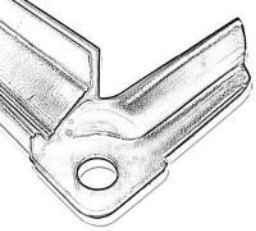

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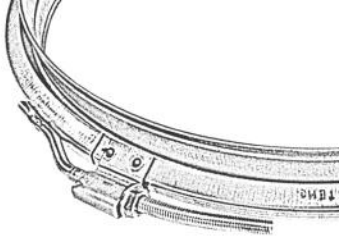
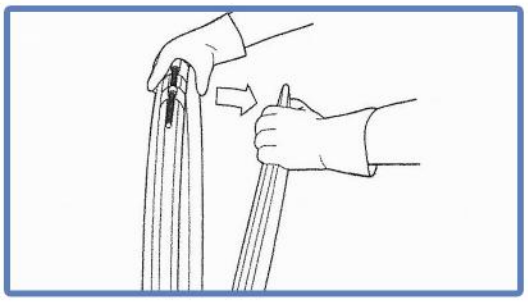
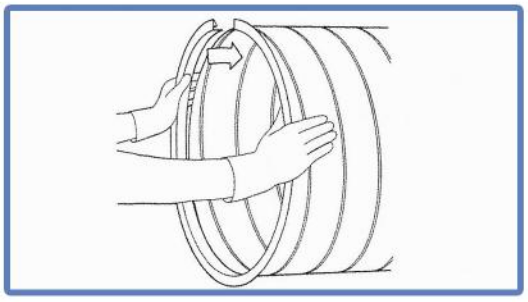


TECHNICAL DATA SHEET- 1B060XXX - SPIRO® DUCT UNION FLANGES

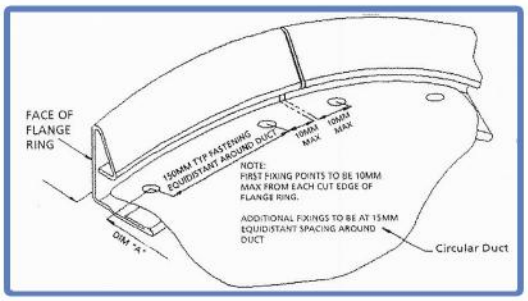
1. Essential information for the correct assembly of flange rings



Each joint comprises of 2 flange rings and 1 closure ring and are supplied together for easier transportation and to avoid pairing mistakes. To start the assembly, slacken the nut and release the flange ring starting at an end, until it's completely free. Proceed the same way for the other flange ring, having this way the joint separated for the next step.



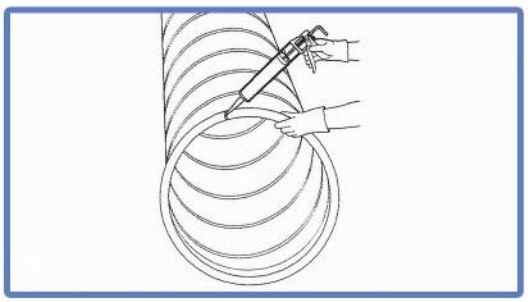
Push one flange ring onto one end of the duct, starting with one end of the break point in the flange ring and working around the duct until the flange ring is completely seated on the end of the duct. To ensure a good seal, when selecting a starting point, where possible position the break point of the flange ring a minimum of 100 mm from the cut seam of the spirally wound ductwork. The flange rings are manufactured to high tolerances and are designed to be fitted without the need for cutting. On occasions, however it may be necessary to cut back the flange ring to give the optimum fit.



Once the flange ring is in the correct position, the ring must be secured to the duct, as shown in the image. The fastening fixing point dimension "A" is variable according to the size of the flange as the table below:

Flange of 10 mm: 12 mm Min. y 15 mm Max.
Flange of 13 mm: 12 mm Min. y 15 mm Max.
Flange of 20 mm: 12 mm Min. y 15 mm Max.
Flange of 32 mm: 20 mm Min. y 25 mm Max.

At one point on the cut end of spirally wound duct the seam of the duct will pass into the pocket of the flange, care must be taken when using a fastener at this point to ensure a positive fixing, although the above dimensions may not be possible.



To complete the fitting of the flange ring, a bead of silicon sealant should be applied down the seam where the break in the flange ring occurs. This can be undertaken at the time of fitting the flange ring or to avoid being damaged in transit could be applied just prior to installation. The process is then repeated on the opposite end of the duct with the second flange ring.

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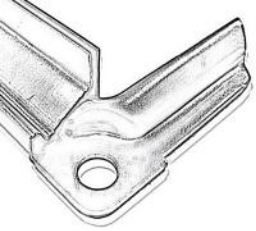

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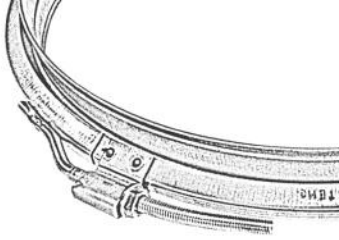
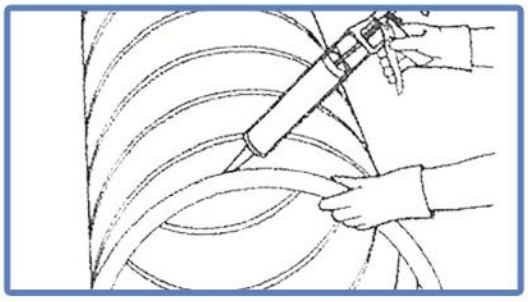


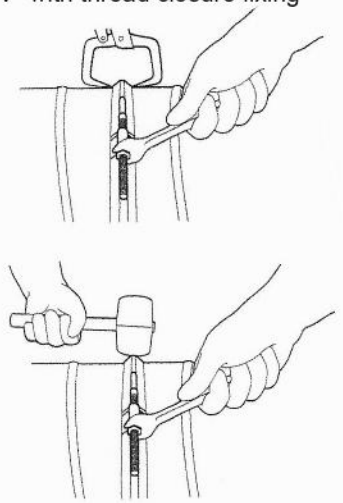


In order to obtain the airtighness levels in the previous table of this technical data sheet, a rope of silicon sealant should be applied between each flange ring and the duct all around it.

When using the “V” closure ring with thread fixing, place the closure ring over the end of the duct that is already installed. Line up that installed duct with the next one and make sure the cuts on each flange ring aren’t in line.

Clamp the two flange rings together using the appropriate vice clamps, ensuring hat the vice clamps also go over the closure ring. More than one pair of clamps may be required dependant on the duct size. Fit the “V” closure ring around the pair of flange rings, progressively tightening the nut in the closure ring to place together both flange rings facing each other.

“V” with thread closure fixing

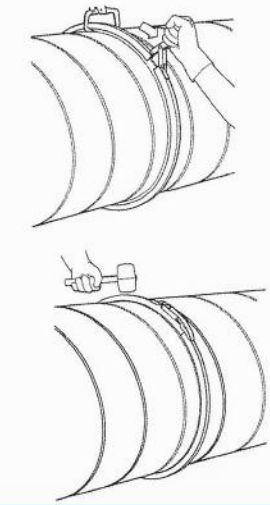


Using a rubber mallet, tap around the outer edge of the closure ring to ensure flange rings are correctly aligned and, at the same time, progressively tighten the nut. Remove vice clamps.

Tighten the nut hard without exceeding the values recommended further on and that are determinated by the thread’s size.

To ensure the stability of the closure, the nut already incorporates a grower washer that efficienly prevents it from slacken itself.

“V” with clasp closure fixing



When using the “V” with clasp closure, place the closure ring over the end of the duct that is already installed. Line up that installed duct with the next one and make sure the cuts on each flange ring aren’t in line.

Clamp the two flange rings together using the appropriate vice clamps, ensuring hat the vice clamps also go over the closure ring. More than one pair of clamps may be required dependant on the duct size. Fit the “V” closure ring around the pair of flange rings, progressively tightening the nut in the closure ring to place together both flange rings facing each other.

Using a rubber mallet, tap around the outer edge of the closure ring to ensure flange rings are correctly aligned and, at the same time, progressively tighten the nut. Remove vice clamps.

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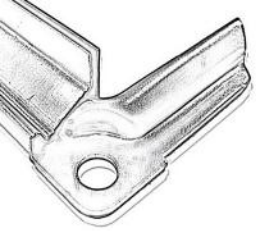

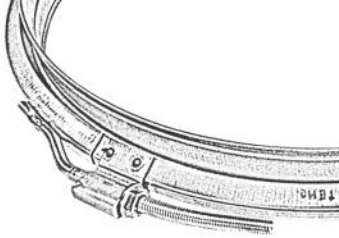

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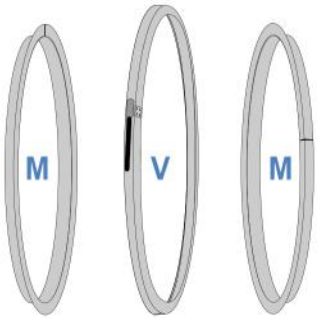
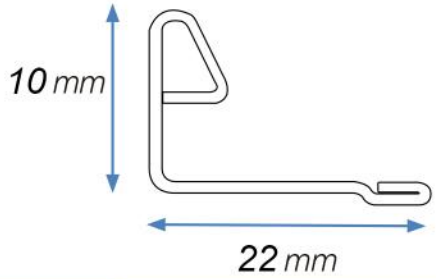
2. Characteristics

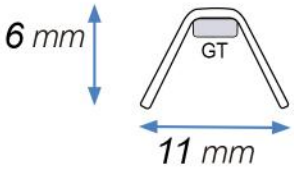
- The RAMI-SYSTEM® joints for SPIRO® duct comprises of:
  2 "M" flange rings fixed to the duct + 1 "V" closure rings (4 sizes according to diameters).
- All joints are supplied assembled to save space (reducing transport costs), guarantee the proper functioning and the correct amount.
- The "V" closure ring is supplied with sealing gasket of polyethylene M-1 incorporated (GT).
- On request, they can also be supplied with ceramic gasket M-0 for 400 ºC / 120 min.
- When assembling, we request to perfectly fit the 2 flange rings of the joint before tightening the "V" closure ring, following the detailed steps on previous point 1.



3. Measurements, weight and blueprints

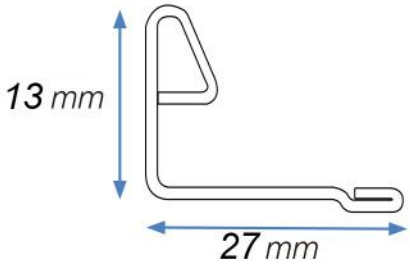
MINI	Diameter Flange (mm)	100	112	125	140	150	160	180	200	224	250	280
	Joint weight (kg)	0,273	0,297	0,322	0,352	0,372	0,391	0,431	0,470	0,517	0,569	0,628

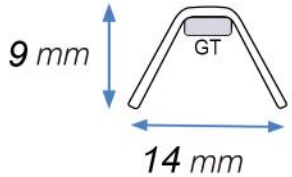




Pair of max. tightening of the closure nut M-6 galva.: 3 Nm.

SMALL	Diameter Flange (mm)	300	315	350	355	400	450
	Joint weight (kg)	0,816	0,852	0,935	0,947	1,054	1,174





Pair of max. tightening of the closure nut M-6 galva.: 3 Nm.

Information contained herein is based on careful tests and experience. It reflects our knowledge and is for guidance purpose only. It is given in good faith and user should ensure that the product is fit for purpose before any application. The quoted values are average and should not be taken as maximum or minimum values for specific purposes. Manufacturer and distributor are not responsible for any non-recommended use or consequential damage.

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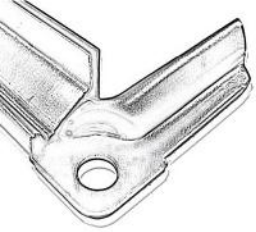

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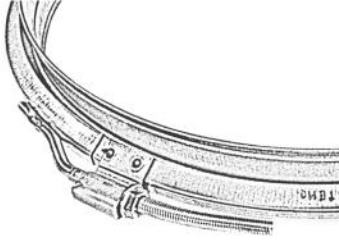
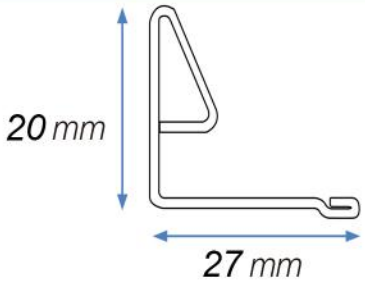
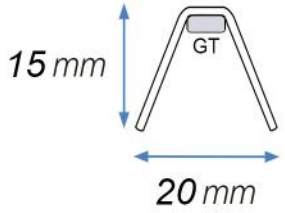


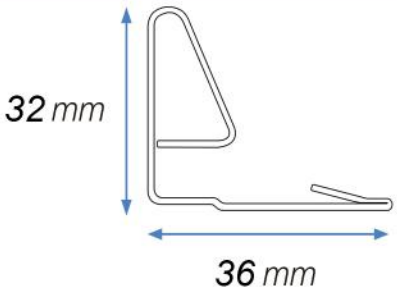
MEDIUM	Diameter Flange (mm)	500	560	600	630	650	700	710	750	800	850	900	950
	Joint weight (kg)	2,54	2,81	2,99	3,12	3,21	3,44	3,48	3,66	3,89	4,11	4,34	4,56

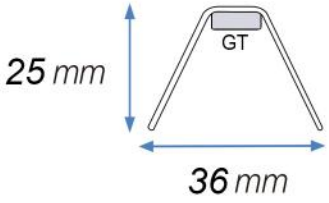




Pair of max. tightening of the closure nut M-8 galva.: 10 Nm.

LARGE	Diameter Brida (mm)	1000	1100	1120	1200	1250	1300	1400	1500	1600	1700	1800	1900	2000
	Joint weight (kg)	10,74	11,69	11,88	12,64	13,12	13,60	14,55	15,50	16,45	17,41	18,36	19,31	20,26





Pair of max. tightening of the closure nut M-10 galva.: 20 Nm.

4. Airthightness test results

- RAMI-SYSTEM®, jointly with the company DOBY VERROLEC Ltd. of Newcastle in the United Kingdom (to which we have assigned since 2005 the rights of manufacture and commercialization of our flanges for the United Kingdom and Ireland), carried out a leak test through the independent agency BSRIA (according to the requirements of UK HVAC, specification DW143-DW144):

Flange type	Diameter (mm)	Class A		Class B		Class C	
		Thread	Clasp	Thread	Clasp	Thread	Clasp
MINI	100-280	✔	✔	✔	✔	✔	✘
SMALL	300-450	✔	✔	✔	✔	✔	✘
MEDIUM	500-950	✔	*N-R	✔	*N-R	✔	*N-R
LARGE	1000-2500	✔	*N-R	✔	*N-R	✔	*N-R

*N-R: NOT RECOMMENED the use of the clasp closure for diameters over 450 mm.

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