

## Top-loading, Full-encirclement & Vacuum-loaded PE Branch Saddles

### Introduction

Cadent Gas Limited carries out many under pressure connection and flowstopping operations on PE mains every year. This is normally performed using a branch saddle that is installed on the PE main using either a top loading (see Fig 1), full encirclement or vacuum loaded fitting (see Fig 2) as outlined in Engineering Bulletin EB/479.

A wide selection of Branch saddles is available from: Fusion, Radius Systems Limited (RSL) and Frialen (GPS), across pressure tiers up to and including 7 bar (refer to Table 1 & 2 for diameter, outlet and pressure applications).

The purpose of this EB is to communicate details on the approved product range for all types of PE branch saddles and provide details on how to install and commission PE branch saddles across a range of mains sizes:

- Up to and including 630mm diameter on IP applications.

- Up to and including 800mm (including imperial 4", 6" & 8") diameter on LP and MP applications.

### Information for first line managers and operatives



Fig 1: Top-loading Branch Saddles

Only approved branch saddles as listed in Table 1 & 2 below shall be utilised.

Equal diameter outlet branch saddles and branch saddles on mains greater than 125mm shall only be installed under Specialist Techniques by trained and competent Flowstop Technicians (e.g. PMC, RadiusPlus, RWT Flowstopping etc), holding the appropriate manufacturer accreditation.

Technicians undertaking the installation of branch saddles shall comply with the PE minimum fitting separation distances specified in GD/PR/ML/4 – Work procedure for pipe system construction – Chapter 1.

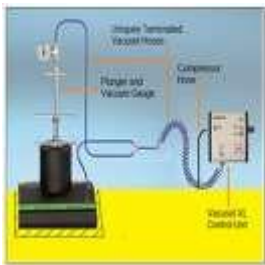


Fig 2: Vacuum-loaded Branch Saddles

Branch saddles shall be installed and commissioned in accordance with the recently approved procedures as detailed below:

**GD/PR/ML/6.7** Engineering work procedure for the installation and commissioning of branch saddles on PE mains in the diameter range: Metric sized 90mm to 800mm across selected LP, MP & IP applications and imperial sized 4" to 8" for LP & MP applications.

**GD/PM/ML/6.8** Management procedure for the installation and commissioning of large diameter branch saddles on PE mains in the diameter range 90mm to 800mm

### Additional information

- All saddles are rated up to and including 2bar applications unless stated otherwise
- Refer to Table 1 & 2 below for material, diameter and SDR combinations of approved PE branch saddles
- SA-TL, SA-XL & SA-UNI saddles are available via GPS, contact manufacturer for availability.
- Underpart branch saddles are available via Fusion
- MiniMuss saddles are available via RSL
- Follow links to: [\(insert hyperlinks\)](#)

**[SUPPLEMENTARY INFORMATION - GD/PR/ML/6.7](#)**  
**[SUPPLEMENTARY INFORMATION - GD/PM/ML/6.8](#)**

Approved Imperial Branch Saddles for the specified range of PE material grades / SDR				
Dimensions	PE80 – SDR 11	PE80 – SDR 17.6	PE80 – SDR 21	Comments
4" x 4"	RSL			Requires 4" x 125mm EF reducing coupler
6" x 4"		RSL		Requires 4" x 125mm EF reducing coupler
8" x 6"			RSL	Requires 6" x 180mm EF reducing coupler

Table 1: Imperial Branch Saddles

**Approved Metric Branch Saddles for the specified range of PE material grades / SDR**

Dimensions	PE 80 – SDR 17.6	PE 100 – SDR 11(7bar)	PE 100 – SDR 17.6	PE 100 – SDR 21	PE 100 – SDR 26
90mm x 90mm (E)	RSL / FUSION	RSL / FUSION	FUSION		
125mm x 90mm	RSL / FUSION	RSL / FUSION	FUSION		
125mm x DN80	RSL / FUSION		FUSION		
125mm x DN100 (E)	RSL				
180mm x 90mm	FUSION	RSL / FUSION	FUSION		
180mm x DN80	RSL / FUSION		FUSION		
180mm x DN100	RSL / FUSION		FUSION		
180mm x 125mm	RSL / FUSION	RSL / FUSION	FUSION		
180mm x DN150 (E)	RSL	RSL	RSL		
250mm x 90mm	FUSION	RSL / FUSION	FUSION	FUSION	
250mm x DN100	RSL / FUSION		FUSION	RSL / FUSION	RSL
250mm x 125mm	FUSION	FUSION	FUSION	FUSION	
250mm x DN150	RSL / FUSION	RSL	RSL / FUSION	RSL / FUSION	RSL
250mm x DN200	FUSION		FUSION	FUSION	
250mm x DN250 (E)	RSL	RSL		RSL	RSL
280mm x DN100		RSL	RSL		
280mm x DN150		RSL	RSL	RSL	RSL
280mm x DN200	FUSION		FUSION	FUSION	
280mm x DN250		RSL	RSL	RSL	RSL
315mm x 90mm		RSL			
315mm x 125mm	FUSION	FUSION	FUSION	FUSION	FUSION
315mm x DN100	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL
315mm x DN150	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
315mm x 180mm	FUSION	FUSION	FUSION	FUSION	FUSION
315mm x DN250	GPS / RSL / FUSION	GPS / RSL	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
355mm x 90mm		RSL			
355mm x DN100	RSL	RSL	RSL	RSL	RSL
355mm x 125mm	FUSION	FUSION	FUSION	FUSION	FUSION
355mm x DN150	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
355mm x 180mm	FUSION	FUSION	FUSION	FUSION	FUSION
355mm x DN250	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
355mm x DN300		RSL	RSL	RSL	RSL
400mm x 90mm		RSL			
400mm x 125mm	FUSION	FUSION	FUSION	FUSION	FUSION
400mm x DN100	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL
400mm x DN150	GPS / RSL / FUSION	GPS / RSL	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
400mm x 180mm	FUSION	FUSION	FUSION	FUSION	FUSION
400mm x DN250	GPS / FUSION	GPS / RSL	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / FUSION
400mm x DN300	RSL	RSL	RSL	RSL	RSL
450mm x DN100	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL
450mm x DN150	GPS / FUSION	GPS / RSL	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
450mm x DN250	GPS / RSL / FUSION	GPS / RSL	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
450mm x DN300		RSL	RSL		
500mm x DN100	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL
500mm x DN150	GPS / FUSION	GPS / RSL	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
500mm x DN200	GPS	GPS	GPS	GPS	GPS
500mm x DN250	RSL / FUSION	RSL	RSL / FUSION	RSL / FUSION	RSL / FUSION
500mm x DN300		RSL	RSL		
560mm x DN100	GPS	GPS	GPS	GPS	GPS
560mm x DN150	GPS	GPS / RSL	GPS / RSL	GPS / RSL	GPS / RSL
560mm x DN200	GPS	GPS	GPS	GPS	GPS
560mm x DN250		RSL	RSL	RSL	RSL
560mm x DN300		RSL	RSL		
630mm x DN100	RSL	RSL	RSL	RSL	RSL
630mm x 125mm	FUSION		FUSION	FUSION	FUSION
630mm x DN150	GPS / FUSION	GPS / RSL	GPS / RSL / FUSION	GPS / RSL / FUSION	GPS / RSL / FUSION
630mm x 180mm	FUSION		FUSION	FUSION	FUSION
630mm x DN200	GPS	GPS	GPS	GPS	GPS
630mm x DN250		RSL	RSL	RSL	RSL

630mm x DN300		RSL	RSL		
800mm x DN100	GPS		GPS	GPS	GPS
800mm x DN150	GPS	RSL	GPS / RSL	GPS	GPS
800mm x DN200	GPS	RSL	GPS / RSL	GPS	GPS
800mm x DN300		RSL	RSL		

Table 2: Metric Branch Saddles Key: (E) Equal diameter outlet branch saddle (7bar) PE100 – SDR11 Saddles rated up to and including 7bar applications