



Datasheet

ENGLISH

RS Pro 300mm Long EPDM 15 bar Braided Stainless Steel Hose

RS Stock No.711-8451





Description:

The Classic range provides a safe and taint free conveyance of potable water supplies in domestic and commercial applications. The range is designed to achieve robust and flexible solutions with the following key attributes:

- Regulation Advisory Scheme (WRAS) approved for both hot and cold water
- Robust construction with excellent abrasion and crush resistance
- Excellent flexibility and kink resistance
- Wide selection of standard plumbing connections
- Customised design options available for OEM clients

Applications:

The Classic Range is extensively used in the UK for the following applications:

- Bathroom Appliances: pumps, shower systems.
- Commercial free standing appliances: Glass washers and dish washers
- Domestic and commercial temperature connector
- Brassware: Kitchen and bathroom taps
- Commercial Plumbing: Potable water supplies

General Performance Data:

Hose Ref	Min Bend Radius (mm)	Working Pressure at 20°C (BAR)	Working Pressure at 65°C (BAR)	Security Pressure at 20°C (BAR)	Flow Rate at 3 bar (L/min)
DN8	35	12	6	18	28
DN10	50	12	6	18	40
DN13	50	12	6	18	57
DN20	80	12	6	18	135

Working: Pressure & temperature are stated as the maximum continuous value.

Security: Pressure is stated as the peak pressure to be attained for short durations or transient pressure spikes. Installations where water hammer exceeds the limits stated will invalidate warranty.

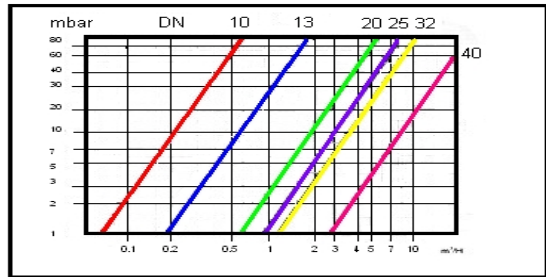
Bend: Minimum by which the hose can be bent without causing excessive stress to the hose fabric or kink.

Pressure:

The calculation of pressure drop is based on the hose internal diameter and estimation of losses for different types of end connections. These are explained as follows:

Schedule 1: Pressure loss for hose based on internal diameter (DN) and length.

Formulae: $P1 \text{ mbar} = F1 \times L$ Where: $F1$ = Pressure drop (mbar) according to its flow capacity in m^3/h
 L = Length of hose (metres)

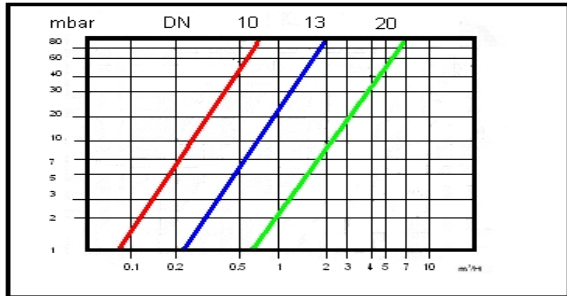


Schedule 2: Pressure loss for type of end connection based in internal diameter (DN)

Formula: $P2 = P3 \times R$

Where $P3$ = pressure drop in mbar according to its flow capacity in m^3/h

R = Correction factor 0, for straight female and male end connections 1.5, for one elbow
 3.0, for two elbows



Therefore pressure drop (mbar) can be calculated for any given hose assembly adding $P1$ and $P2$.

Example: Flexible Hose: DN13

Flow capacity: 1000 lit/hr ($1.0\text{m}^3/\text{hr}$)

Length: 500mm, terminated with 1 male and 1 female elbow would be calculated as follows,

Correction factor: 1.5

$$P = (F1 \times L) + (P3 \times R)$$

$$P = (26\text{mbar} \times 0.5\text{mtr}) + (23\text{mbar} \times 1.5) = 47.5\text{mbar}$$

General Construction Data:

End Connection	Size Range	Material	Standard
Female Swivel	1/4BSP - 1"BSP	CW614N/CW617N	EN12164/5
Female Swivel Elbow	3/8BSP - 1"BSP	CW614N	EN 12164
Male taper	1/4BSP - 1"BSP	CW614N	EN12164
Compression 15mm	15mm	CW614N/CW617N	EN1254-2, ISO 6957
Compression 22mm	22mm	CW614N/CW617N	EN1254-2, ISO 6957
Compression ISO Valve	15mm	CW614N/CW617N	EN1254-2
Compression ISO Valve	22mm	CW614N/CW617N	EN1254-2
Standpipe	15mm - 28mm	CW614N/CW617N	EN12164/5
Push-fit Brass	10mm - 22mm	CW614N/CW617N	EN12164/5
Mono Block	8mm to 12mm	CW614N	EN12164
Push Fit Plastic	15mm – 22mm	Acetyl Black	BS6920
Female Swivel	1/2BSP- 3/4BSP	Nylon Black	BS6920
Female Elbow Swivel	3/4BSP	Nylon Black	BS6920
Standpipe	22mm	Acetyl Black	BS6920
Washer	1/2BSP - 1"BSP	Fibre, EPDM & Silicon	BS6920
O rings & Washers	Various	EPDM	BS6920
Hose Liner	DN10 - DN25	EPDM	BS6920
Hose Braid	DN10 - DN26	Stainless Steel 304	EN 10204 3.1
Ferrule	DN10 - DN27	Stainless Steel 304	EN 10088-2

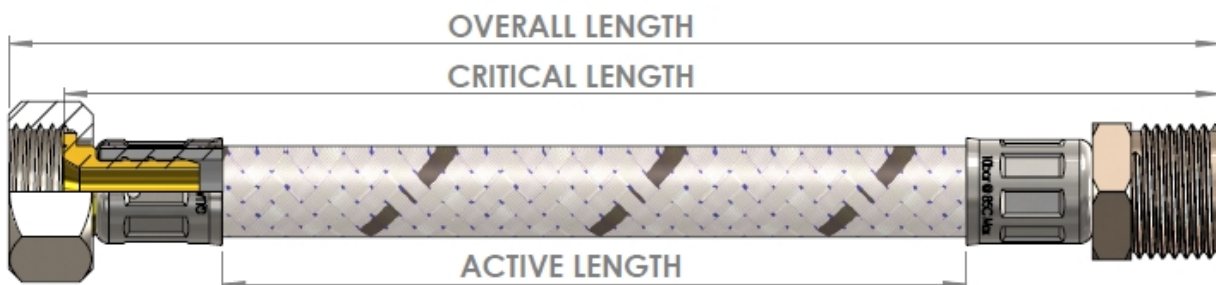
Note

- External Brass fittings are supplied with nickel plated finish to avoid tarnishing.
- Male Taper fittings should be used with female swivel or push fit connections to avoid twisting and torsion stress.
- Compression Joints tested for Stress Corrosion Cracking to ISO 6957:1998.

Dimensioning:

Hose assemblies are quoted by their overall length; as measured from end face to end face for each fitting. The standard manufacturing tolerance on overall length is:

- <500mm +/- 5.00mm
- >500mm +/- 10.00mm



Critical length is the distance between hose mating faces. This must be 10% greater than the actual distance between the two corresponding fixed mating parts to avoid tensile stress whilst in service.

Active length is the length by which pressure and movement is absorbed by the flexible hose.



Hose Data:

The Classic range incorporates a non toxic food grade liner manufactured from Ethylene Propylene Diene Monomer (EPDM). The liner is manufactured under closely controlled conditions to ensure compliance to requirements against BS6920. The hose and liner are identified by,

- Batch code and identification code for traceability.
- Black tracer for easy identification in service.

Ferrule Data:

The ferrule is integral part of the swage joint, between the end fitting and the flexible hose. The integrity of the ferrule must be maintained throughout its service.

Note: Do not use grippers or spanners to secure against the end connections

The ferrule contains important information,

- Wras Identification: QWRAS
- Temperature: 6 bar @ 65°C
- Date of manufacture: Year and month code

Month Code

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A	B	C	F	G	H	L	N	P	S	T	V

Standards:

WRAS: Water Regulations Advisory Scheme (WRAS) certificate 1405049 and complies with requirements of:

- The Water Supply (Water Fittings) Regulations 1999,
- The Water Byelaws 2004 Scotland,
- Water Supply (Water Fittings) Regulations Northern Ireland 2009

Quality Assurance:

Hydraelectric is ISO 9001:2008 certified by British Standards Institute under certification number FM7541. The Classic range is manufactured under strict quality assurance systems to ensure integrity, the following tables summaries the different tests available for product development and manufacturing, these are updated and subject to change.

TEST	Development	Production
Working Pressure	Material, Process & new Product.	QA Audit
Burst Pressure	Material, Process & new Product.	QA Audit
Thermal Ageing and Fatigue	Material, Process & new Product.	QA Audit
Tensile Pull Test	Material, Process & new Product.	Audit
Visual Compliance		100%
Overall length		100%



Installation:

Check the application does not exceed the rated temperature or pressure as stated for both continuous and transient variations. Flexible hoses should be installed by a competent Plumber or Engineer in accordance with standards and recommendations of BS 6700:2006. The Installation guide is available on Hydraelectric website www.hydraelectric.com.

Chemical Resistance:

The Classic range is designed for use with hot and cold potable water supplies. The Classic range should not be used in closed systems or in the presence of chemical inhibitors or solder fluxes.

Caution: Brass Fittings used on cold water lines will gather condensation and may become exposed to environments which are alkaline and corrosive, please see installation guide for best practices.

Technical Assistance:

Please contact our Sales or Technical Support team on 0044 (0) 1932 334200, or visit our website www.hydraelectric.com.