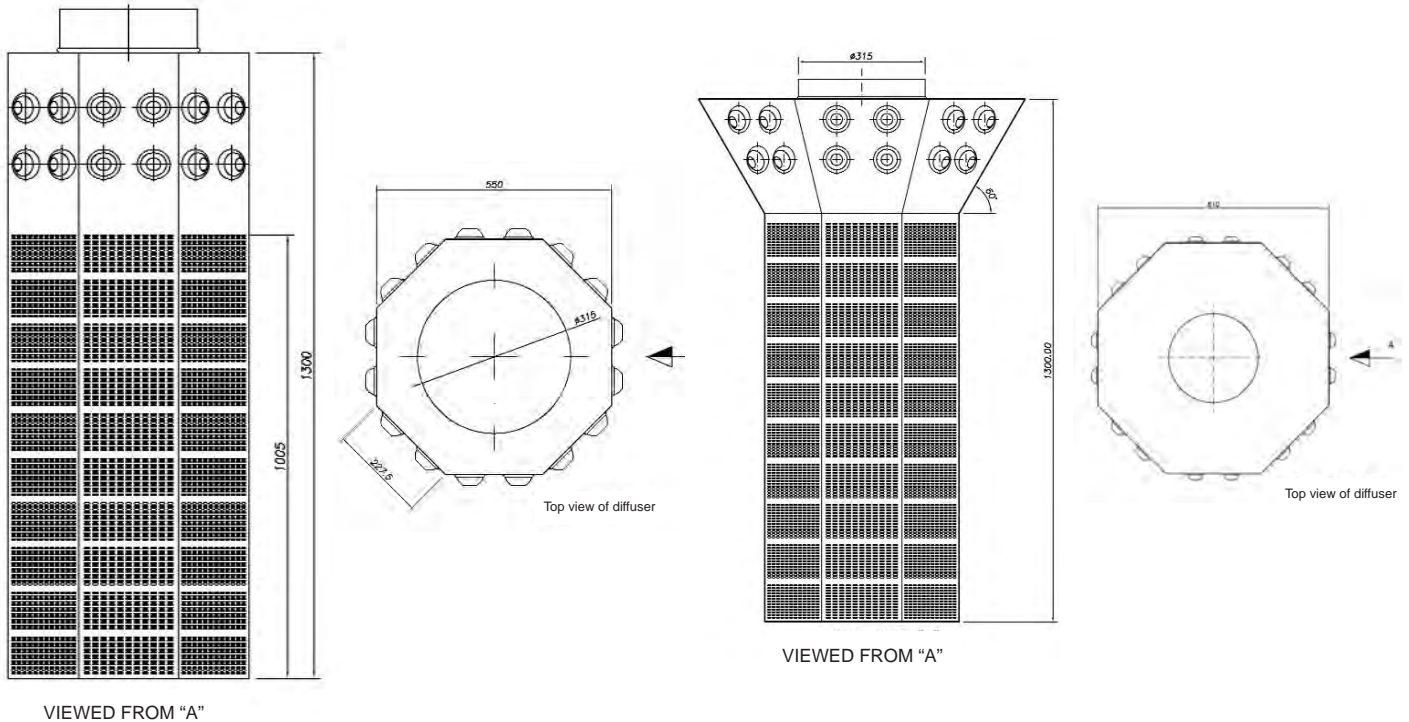
LADES-I Tilted nozzle plate diffuser



Long-Throw Displacement Unit LADES

Dimensions

LADES DIFFUSER	LADES-I DIFFUSER
-----------------------	-------------------------



Quick selection table

The air flow and pressure drop data are listed below for the supply of both cold and heat, based on a specific sound level.

LADES QUICK SELECTION TABLE						
FLOW RATE - SOUND LEVEL Lw - Pressure drop						
Configuration	m ³ /h (Pa)					
	25 dB(A)	30 dB(A)	35 dB(A)	40 dB(A)	45 dB(A)	50 dB(A)
COLD	1000 (11)	1175 (15)	1375 (21)	1625 (30)	1900 (40)	2225 (55)
HEAT	470 (9)	570 (13)	690 (19)	840 (28)	1040 (42)	1250 (61)

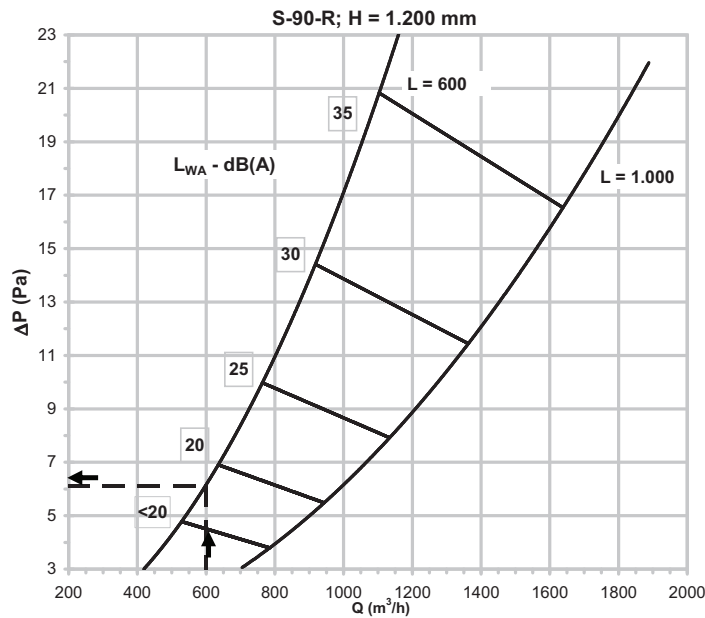
Note: According to the needs required, there are different diffuser models such that the number of nozzles per plate can be increased in the upper section of multiple nozzles and the perforated section can be increased in the lower area.

Selection in a sample project

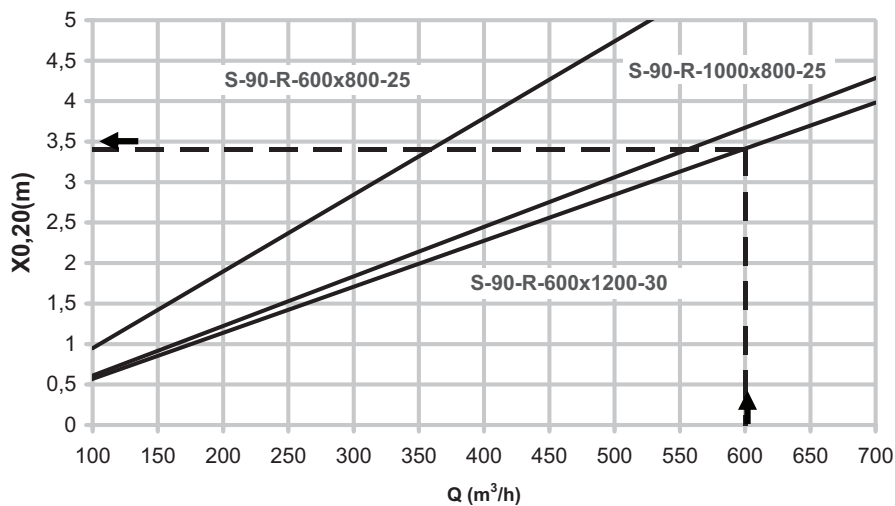
Air conditioning is to be provided to a room using a displacement system. Based on the architectural characteristics of the room, a decision was made to use the S-90-R rectangular diffuser of 600x1200 (LxH). The following data are assumed:

- Unit supply air flow = **600 m³/h**
- Room dimensions = **10x10x4 (LxAxH)**
- Temperature difference (difference between supply temperature and ambient temperature) = **3 °C**

The technical data for the selected diffuser is obtained from the catalogue charts:



S-90-R

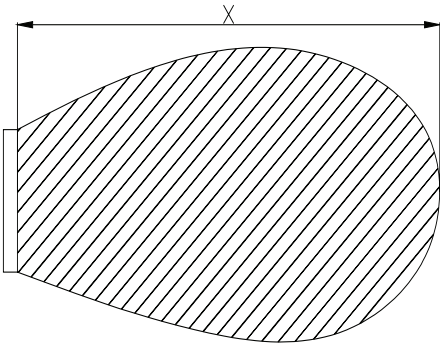


Results

Pressure drop: **6 Pa**
 Sound power level: **<20 dBA**
 (*)Distance where the velocity isovel achieves $V_x = 0.20$ m/s: **3.4 m**

NOTE: (*) This data is known as the near zone and is defined as the area near the supply terminal unit in which the air velocity is higher than the velocity of 0.20 m/s for HVAC installations.

Floor mount:
 Near zone



Correction factors

Coefficient table to correct the horizontal throw of the air jet, when the velocity in the occupied area reaches 0.20 m/s for a different temperature difference from the one used in the catalogue charts, which is $T = -3^\circ$ C.

T	C
-1 °C	0.86
-2 °C	0.92
-3 °C	1.00
-4 °C	1.10
-5 °C	1.17
-6 °C	1.25

$$X_{0.20 \text{ total}} = X_{0.20 \text{ Chart}} \times C$$

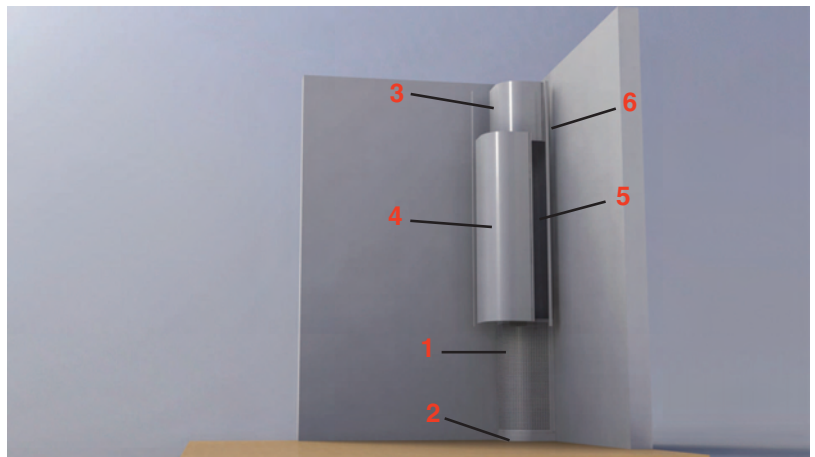
Installation

Assembly instructions for collapsible covers and bases of S-90 series diffusers.

All S-90 diffuser models and sizes are manufactured for installation with cover and plinth, except for S-90-R-E diffusers which are flush mounted in the wall. The steps to be followed for installation are shown below:

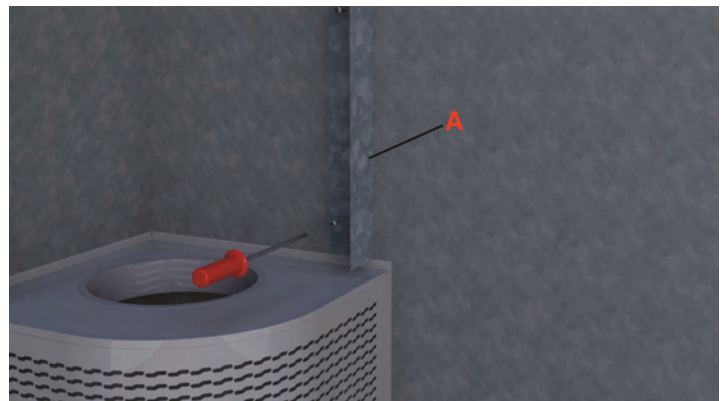
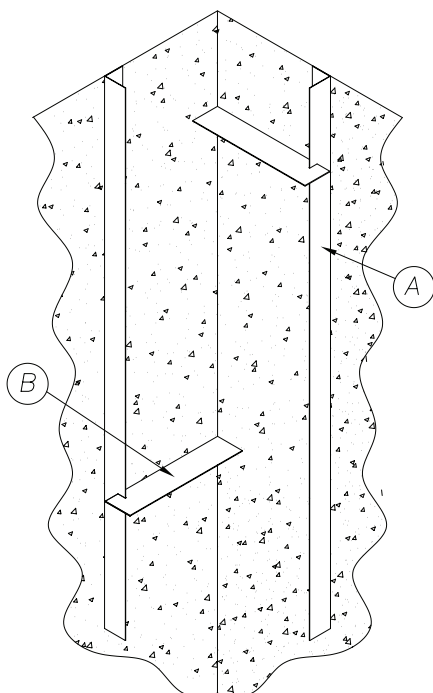
Existing components

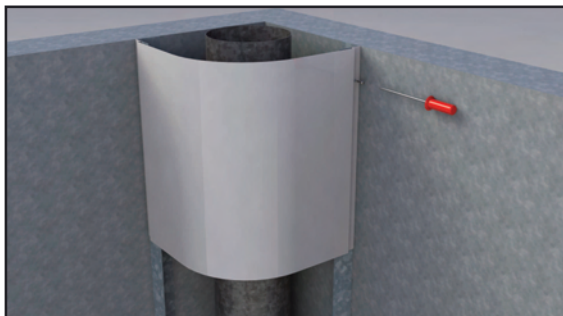
Diffuser	1
Plinth	2
Upper cover	3
Lower cover	4
Band fasteners for trim section	5
Removable trim sections	6



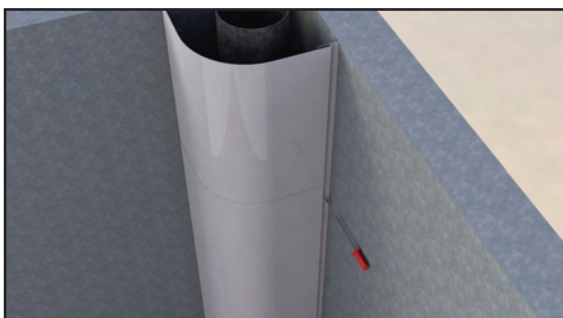
To attach the upper and lower covers, use the (A) guiding brackets previously attached to the wall by screws and aligned at the correct distance with the help of the (B) alignment parts.

Position the air ductwork, fitting it to the diffuser and the wall properly in order to prevent leaks and noise.

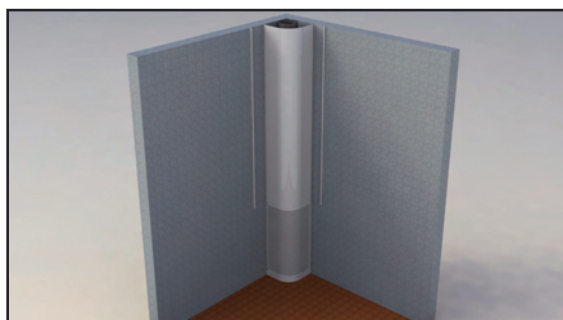


Installation (continuation)

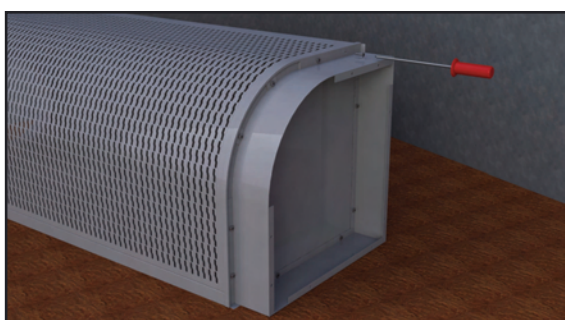
To attach the upper cover, screw it onto the (A) guiding brackets flush with the ceiling.



The lower cover will be placed in the same way and bolted to the "A" guide angles.



Lastly, place the trim sections.



To install the plinth, turn the diffuser and screw it onto the diffuser base. The plinth can also be attached to the floor and then screwed onto the diffuser base.

Product codes

S-90	Displacement diffuser
-------------	-----------------------

C	Circular
SC	Semicircular
CC	Square
R	Rectangular
R3	Rectangular (3-way air supply)
RT	Horizontal rectangular
RE	Flush-mounted rectangular

Z	Plinth
CS	Upper cover
CI	Lower cover
ET	Collapsible trim
PT	Collapsible plenum

Finishes: standard finish in white RAL 9010 paint. Please contact us regarding other finishes.

Coding example of an order. All of the different models, sizes, accessories, etc., existing in the Koolair S-90 series are listed.

Coding example: S-90-R/600x1200/CS/CI/Z

Rectangular displacement terminal, S-90-R model, 600x1200 with upper and lower covers and plinth. Diffuser painted in white (RAL 9010).