



The Excel range with its unique **Cross-linked polyethylene** liner has been developed to support growing demands from the Health care markets for alternative liner material with improved traceability and identification. The Excel range provides a safe and taint free conveyance of potable water supplies for Domestic and Commercial plumbing applications whilst maintaining a robust and flexible solution with following key attributes,

- Reduction in the risks associated with micro bacterial colonisation and potential for cross infections.
- UV barrier to further reduce risks associated with micro bacteria growth.
- Water Regulation Advisory Scheme (WRAS) approved hose assemblies for both hot and cold water supplies.
- All materials have been tested and approved to BS 6920 to ensure potable water supplies intended for human consumption remain safe and free from contamination.
- Unique Green Tracer band for easy identification against other materials.
- Robust construction with excellent abrasion and crush resistant
- High Quality material selection to provide excellent flexibility and kink resistance.
- Wide selection of standard and non standard plumbing connections
- Customised Design options available for OEM clients

Applications

The Excel Range is extensively used in the UK to meet the stringent demands of Health care & Public Services,

- Hospitals
- Care homes for the elderly
- Hotels
- Public Services
- Schools & Colleges

General Performance Data

Hose Ref	Minimum Bend Radius	Working Pressure at 20°C (BAR)	Working Pressure at 65°C (BAR)	Safety Pressure at 20°C (BAR)	Flow Rate at 3 bar (lit/min)
DN8	35mm	12	6	18	28
DN10	45mm	12	6	18	48
DN13	55mm	12	6	18	74

Working pressure is stated as the continuous operating maximum pressure.

Security pressure is stated as the peak pressure to be attained for short durations or transient pressure spikes.

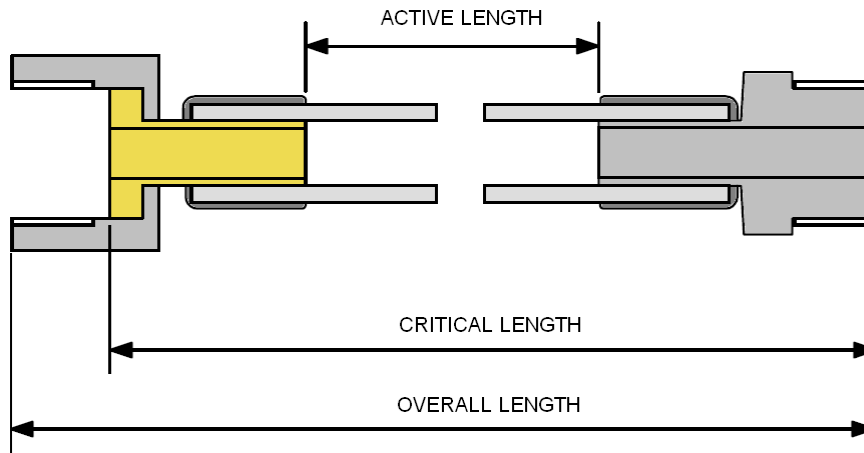
Bend radius is the minimum by which the hose can be bent without causing excessive stress to the hose fabric.

Dimensioning

Hose assemblies are quoted by their overall length as measured from end face to end face of each fitting.

Critical length is the distance between hose mating faces; note this value must be greater than actual distance between the two corresponding fixed mating parts to avoid tensile stress whilst in service.

Active length is the distance between the two ferrules, as a general rule the active length should be greater than the distance between corresponding fixed mating parts. Active length is the length by which pressure and movement is absorbed by the flexible hose.



Construction Data

End Connection Data

The Excel range can be terminated in a range of plastic and Brass connectors to suit UK and European plumbing connections.

Female Swivel connections:	1/4BSP to 3/4BSP
Female Elbow Connections:	3/8BSP to 3/4BSP
Male Connections:	1/4BSP to 3/4BSP
Isolation valves	15mm and 22mm
Compression:	10mm to 22mm
Mono Block:	8mm to 12mm
Push-fit Brass	10mm to 22mm
Push-fit	15mm to 22mm



Materials Specification

Inserts	Brass EN12164, CW614N (CZ121), plain and nickel plated. Options available for DZR Brass; BS EN 12164 CW602N
Inserts	Polyacetal (POM) Black, <i>only available in push fit end connections.</i>
Female Nuts	Brass EN12164 CW602N nickel plated
Female Nuts	Nylon 6.6 Glass filled 30%
Washers	Green Fibre

Ferrule Data

The ferrule is an important part of the joint which is formed between the end fitting and flexible hose, the integrity of the final swaged joint must be maintained throughout its service life. Ferrules used on the Excel range have following physical attributes,

Material Specification:	Stainless steel AISI 304 EN 1.4301.
Inspection Hole:	Security of braid present
Date of Manufacture:	Year Stamp
WRAS Identification:	Stamped "QWRAS"
Brand name:	"Qualflex"



Hose Specification Data

The Excel range incorporates a flexible non toxic food grade liner of **Cross-linked polyethylene (Polyolefin)** with grey master batch,

Tensile strength:	28 Mpa
Elongation at Break:	590 %
Tear Strength:	33 N/mm
Operating temp:	-20°C to 90°C
Identification:	Printed with batch code and unique identification number



Material Specification:

Inner Liner:	Cross-linked polyethylene (Polyolefin)
External Braid:	Multi Strand Stainless Steel AISI 304 EN 10204 3.1
Identification:	Green Polyester tracer printed "Qualflex PEX"

Mechanical Data

DN	ID (mm)	OD (mm)	Burst Pressure at 20°C	Burst pressure at 90°C
DN8	8.0	12.0	120	90
DN10	10.0	14.0	100	80
DN13	13.0	17.0	90	70

Approvals

Water Research Advisory Scheme (UK) :

Certificate Number 0903047

National sanitation Federation (USA):

Ferrules are stamped QWRAS to signify WRAS approved
Approved



Chemical Resistance

All materials stated are fully tested for compliance in the safe conveyance of potable water supplies. If the application requires additives to water supply please refer to the chemical resistance charts and each material in contact with chemical under the same conditions of the final application. Ratings of chemical behavior listed on the website apply at a 48-hr exposure period.

Installation

Check the application does not exceed the rated temperature or pressure as stated above for both continuous and transient variations. Flexible hoses should be installed by a competent Plumber or Engineer.



Quality Assurance

The Excel range is manufactured under strict quality assurance systems to ensure compliance, the following tables summaries the different tests available for product development and manufacturing, these are updated and subject to change.

TEST	Development	MANUFACTURING	
		Batch	Statistical
Working Pressure	Material, Process & new Product.	Client Specified	
Burst Pressure	Material, Process & new Product.		
20 bar air leakage under stress			AQL
5 bar air leak with air			AQL
Thermal Ageing and Fatigue	Material, Process & new Product.		
Tensile Pull Test	Material, Process & new Product.		
Visual Compliance	100%	100%	
Overall length	100%	AQL	

