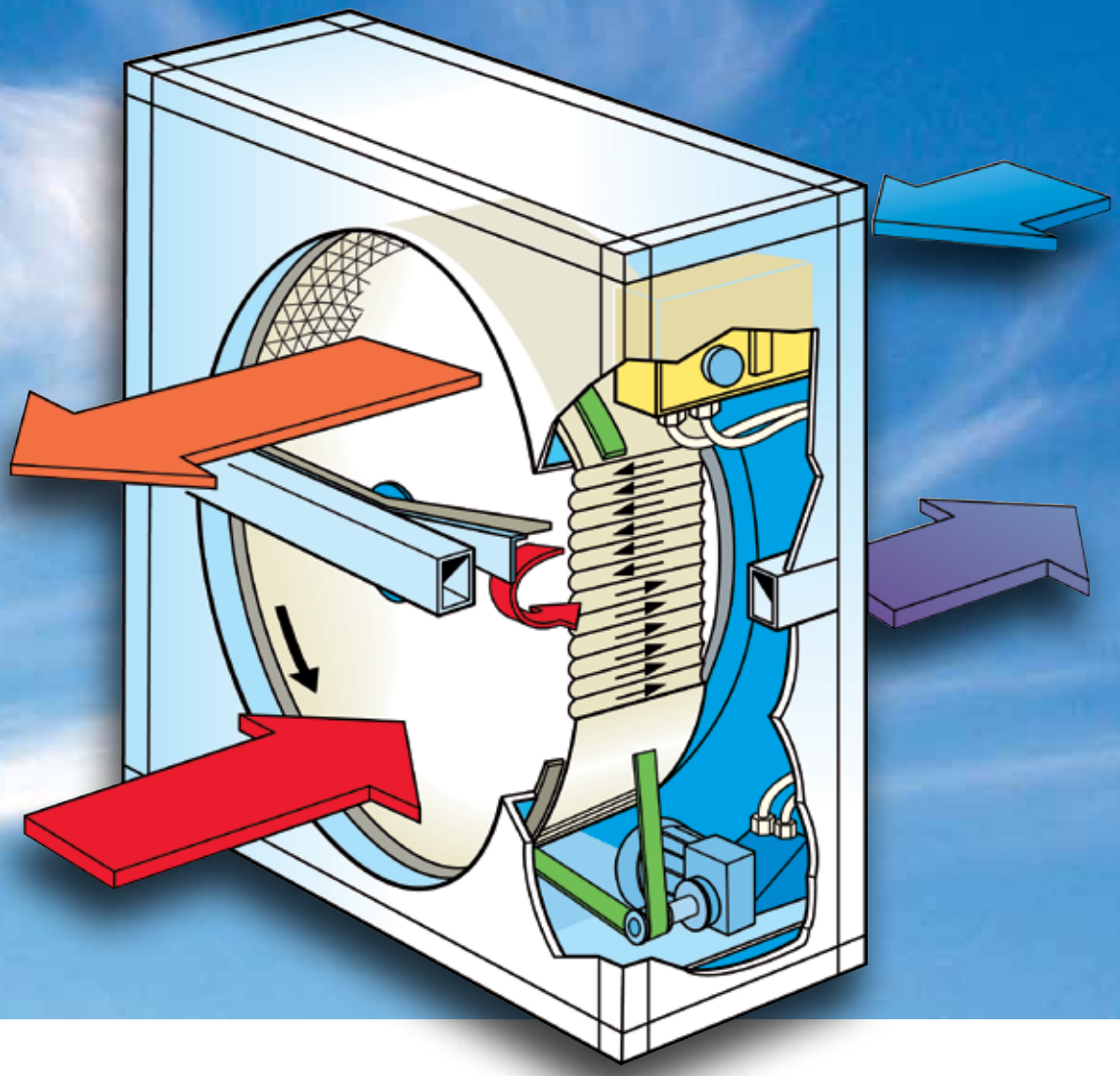
ECONOVENT® – PUM (O,R,V)

Assembly instructions for rotary heat exchangers, sizes 150–420 (500)

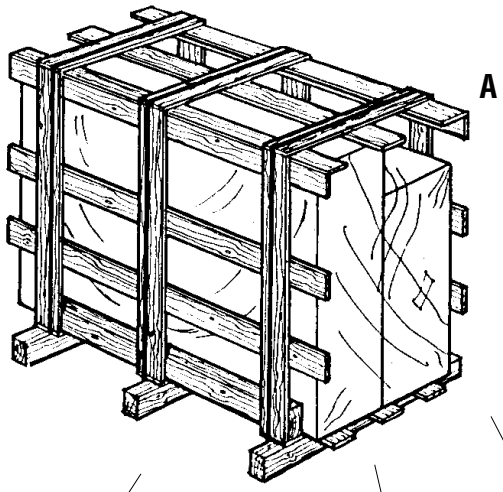


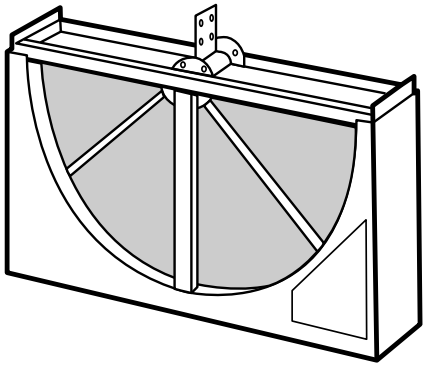
FläktWoods

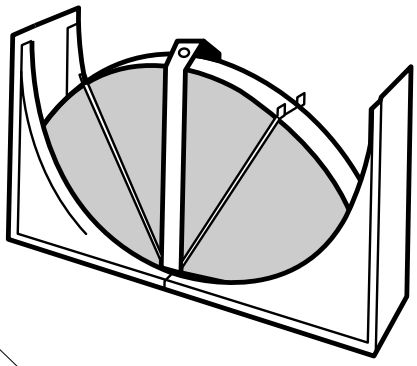
Contents

Condition on delivery

A. The heat exchanger is delivered in a wooden crate.
B. Bottom half with fully assembled rotor half and drive motor fitted in position.
C. Top half with rotor half in sections, provided with transport protection and with lifting device.
D. Plastic bag with the contents listed below.
E. Other assembly components (see below).

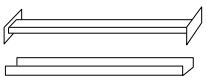
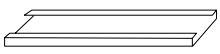
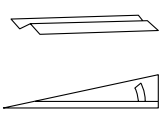




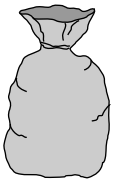



Drive belt

E

Size	Quantity	Designation	
265 – 500	2	Cover plate for hub	
460 – 500	1	Cross beam	
380 – 500	4	Diagonal stay	
460 – 500	2 2	Vertical beam Cover plate	
460 – 500	2	Cover plate for end wall	
Installation alternative with centre beam			
460 – 500	2 or 1	Sealing strip Purging sector	

D



Content:
Necessary screws, nuts and washers and a threaded rod for assembling the clamping straps.

Four diagonal stays on the upper half of the rotor for sizes 380 – 500

Product Code

Casing **PUMO-aaa-bbb-ccc-d-1-f-g-hh-ii**

See next page

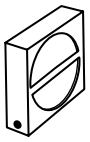
Rotor size, in cm **(aaa)**
060 - (in steps of 1 cm) - 249
250 - (in steps of 5 cm) - 420
460/500

Width of casing, cm **(bbb)** according to Table A

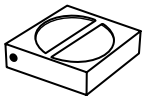
Height of casing, cm **(ccc)** according to Table A

Direction of airflow **(d)**

1 = Horizontal air flow, top-bottom, with purging sector
2 = Horizontal air flow, top-bottom, without purging sector

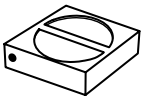


3 = Vertical air flow, with purging sector (Centre beam 90° to the inspection side)
4 = Vertical air flow, without purging sector (Centre beam 90° to the inspection side)



5 = Horizontal air flow, side-by-side, with purging sector
6 = Horizontal air flow, side-by-side, without purging sector

7 = Vertical air flow, with purgin sector (Centre beam parallel to the inspection side)
8= Vertical air flow, without purgin sector (Centre beam parallel to the inspection side)



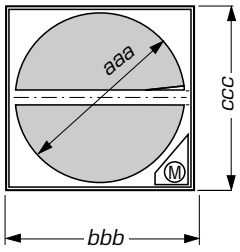
Delivery version **(f)**
1 = One-piece casing (aaa = 060–249)
2 = Split casing (aaa = 150–500)
3 = Assembled, split casing (aaa = 150–290)

Casing material **(g)**
1 = Galvanised, uninsulated
2 = Stainless (AISI 304), uninsulated
4 = Stainless (AISI 316 L), uninsulated
5 = Galvanised, insulated
6 = Stainless (AISI 304), insulated
8 = Stainless (AISI 316 L), insulated

Table A

Standard casing / rotor		**Custom-made casing / rotor**		
aaa	bbb/ccc	bbb/ccc max	One-piece rotor *) bbb/ccc min	Split rotor *) bbb/ccc min
060	096	200	070	078
080	110	200	090	098
095	120	200	105	113
110	140	200	120	128
120	150	300	130	138
135	160	300	145	160
150	170	300	160	168
170	190	300	180	188
190	210	400	200	208
200	220	400	210	218
215	240	400	225	233
240	264	400	250	258
265	290	450	-	290
290	310	450	-	310
320	340	450	-	340
350	370	450	-	370
380	400	450	-	400
420	450	450	-	450
460	490	540	-	490
500	540	540	-	

*) Min permissible dimensions on the side bbb/ccc.
Σ bbb+ccc according to Motor Requirements Table.



Motor requirements on Custom made casings

Underlined = standard sizes

		Δ **bbb+ccc**
aaa	Constant	Variable
060	191	185
065	196	191
070	202	196
075	207	202
080	213	208
085	219	214
090	225	220
095	232	226
100	238	233
105	245	240
110	252	247
115	259	254
120	266	261
125	273	–
130	280	–

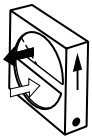
Product Code

Casing **PUMO-aaa-bbb-ccc-d-1-ff-g-hh-ii**

Inspection/motor side **(hh)**
Viewed in the direction of the supply air

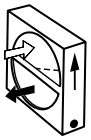
Design variant **(ii)**
00 = ECONOVENT standard
02 = Standard for (aaa = 250 - 300)
20-99 = Custom-made variants

10= Right hand, supply air below, Inspection in gable (d=1-4)
11= Right hand, supply air below, Inspection in right hand front panel (d=1-4)
12= Right hand, supply air below, Inspection in left hand front panel (d=1-4)
13= Right hand, supply air below, Inspection in front panel, both sides (d=1-4)

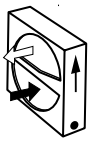


20= Left hand, supply air below, Inspection in gable (d=1-4)
21= Left hand, supply air below, Inspection in right hand front panel (d=1-4)
22= Left hand, supply air below, Inspection in left hand front panel (d=1-4)
23= Left hand, supply air below, Inspection in front panel, both sides (d=1-4)

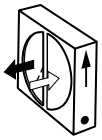
30= Right hand, supply air above, Inspection in gable (d=1-4)
31= Right hand, supply air above, Inspection in right hand front panel (d=1-4)
32= Right hand, supply air above, Inspection in left hand front panel (d=1-4)
33= Right hand, supply air above, Inspection in front panel, both sides (d=1-4)



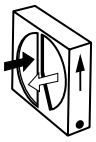
40= Left hand, supply air above, Inspection in gable (d=1-4)
41= Left hand, supply air above, Inspection in right hand front panel (d=1-4)
42= Left hand, supply air above, Inspection in left hand front panel (d=1-4)
43= Left hand, supply air above, Inspection in front panel, both sides (d=1-4)



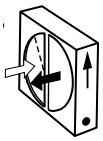
50= Right hand, side-by-side, supply air at inspection side, Inspection in gable (d=5-8)
51= Right hand, side-by-side, supply air at inspection side, Inspection in right hand front panel (d=5-8)
52= Right hand, side-by-side, supply air at inspection side, Inspection in left hand front panel (d=5-8)
53= Right hand, side-by-side, supply air at inspection side, Inspection in front panel, both sides (d=5-8)



60= Left hand, side-by-side, supply air at inspection side, Inspection in gable (d=5-8)
61= Left hand, side-by-side, supply air at inspection side, Inspection in right hand front panel (d=5-8)
62= Left hand, side-by-side, supply air at inspection side, Inspection in left hand front panel (d=5-8)
63= Left hand, side-by-side, supply air at inspection side, Inspection in front panel, both sides (d=5-8)



70= Right hand, side-by-side, supply air at rear side, Inspection in gable (d=5-8)
71= Right hand, side-by-side, supply air at rear side, Inspection in right hand front panel (d=5-8)
72= Right hand, side-by-side, supply air at rear side, Inspection in left hand front panel (d=5-8)
73= Right hand, side-by-side, supply air at rear side, Inspection in front panel, both sides (d=5-8)



80= Left hand, side-by-side, supply air at rear side, Inspection in gable (d=5-8)
81= Left hand, side-by-side, supply air at rear side, Inspection in right hand front panel (d=5-8)
82= Left hand, side-by-side, supply air at rear side, Inspection in left hand front panel (d=5-8)
83= Left hand, side-by-side, supply air at rear side, Inspection in front panel, both sides (d=5-8)

• = Motor

Product Code

Rotor mounted in casing PUMO PUMR-aaa-b-c-d-e-ff

Rotor size, in cm **(aaa)**
060 - (in steps of 1 cm) - 249
250 - (in steps of 5 cm) - 420
460/500

Rotor design **(b)**
1=Non-hygroscopic rotor
3=Edge-reinforced, Non-hygroscopic rotor
5=Epoxy coated, Non-hygroscopic rotor
6=Composite rotor (aaa=060-420) (c=1, d=4,6,8)
7=Semco (sorption)
8=Semco (sorption), Edge-reinforced

Output variant **(c)**
1=Output variant 5 (1,7 mm)
2=Output variant 1 (2,65 mm)
5=Output variant 9 (1,4 mm)
6=Output variant 3 (2,0 mm)
8=Output variant 7 (1,55 mm)

Sectorised **(d)**
1=Wound, not sectorised (aaa=060-249)
2=2-sectors (aaa=060-090)
4=4-sectors (aaa=091-249)
6=6-sectors (aaa=150-305)
8=8-sectors (aaa=310-500)

Casing material **(e)**
1=Galvanised, uninsulated
2=Stainless (AISI 304), uninsulated
4=Stainless (AISI 316 L), uninsulated
5=Galvanised, insulated
6=Stainless (AISI 304), insulated
8=Stainless (AISI 316 L), insulated

Design variant **(ff)**
00 = ECONOVENT standard
02 = Standard for (aaa = 250 - 300)
20-99 = Custom-made variants

Drive unit for PUMO PUMV-aaa-bbb-ccc-dd-e-f-g-hh

Rotor size, in cm **(aaa)**
060 - (in steps of 1 cm) - 249
250 - (in steps of 5 cm) - 420
460/500

Width of casing, cm **(bbb)**

Height of casing, cm **(ccc)**

Type of drive unit fitted **(dd)**
00= Without motor. Calculated for heat recovery
01= Constant speed, heat recovery
3x220-240/380-420V, 50Hz
20= Without motor. Calculated for cooling recovery
21= Constant speed, cooling recovery
3x220-240/380-420V, 50Hz
41= Variable speed, standard, incl. rot. monitor
1x220-240V, 50/60Hz
42= Variable speed, with display,
1x220-240V, 50/60Hz incl. rot. monitor
61= Constant speed, heat recovery
3x220-240/380-420V, 60Hz
81= Constant speed, cooling recovery
3x220-240/380-420V, 60Hz
85= Constant speed, cooling recovery
3x440V, 60Hz

Installation alternative **(e)**
1=Horizontal airflow
2=Vertical airflow

Casing material **(f)**
1 = Galvanised, uninsulated
2 = Stainless (AISI 304), uninsulated
4 = Stainless (AISI 316 L), uninsulated
5 = Galvanised, insulated
6 = Stainless (AISI 304), insulated
8 = Stainless (AISI 316 L), insulated

Delivery version **(g)**
1=Mounted
2=Unmounted, delivered separately

Design variant **(hh)**
00 = ECONOVENT standard
02 = Standard for (aaa = 250 - 300)
20-99 = Custom-made variants

Product Code

Rotor, separately delivered **PUML-aaa-b-c-d-e-f-g-h-i-jj**

Rotor size, cm **(aaa)**
030 - (in steps of 1 cm) - 250,
Fully wound rotor
060 - (in steps of 1 cm) - 249,
Sectorised rotor
250 - (in steps of 5 cm) - 420,
Sectorised rotor
460 /500, Sectorised rotor

Rotor design **(b)**
1=Non-hygroscopic rotor
3=Edge-reinforced, Non-hygroscopic rotor
5=Epoxy coated, Non-hygroscopic rotor
6=Composite rotor (aaa=060-420, c=1, d=4, 6,8)
7=Semco (sorption)
8=Semco (sorption), Edge-reinforced

Output variant **(c)**
1=Output variant 5 (1,7 mm)
2=Output variant 1 (2,65 mm)
5=Output variant 9 (1,4 mm)
6=Output variant 3 (2,0 mm)
8=Output variant 7 (1,55 mm)

Type of running **(d)**
1=Heat recovery
2=Cooling recovery

Sectorised **(e)**
1=Wound, not sectorised (aaa=030-250)
2=2-sectors (aaa=060-090)
4=4-sectors (aaa=091-249)
5=4-sectors + 1 radial (aaa=110-249)
6=6-sectors (aaa=150-305)
7=6-sectors + 1 radial (aaa=150-305)
8=8-sectors (aaa=310-500)
9=8-sectors + 1 radial (aaa=310-500)

Periphery design **(f)**
1=Standard
2=Flat (sectorised rotor)
3=Chain drive

Hub design **(g)**
1=Standard with bearings,
Width 200 (aaa=030-249),
Width 270 (aaa=250-500)
3=200 mm wide hub with bearings
(aaa=250-305;e=2-7)
5=200 mm wide hub with bushings
(aaa=030-305;e=1-7)
7=270 mm wide hub with bushings
(aaa=250-500; e=2-7)

Casing material **(h)**
1=Galvanised
2=Stainless (AISI 304)
4=Stainless (AISI 316L)

Delivery version **(i)**
1=Assembled rotor unit (aaa=040-300)
2=Split rotor unit (aaa=060-500; d=2-9)

Design variant **(jj)**
00=ECONOVENT standard
20-99=Custom-made variants

Assembly – split rotor

To assemble a heat exchanger in the split version

Tools and materials necessary.

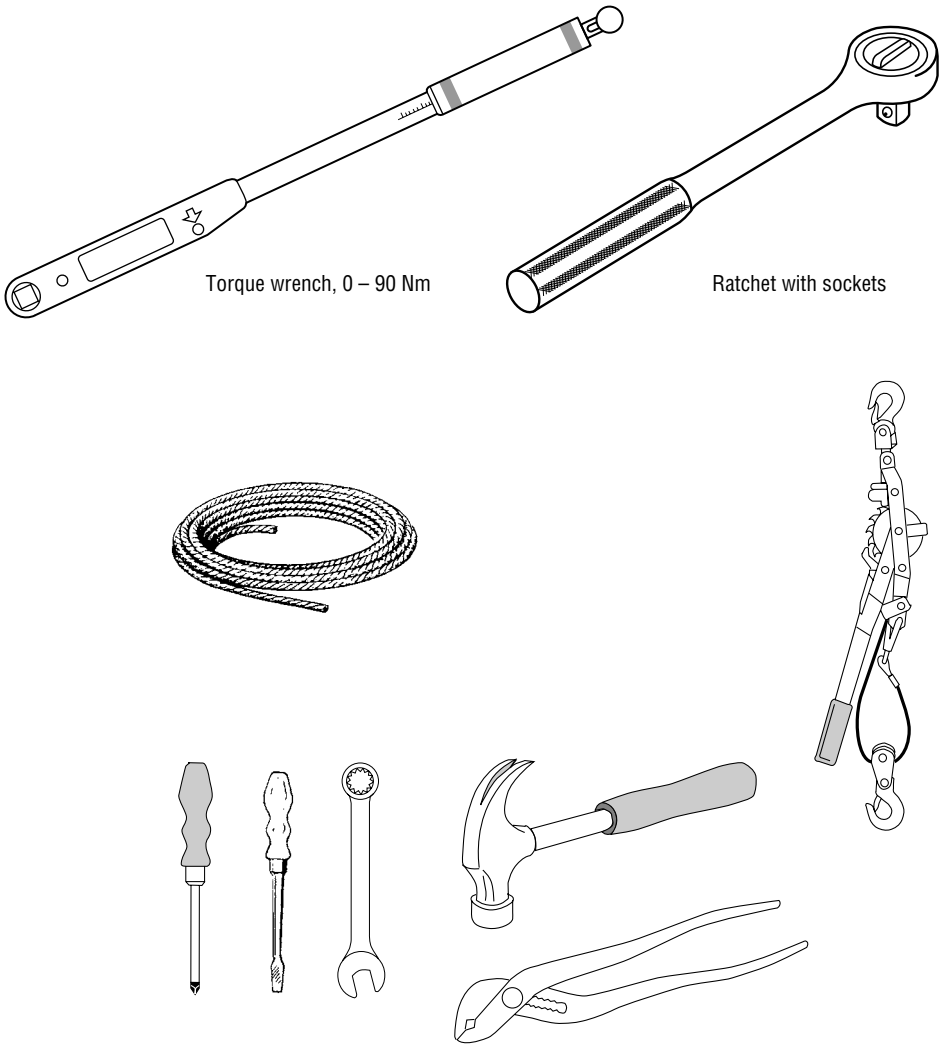


Fig. 4:1

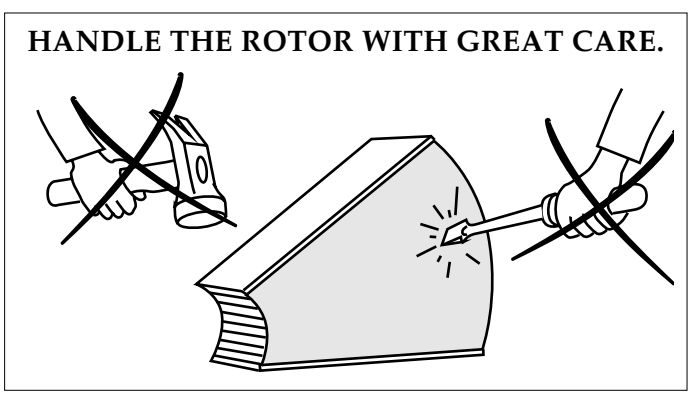
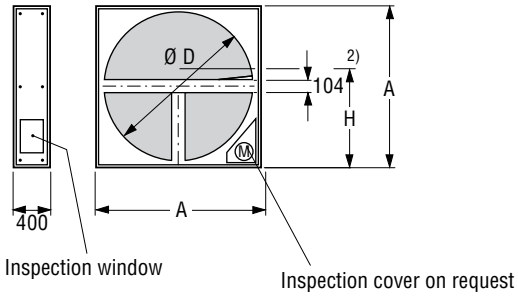


Fig. 4:2

Dimensions and weights

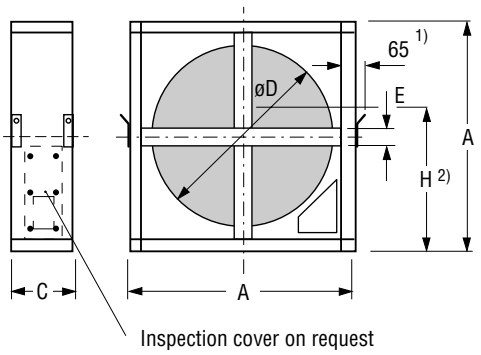
Sizes 150–300



2) Height H is to the joint face on split heat exchangers.

Size	A	D	H	Weight, kg Output variant 5	Output variant 1
150	1700	1500	990	265	245
170	1900	1700	1090	305	275
190	2100	1900	1190	360	335
200	2200	2000	1240	415	355
215	2400	2150	1340	430	395
240	2640	2400	1460	530	480
265	2900	2650	1800	660	560
290	3100	2900	1900	820	720

Sizes 301–500



1) Removable lifting lugs on size 265 up to and including size 500 units.
2) Height H is to the joint face on split heat exchangers.

Size	A	C	D	E	H	Weight, kg Output variant 5	Output variant 1	Composite rotor
320	3400	430	3200	120	2050	1200	1050	1350
350	3660	430	3460	120	2180	1300	1120	1450
380	4000	430	3800	120	2350	1500	1350	1700
420	4500	430	4200	120	2600	1800	1600	2000
460	4900	470	4600	185	2800	2900	2700	3500
500	5400	470	5000	185	3050	3500	3200	3800

Delivery – lifting the components – sizes 150–300

Delivery

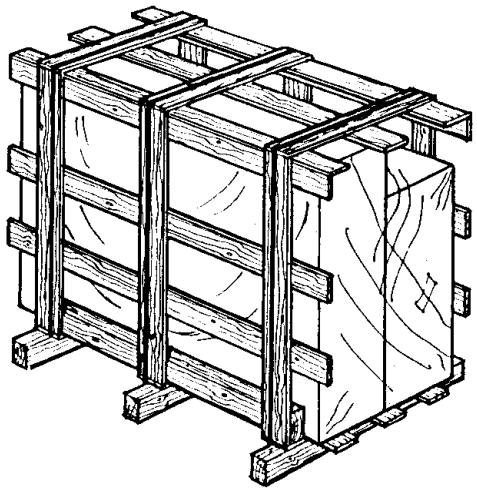


Fig. 6:1

The heat exchanger is delivered in a wooden crate.
Plastic bag with necessary bolts, nuts and washers.

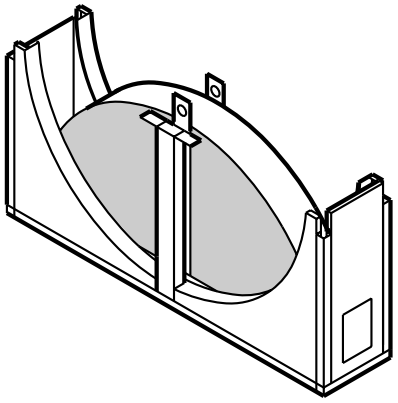


Fig. 6:2

Top half with the rotor half in sections, provided with transport protection and lifting devices.

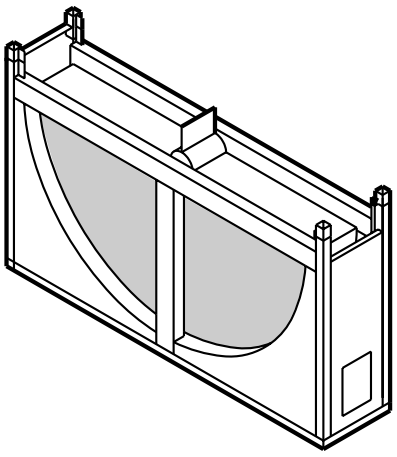


Fig. 6:3

Bottom half with the rotor half and drive motor installed.

Lifting the components

Lift the components as shown in Fig. 6:4, 6:5, 6:6 and 6:7.
Use lifting lugs when lifting the bottom half (Fig. 6:4).

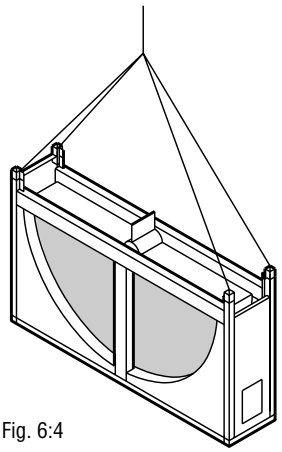


Fig. 6:4

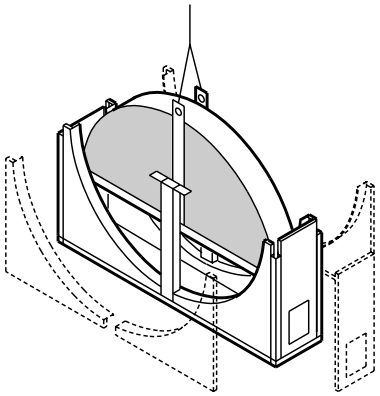


Fig. 6:5

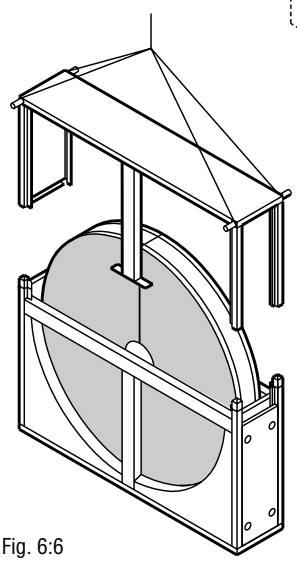


Fig. 6:6

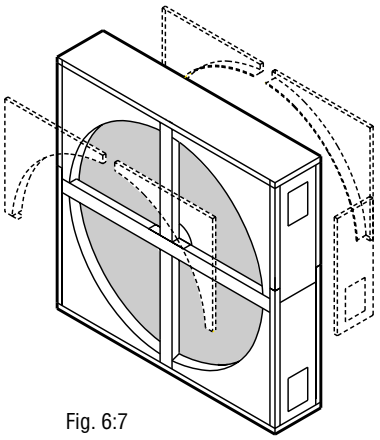


Fig. 6:7

Delivery – lifting the components – sizes 301–420 (500)

Delivery

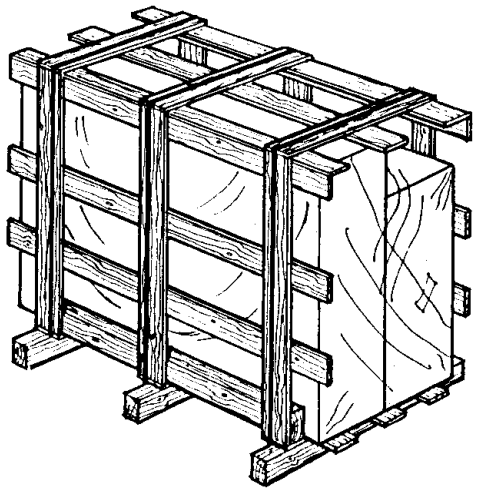


Fig. 7:1

The heat exchanger is delivered in a wooden crate.
Plastic bag with necessary bolts, nuts and washers.

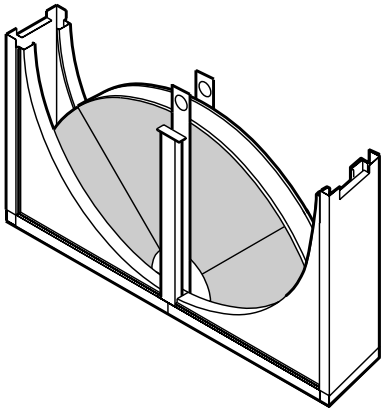


Fig. 7:2

Top half with the rotor half in sections, provided with transport protection and lifting devices.

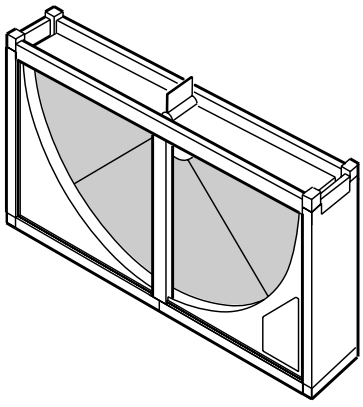


Fig. 7:3

Bottom half with the rotor half and drive motor installed.

Lifting the components

Lift the components as shown in Fig. 7:4, 7:5, 7:6 and 7:7.
Use lifting lugs when lifting the bottom half (Fig. 7:4).

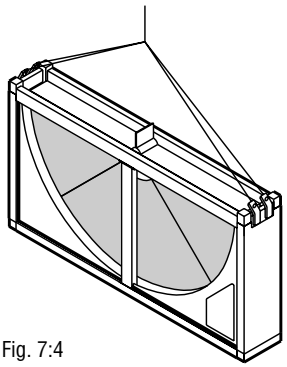


Fig. 7:4

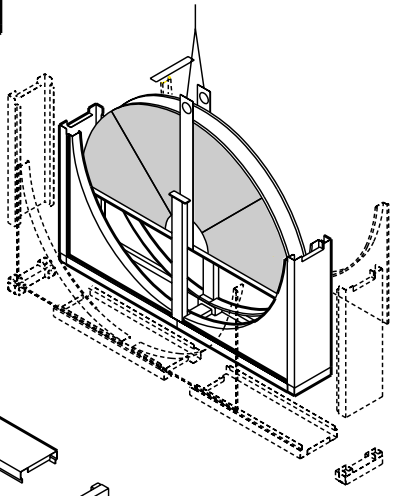


Fig. 7:5

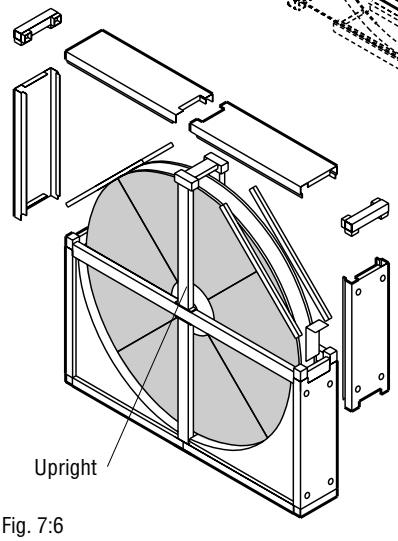


Fig. 7:6

In the event of bad lifting conditions and insufficient space, it will be advisable to fit the uprights before assembling the rotor segments.

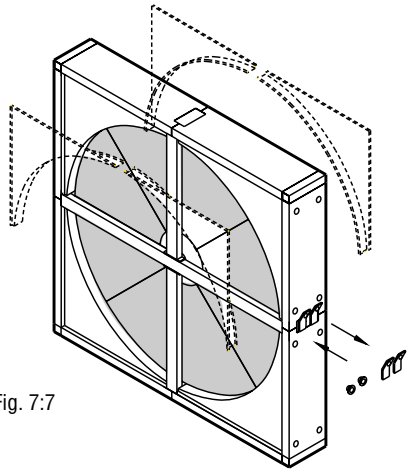


Fig. 7:7

Assembly – sizes 150–420 (500)

Regardless of whether or not the heat exchanger is assembled in its final location, the surface supporting it must be flat. Fit spacers under the heat exchanger to compensate for any surface irregularities.
The heat exchanger must be accessible from both sides for final inspection of the rotor and adjustment of the seals.
To prevent the heat exchanger from falling over when it is being assembled in an upright position, secure the bottom half in position before starting the work.
Secure it in one of the stays as shown in Fig. 8:1 or Fig. 8:2.
Assemble the heat exchanger vertically. If this is impossible, the heat exchanger can also be assembled horizontally in accordance with these instructions.

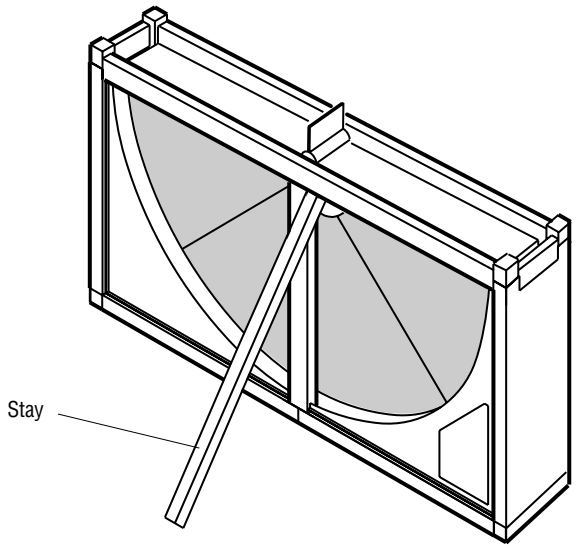


Fig. 8:1. Stay secured by means of one of the bolts in the vertical beam.

N.B. Fit one stay on each side of the heat exchanger.

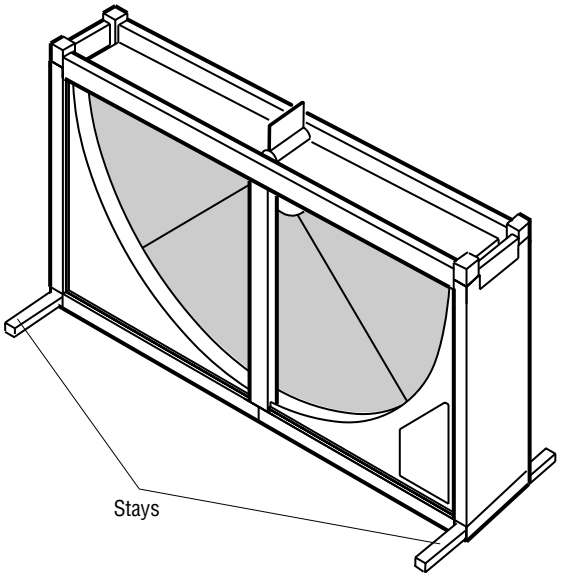


Fig. 8:2. Stays secured by bolts in the existing corner pieces and to the floor or wall.

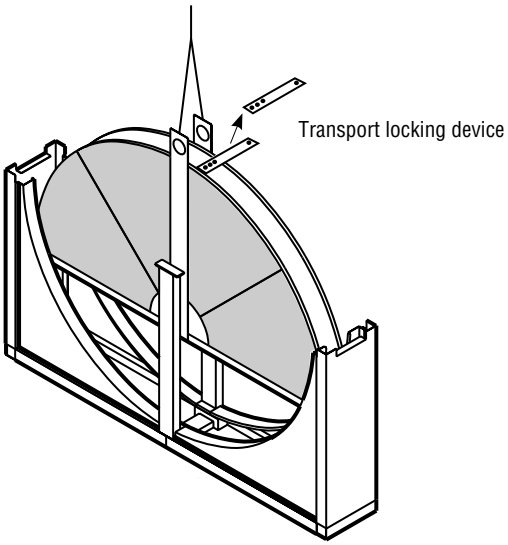


Fig. 8:3. Remove the protective panels and transport locking devices of the rotor. Lift out the rotor half.

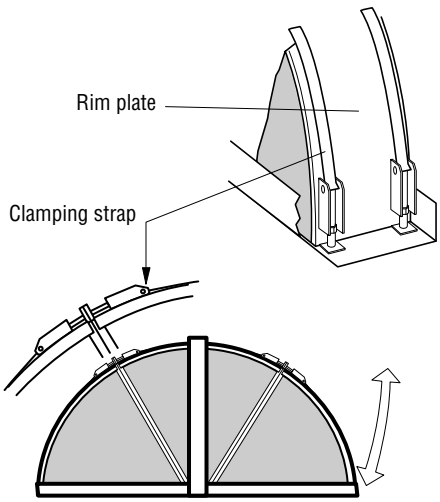


Fig. 8:4. Remove the rim plates and clamping straps. Keep the bolts in a safe place.

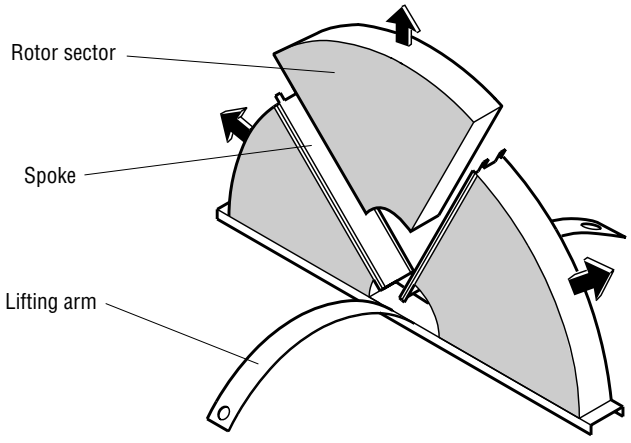


Fig. 8:5. Bend down the lifting arms and lift out the rotor sectors and spokes.

Assembly – sizes 150–420 (500)

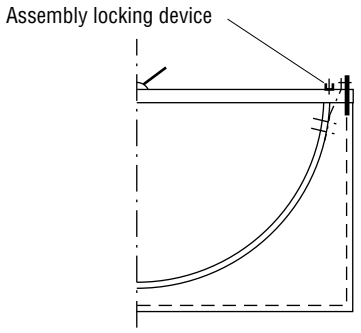


Fig. 9:1. Bottom half

Caution! Leave the front assembly locking device in position while the rotor sectors are being assembled.

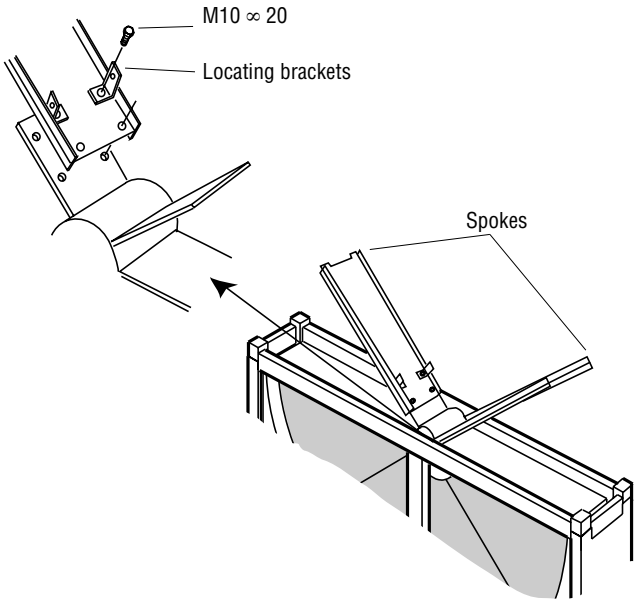
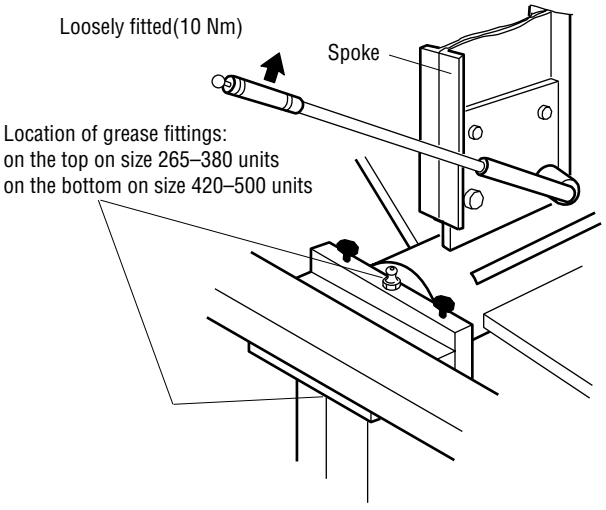


Fig. 9:2. Fit the spokes to the hub and fit the locating brackets for the cover plates, using the bolts supplied.



9:3. Tighten the spoke bolts to a torque of about 10 Nm so that the spoke will still be able to slide in the bolt connection.

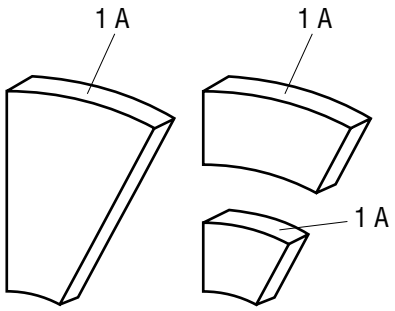


Fig. 9:4

The rotor sectors are numbered as shown in figure 9:4. Note that sectors consisting of more than one segment must always be assembled so that appropriate segments are fitted together. Letters after the numerals are used for identifying the sectors of split rotors.

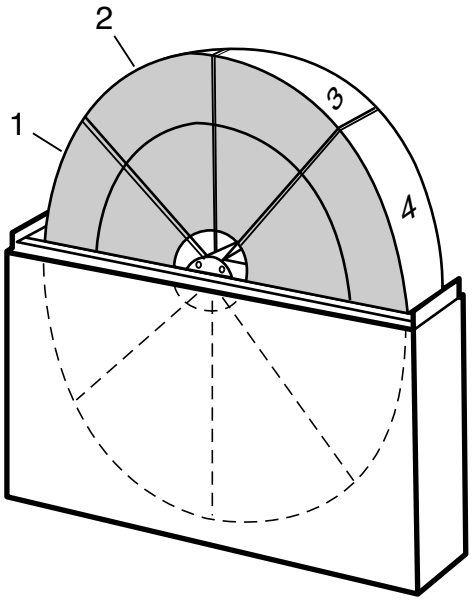


Fig. 9:5

Example. Assembled rotor. Sector elements arranged in the correct numerical order and with the numerals facing in the same direction.

Assembly – sizes 150–420 (500)

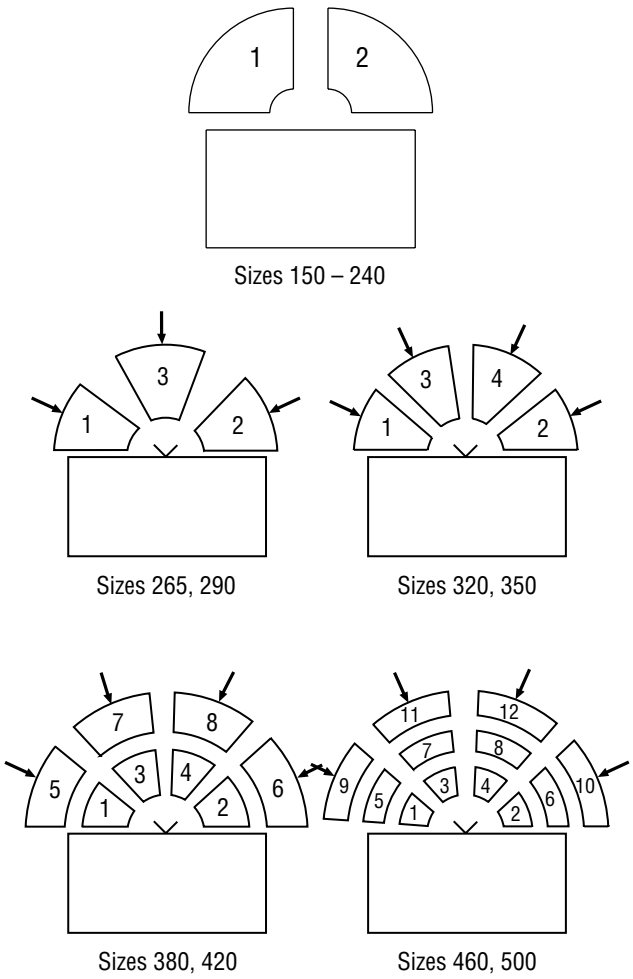


Fig. 10:1. Assembly sequence. The heat exchanger should be freely accessible from all sides.

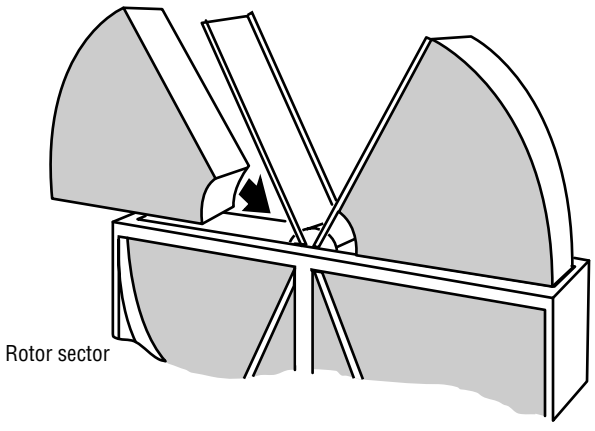


Fig. 10:2. Fit rotor sectors into place.

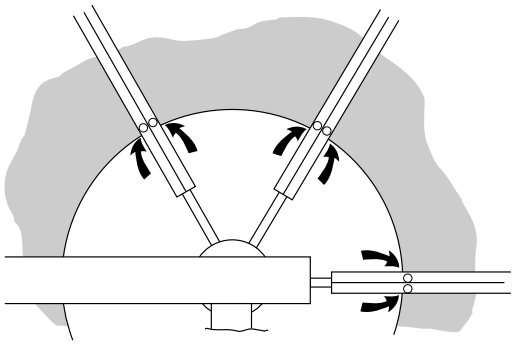


Fig. 10:3. Sizes 150 – 420.

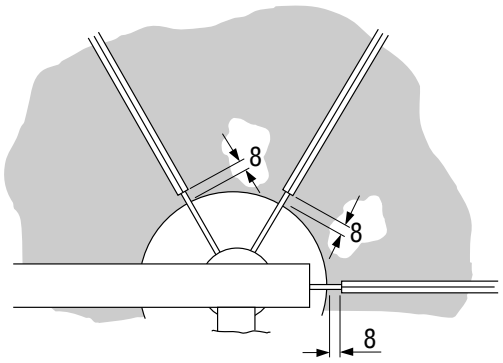


Fig. 10:4. Sizes 460 – 500.

During assembly, the internal peripheral surfaces of the rotor sectors should be located at the centres of the marking holes in the spokes on sizes 150 – 420 (see Fig. 10:3) or 8 mm outside the edge of the spoke flanges on sizes 460 – 500 (see Fig. 10:4).

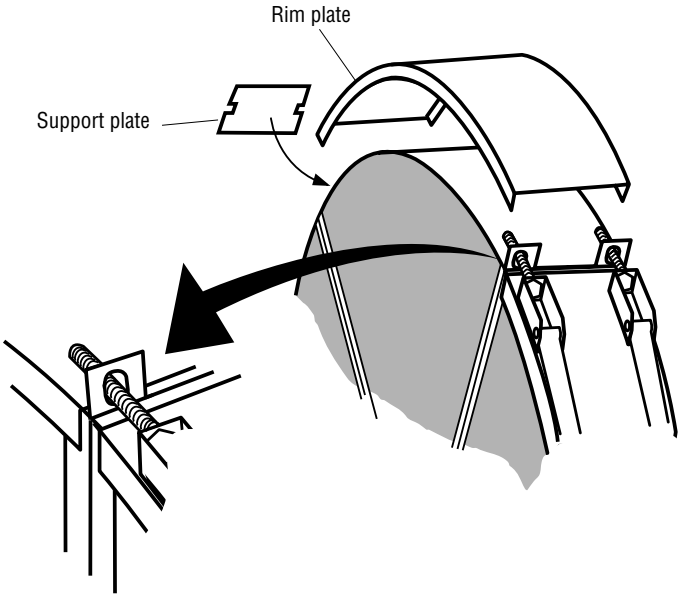


Fig. 10:5. Fit rim plates and support plates. Ensure that the rim plates fit over the edges of the rotor sectors and that they rest on the flange edges of the spokes.

Assembly – sizes 150–420 (500)

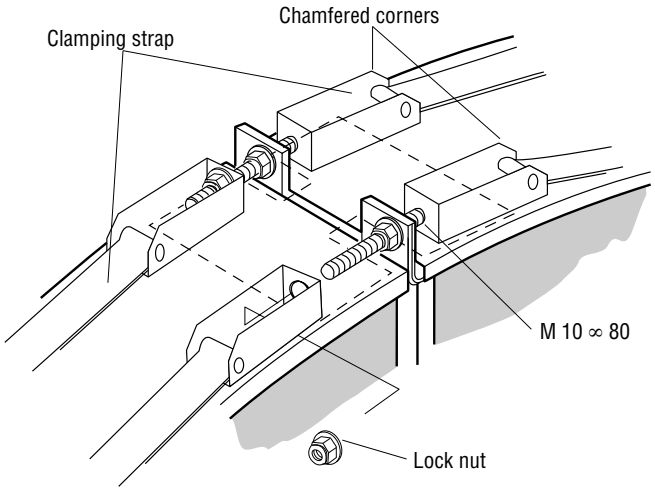


Fig. 11:1. Fit the clamping straps. The chamfered corner must face outwards. Use the M10 x 80 mm long bolts, washers and locknuts supplied.

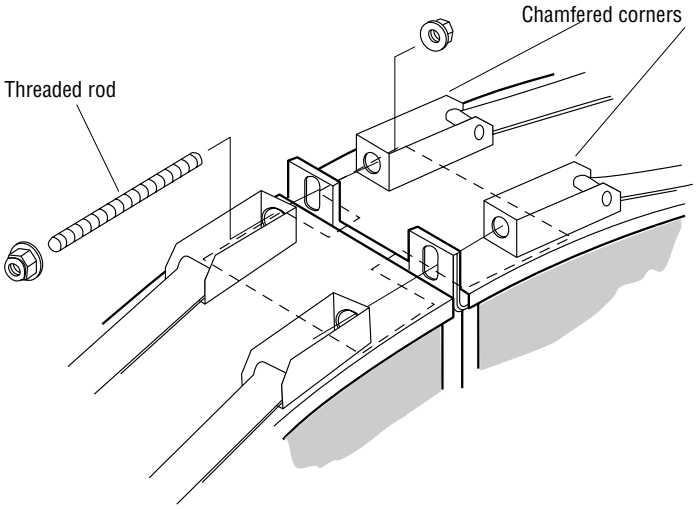


Fig. 11:2. If the distance between the strap ends for the last two bolts is too large, use the threaded rod. First tighten one of the clamping straps until the M10 x 80 mm long bolt can be fitted into the other clamping strap.
Remove the threaded rod and fit the remaining bolt.

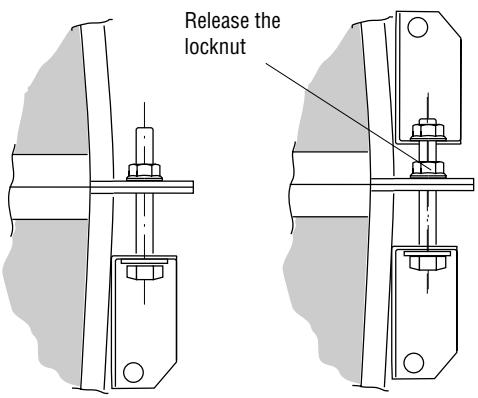


Fig. 11:3. Before the clamping straps can be tightened, the locknut holding the lower half of the rotor must be released.

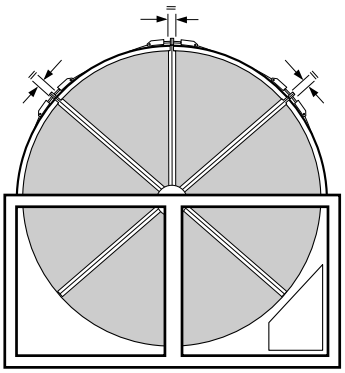


Fig. 11:4. Tighten the bolts of the clamping straps lightly, and make sure that the distances are the same at each spoke.
Remove the rotor assembly locking devices (see Fig. 9:1).

Special instructions for horizontal installation

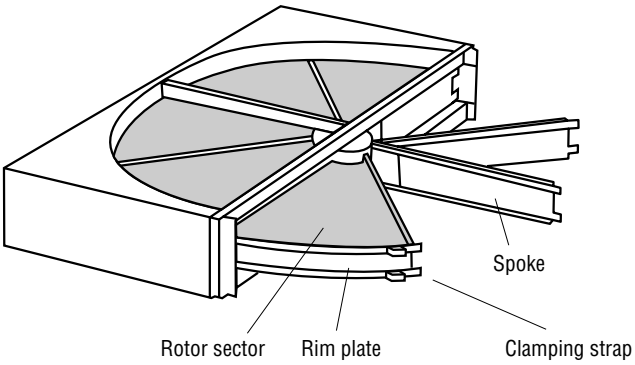


Fig. 11:5. On horizontal installation, the sequence of assembly shown in Fig. 10:1 is not applicable. Fit each rotor sector complete with the sector components and clamping straps before fitting the next sector. Remove the rotor assembly locking device (see Fig. 9:1), and fit one rotor sector next to the assembled rotor half. Fit the rim plate and clamping straps for the rotor sector. Ensure that the rim plate and spoke flange fit over the edge of the rotor sector. The chamfered corners of the clamping straps must face outwards. Tighten the clamping straps lightly using the M10 auxiliary nuts supplied. Ensure that the clamping straps are on the inside of the outer edge of the rim plate.

Assembly – sizes 150–420 (500)

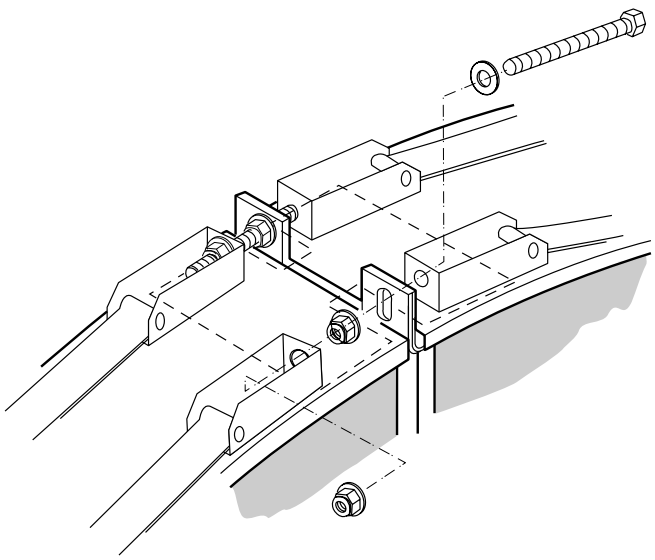


Fig. 12:1. Fit the clamping straps, using the M10 ∞ 80 mm long bolt, two washers and locknut supplied. The auxiliary nuts may be left in position after assembly. Use the same procedure to assemble the other rotor sectors in sequence.

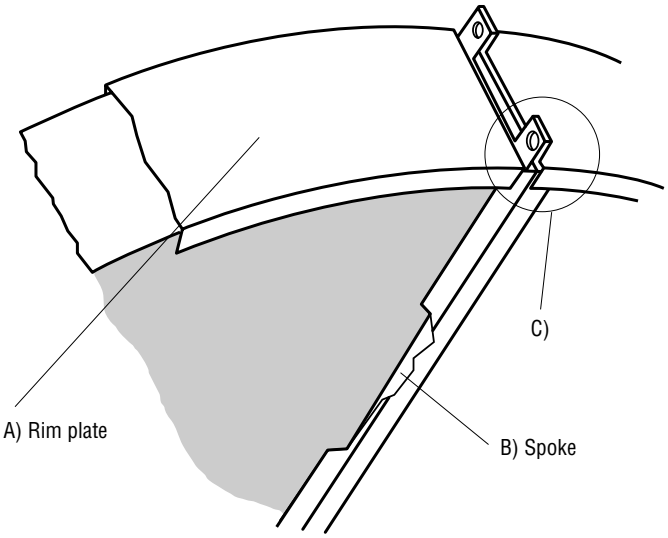


Fig. 12:2

Check continually:
A. That the rim plates fit over the edges of the rotor sectors.
B. That the rotor sectors are in the correct positions between the spoke flanges along the entire radius (see also Fig. 9:3).
C. That the rim plate flanges overlap the spoke flanges. See also Fig. 11:2 and 11:4.

To adjust the rotor sectors

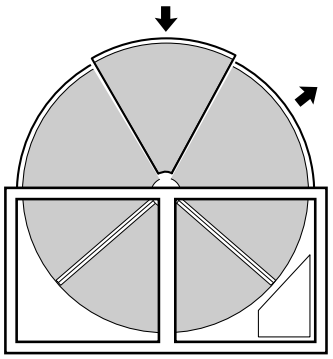


Fig. 12:3. Compensate for any deviations by releasing the clamping straps of the relevant rotor sector and moving the sectors out or in.
For particulars of the rotor sector positions, see Fig. 10:3 and 10:4.

10 Nm ∅ 20 Nm ∅ 25 Nm for sizes 150–265
10 Nm ∅ 20 Nm ∅ 35 Nm for sizes 290–500

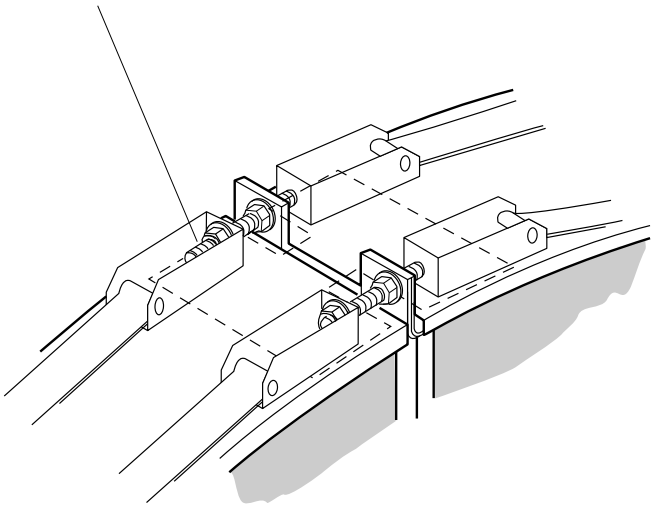


Fig. 12:4. Tighten the bolts of the clamping straps in steps. Make sure that the distances between the clamping strap ends are about the same at every spoke. First tighten all bolts to a torque of 10 Nm, then to 20 Nm and finally to 25 or 35 Nm.
After the clamping strap bolts have been tightened to 25 or 35 Nm, check again the positions of the spokes and the circularity of the rotor.

Cover plate

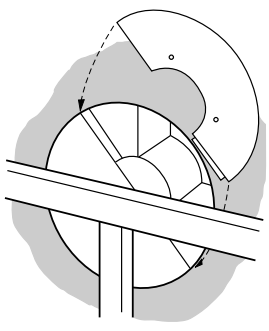


Fig. 12:5. Fit the cover plate over the rotor centre. Use the M5 ∞ 12 mm long countersunk head screws supplied.

Assembly – sizes 150–420 (500)

To assemble the rotor from one side

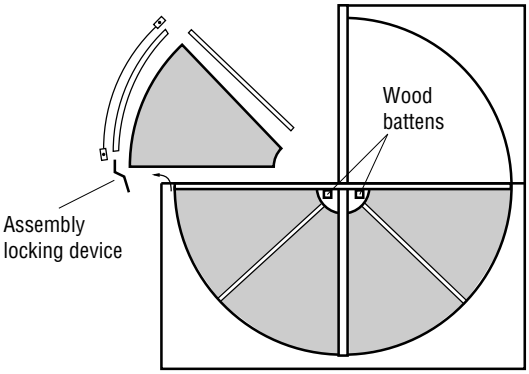


Fig. 13:1. Use wood battens to secure the rotor. Remove assembly locking device at the periphery. Fit the first sector consisting of one or more segments.
Fit the spoke, rim plate and clamping strap. Tighten the spoke and clamping strap bolts lightly. Lower the rotor by moving the wood battens.
N.B. The rotor is unbalanced – risk of injury!

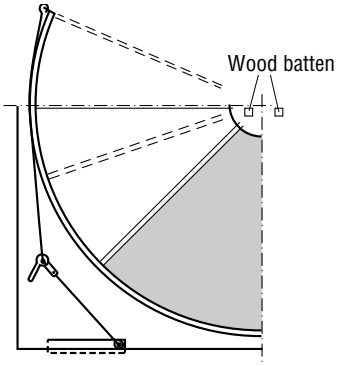


Fig. 13:2. Fit a sling as shown in the figure and pull the rotor down so that the upper spoke is horizontal. Use wood battens to lock the rotor again. Fit the next rotor sector.
Otherwise, the instructions according to Fig. 12:1 to 12:4 apply.

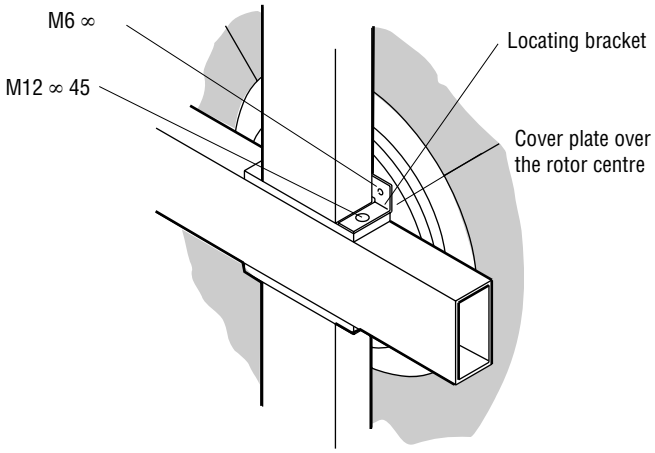


Fig. 13:3. Secure each locating bracket using the M12 ∞ 45 mm long screw in the vertical beam. Fit the top half of the cover plate over the rotor centre using 2 M6 ∞ 16 mm long screws.

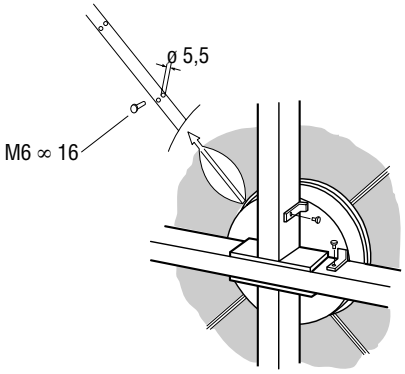


Fig. 13:4. For sizes 460 – 500, drill a 5.5 mm dia, hole through the existing holes in the spokes and into the rotor sectors. Fit M6 ∞ 16 mm long countersunk head, self-tapping screws.

Assembly – sizes 150–420 (500)

To adjust the rotor shaft

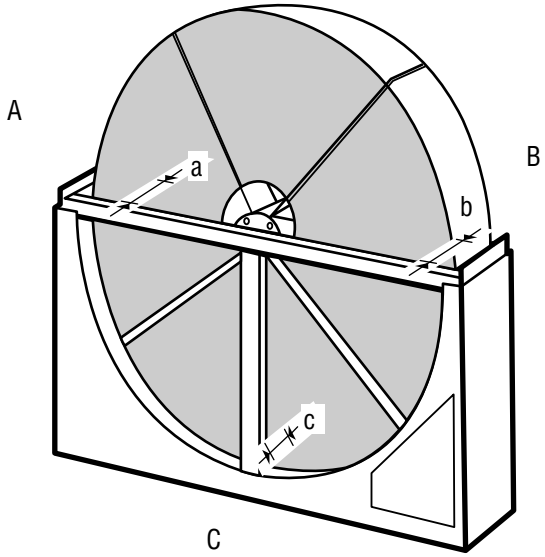


Fig. 14:1

The rotor shaft and the spokes of the bottom half of the rotor are pre-adjusted at the factory, i.e. the rotor mounting bolts and the spokes have already been tightened to the correct torque.
Inspection of the rotor shaft. Mark one spoke at A with an X. Measure dimension ”a” at the spoke marked X between the sealing plate and the flange. Measure dimension ”b” and ”c” at B and C at the same spoke. If ”a” = ”b”, the rotor shaft is perpendicular in the horizontal plane. If ”a” = ”c”, the rotor shaft is perpendicular in the vertical plane. The maximum permissible difference between dimensions ”a”, ”b” and ”c” is 2 mm.

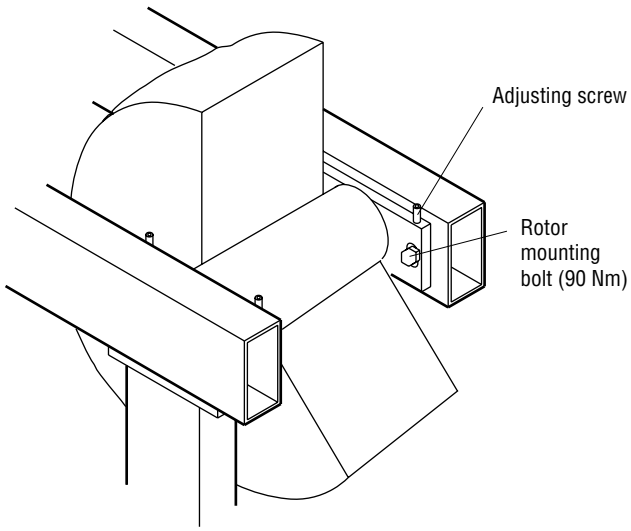


Fig. 14:2

In the horizontal plane, ”a” = ”b”.
Release bolts of the rotor mountings. Push the rotor by hand to the correct position.
In the vertical plane ”a” = ”c”.
Release bolts of the rotor mountings. The rotor shaft can easily be adjusted by means of adjusting screws.

N.B. After completing the adjustment work, tighten rotor mounting bolts to a torque of 90 Nm.

To adjust the spokes

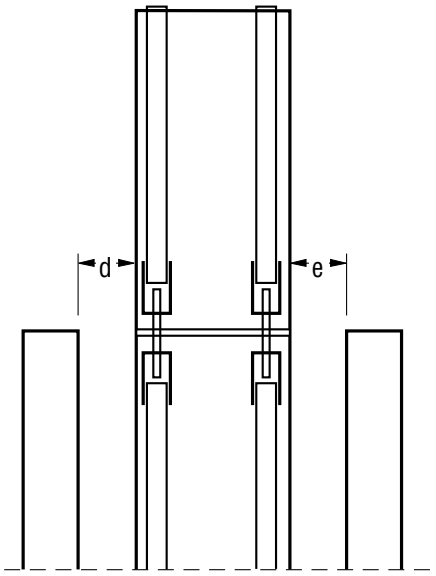


Fig. 14:3

Measure ”d” and ”e” at the periphery. Adjust the spoke so that ”d” = ”e”. A difference of up to 2 mm is acceptable.
Adjust the spoke by releasing the bolts at the hub and then retightening them when the spoke is in the correct position. The tightening torque for the spoke bolts is 50 Nm.

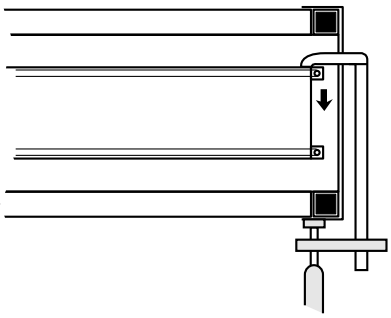


Fig. 14:4

The spoke can be moved to the correct position by means of a clamp or lever. Turn the rotor and adjust the other spokes in the same manner.

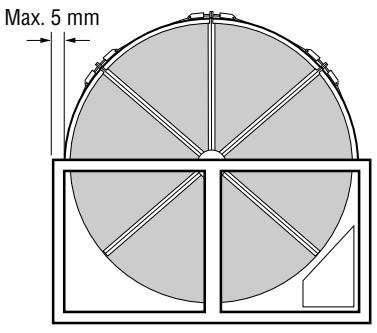


Fig. 14:5

Check the circularity of the rotor. The maximum permissible deviation is 5 mm.

Assembly – sizes 150–420 (500)

Checking the out-of-balance. Sizes 460–500. For horizontal air stream only.

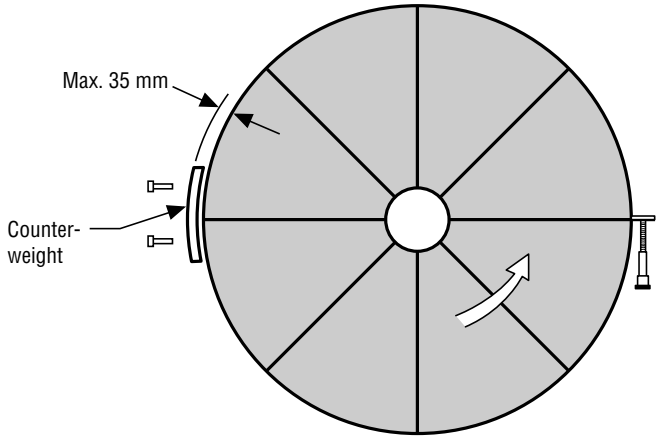


Fig. 15:1

Check and, if necessary, adjust the out-of-balance to ensure that the drive motor will not be overloaded.

Before the check, all parts of the rotor should be equally humid. If they are not, run the heat exchanger at full speed and with the ventilation system fans running for at least one hour.

1. Disconnect the drive and check that the rotor runs freely.
2. "Spin" the rotor by hand through a few revolutions. Make a mark on the rotor periphery to show where the rotor has stopped. Repeat this procedure several times.
3. If the rotor has stopped in the same position every time, this indicates that the rotor is not in balance.
4. Measure the deviation at the rotor periphery by turning the rotor through 90° and securing the tensiometer to one of the rotor spokes (see Fig. 15:1 above). Read the tensiometer and fit a counterweight (piece of bar) of the same weight as the tensiometer reading to the opposite side of the rotor periphery.
   N.B. Take care not to fit this counterweight to the drive belt track.

Brush seals

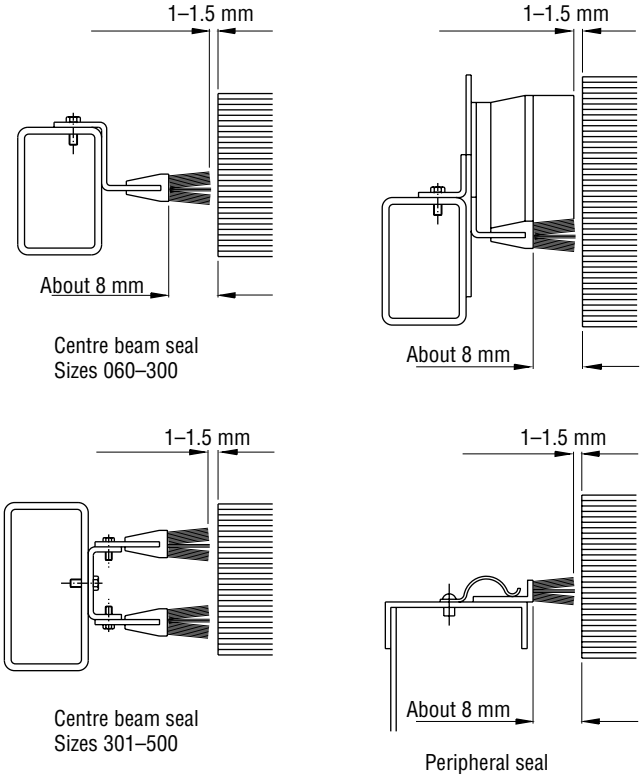


Fig. 15:2

To fit the drive belt

Fit the drive belt suppled around the rotor and the V-belt pully. Adjust the length of the belt so that a suitable belt tension will be obtained.

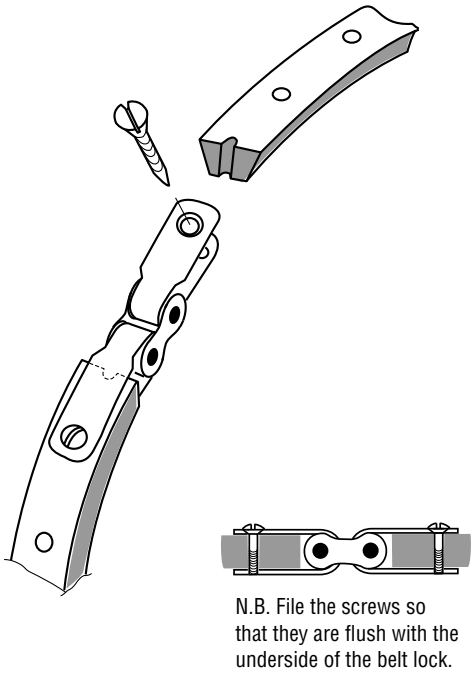


Fig. 15:3

Cut the belt as shown in the above drawing. Use a belt lock to join the belt ends.

Assembly – sizes 150–420 (500)

To assemble the casing

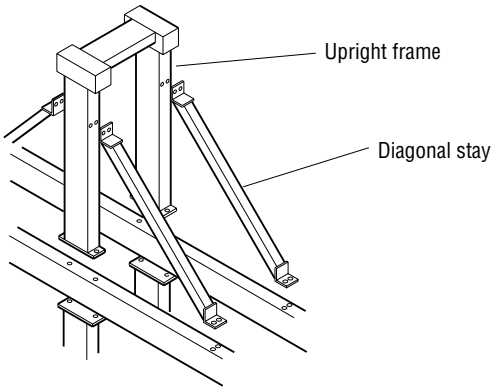


Fig. 16:1

Fit the upright frame to the bottom half of the heat exchanger.
On sizes 385 - 500, also fit the diagonal stays.

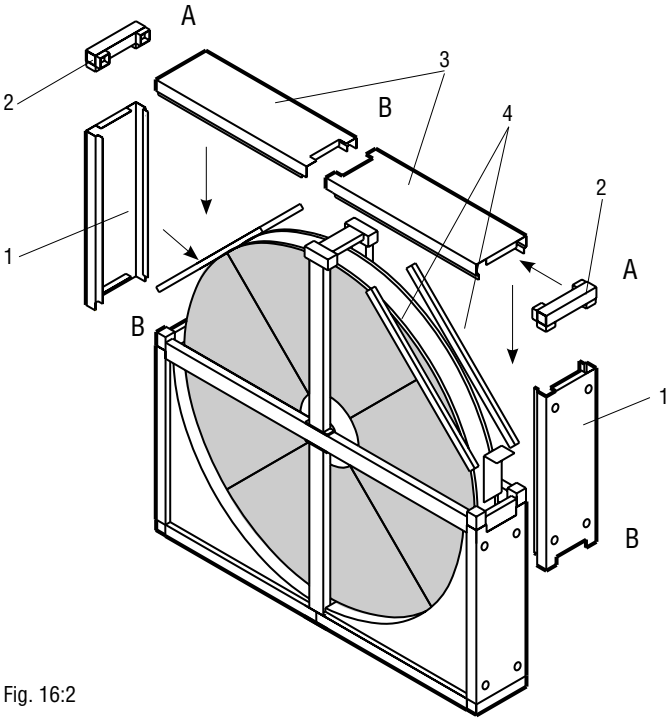


Fig. 16:2

Fit the components and panels of the casing in numerical order shown in Figs. 16:2 and 16:4 and seal the joints with sealing compound as shown in Fig. 16:3, views A and B.

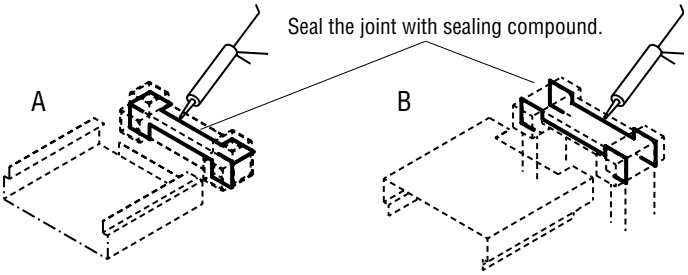


Fig. 16:3. Detailed view: application of sealing compound.

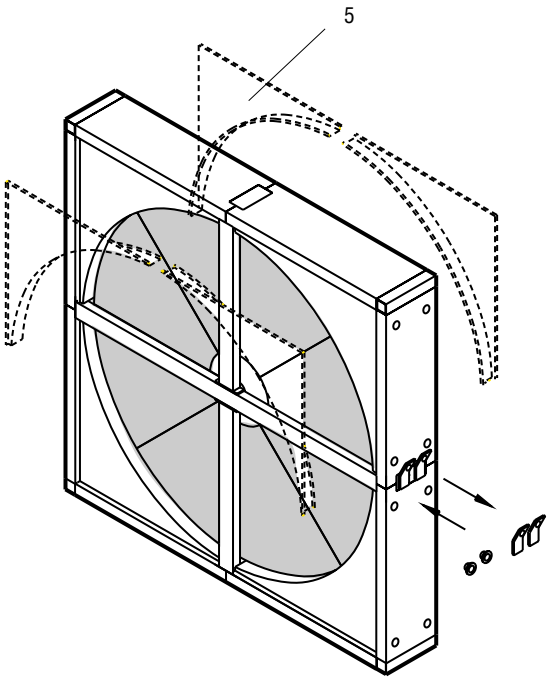


Fig. 16:4

Notes

We Bring Air to Life

Fläkt Woods is a global leader in air management. We specialize in the design and manufacture of a wide range of air climate and air movement solutions.

Our collective experience is unrivalled. We are constantly aiming to provide systems that precisely deliver required function and performance as well as maximum energy efficiency.

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