



DRA Submittal



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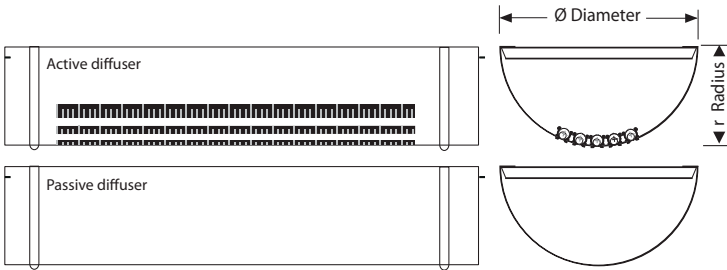
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Date

Project

Engineer

Contractor



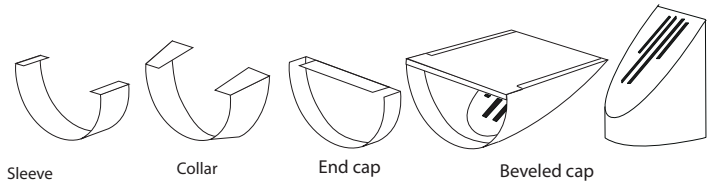
Accessories

All of the standard accessories (elbows, sleeves, reducers, multi-branch connectors, etc.) are available in the precise dimensions of the ducts.

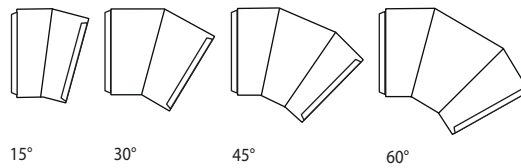
For air balancing reasons, reducers or balancing damper are required between multiple sections. (see DRA Catalog p. 5).

The diffuser

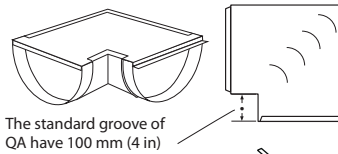
- Made of 22 ga brushed steel for ducts inferior to 508 mm (20 in) in diameter, and 20 ga for diameters superior or equal to 508 mm (20 in).
- Diameters ranging from 305 mm (12 in) to 1118 mm (44 in).
- Assembled using union sleeves..
- Steel reininforcements inside ducts of more than 433 mm (17 in) in diameter.
- Painted with a TGIC-free polyester powder coat
- RAL colour chosen by the customer.
- Slots containing ABS eccentric rollers.
- 100 mm (4 in) long eccentric rollers.
- Eccentric rollers have alphanumericly identified, allowing for an adjustment of the air flow.
- Air flow pattern over 180 degrees.
- Easy-to-clean
- Reducer fitting or a perforated balancing damper after 5 active sections.
- Duct section can be passive (without slots).



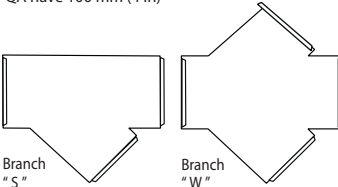
Coudes et raccords



The standard radius are base on : $r (c/c) = 1.5\varnothing$



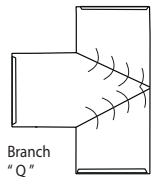
The standard groove of QA have 100 mm (4 in)



Branch "S"

Branch "W"

For S and W, add an elbow to degree and diameter choosed to completed the fitting

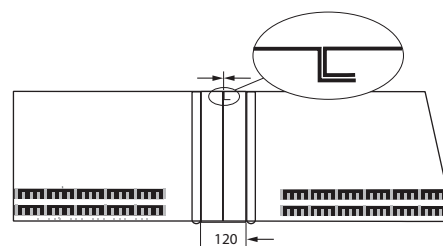


Branch "Q"

For Q, the inlet diameter can not exceed the outlet diameter

Assembly

The sections of the diffuser DRA are assembled by connection sleeves adapted to the diameter of the duct.



Standard sleeve : 120 mm and no space between DRA

DRA - Setting of the air jet direction

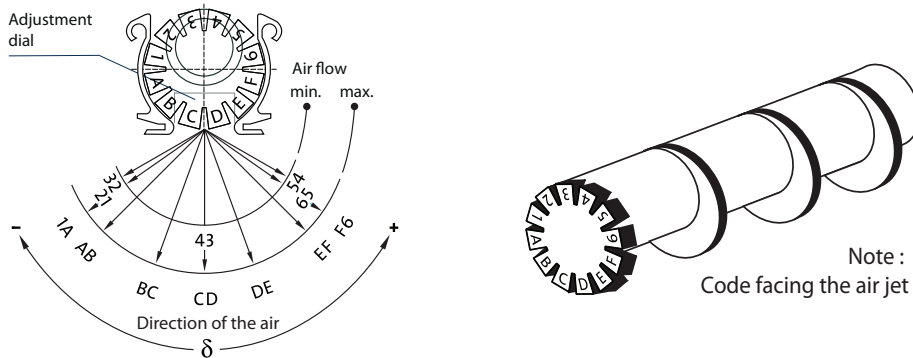
Thanks to the shape of the eccentric rollers and adjustment dial with alphanumeric characters, the air jet's direction at the diffuser's outlet can vary up to 180°. For each direction, there are two (2) rollers positions ("reduced" or "not reduced"), as illustrated in figure E.

The length of each roller is 100 mm and they are individually adjustable. As a result, the combinations of airflow are almost infinite. In manufacturing, the ducts are individually adjusted for each project. The standard setting for the rollers is set to diffusion mode in positions "21" and "65" alternately. This setting produces strong induction, which can be used to meet heating and cooling needs, thereby creating high mixing levels.

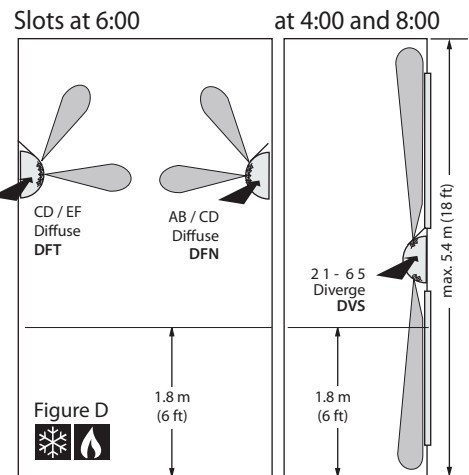
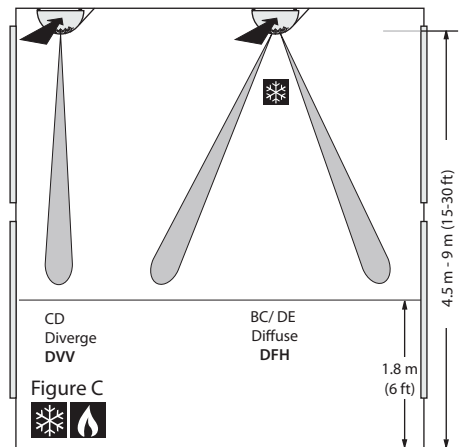
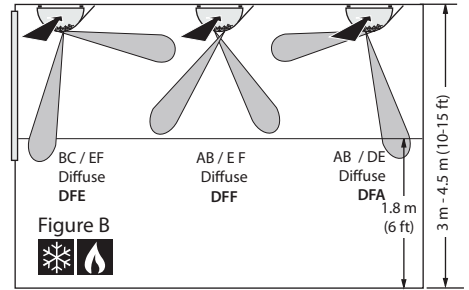
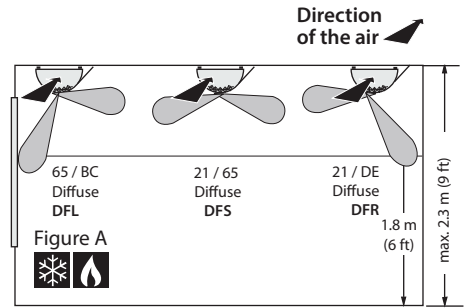
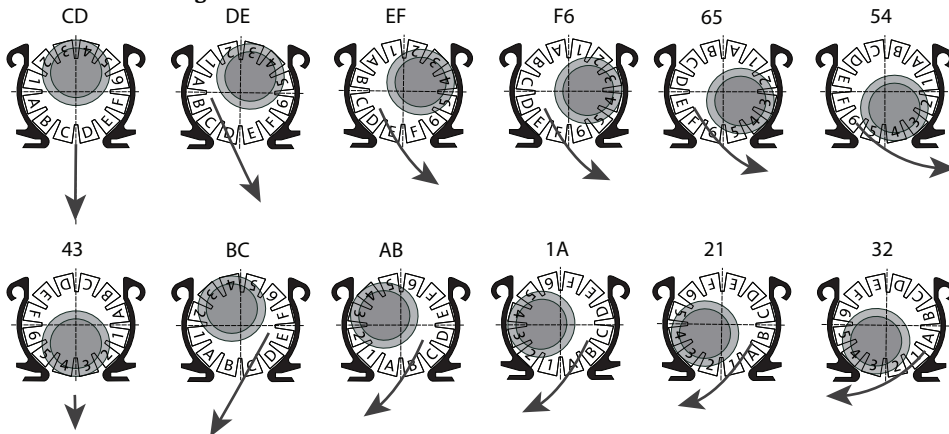
As a result, the divergent mode allows jets to blow in more accurate directions.

This mode also allows a longer projection of the airflow. In specific zones, which are usually difficult to cover, a specialized setting can be created. Figures C and D show the relationship between the position of the eccentric roller and the direction of exiting airflow. Note that to maximize air projection, multiple jets can be orientated in the same direction to optimize the coverage of a zone, even when heating.

Eccentric roller Figure E



Jet orientation guide



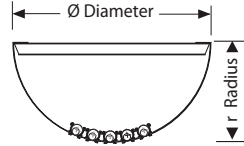
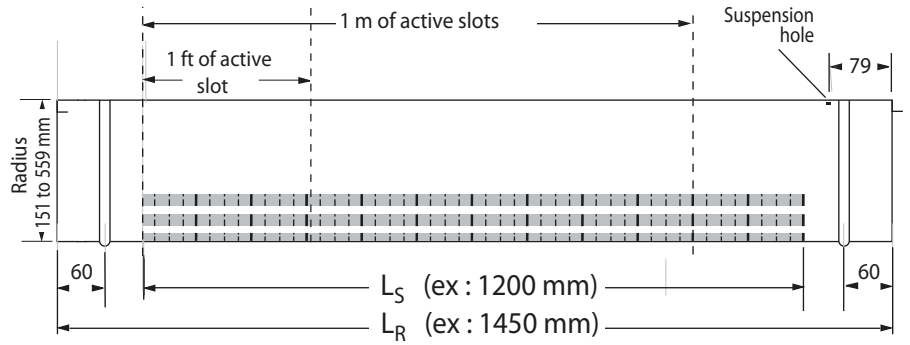
DRA - Dimensions et poids

Duct length	LR	1000	1450
Slot length	LS	800	1200

Weight per slot (kg)	
0.30	0.44

Diameter in (mm)	Weight of passive DRA (kg)	
	Sheet thickness : 0.85 mm	
12 (305)	5.92	8.34
14 (356)	6.88	9.71
16 (406)	7.85	11.08
18 (457)	8.82	12.45

Diameter in (mm)	Weight of passive DRA (kg)	
	Sheet thickness : 1.00 mm	
20 (508)	11.53	16.28
22 (559)	12.67	17.90
24 (610)	13.81	19.51
26 (660)	14.95	21.13
28 (711)	16.09	22.75
30 (762)	17.23	24.36
32 (813)	18.37	25.98
34 (864)	19.51	27.59
36 (914)	20.65	29.21
38 (965)	21.80	30.82
40 (1016)	22.94	32.44
42 (1067)	24.08	34.05
44 (1118)	25.22	35.67

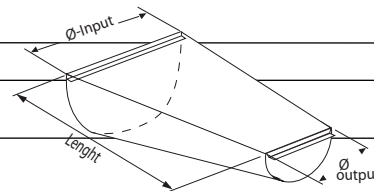


DRA - Codification

DRA	1000, 1450										Product
	0800, 1200 ____ = Special length (write in mm) XXXX = Non applicable (passive duct)										Length L_R
	305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118										Length of slots L_S
	X = Passive 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14										Diffuser diameter Ø
	004 = Slots at 60°(4h) 048 = Slots at (4h) and at -60° (8h) 005 = Slots at 30°(5h) 468 = Slots at (4h), 0° (6h) and at -60° (8h) 006 = Slots at 0° (6h) AAA = Other (specify in annotation) 007 = Slots at -30° (7h) XXX = Passive 008 = Slots at -60° (8h)										Number of slots
	XXX = Passive DFH = Diffuse height BC / DE DFS = Diffuse standard 21/ 65 DFA = Diffuse AB / DE DFR = Diffuse window DE / 21 DVB = Divergent 21 DFL = Diffuse window BC / 65 DVD = Divergent 65 DFF = Diffuse height AB / EF DVV = Vertical divergent CD DFT = Diffuse CD / EF DFN = Diffuse CD / AB										Slot position
	W = White roller (RAL 9003) C = Cream roller (RAL 9010) B = Black roller X = Without roller										Air flow
	9003 = White 9010 = Cream 00SB = Solar Black (Standard matte black) 00SM = Silver Matte (Standard metallic grey) ____ = RAL color (write the color number of RAL)										Roller color
	A = With closed-cell acoustic insulation X = Without insulation										Diffuser color
	D = With damper X = Without damper R = With register (perforated plate) X = Without register										Acoustic insulation
D = With damper X = Without damper R = With register (perforated plate) X = Without register										Balancing damper	
D = With damper X = Without damper R = With register (perforated plate) X = Without register										Register	
DRA	1450	1200	305	1	006	DFS	W	9003	X	X	Exemple

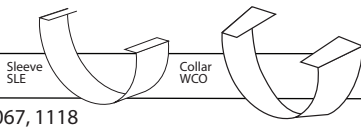
Codification for reducers

DRA	RED = Reducer										Product
	356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118										Ø input diameter
	305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067										Ø output diameter
	S = Standard $\alpha = 14^\circ$ A = Other (specified in annotation)										Length
	9003 = White 9010 = Cream 00SB = Solar Black (Standard matte black) 00SM = Silver Matte (Standard metallic grey) ____ = RAL color (write the number of RAL color)										Color
	A = With insulation with closed cells X = Without insulation										Acoustic insulation
DRA	RED	356	305	S	9003	X					Example

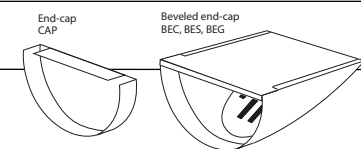


DRA - Codification

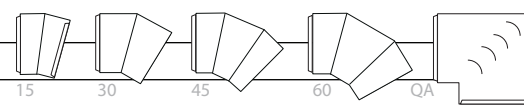
Codification for sleeve and collar

DRA	SLE (Sleeve), WCO (Collar)				Product
		305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118			Diameter
		9003 = White 9010 = Cream 00SB = Solar Black (Standard matte black) 00SM = Silver Matte (Standard metallic grey) ____ = RAL color (write the number of RAL color)		Color	
DRA	SLE	203	9003		Example

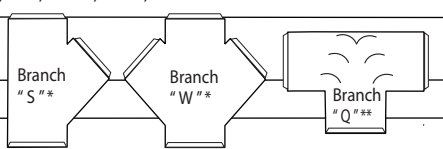
Codification for end-cap

DRA	CAP (End-cap), BEC (Beveled end-cap with or without logo), BES (Beveled end-cap+slots), BEG (Return beveled end-cap)				Product
		305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118			Diameter
		9003 = White 9010 = Cream 00SB = Solar Black (Standard matte black) 00SM = Silver Matte (Standard metallic grey) ____ = RAL color (write the number of RAL color)		Color	
		A = With insulation with closed cells X = Without insulation		Acoustic insulation	
DRA	CAP	305	9003	X	Example

Codification for elbows

DRA	ELB = Elbows				Product		
		15, 30, 45, 60, QA			Angle		
		305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118 QA		Diameter			
		S = Standard (r (c/c)= 1.5 Ø) (inner corner of the QA: 100 mm) see on page 2 A = Other (specified in annotation)		Radius			
		9003 = White 9010 = Cream 00SB = Solar Black (Standard matte black) 00SM = Silver Matte (Standard metallic grey) ____ = RAL color (write the number of RAL color)		Color			
		A = With insulation with closed cells X = Without insulation		Acoustic insulation			
DRA	ELB	15	305	S	9003	X	Example

Coding for the branches

DRA	BRA = raccord				Product				
		305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118			ØD - Input diameter				
		305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118		Ød1 - Output diameter					
		305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118		Ød2 - Output diameter (For «W» branch only)					
		S*, W*, Q**		Configuration					
		9003 = White 9010 = Cream 00SB = Solar Black (Standard matte black) 00SM = Silver Matte (Standard metallic grey) ____ = RAL color (write the number of RAL color)		Color					
		A = With insulation with closed cells X = Without insulation		Acoustic insulation					
DRA	BRA	305	305	203	S	9003	X	Annotation	Example

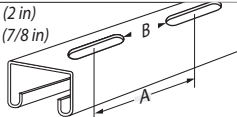

Notes : The « W » branch may have two different outlet diameters. * For « S » and « W » fittings, add an elbow to the degree and diameter chosen to complete the branch.

** For « Q », the input diameter can not exceed the output diameter.

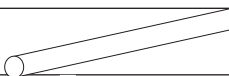
Our thermolacqued paint are available in the RAL color chart only. Metallic colors available on request.

DRA - Codification

Coding for anchorage system, with rail

RAI	S-33 Steel rail 22 mm X 41 mm X 3048 mm (7/8 in X 1 5/8 in X 10 li. ft) can be paint	A: 50 mm (2 in) B: 22 mm (7/8 in)	
	9003 = White 9010 = Cream ____ = RAL color (4 number) XXXX = Non paint	Color	
RAI	S33 - 9003	Example	
Accessories supplied with the steel rail (S33) (2/DRA)			
RKS	Fastening system Bolt, washer, lock washer and nut		

Coding for suspension accessories with threaded rods (threaded rods are supplied by the installer)

RCT	Threaded rod cover 16 mm X 3.05 m (5/8 in X 10 ft)	
	9003 = White 9010 = Cream 00SB = Solar Black 00SM = Silver Matte ____ = RAL color* (write the 4 numbers) XXXX = Non paint	Color
RCT	9003	Example

Touch-up spray paint

CAN	9003 Paint can (RAL 9003)	
CAN	____ Paint can (other colour RAL) (write the number of the color)	
CAN - 9003	Example	

Description of anchors for the ceiling	
CPA	Anchor with hook nickel plated Ø 13 mm X 70 mm X 14.3 mm (Ø 1/2 in X 2 3/4 in X 9/16 in)
CCP	Swiveling anchor nickel plated Not adjustable Ø 25 mm X 28.5 mm (Ø 1 in X 1 1/8 in) (screw not supplied)
Description of anchor for the diffuser	
CCA	Anchor for duct Adjustment throttle nickel plated Ø 1 mm X 50 mm (Ø 3/4 in X 2 in)
XXXX = Without cable 3048 mm - standard (10 ft)	
Cable length	
A = Nickel plated steel (standard) S = Stainless Steel (optional)	
CPA - 3048 - A	Example