

RETURN AIR PERFORMANCE DATA - Models RAEA & RAPA Eggcrate Return Air Registers and Grilles

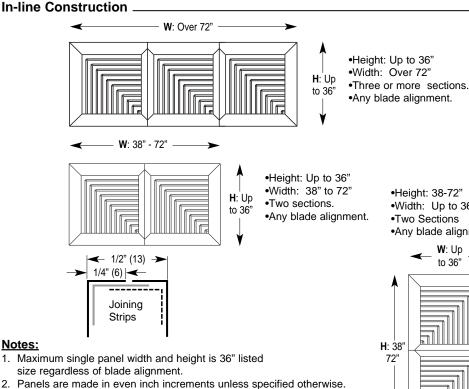
DUCT DUCT														
VELOCITY	200 FPM .009		300 FPM .016		400 FPM .031		500 FPM .048		600 FPM .069		800 FPM .123		1000 FPM .192	
STATIC														
PRESSURE														
GRILLE SIZE									1					_
WxH	CFM	NC	CFM	NC										
6 x 6	50	_	75	_	100	_	125	_	150	_	200	22	250	30
8 x 8	89	_	133	_	178	_	222	_	266	_	355	24	444	32
10 x 8	111		167	_	222	_	278	_	333	15	444	25	555	33
10 x 10	139	_	208	_	278	_	347	_	416	16	555	26	694	34
12 x 8	133	_	200	_	267	_	333	_	400	16	533	26	667	34
12 x 12	200		300	_	400	_	500	_	600	18	800	28	1000	36
14 x 10	194	_	292	_	389	_	486	_	583	18	778	28	972	36
18 x 10	250		375	-	500	_	625	_	750	19	1000	29	1250	37
18 x 12	300	l	450	_	600	_	750		900	20	1200	30	1500	38
18 x 18	450		675	_	900	_	1125	15	1350	21	1800	31	2250	39
24 x 12	400	l	600	_	800	_	1000	15	1200	21	1600	31	2000	39
24 x 18	600	l	900	_	1200	_	1500	17	1800	23	2400	33	3000	41
24 x 24	800	l	1200	_	1600	_	2000	18	2400	24	3200	34	4000	42
30 x 12	500	l	750	_	1000	_	1250	16	1500	22	2000	32	2500	40
36 x 12	600		900	_	1200	_	1500	17	1800	23	2400	33	3000	41
36 x 18	900		1350	_	1800	_	2250	19	2700	25	3600	35	4500	43
36 x 24	1200	l	1800	_	2400	_	3000	20	3600	26	4800	36	6000	44
36 x 36	1800		2700	_	3600	_	4500	22	5400	28	7200	38	9000	46
48 x 24	1600		2400	_	3200	_	4000	21	4800	27	6400	37	8000	45
48 x 36	2400	l	3600	_	4800	15	6000	23	7200	29	9600	39	12000	47
48 x 48	3200	_	4800	_	6400	16	8000	24	9600	30	12800	40	16000	48



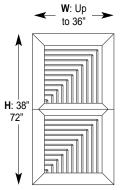
Multi-Panel Construction for the following Registers & Grilles

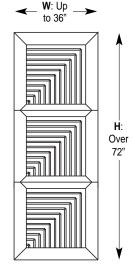
Stainless Steel Steel Aluminum RSSB, RTSB RLSB, RMSB, RKSB RASM, RNSM Single Deflection Double Deflection RSDB, RTDB RLDB, RMDB, RKDB RADM, RNDM 0° Fixed Return RSRB, RTRB RLRB, RMRB, RKRB RARM, RNRM 45° Fixed Return RSAB, RTAB RLAB, RMAB, RKAB RAAM, RNAM

In-line Construction _



- Any blade alignment
- •Width: Up to 36"
- Two Sections
- Any blade alignment





•Height: Over 72" •Width: Up to 36"

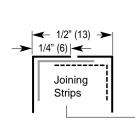
•Three or More Sections

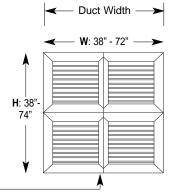
Notes:

- 1. Maximum single panel width and height is 36" listed size regardless of blade alignment.
- 3. Front blade alignment is as pictured.
- 4. Grille height & width dimensions shown are listed size dimensions.
- 5. Panel flanges are sheared and aligned with joining strips.

Ganged Construction _____

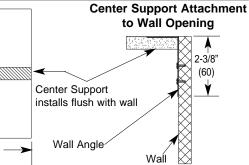
- 1. Maximum single panel width is 36" listed size.
- 2. Maximum single panel height is 36" listed size.
- 3. Panels will be made in even inch increments unless specified otherwise.
- 4. Front blade alignment is always parallel to center support.
- 5. Either the vertical or horizontal joint can be sheared down, but not both.
- 6. The center support can be aligned vertically or horizontally, depending on blade alignment desired. It is shown here mounted horizontally.
- 7. Grille height and width dimensions shown are listed size dimensions.
- 8. Metric dimensions are shown in millimeters.



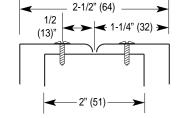


Duct

Height



Cross-Sectional View of Center Support with Grilles Attached



www.carnes.com A-299



Multi-Panel Construction for the following Registers & Grilles

Louvered Return Perforated Return

<u>Steel</u> RSLA, RTLA RSFA, RTFA

•Height: Over 72" •Width: Up to 48"

•Horizontal Blade Alignment •Three or More Sections

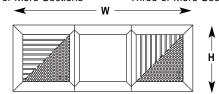
In-Line Construction.

•Height: Up to 36" •Width: Over 96"

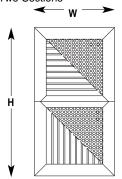
•Horizontal Blade Alignment •Three or More Sections

•Height: Up to 48" •Width: Over 72"

 Vertical Blade Alignment •Three or More Sections



- •Height: 38-72" •Width: Up to 48"
- Horizontal Blade Alignment
- Two Sections

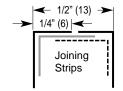


- •Height: 50-96" •Width: Up to 36"
- Vertical Blade Alignment
- Two Sections
- •Height: Over 96"
- •Width: Up to 36"
- •Vertical Blade Alignment
- •Three or more Sections

Duct

Height

- •Height: Up to 36" •Width: 50" to 96"
- •Horizontal Blade Alignment
- Two Sections
- •Height: Up to 48" •Width: 38" to 72"
- •Vertical Blade Alignment
- Two Sections



Notes:

- 1. Panels will be made in even inch increments unless specified otherwise.
- 2. Dimensions shown are listed size dimensions.
- 3. Max. blade length on louvered face models is nominal 48".

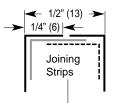
Wall Angle

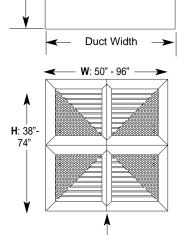
4. Panels are sheared and aligned with joining strips.

Ganged Construction .

Notes:

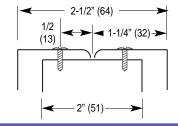
- 1. Either the vertical or horizontal joint can be sheared down, but not both.
- 2. Maximum single panel width is 48" listed size.
- Maximum blade length on louvered face models is listed size 48". 4. Maximum single panel height is 36"
- listed size. 5. Panels are made in even inch increments unless specified otherwise.
- 6. Blade alignment is always parallel to center support.
- 7. The center support can be aligned vertically or horizontally, depending on the blade alignment desired. It is shown here mounted horizontally.
- 8. Grille dimensions shown are listed size dimensions.





Center Support Attachment to **Wall Opening** 2-3/8" (60)Center Support install flush with wall

Cross-Sectional View of Center Support with Grilles Attached



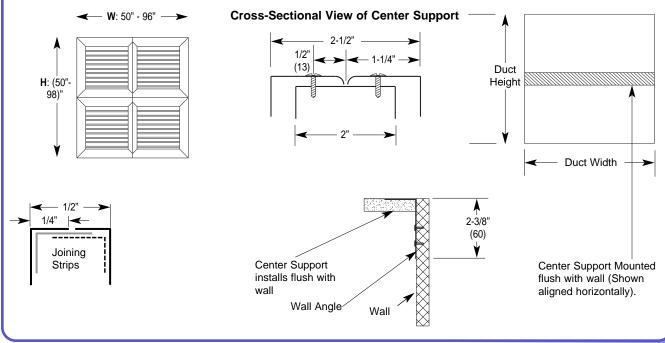


W (Up to 48") Multi-Panel In-Line Construction •Height: 50-96" 1. Maximum single panel width and height is 48" nominal size, regardless •Width: Up to 48" of blade alignment. •Two Sections 2. Panels are made in even inch increments unless specified otherwise. •Any Blade Alignment 3. Front blade alignment is as pictured. **H** (50" 4. Grille dimensions shown are nominal dimensions. -96") 5. Panel flanges are sheared and aligned with joining strips. - 1/2" W (Up to 48") Joining •Height: Over 96" Strips •Width: Up to 48" •Three or more Sections Any Blade Alignment •Height: Up to 48" •Height: Up to 48" •Width: Over 96" •Width: 50" - 96" •Three or more Sections •(Two Sections) •Any Blade Alignment Any Blade Alignment W (Over 96") W (50" - 96") H: (Up to **H:** (Up to

Notes:

- 1. Maximum single panel width and height are 48" nominal size.
- 2. Panels are made in even inch increments unless specified otherwise.
- 3. Front blade alignment is always parallel to center support.
- 4. Either the vertical or horizontal joint can be sheared down, but not both.
- 5. The center support can be aligned vertically or horizontally, depending on blade alignment desired.
- 6. Grille dimensions shown are nominal dimensions.

Multi-Panel Ganged Construction



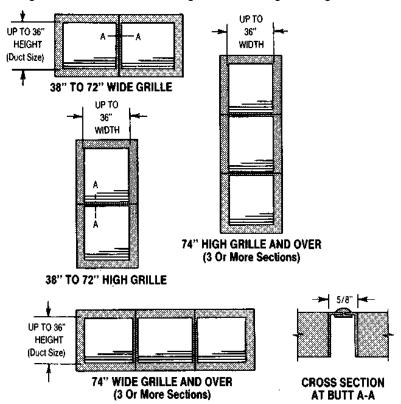
www.carnes.com A-301

Multi-Panel Construction for M-Series Alum, R&G PARISES

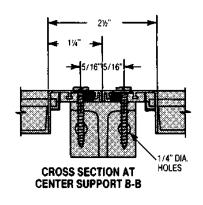
All Sections of Butted Grilles or Registers will be made in Listed Sizes as Standard.

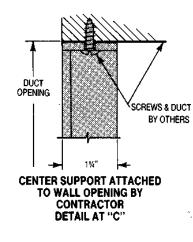
STANDARD REGISTERS AND GRILLES

Applies to all models except louvered return air registers and grilles and door partition grilles. Registers and grilles over 36" x 36" butting two or more grilles together.



GRILLES AND REGISTERS HAVING FOUR SECTIONS AND OVER





DUCT OPENING LISTED SIZE CENTER SUPPORT (Flush With Wall) DUCT OPENING

NOTES:

Extruded aluminum supporting members with mounting angles, are furnished where required.

Center support may run vertically or horizontally, depending upon combination of grilles used.

Combination of panels will be furnished to fit duct opening with satisfactory clearance.

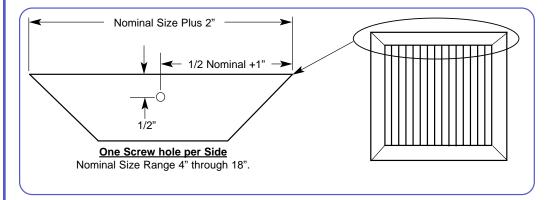


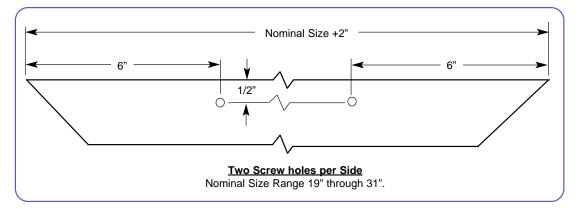
Screw Hole Location for the following Registers & Grilles

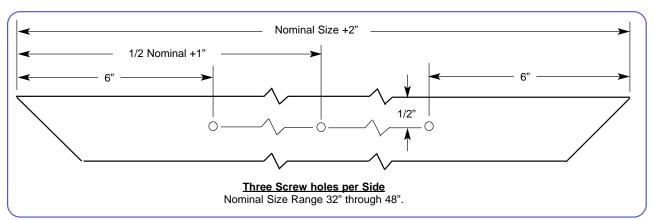
	<u>Steel</u>	<u>Aluminum</u>	Stainless Steel
Single Deflection	RSSB, RTSB	RASM, RNSM	RLSB, RMSB, RKSB
Double Deflection	RSDB, RTDB	RADM, RNDM	RLDB, RMDB, RKDB
0° Fixed Return	RSRB, RTRB	RARM, RNRM	RLRB, RMRB, RKRB
45° Fixed Return	RSAB, RTAB	RAAM, RNAM	RLAB, RMAB, RKAB
Louvered Return	RSLA, RTLA		
Perforated Return	RSFA. RTFA	RAFM. RNFM	

Notes:

- · Screw holes on the face are standard on Registers and Grilles.
- Steel R&G can be ordered without screw holes, for use with concealed hangers (Opt. N).
- The screw holes is 5/32" in diameter.
- Each Register or Grille is provided with the appropriate number of screws as standard.
- The standard screw is #8 x 1-1/4" pan head screw, with a flat blade head.
- Tamper-proof screws are available as an option (Opt. B).







www.carnes.com A-303