

DOLRE,
containment level TL4



DOLRE H241
Ref. Plan n°:
DOLRE 161124o V05 Ind.J

INSTALLATION INSTRUCTIONS

(Ref. Plan DOLRE 161124o V05 Ind.J)



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1. INSTALLATION MANUAL

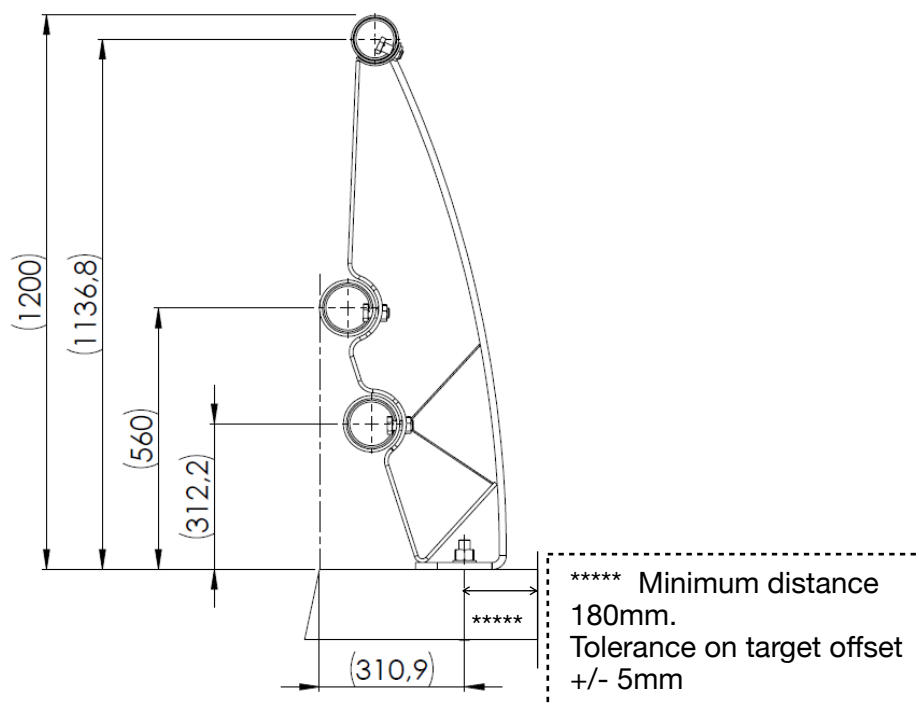
(Ref. Plan DOLRE 161124o V05 Ind.J)

The DOLRE system is a safety device, and as such, it is important that these installation instructions are followed to ensure the system is installed correctly. If a situation arises in which these instructions cannot be followed, please contact LB Australia Pty Ltd for further advice.

1.1 Setting Out

1. Installation instructions for the DOLRE H241 device refer to drawings : « Ref. Plan DOLRE 161124o V05 Ind.J ». Please review these drawings prior to installation.
2. In the case of installation on concrete beam, the device is located relative to the front of the concrete beam as shown in FIGURE 1. Setting out operations must be performed with great care and with the aid of a suitable tools that ensure the correct alignment of the device.

Figure 1:



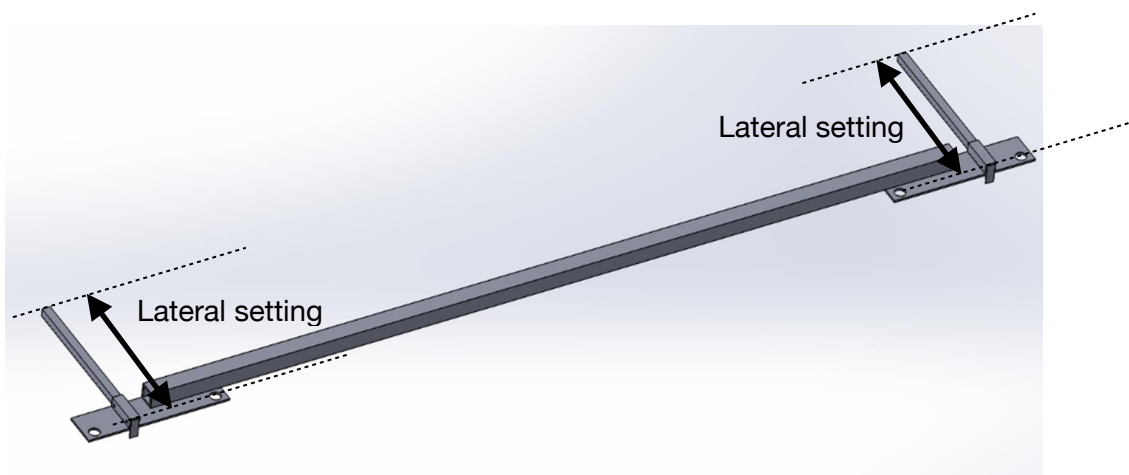
1.2 Unloading and distribution of material on the site

The truck carrying the device must be unloaded using an appropriate handling equipment and in compliance with all relevant site safety standards.

1.3 Anchor installation

1. The posts must be installed using the spacing template - FIGURE 2 -. (it guarantees a spacing between posts of 2m); the lateral setting must be adjusted to allow the correct location of the post in relation to concrete beam. (both sides must be on the same settings).
2. Drill the holes previously marked with a 28 mm diameter drill bit (Core drill preferred).
3. Refer to the specification sheet of the epoxy being used to clean and dry the anchor holes according to the drilling method used. (drilling or coring).

Figure 2:



1.4 Installation of the posts

1. After cleaning and drying the holes, place the posts (Item 5) before injecting the epoxy (HIT RE 100, 500 or 200) and then insert the threaded rod M24 x 215 Cl.8.8 (Item 10) with its washer and nut M24 (nut height=24 mm) (Items 11 & 12) -FIGURE 3 & 4-.
2. After epoxy has cured, the nuts can be tightened ; refer to the technical data sheet of the epoxy for the curing time with respect to temperature of the support. - FIGURE 4 -.

Note 1 : It is important to ensure the correct longitudinal and lateral alignment of the posts to obtain an aesthetic result in line with the line of the installation support (concrete beam).

Note 2 : If the concrete beam is not flat :

- For heights ≤ 6 mm, it is permitted to wedge the posts with washer ;
- For heights ≥ 6 mm, the height must be adjusted by sealing using a suitable product.

Figure 3 (Top view of the post):

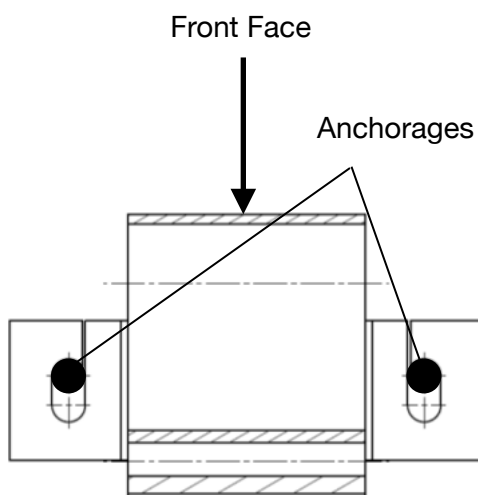
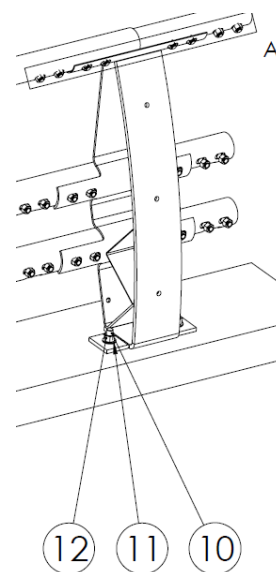


Figure 4:



1.5 Set up and fasten the tubes

1. Place the upper tube (Item 6 (*HANDRAIL*)) and tighten by hand the screws M20X45 Cl.8.8 and the hex nuts M20 Cl.8.8 (reference **Tubosider bolt 080-2377/02**) - FIGURE 5 & 6 -.
2. Place the lower tube (Item 7) using an appropriate handling equipment and tighten by hand the screws M20X45 Cl.8.8 and the hex nuts M20 Cl.8.8 (reference **Tubosider bolt 080-2377/02**) – FIGURE 5 & 6 -.
3. Place the middle tube (Item 7) using an appropriate handling equipment and tighten by hand the screws M20X45 Cl.8.8 and the hex nuts M20 Cl.8.8 (reference **Tubosider bolt 080-2377/02**) - FIGURE 5 & 6 -.
4. Respectively place the COUPLING HANDRAIL (item 8) and the COUPLING TUBES (item 9) on each extremities of the HANDRAIL (item 6) and TUBES (item 7) and tighten by hand the screws M20X45 Cl.8.8 and the hex nuts M20 Cl.8.8 (reference **Tubosider bolt 080-2377/02**) - FIGURE 5 & 6 -.
5. After assembly and adjustment of the whole device tighten the bolts to a torque of 150 Nm.
6. Tighten the bolts on the anchorages to a torque of 200 Nm.

Note 1 : All the hex nuts are placed on the outside of the tubes (see detail on FIGURE 6)

Figure 5 :

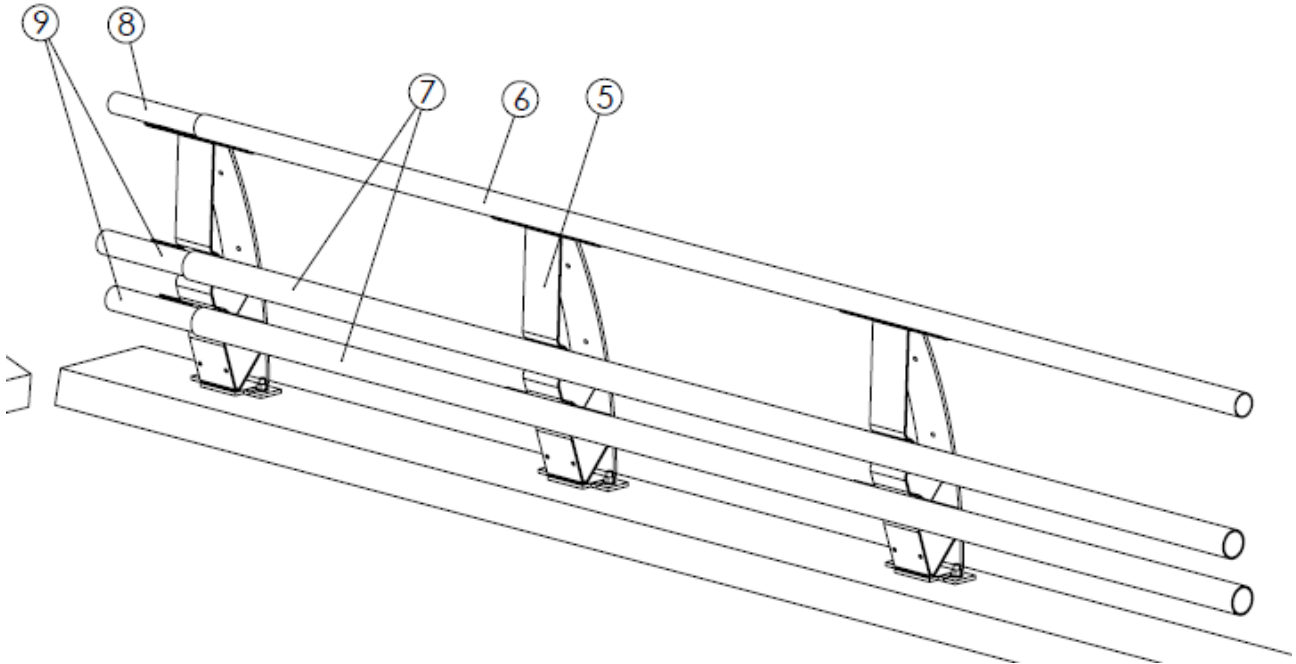
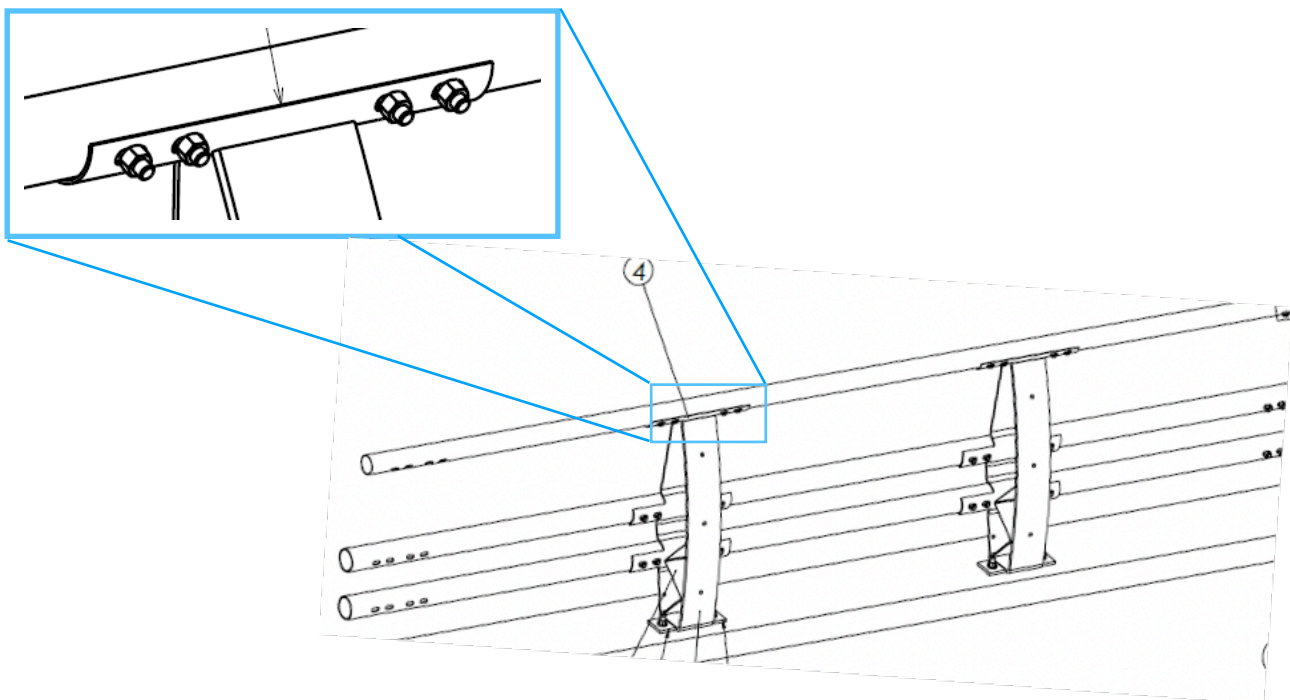


Figure 6 :



1.6 Checking the anchorages and bolts

After the installation, check the tightening torque by sampling with a torque wrench. At least 10% of the fasteners must be sampled. The sample will be evenly distributed over the length of the device.

If some anchorages still require torquing, 10% of the remaining fasteners

must be sampled also etc. The tightening torque must be that indicated on the plan.

1.7 Storage on site (long-term storage)

All components must be kept isolated from the ground until they are used by placing an appropriate support between the equipment and the ground. Particularly, the tube components should be kept in a slightly inclined position (at least 5°) so as to prevent rain water and / or moisture from stagnating.

Keep the screws, washers and nuts away from moisture.

1.8 Equipment

Here is the list of the minimum equipment required :

Setting Out :

Builder's pencil, chalk line, string, tape measure, spacing template.

Drilling, cleaning and anchoring equipment :

Generator, electrical leads(tagged) , suitable drill (e.g. Hilti TE-70 or DD-30), 28mm drill / core bits 28 mm, water, pump.

Cleaning brush, compressor with hose and blow gun, vacuum cleaner with hose and tip nozzle, electric dryer (if needed), bucket, brushes.

Epoxy injector.

Installation equipment for tubes and extremities :

Lifting device for tubes (120kg), (e.g. straps, magnet etc).

Crowbar, flat wrenches (36mm, 30mm, 24 mm), socket (36mm, 30mm, 24mm), torque wrench.

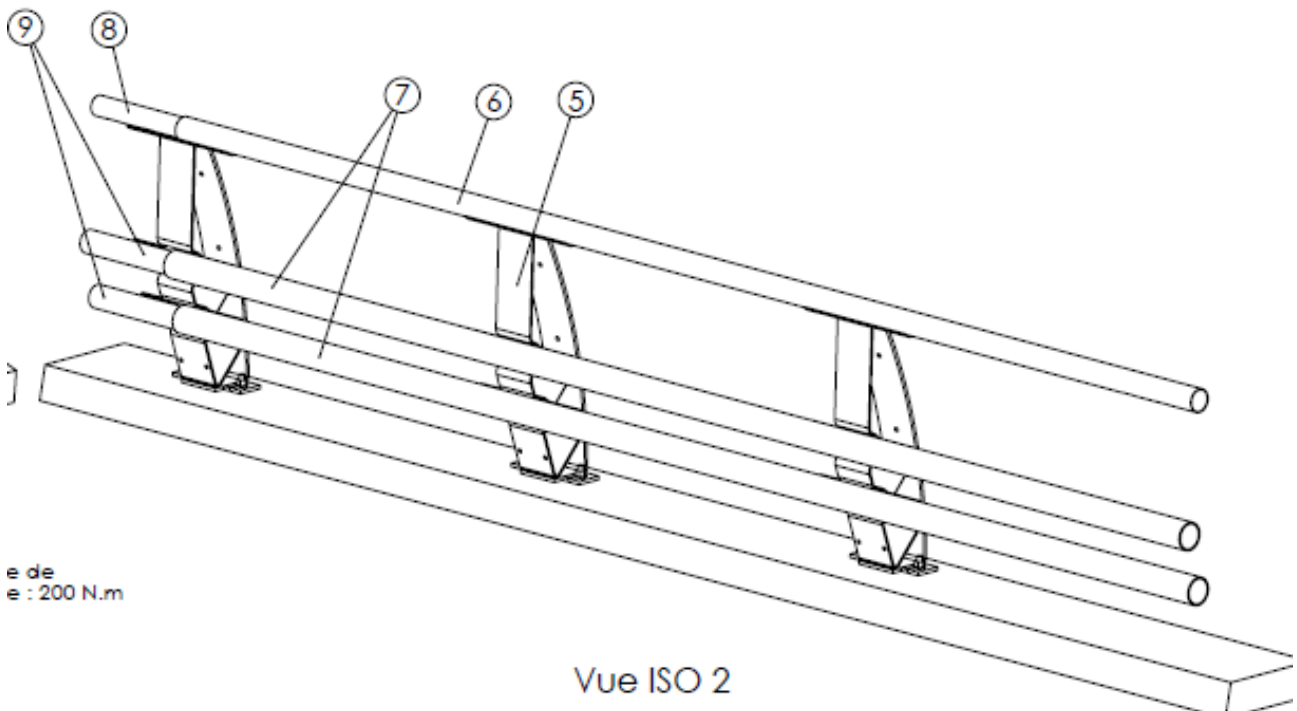
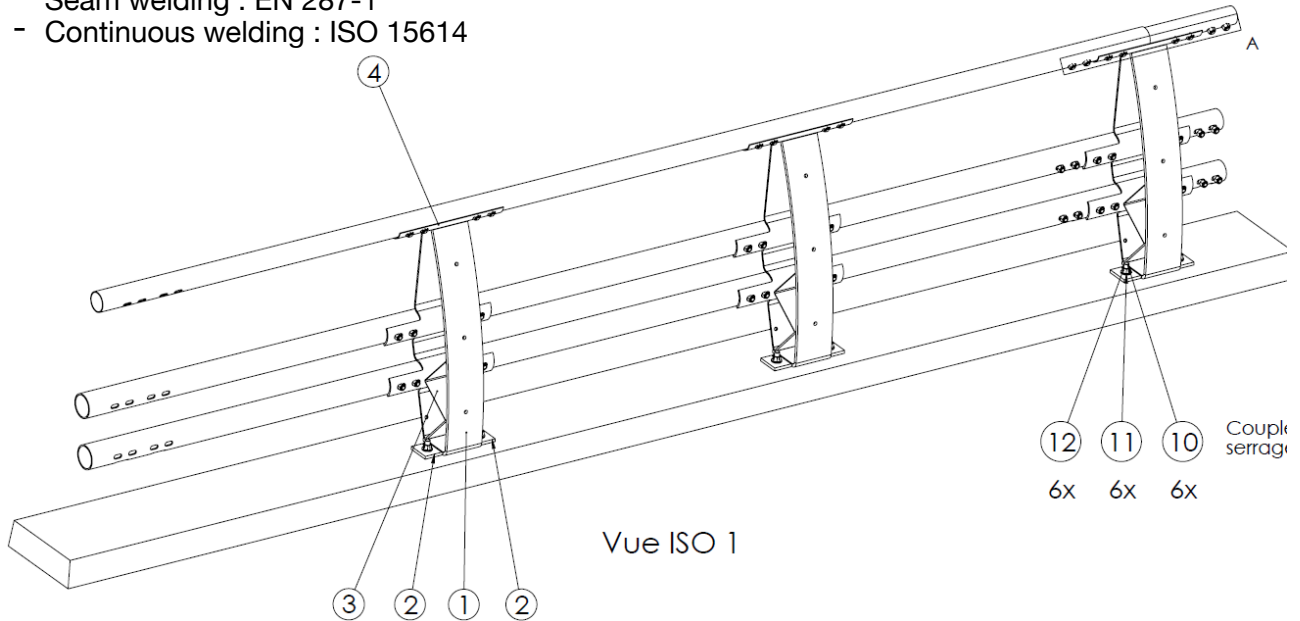
1.9 Appendices

General view of the bridge parapet

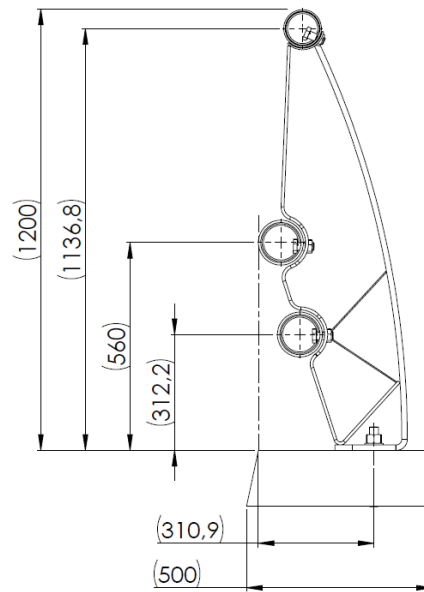
Note:

UNLESS OTHERWISE SPECIFIED, THE STANDARDS TO BE APPLIED:

- For dimensional tolerances : NF EN 10051
- Seam welding : EN 287-1
- Continuous welding : ISO 15614



e de
e : 200 N.m



N°	QTY	DESCRIPTION	MATERIAL	SURF. TREAT.	COMMENTS
14	48	HEX NUT H M20	-	GALVA	Item TUBOSIDER 080-2377/02
13	48	HEX SCREW M20x45	-	GALVA	Item TUBOSIDER 080-2377/02
12	6	HEAVY HEX NUT M24	Cl. 8	GALVA	ISO 4033
11	6	WASHER M24 N	-	GALVA	NF 25513
10	6	THREAD ROD M24	Cl 8.8	GALVA	NF 25136
9	2	COUPLING TUBE	S355 J2H	GALVA	Ø101.6 mm thick. 4 mm
8	1	COUPLING HANDRAIL	S235 J2H	GALVA	Ø88.9 mm thick. 4 mm
7	2	TUBE	S355 J2H	GALVA	Ø121 mm thick. 6.3 mm
6	1	HANDRAIL	S235 J2H	GALVA	Ø101.6 mm thick. 4 mm
5	3	FRONT FACE	S235 JR	GALVA	thick. 8 mm
4	3	HANDRAIL SHEATH	S235 J2H	GALVA	Ø114.3 mm thick. 4 mm
3	3	SPACER	S235 JR	GALVA	thick. 3 mm
2	6	PLATE	S235 JR	GALVA	thick. 15 mm
1	3	REAR FACE	S235 JR	GALVA	thick. 15 mm