

# CALIBRE™

CABLE DUCT SYSTEMS

**PERFORMANCE  
REDEFINED**

Cable Management Solutions

 **MARLEY**

by aliaxis



WHAT IS CALIBRE?

# REDEFINING PERFORMANCE IN ELECTRICAL UTILITIES



## COMPLETE PE & PVC RANGE

Unified range for utilities market

## ELECTRICAL PURPOSED STANDARD

AS/ NZS 61386 incorporates the replacement of the PE pressure standard

## PERFORMANCE BASED CLASSIFICATION

Mechanical durability (VHD, HD, MD ratings)

## SIMPLIFIED PRODUCT SELECTION

Applied based options: Trench & Trenchless

## FULLY FEATURED PRODUCT BENEFITS

Durability, Productivity & Assurance attributes to meet stakeholders needs

## SUSTAINABILITY BENEFITS

100% recyclable. Made with 100% renewable energy. Collection & recycling programs.

## COMPLIANCE

Bureau Veritas - Independent verification of Performance & Quality

# CALIBRE™

CABLE DUCT SYSTEMS

## SIMPLIFIED AND UNIFIED PERFORMANCE-BASED RANGE

The new CALIBRE™ product range by Marley delivers a unified approach to cable ducting design, manufacture, and installation.

It is the amalgamation of the Marley PVC Cable Duct segment (700 Power & TC Comms series) and the Marley PE Cable Duct segment (COMD series) and redefines how underground cable ducting and fittings perform.

As a fully featured PE and PVC cable duct range, CALIBRE CABLE DUCT Systems is manufactured to the electrical purposed AS/NZS 61386 standard with product classification according to a performance-based mechanical duty rating.

This allows CALIBRE to deliver a consistent and simplified pathway across product selection, installation, and compliance in the electrical utilities industry.





### FULLY FEATURED

- › **Durability** range: Performance-based Mechanical Protection rating
- › **Productivity** features: Saves time and money for improved trenching
- › **Assurance** credential: Product based sustainability practices, supporting certifications (BEP), and licences for compliance

### EASE OF SELECTION



#### TRENCH

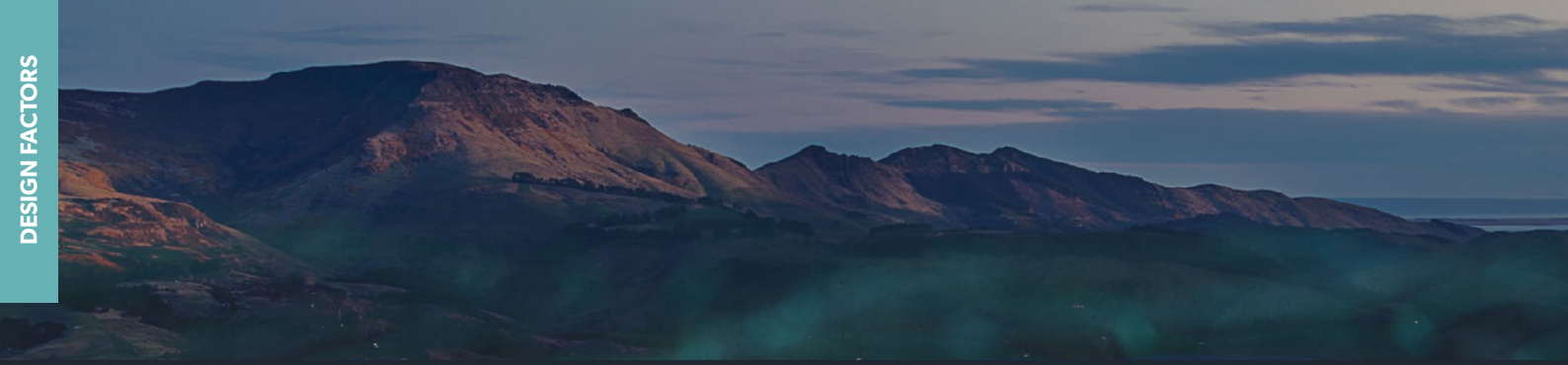
Unified solutions for open cut excavation



#### TRENCHLESS

Unified solutions for HDD excavation

		TRENCH	TRENCHLESS	
DURABILITY	<b>A</b>	Category A Underground Wiring System	✓	✓
	<b>VHD</b>	Very Heavy Duty	✓	✓
	<b>HD</b>	Heavy Duty	✓	✓
	<b>B</b>	Category B Underground Wiring System	✓	✓
	<b>MD</b>	Medium Duty	✓	✓
		Service Temperature Range	✓	✓
PRODUCTIVITY		Service ID	✓	✓
		Metre Marked		✓
		Custom Length		✓
		Extensive PE Fittings		✓
		Extensive PVC Bends	✓	
ASSURANCE		PE / PVC 100% Recyclable	✓	✓
		Standards Compliance & Licence	✓	✓



# UNDERGROUND CABLE DUCT RANGE DESIGN & INSTALLATION

There are several key factors to consider that will influence the selection of Trench and Trenchless cable duct when undertaking electrical utility projects. Based on an asset's replacement, renewal or future proofing requirements, several project parameters (including cable and ducting design, speed of install) along with sustainability factors will influence the outcome.



**Engineering design and reliability:**  
Mechanical duty, duct size and material, temperature range, predesign survey, project size, established or greenfield location, depth of install.



**Site conditions:**  
Geotechnical features, existing underground services, restrictive site / area confinements; time constraints.



**Contractor preference:**  
Ducting route and shot length; logistics (supply, handling and transport); time and resource constraints.



**Environmental and social:**  
Construction impact to geographical location, waste management, residential, business and traffic inconvenience.





## TRENCH (OPEN CUT) BENEFITS

Ideal for working around unidentifiable services and geotechnical features / rock and soil challenges when undertaking repairs, or smaller projects.

- › Repair work especially where multiple services / ducting laid together
- › Shorter runs, low depth excavation, no surface / unpaved covering
- › Does not require specialist equipment and skills, less capital intensive (duct and fittings)
- › PVC or PE straight length ducting, kink free. Does not suffer from coil memory
- › Very large diameter ducting where directional drilling is not practical
- › Transport / handling advantages – shorter lengths (6m – 18m)

## TRENCHLESS (DIRECTIONAL DRILLING) BENEFITS

Ideal for larger projects with longer runs. Sophisticated equipment delivers a faster and more environmentally sustainable installation.

- › Faster installs when covering a greater distance
- › Longer and deep installations, less joins required
- › Less disruption to above ground community activity, urban surfaces and structures
- › Minimal disruption to geological features (wetlands, lagoons, rivers and embankments)
- › No backfilling excavation
- › Transport / handling – greater metreage per delivery (coil and drums) compared to straight lengths

To identify CALIBRE features necessary to achieve a reliable design and cost effective underground installation, please refer to the criteria outlined in the best practice selection guideline.



# BEST PRACTICE SELECTION GUIDELINE

For cost effective and reliable underground Cable Duct systems, always consider 3 key selection factors – **reliability, productivity and quality.**

## BEST PRACTICE CABLE DUCT SELECTION CRITERIA

### EXCAVATION METHODOLOGY



#### RELIABILITY & DURABILITY

Designed for 100+ years performance (buried in service)	✓	✓
Category A Underground Wiring Rules Very Heavy Duty / Heavy Duty	✓	✓
Category B Underground Wiring Rules Medium Duty	✓ (Extra mechanical protection required)	✓ (Sub Duct application)
In-service temperature (wide range)	-15/60	-15/60

#### PRODUCTIVITY – INSTALLATION & BURIAL

Application to suit project / site / economic parameters	<ul style="list-style-type: none"> <li>› Urgent repairs</li> <li>› Short, shallow installs in soft soil</li> <li>› Unidentifiable services &amp; obstacles</li> <li>› Deployment of minimal equipment</li> <li>› Ideal for Rural locations</li> </ul>	<ul style="list-style-type: none"> <li>› Environmental / social sustainability</li> <li>› Long, deep installs or under roads, bridges, crossings</li> <li>› Greenfield installations</li> <li>› Deployment of sophisticated technology, equipment &amp; operations</li> <li>› Ideal for Urban locations</li> </ul>
Ease of handling / transport	<ul style="list-style-type: none"> <li>› Rigid - straight lengths</li> <li>› Kink free</li> </ul>	<ul style="list-style-type: none"> <li>› Coils – 50 to 1000m</li> <li>› Customised lengths</li> <li>› Metre marking</li> <li>› Strapping to maintain nesting and minimise coil tails</li> </ul>
Ease of service identification	✓	✓
<ul style="list-style-type: none"> <li>› Power or Comms colour coded</li> <li>› Product print details</li> </ul>		
Fittings range	Fabricated bends (duty, angle, radius)	Friatec, Philmac (smaller DN)
Joining	PVC Solvent, PE Electrofusion, PE Compression fittings	PE Electrofusion, PE Compression fittings

#### QUALITY & COMPLIANCE

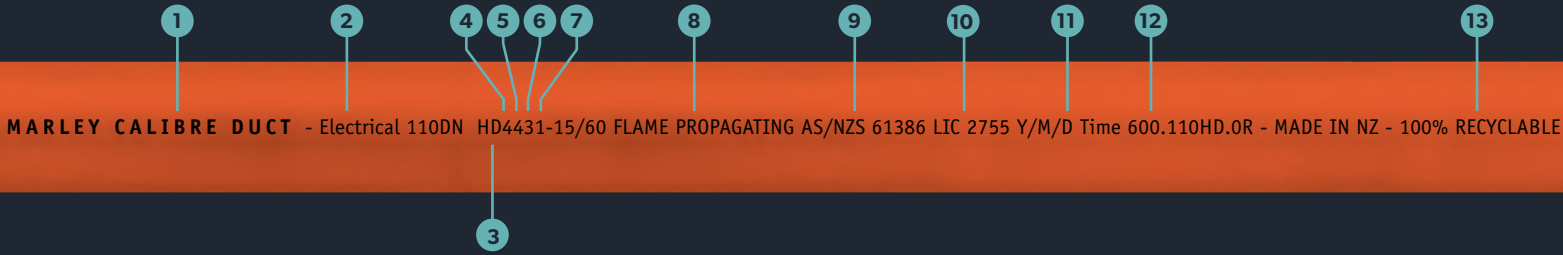
Environmental	BEP (PVC applicable)	
100% Recyclable	✓	✓
Manufacturing standard – electrical specific AS/NZS 61386	✓	✓
3 <sup>rd</sup> Party verification	✓	✓
Tech and sales support	✓	✓





# PRODUCT AUTHENTICITY

Not all brands of Cable Duct in the market perform to the same level. For proof of intended performance, check the mandatory print requirements that are marked on the Cable Duct.



- 1 Manufacturer and/or brand name identification
- 2 Designed specifically to protect electrical wiring
- 3 Classification Rating  
(VHD = Very Heavy Duty)  
(HD = Heavy Duty)  
(MD = Medium Duty)
- 4 Compression Duty / Ring Stiffness Rating  
(Rating 5 = Very Heavy Duty)  
(Rating 4 = Heavy Duty)  
(Rating 3 = Medium Duty)
- 5 Impact Duty Rating  
(Rating 5 = Very Heavy Duty)  
(Rating 4 = Heavy Duty)  
(Rating 3 = Medium Duty)
- 6 Minimum Service Temperature rating (Rating 3 = -15°C)
- 7 Maximum Service Temperature rating (Rating 1 = 60°C)
- 8 Resistance to burning (PE duct only = flame propagating)
- 9 Cable Duct manufacturing standard
- 10 3<sup>rd</sup> party Licence Verification for the specific manufacturing site
- 11 Exact date and time of manufacture
- 12 Marley item code for easy tracking  
PVC = 700 Series  
PE = 600 Series
- 13 Recyclability

# PROOF OF ASSURANCE

Certifications and standards to demonstrate compliance and ensure quality is consistency achieved each and every time.



Bureau Veritas provides independent third-party verification of compliance in the manufacture of CALIBRE. Licences are issued by manufacturing location.  
 Manurewa: BV Lic. 2755  
 Horotiu: BV Lic. 2970  
 Tinwald: BV Lic 2806

# PRODUCT SPECIFICATION

**CALIBRE™**  
TRENCH



**CALIBRE™**  
TRENCHLESS



Size		
Diameter (mm)	32, 40, 50, 65, 80, 100, 150, (PE = 140/160)	20, 25, 32, 40, 50, 63, 90, 110, 125, 140, 160
Length (m)	6, (PE = 12)	50, 100, 150, 200, 500, 1000
Material		
Colour	Orange, Green, White, Salmon	Orange, Green, Red, Salmon
Formulation	uPVC Resin + modifiers	MDPE (DN ≤ 40) HDPE (DN ≥ 50)
Finish	Matte Finish	Matte Finish
Temperature		
Service temperature range	-15°C to 60°C	-15°C to 60°C
Linear coefficient of thermal expansion	7 X 10 <sup>-5</sup> m/(mK)	17 X 10 <sup>-5</sup> m/(mK)
Fittings		
Marley colour match	Orange, Green, White	
Extensive range	Yes	
Joint	Solvent (S) Rubber Ring Joint (RRJ)	Electrofusion Compression
Duty rating <sup>1</sup>	Very Heavy Duty (5531) Heavy Duty (4431) Medium Duty (3331)	SDR 11-17
Durability		
Duty rating <sup>1</sup>	Very Heavy Duty (5531) Heavy Duty (4431) Medium Duty (3331) Non-Duty Rated	Very Heavy Duty (5531) Heavy Duty (4431) Medium Duty (3331)
Ring stiffness (SN) (when DN ≥ 100)	MD ≥ SN4 HD ≥ SN10 VHD ≥ SN25	MD ≥ SN4 HD ≥ SN10 VHD ≥ SN25
Resistance to burning	Non flame propagating	Flame propagating
UV resistance <sup>3</sup>	White Duct only	N/A
Chemical resistance	High <sup>2</sup>	High <sup>2</sup>
Compliance		
Manufacturing standard	AS/NZS 61386 AS/NZS 1260	AS/NZS 61386
Environmental	BEP certified (PVC applicable) ISO 14001	BEP certified - N/A ISO 14001
3rd party verification	Manurewa: BV Lic. 2755 Horotiu: BV Lic. 2970 Tinwald: BV Lic. 2806	Manurewa: BV Lic. 2755 Horotiu: BV Lic. 2970 Tinwald: BV Lic. 2806

<sup>1</sup> Duty rating varies by size and customer requirements, please contact Marley for more information

<sup>2</sup> Avoid contact with ketones, esters, aromatic and chlorinated solvent

<sup>3</sup> Cable ducting designed to be buried in service, unless stated otherwise

## Sustainable Manufacturing

Marley is committed to creating environmentally sustainable processes and products and was the first plastics manufacturer in New Zealand to achieve ISO14001 registration. We are also Best Environmental Practice certified for our entire range of manufactured uPVC systems. This means we get our raw materials from sustainable and responsible sources, continuously work on our manufacturing processes to reduce our environmental footprint and accept our products back at the end of their useful life for recycling.



 FOLLOW US @MARLEYNEWZEALAND

### DISCLAIMER

This sales brochure has been compiled by Marley New Zealand Limited ("The Company") and is supplied subject to acknowledgment of the following conditions:

The sales brochure is protected by Copyright and may not be copied or reproduced in any form or by any means in whole or in part without prior consent in writing by the Company. Prices are subject to change, product specifications, usage data and advisory information may also change from time to time with advances in research and field experience. The Company reserves the right to make such changes to price or product information at any time without notice. Correct usage of the Company's products involve engineering judgements which cannot be properly made without full knowledge of all the conditions pertaining to each specific installation. The Company expressly disclaims all and any liability to any person whether supplied with this publication or not in respect of anything and of the consequences of anything done or omitted to be done by any such person in reliance whether whole or partial upon the whole or any part of the contents of this publication. No offer to trade, nor any conditions of trading, are expressed or implied by the issue or content of this manual. Nothing herein shall override the Company's Conditions of Sale, which may be obtained from the Registered Office or any Sales Office of the Company. This price book is and shall remain the property of the Company, and shall be surrendered on demand to the Company.

MAR4934-SEPTEMBER 2022

OUR PARTNERS



REGISTERED MASTER BUILDERS  
**ASSOCIATE  
MEMBER**



For more information: **0800 MARLEY (0800 627539)** | [www.marley.co.nz](http://www.marley.co.nz)

 **MARLEY**  
by **alixis**