

SRY

Ceiling mounted linear nozzle diffuser for supply air



QUICK FACTS

- 100% flexible spread pattern
- Facility for vertical spread
- Facility for simultaneous vertical/horizontal spread
- Large induction effect
- Suitable for wall-to-wall installations
- Measurement and regulation functions
- Removable damper
- Standard colour White RAL 9003
 - 5 alternative standard colours
 - Other colours upon request

AIR FLOW - SOUND PRESSURE ROOM (Lp10A) *)						
SRY Size	25 dB(A)		30 dB(A)		35 dB(A)	
	l/s	m³/h	l/s	m³/h	l/s	m³/h
1-900-1	25	90	30	108	35	126
2-900-1	38	137	45	162	55	198
3-900-1	53	191	63	227	76	274
4-900-1	68	245	80	288	95	342
1-1200-1	27	97	33	119	38	137
2-1200-2	62	223	72	259	86	310
3-1200-2	82	295	97	349	112	403
4-1200-2	105	378	130	468	150	540
1-1500-2	43	155	50	180	60	216
2-1500-2	70	252	85	306	100	360
3-1500-2	98	353	115	414	140	504
4-1500-2	125	450	145	522	170	612
1-1800-2	45	162	55	198	65	234
2-1800-2	75	270	90	324	105	378
3-1800-2	110	396	130	468	150	540
4-1800-3	145	522	175	630	205	738

Data apply to fully open damper.

*) L_{p10A} = Sound pressure incl. A-filter with 4 dB room attenuation and 10 m² room absorption area.

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Technical description

Design

Linear nozzle diffuser consisting of two parts, the diffuser face and backing box.

The removable diffuser face is equipped with aerodynamically shaped nozzles. The diffuser face is attached to the backing box with screw fixing concealed behind the adjustable and removable nozzles.

Materials and surface treatment

The diffuser face is manufactured in galvanized sheet steel and the backing box is made from sheet steel. The complete diffuser is painted.

- Standard colour:
 - White semi-gloss, lustre 40, RAL 9003/NCS S 0500-N
- Alternative standard colours:
 - Silver gloss, lustre 80, RAL 9006
 - Grey aluminium gloss, lustre 80, RAL 9007
 - White semi-gloss, lustre 40, RAL 9010
 - Black semi-gloss, lustre 35, RAL 9005
 - Grey semi-gloss, lustre 30, RAL 7037
- Non-painted finish and other colours available on request.

Accessories

Commissioning box:

SRYT 1, made in galvanized sheet steel. Contains removable commissioning damper, fixed measurement unit and acoustic lining with a reinforced surface layer, to Fire Resistance Class B-s1,d0 according to EN ISO 11925-2. Tightness class B on the housing according to SS-EN 12237.

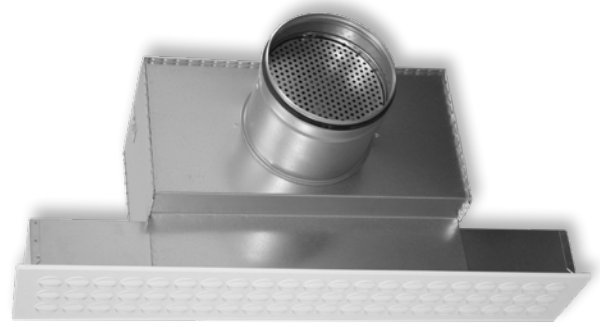
Joint piece:

SRYT 2 made in galvanized sheet steel. This is used in wall-to-wall mounting installations.

Planning

Each nozzle can be rotated through 360°, which provides an infinitely number of spread patterns without affecting the air flow, pressure drop or sound level. It is also possible to obtain both horizontal and vertical spread patterns simultaneously.

The diffuser and the plenum box can be mounted in rows of several units for so-called wall-to-wall installations and in this way achieve a visually cohesive installation even in long rows. See Figure 1.



Installation

The commissioning box is mounted to the ceiling. The box is equipped with mounting points. When mounting several units in wall-to-wall installations, the c/c measurements between the units are to be used, as given in the special installation instructions.

The sizes of the holes to be cut are given in the dimensions table. The backing box is fastened to the commissioning box using the pre-drilled screw mountings. In wall-to-wall installations is the joint piece SRYT 2 used, to achieve a straight line for all the diffusers.

The diffuser face is attached to the backing box with screw fixing concealed behind the removable nozzles. One nozzle is removed at each end of the diffuser face to gain access to the screws, which go through the perforated distribution plate and up into the backing box. See Figure 1.

Commissioning

Commissioning must be carried out with the diffuser in place. The measuring tubes and damper cords are pulled out of the diffuser through the nozzles. When the pressure measurements are completed and the damper position determined, both of the damper cords are stretched and tied together in a commissioning knot. The cords are then wound round the locking screw which is tightened. See figure 1.

The k-factor is shown on the product label and is also indicated in the relevant k-factor guide which can be downloaded at www.swegon.com.

Maintenance

The diffuser can be cleaned when necessary using luke warm water and detergent. The duct system can be accessed by removing the diffuser face, the distribution plate and the damper unit. See figure 1.

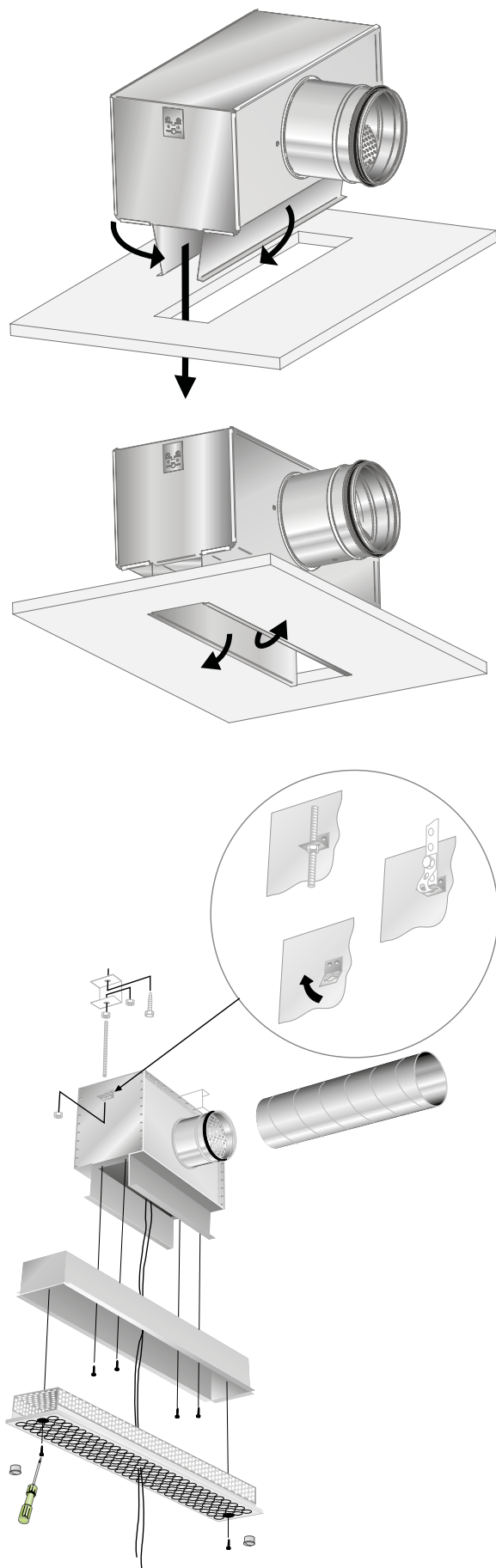


Figure 1. Installation.

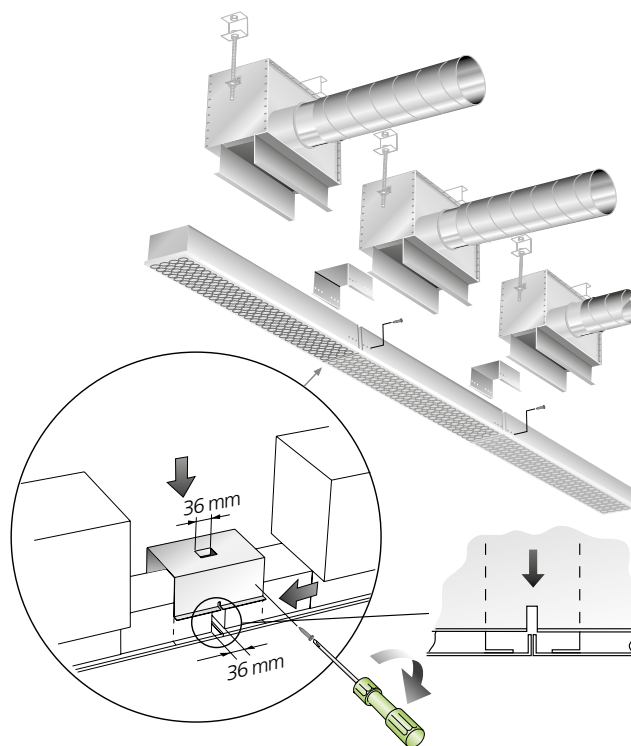


Figure 2. Example wall-to-wall mounting.

Sizing

- Sound pressure level dB(A) applies to rooms with 10 m² equivalent sound absorption area.
- Sound attenuation (ΔL) below is shown in the octave band. Orifice attenuation is included in the values.
- Throw $I_{0.2}$ is measured under isothermal conditions.
- Recommended maximum under temperature with standard nozzle setting and closed slot is 14 K.
- For calculating the width of the air stream, air velocities in the occupied zone or sound levels in rooms with other dimensions, please refer to our web calculation softwares available for download at www.swegon.com.

L_w = Sound power level

L_{p10A} = Sound pressure level dB (A)

K_{ok} = Correction for producing the L_w value in the octave band

$L_w = L_{p10A} + K_{OK}$ gives the frequency divided octave band

Sound data – SRY – Supply air

Sound power level L_w (dB)

Table K_{OK}

Size SRY	Mid-frequency (octaveband) Hz							
	63	125	250	500	1000	2000	4000	8000
1-900-1	3	3	4	3	-1	-8	-15	-14
2-900-1	1	4	3	4	-1	-10	-18	-18
3-900-1	0	5	3	4	-2	-10	-18	-18
4-900-1	-2	7	5	3	-3	-10	-16	-15
1-1200-1	2	3	4	3	0	-7	-15	-17
2-1200-2	3	7	5	1	0	-8	-16	-16
3-1200-2	0	9	6	2	-1	-8	-15	-15
4-1200-2	2	9	6	2	-2	-8	-16	-16
1-1500-2	5	7	5	2	-1	-9	-17	-16
2-1500-2	3	8	4	2	-1	-9	-15	-11
3-1500-2	3	9	4	2	0	-8	-17	-15
4-1500-2	-2	9	6	2	-3	-9	-15	-13
1-1800-2	0	7	4	3	-2	-9	-17	-15
2-1800-2	-2	8	4	3	-2	-10	-15	-12
3-1800-2	1	9	3	4	-3	-10	-17	-14
4-1800-3	4	9	6	2	-2	-8	-15	-13
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

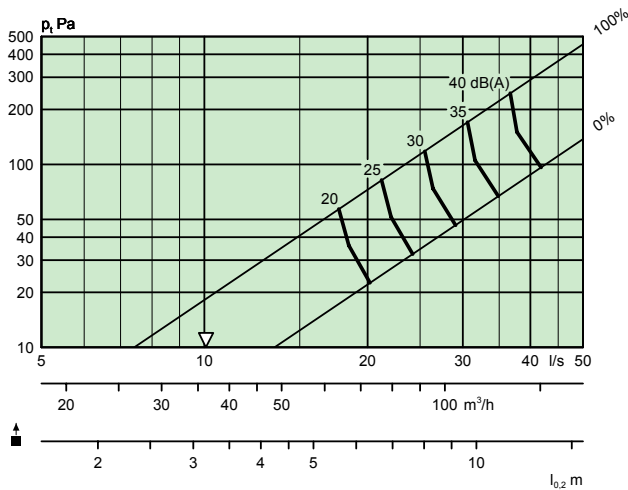
Size SRY	Mid-frequency (octaveband) Hz							
	63	125	250	500	1000	2000	4000	8000
1-900-1	22	16	15	20	18	14	21	18
2-900-1	21	13	13	18	15	13	19	17
3-900-1	20	10	12	16	12	12	17	16
4-900-1	19	7	9	14	9	11	15	15
1-1200-1	22	16	15	20	18	14	21	18
2-1200-2	21	13	13	18	15	13	19	17
3-1200-2	20	10	12	16	12	12	17	16
4-1200-2	19	7	9	14	9	11	15	15
1-1500-2	22	16	15	20	18	14	21	18
2-1500-2	21	13	13	18	15	13	19	17
3-1500-2	20	10	12	16	12	12	17	16
4-1500-2	19	7	9	14	9	11	15	15
1-1800-2	22	16	15	20	18	14	21	18
2-1800-2	21	13	13	18	15	13	19	17
3-1800-2	20	10	12	16	12	12	17	16
4-1800-3	19	7	9	14	9	11	15	15
Tol. ±	2	2	2	2	2	2	2	2

Engineering graphs – SRY – Supply air

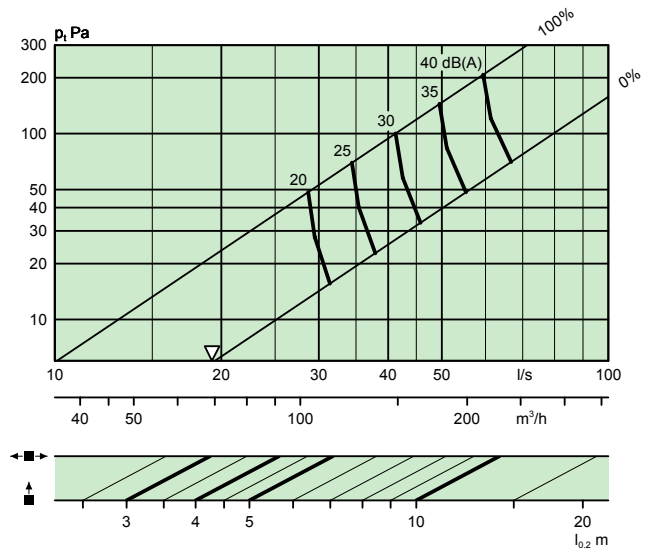
Air flow – Pressure drop – Sound level – Throw

- The graphs illustrate data for SRY recessed in a ceiling.
- The graphs are not to be used for commissioning.
- The dB(A) values are for rooms with normal acoustic absorption of 4 dB.
- The dB(C) value is normally 6-9 dB higher than the dB(A) value.
- Δ = Minimum flow to obtain sufficient commissioning pressure. Should Δ not be seen in the graph, the min. flow is less than the min. flow shown in the graph.
- For alternative nozzle setting 45°, see figure for nozzle settings, $l_{0,2}$ m is reduced by approx 30%. This reduction is not applicable to wall-to-wall installation.

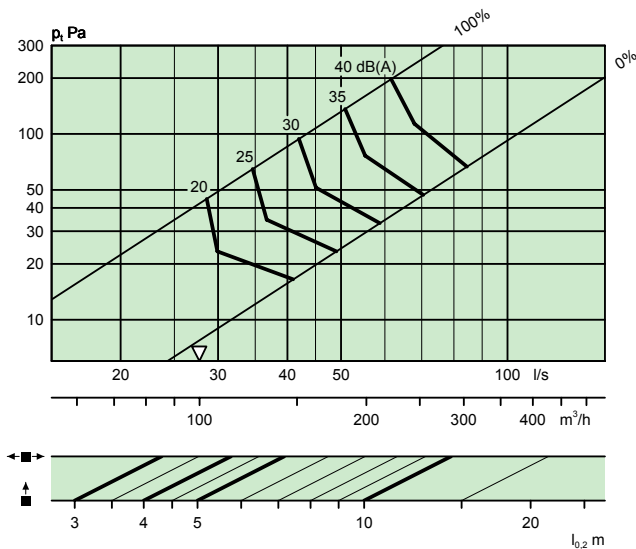
SRY 1-900 + SRYT 1 1-500-Ø125-L



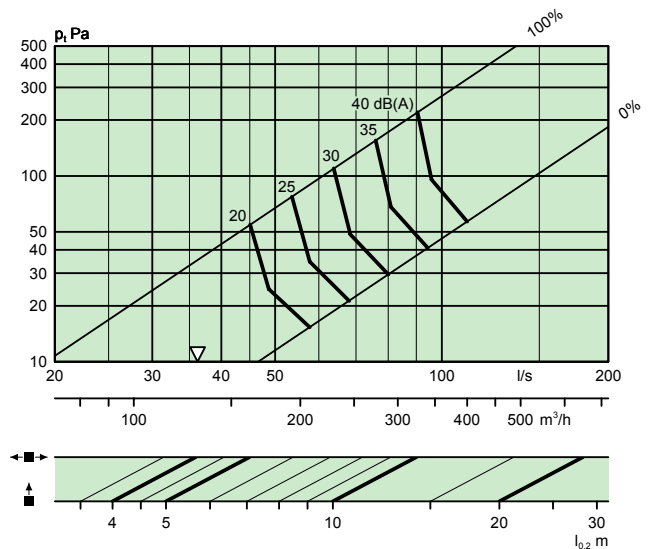
SRY 2-900 + SRYT 1 2-500-Ø160-L



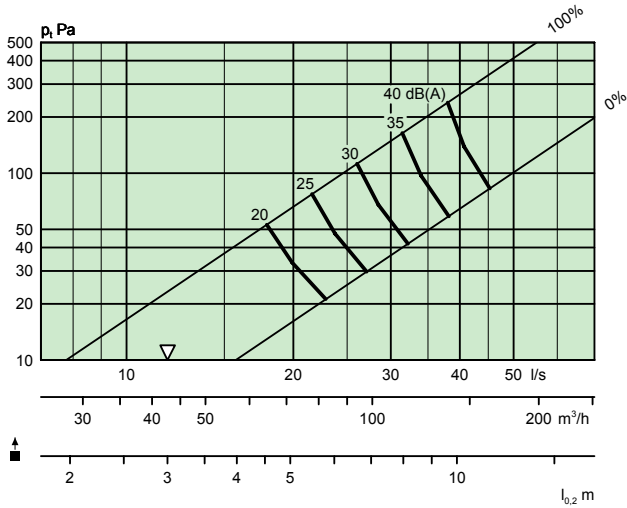
SRY 3-900 + SRYT 1 3-500-Ø160-L



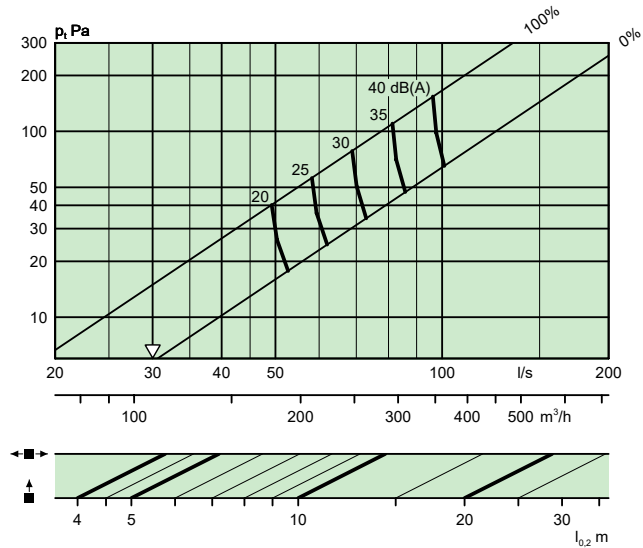
SRY 4-900 + SRYT 1 4-500-Ø200-L



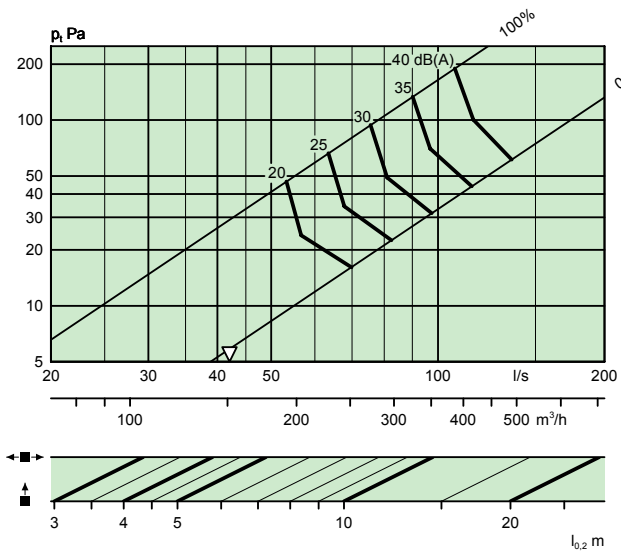
SRY 1-1200 + SRYT 1 1-500-Ø125-L



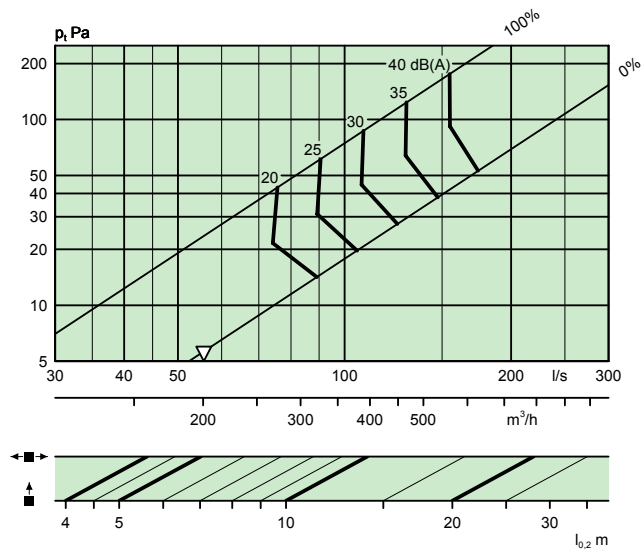
SRY 2-1200 + 2 x SRYT 1 2-500-Ø160-L



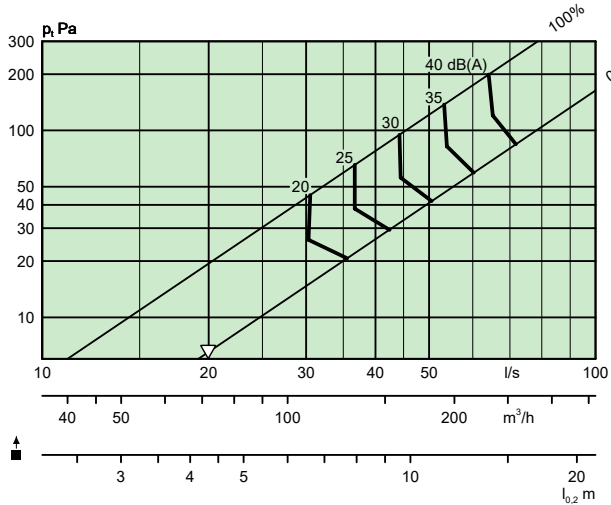
SRY 3-1200 + 2 x SRYT 1 3-500-Ø160-L



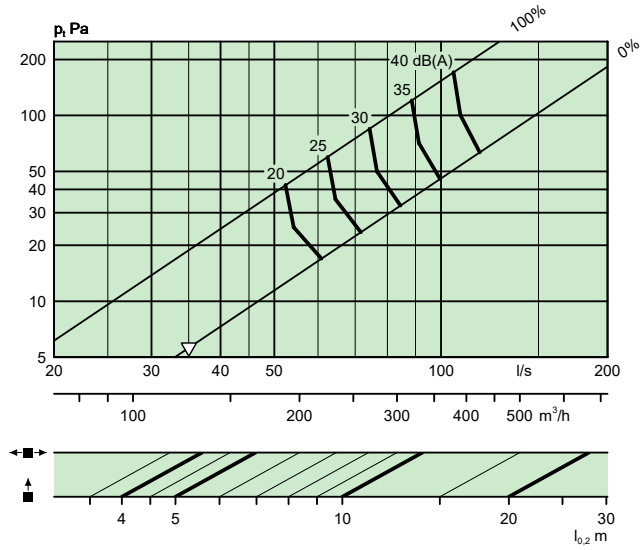
SRY 4-1200 + 2 x SRYT 1 4-500-Ø200-L



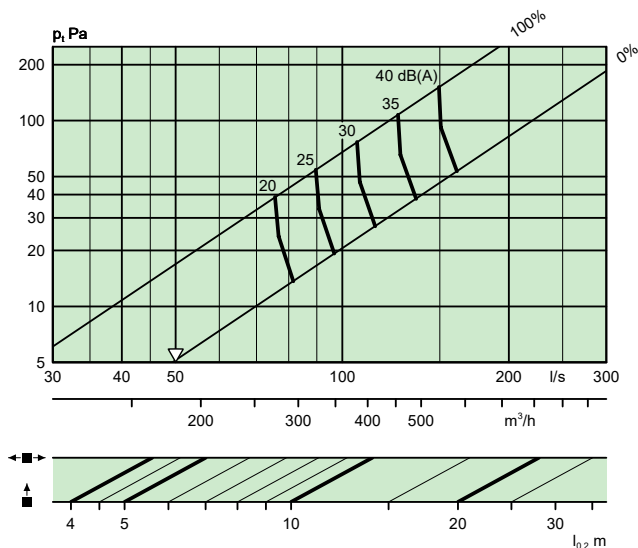
SRY 1-1500 + 2 x SRYT 1 1-500-Ø125-L



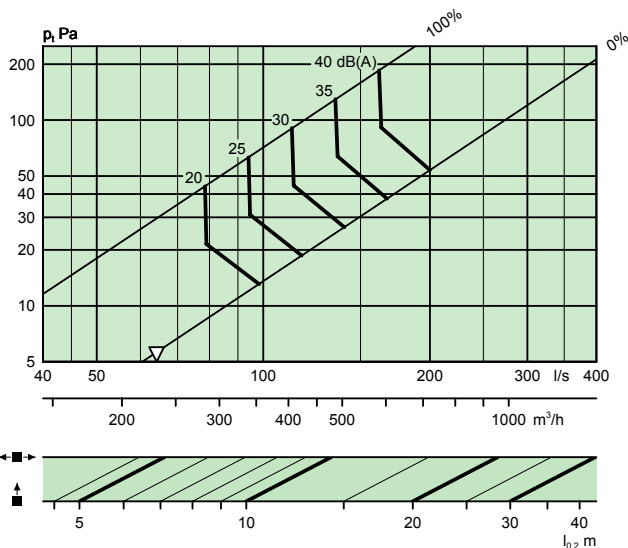
SRY 2-1500 + 2 x SRYT 1 2-500-Ø160-L



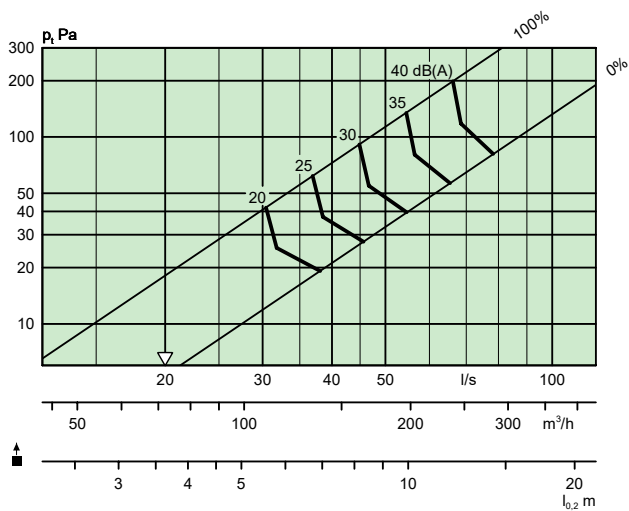
SRV 3-1500 + 2 x SRYT 1 3-500-Ø200-L



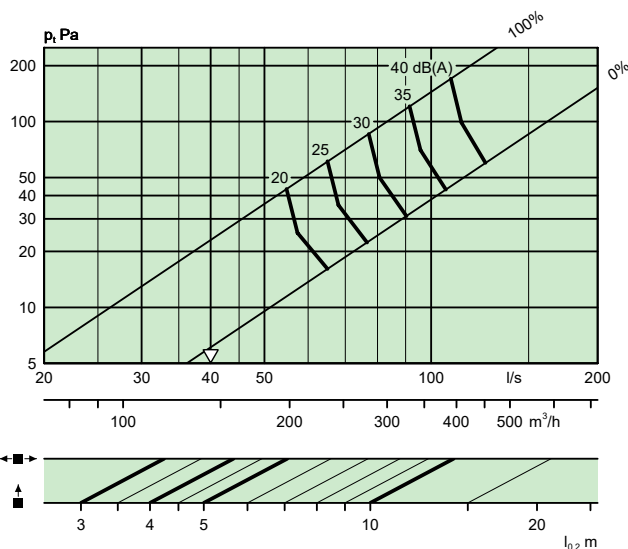
SRV 4-1500 + 2 x SRYT 1 4-500-Ø200-L



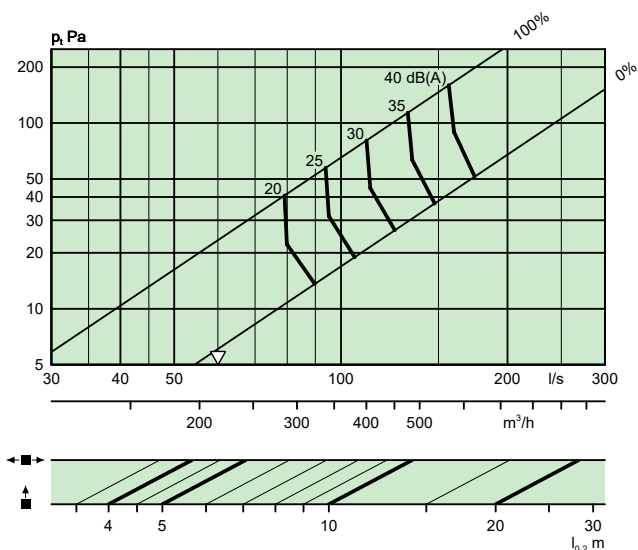
SRV 1-1800 + 2 x SRYT 1 1-500-Ø125-L



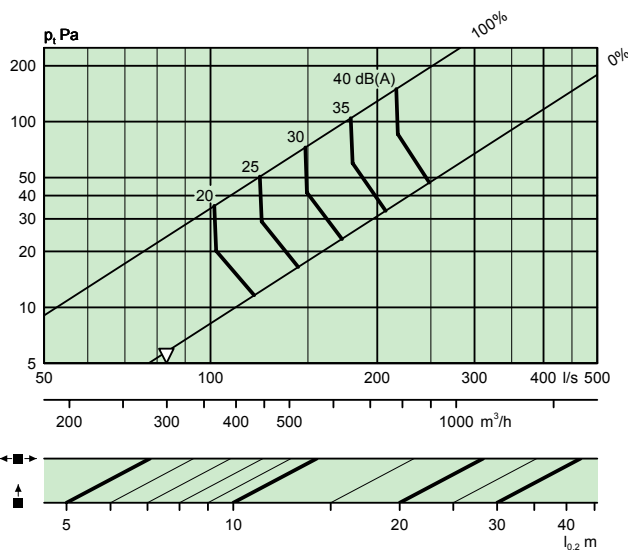
SRV 2-1800 + 2 x SRYT 1 2-500-Ø160-L



SRV 3-1800 + 2 x SRYT 1 3-500-Ø200-L



SRV 4-1800 + 3 x SRYT 1 4-500-Ø200-L



Dimensions and weights

SRY

Size SRY	Dimensions (mm)												Weight (kg)	No. of nozzles	Setting acc. to fig.
A	B	C	ØD	G	H	I	J	K	L	M	N				
1-900-1	897	80	50	124	287	197	860	195	500	80	-	-	6.1	21	3
2-900-1	897	120	90	159	308	218	860	230	500	95	-	-	6.9	42	3
3-900-1	897	160	130	159	312	222	860	230	500	95	-	-	8.9	63	3
4-900-1	897	200	170	199	366	276	860	270	500	115	-	-	9.3	84	3
1-1200-1	1197	80	50	124	287	197	1160	195	500	80	-	-	7.1	29	3
2-1200-2	1197	120	90	159	308	218	1160	230	500	95	600	280	11.4	58	4
3-1200-2	1197	160	130	159	312	222	1160	230	500	95	600	280	12.0	87	4
4-1200-2	1197	200	170	199	366	276	1160	270	500	115	600	280	14.5	116	4
1-1500-2	1497	80	50	124	287	197	1460	195	500	80	700	380	11.2	37	4
2-1500-2	1497	120	90	159	308	218	1460	230	500	95	700	380	12.5	74	4
3-1500-2	1497	160	130	199	346	256	1460	270	500	115	700	380	14.7	111	4
4-1500-2	1497	200	170	199	366	276	1460	270	500	115	700	380	15.6	148	4
1-1800-2	1797	80	50	124	287	197	1760	195	500	80	900	430	12.1	44	4
2-1800-2	1797	120	90	159	308	218	1760	230	500	95	900	430	13.6	88	4
3-1800-2	1797	160	130	199	346	256	1760	270	500	115	900	430	15.9	132	4
4-1800-3	1797	200	170	199	366	276	1760	270	500	115	600	280	21.1	176	5

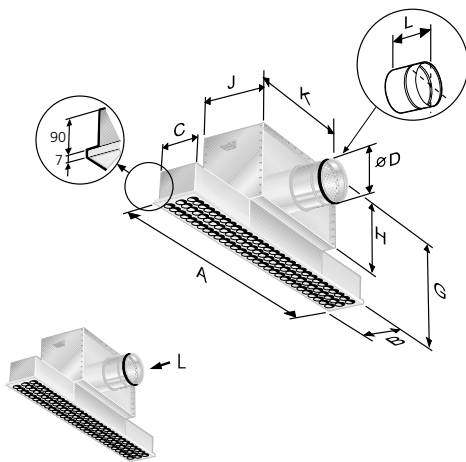


Figure 3. SRY with one commissioning box.
L = Connection on long side

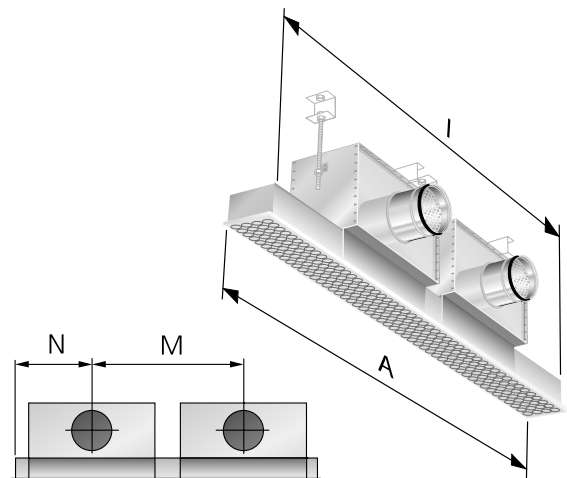


Figure 4. SRY with two commissioning boxes.

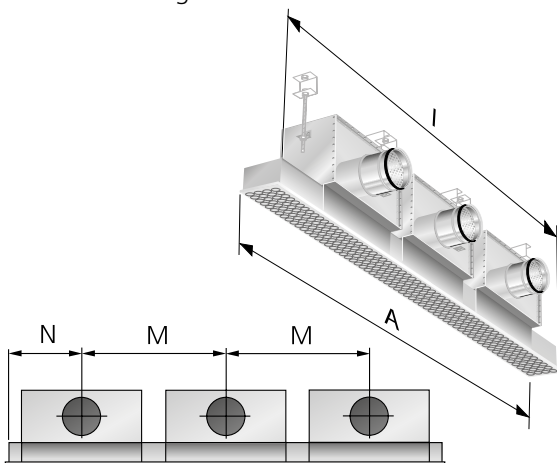


Figure 5. SRY with three commissioning boxes.

Nozzle settings, examples

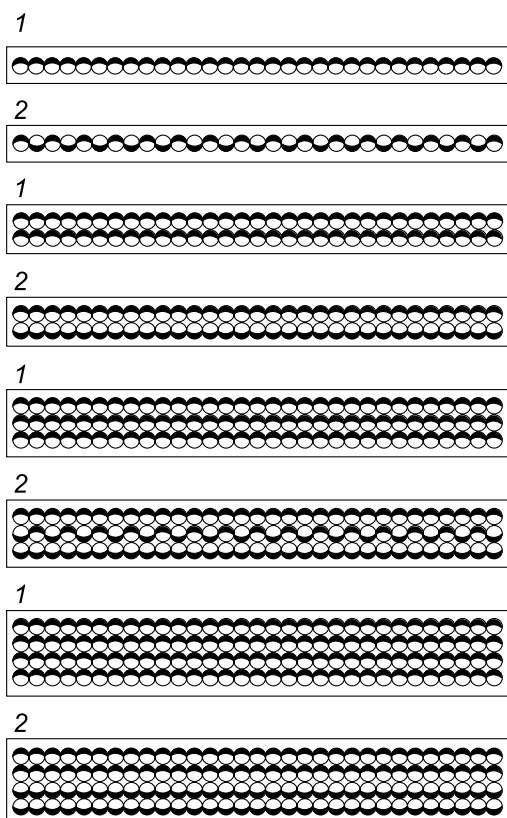


Figure 6. Standard nozzle setting.

1 = 1-way

2 = 2-way

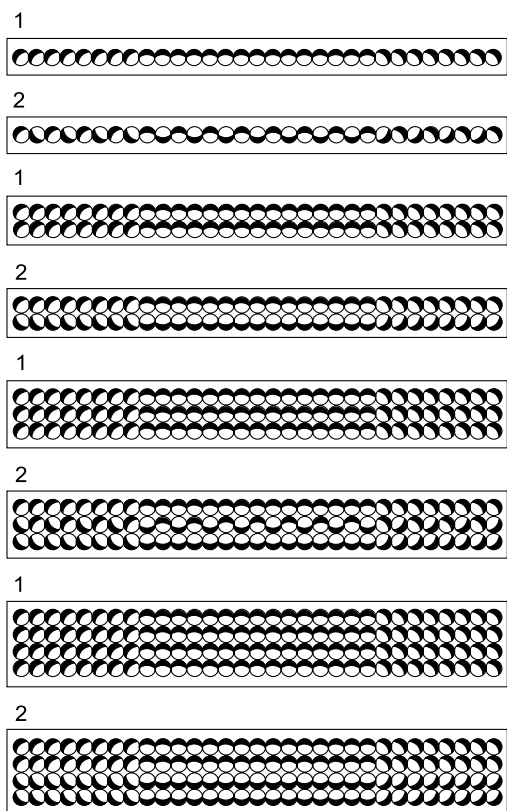


Figure 7. 45° nozzle setting.

1 = 1-way

2 = 2-way

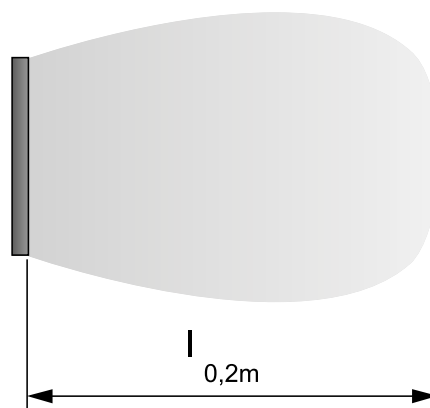


Figure 8. Standard isovel.

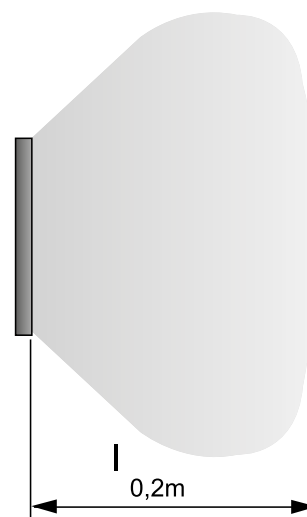


Figure 9. 45° Isovel.

Ordering key

Product

Linear nozzle diffuser for ceiling mounting SRY b -a -bbbb -c

Version:

Number of rows of nozzles.: 1, 2, 3, 4

Length: 900, 1200, 1500, 1800

Number of connections: 1, 2, 3

Standard range:

SRY	1-900-1	1-1200-1	1-1500-2	1-1800-2
	2-900-1	2-1200-2	2-1500-2	2-1800-2
	3-900-1	3-1200-2	3-1500-2	3-1800-2
	4-900-1	4-1200-2	4-1500-2	4-1800-3

Accessories

Commissioning box with removable damper SRYT 1 b -a -bbb -c

Version:

Number of rows of nozzles: 1, 2, 3, 4

Connection dimension: 125, 160, 200, 500

Connection alternatives: L = Side connection

Standard range:

SRY	1-900	1 pcs	SRYT-1	1-500-125-L
	2-900	1 "	"	2-500-160-L
	3-900	1 "	"	3-500-160-L
	4-900	1 "	"	4-500-200-L
SRY	1-1200	1 pcs	SRYT-1	1-500-125-L
	2-1200	2 "	"	2-500-160-L
	3-1200	2 "	"	3-500-160-L
	4-1200	2 "	"	4-500-200-L
SRY	1-1500	2 pcs	SRYT-1	1-500-125-L
	2-1500	2 "	"	2-500-160-L
	3-1500	2 "	"	3-500-200-L
	4-1500	2 "	"	4-500-200-L
SRY	1-1800	2 pcs	SRYT-1	1-500-125-L
	2-1800	2 "	"	2-500-160-L
	3-1800	2 "	"	3-500-200-L
	4-1800	3 "	"	4-500-200-L

Joint piece for SRY SRYT 2 b -a

Version:

with	1 row of nozzle.	1
	2 row of nozzles.	2
	3 row of nozzles.	3
	4 row of nozzles.	4

Specification

Swegons linear nozzle diffuser of type SRY for ceiling mounting with the following functions:

- 100% flexible spread pattern
- Individually adjustable nozzles (35 mm) of recyclable plastic
- Powder-coated in white, RAL 9003/NCS S 0500-N
- Cleanable
- Cleanable commissioning box SRYT 1 with removable commissioning damper with lockable controls, measurement function with low method error and interior acoustic lining with reinforced surface layer

Accessories:

Joint piece: SRYT 2b - a xx items

Size: SRYb a-bbb - c with
SRYT 1b - a - bbb - ccc - d xx items