RAPIDDRAIN

TECHNICAL GUIDE

Supplying to all of **New Zealand**

RAPIDDRAIN

1.0 Introduction

RapidDrain is a draining system consisting of tubes and joints in AISI 316L (1.4404) stainless steel, thin wall, suitable to convey, with gravity or under vacuum, waste waters which are frequently contaminated with organic or chemical corrosive substances.

The wide range of products is available in seven sizes, DN 40 to DN 100. As they are consistently fire resistant, (certified class A, non combustible), they allow to comply with many installation requirements as for marine or industrial installations (cruise ships, military ships, yacht, offshore structures, hospitals, wine companies, spa, hotels, etc.).

RapidDrain pipes and fittings present a finish surface type “opaque”. In comparison to the traditional plastic drains, **RapidDrain** has a low dilation coefficient, then it does not need any dilation compensator or frequent fitting.

Push fit joints of the parts, allowing to rapidly and simply assembling the system, comply with the DIN 19530-2 standard prescription and thy stand operating pressures up to:

Internal pressure	DN 40 to DN 150	+0.5 bar
Internal pressure, if blocked with the specific fitting collars	DN 40 to DN 65	+2.0 bar
	DN 80 to DN 150	+1.5 bar
Depressions (Vacuum)	DN 40 to DN 150	- 0.97 bar

Each part end, female or male, is calibrated to provide for the perfect housing of the sealing and part fitting.

RapidDrain joint tightness is granted by the special EPDM rubber Sealing present in all parts.

The **RapidDrain** assembling procedure asks for simple and rapid manual operations, with no specific or expensive tool.

2.0 Assembling Procedure

2.1 Tube Cutting

The tube supply program includes different lengths in the 1 socket/2 sockets version, to limit the tube cutting to the minimum.

If required, the RM DRAIN tubes can be manually cut with a roller, or an electric band or disk saw. After cutting, the ends are to be recovered in their original conditions, removing bars or bevelled to ease the seal fitting.

2.2 System Assembling

1. Check that the components are cleaned (tubes, joints, seals).
2. Add the seal inside the female joint (socket) of the units, deforming to a heart shape to ease its connection.
3. Check the seal correct positioning, paying attention to the upper border which should comply with the steel profile on the socket end.
4. Mark with a pen the “P” joint depth on the part male end, following instructions in table 1 (socket size).
5. Lubricate the internal seal upper area.
6. Add the male end of the parts inside the female with the joint, with a light pressure and rotation to reach the groove.
7. Remove any possible lubricant residue from the seal outside.
8. Check the seal upper border marking compliance

TABLE 1: SOCKET SIZE

Tubing diameter DN	D (mm)	S (mm)	D1 (mm)	D2 (mm)	D3 (mm)	P
DN 40	42	1	45	48	45	30
DN 50	53	1	56	60	56	38
DN 65	73	1.25	76	81	76	55
DN 80	88.9	1.25	92	99	92	60
DN 100	102	1.25	106	114	107	70
DN 125	133	1.5	138	147	140	75
DN 150	159	1.5	164	176	168	80

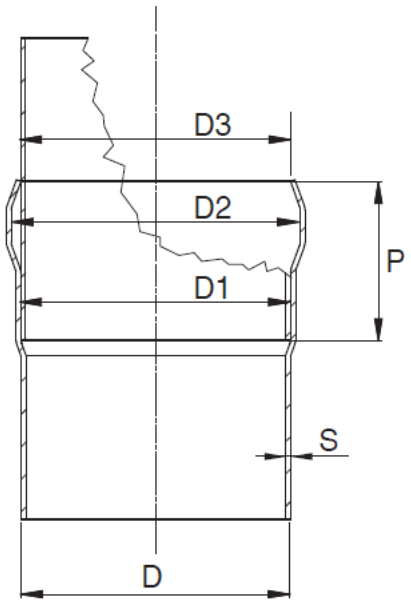

Figure 1 - Socket’s Dimensions

Figure 2 - Verify the components' cleaning

Figure 3 - Insert the gasket into socket

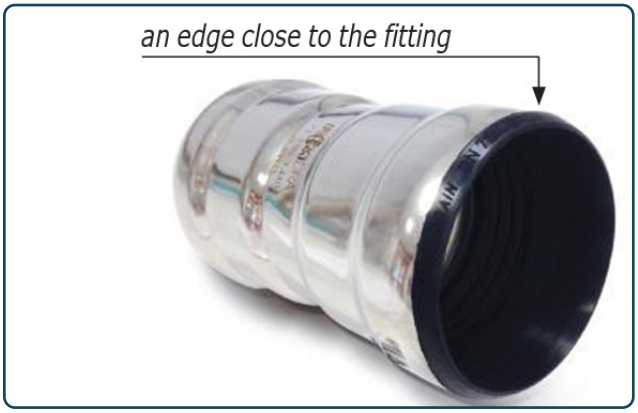

Figure 4 - Verify the correct gasket's position

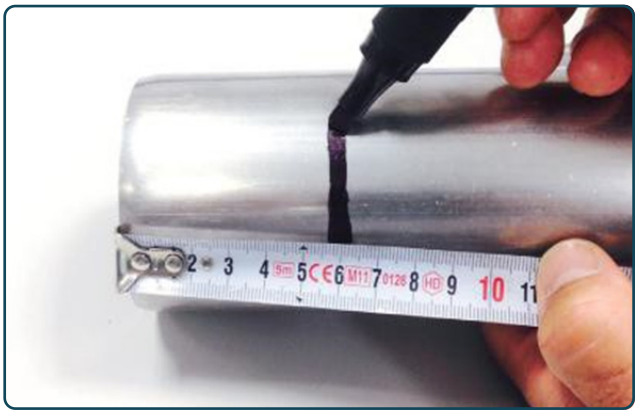

Figure 5 - Marking the insertion's depth

Figure 6 - Internal gasket lubrification

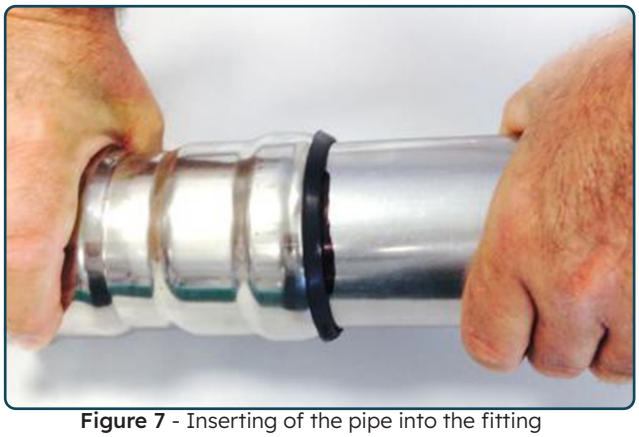

Figure 7 - Inserting of the pipe into the fitting

Figure 8 - Cleaning of the grease residual

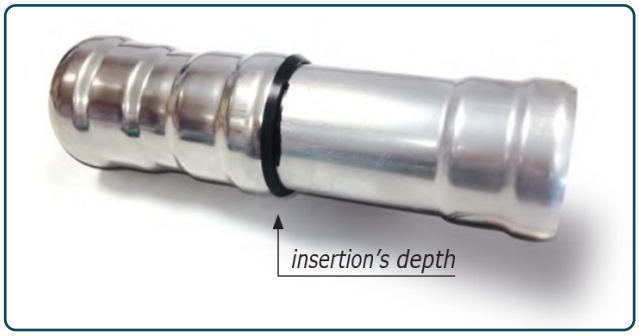

Figure 9 - Check of complete pipe's insertion into the fitting

2.3 Tube Fitting

Tubes should be fitted with collars suitable to stand weights reported in Table 2.

For **RapidDrain** it is advisable to use **RapidPress** stainless steel collars, available in the cured version, offering consistent soundproofing features.

On a straight path, horizontally or vertically, tubes are to be supported by collars at no more than 2000 mm distance. When changing the tube direction, collars should be positioned at no more than 750 mm.

In the case of long horizontal path, tubes should be fixed through collars at a 10 m distance maximum.

Under severe operating conditions, seals can be blocked against removal through suitable safety rings, available as accessories in the **RapidDrain** product range.

TABLE 2:
TUBE WEIGHT WHEN FULL OF WATER

Tube diameter DN	Tube weight (Kg/m)
DN 40	2.3
DN 50	3.3
DN 65	6.1
DN 80	8.6
DN 100	10.9
DN 125	18.1
DN 150	25

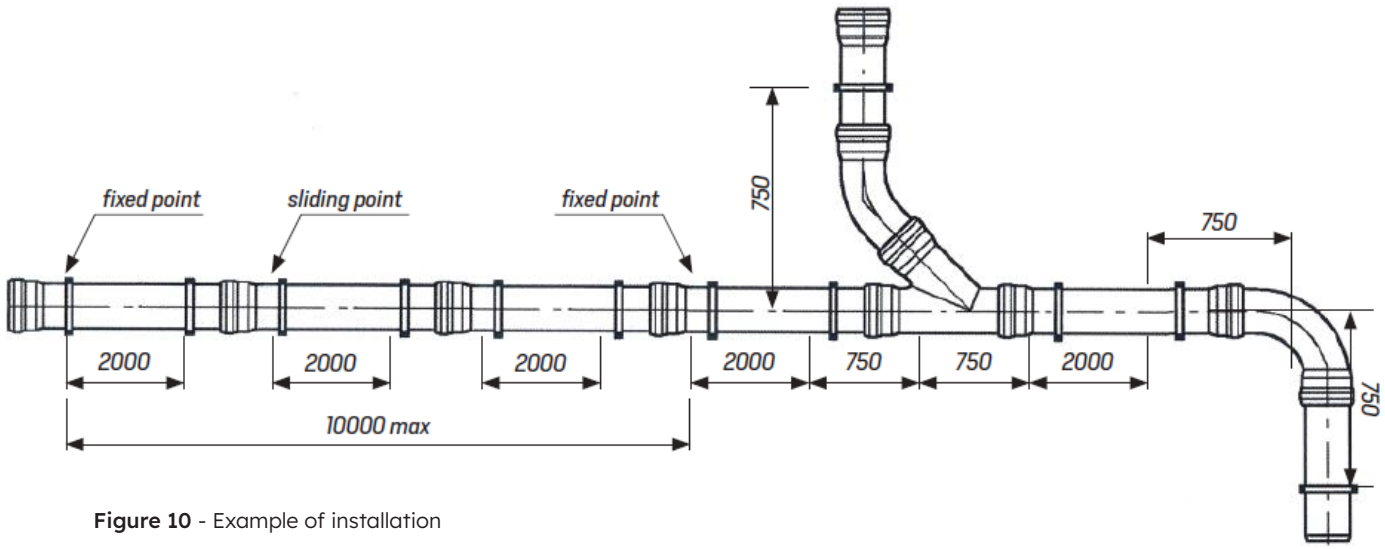

Figure 10 - Example of installation

2.4 System Disassembling

RapidDrain seals when fitted since a long time can be easily removed heating the external surface with a blow of hot air at high temperature. The heated internal seal can't be reused.

3.0 Installation Mode

RapidDrain can be used for visible installations. However the system can be installed buried on condition that it is protected from corrosion.

Tubes are to be protected from additives present in concrete or corrosive agents, through sheaths or protection dressing.

4.0 Sealing

RapidDrain DN 40 - DN 50 e DN 65 are supplied with long seals, while DN 80 and DN 100 are supplied with short seals.

Short seal are available for DN 40 - DN 50 and DN 65 as well.

5.0 Compatibility with Other Drains

On request, the **RapidDrain** can be supplied with stainless steel joints, thus simply and safety connecting it to other system/ material piping such as ABS, cast, ceramic stoneware, PE, PP, PVC, etc.

6.0 Certifications

The push fit **RapidDrain** is certified by DNV (Det Norske Veritas) and LR (Lloyd's Register).

7.0 Annex

The deck and bulkhead pipe penetrations, **RapidDrain** items 823/F1, 823/M1, 823/M2, 823/M3, 823/M4 must be installed by welding.

The steel socket or disk (823/F1) must be fully welded on deck or bulkhead, on both sides, grinding of primer in the area of welding (if requested).

The **RapidDrain** scuppers, items 825/02, 825/04, 825/05, 825/06Q, 825/06C, 825/07Q, 825/07C, must be installed by welding. The carbon steel tubular rings must be fully welded on deck, on both sides, grinding of primer in the area of welding (if requested).

The **RapidDrain** scuppers, items 825/01, 825/03, must be installed using countersunk screws.

RAPIDDRAIN

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