



AQUALINE

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PRODUCT TECHNICAL STATEMENT

Spartan Brass fittings for water

Spartan brass fittings are designed and manufactured to comply with material grade as specified in AS/NZS1567, and to fit copper tubing complying with NZS 3501 tubing sizing.

These fittings are made from Certified DR brass.

Spartan Brass Fittings carry a lifetime warranty

Please refer to appendix 1 for a list of product codes this PTS covers.

Purpose and use

This PTS covers all Spartan brass fittings compliant with copper pipe to NZS 3501.

Product description

Spartan Superior Brassware is the preferred choice for professional tradespeople in New Zealand. With over 50 years' experience Spartan has developed a full range of products specifically manufactured for the New Zealand market

All brass fittings are made from DR brass.

Aqualine supplies a wide range of brass fittings to fit NZ copper pipe compliant to NZS 3501:

- Shires compression fittings
- Clamp fittings
- Connectors
- Reducing Connectors
- Elbows
- Tee's
- Reducing Tee's



Key advantages

The most important commercial application and key advantages for using NZ copper pipe and corresponding fittings for water supply, are:

- High resistance to corrosion
- Hygienic operation: does not give off any taste or smell or add any harmful substances
- Very strong
- Not affected if installed in certain building materials such as concrete, lime mortar, gypsum, etc.
- Underground pipes easily found by metal detectors
- Expected life span more than 50 years

Compliance

Spartan brass fittings for water and gas are in full compliance with the requirements as set out in the New Zealand Building Code, as follows:

Building code	Paragraph	Requirement	Tested to
B2 (Durability)	AS1/1.2	Moderately difficult to access 15 years 50 years	Specified and analysed – DR brass Historically compliant
	AS1/2.0 Maintenance	No maintenance required	
G12 (Water supplies)	VM1/1.0 Water supply systems	AS/NZS 3500.1	Compliant to NZ copper pipe to NZS 3501 Brass fittings to AS/NZS 1567 do not contaminate potable water

NZS 3501 Plumbing Pipe

This standard applicable for copper pipe.

Note: There is no published standard for fittings to fit with NZS3501 copper pipe.

AS/NZS 1567 Brass material grades

This standard applicable for all brass fittings.

The following requirements are specified in the standards shown above:

PIPE

Copper tube to NZS3501 is suitable for connection by means of compression fittings, crox fittings or by brazing. It also has to comply with the following:

- Scope
 - Maximum working pressure specified
 - Heat treatment specified
- Properties
 - Chemical composition specified
 - Dimensions specified
 - Outside diameter and wall thickness
 - Hydrostatic test pressure
 - Maximum working pressure
 - Mechanical tests specified including sampling and inspection

FITTINGS

Brass fittings complies with the requirements as set out in AS/NZS 1567 and is suitable for connection by means of compression fittings, crox fittings or by brazing.

It also has to comply with the following:

- Temper of material (heat treatment condition as specified)
- Chemical composition
- Freedom from defects
- Mechanical properties
- Dezincification resistant
- Mercurous nitrate test (to show resistance to stress corrosion cracking)
- Electrical resistivity test
- Hydrogen embrittlement test
- Manufacturing tolerances

Design, construction and installation instructions

Assembly as required for the fitting type. No assembly instructions are given.

Fitting types are:

Sealing thread fittings

Crox fittings

Compression fittings

New Zealand Building Code G12/VM1

1.0.1 Comply with AS/NZS3500.1:2015

[AS/NZS3500.1:2015](#)

Appendix C - Copper pipe used in New Zealand as per NZS 3501

Spartan Brass fittings complying with AS/NZS 1567 does not contaminate potable water.

Maintenance requirements

No specific maintenance is required over the life of all Spartan Brass fittings.

Product support

Full product support can be found at the following:

Aqualine Products Limited

7 Winston Place	P +64 (9) 837 2725
Henderson, 0610	F +64 (9) 837 2729
PO Box 104298	PH 0800 889914
Lincoln North,	FAX 0800 920 700
Auckland 0654	aqualine.co.nz

Warranty information

Aqualine Offers a LIFETIME Warranty

Aqualine warranty all Spartan Brass fittings for water and gas, to be free from defects in material and workmanship.

Products sold under this limited warranty must:

1. Be installed according to general trade practices, using appropriate trade workmanship and according to the local building code(s).
2. Remain in their originally installed location.
3. Be applied for authorised applications and within authorised temperature and pressure limits, and
4. Show no evidence of tampering, mishandling, neglect, accidental damage, modification, or repair without the approval of Aqualine, damage caused by Acts of God or anyone other than Aqualine.

Life expectancy is in excess of 50 years

Appendix 1

This PTS covers the following products:

Model identification	Product description
	Hexagon Reducing Bush
B86	Hexagon Reducing Bush 8mm x 6mm Brass DR
B106	Hexagon Reducing Bush 10mm x 6mm Brass DR
B108	Hexagon Reducing Bush 10mm x 8mm Brass DR
B156	Hexagon Reducing Bush 15mm x 6mm Brass DR
B158	Hexagon Reducing Bush 15mm x 8mm Brass DR
B1510	Hexagon Reducing Bush 15mm x 10mm Brass DR
B2010	Hexagon Reducing Bush 20mm x 10mm Brass DR
B2015	Hexagon Reducing Bush 20mm x 15mm Brass DR
B2515	Hexagon Reducing Bush 25mm x 15mm Brass DR
B2520	Hexagon Reducing Bush 25mm x 20mm Brass DR
B3215	Hexagon Reducing Bush 32mm x 15mm Brass DR
B3220	Hexagon Reducing Bush 32mm x 20mm Brass DR
B3225	Hexagon Reducing Bush 32mm x 25mm Brass DR
B4015	Hexagon Reducing Bush 40mm x 15mm Brass DR
B4020	Hexagon Reducing Bush 40mm x 20mm Brass DR
B4025	Hexagon Reducing Bush 40mm x 25mm Brass DR
B4032	Hexagon Reducing Bush 40mm x 32mm Brass DR
B5015	Hexagon Reducing Bush 50mm x 15mm Brass DR
B5020	Hexagon Reducing Bush 50mm x 20mm Brass DR
B5025	Hexagon Reducing Bush 50mm x 25mm Brass DR
B5032	Hexagon Reducing Bush 50mm x 32mm Brass DR
B5040	Hexagon Reducing Bush 50mm x 40mm Brass DR
BC1510	Hexagon Reducing Bush 15mm x 10mm Chrome DR
BC2015	Hexagon Reducing Bush 20mm x 15mm Chrome DR
BC2520	Hexagon Reducing Bush 25mm x 20mm Chrome DR
	Blind Cap
BC6	Blind Cap 6mm Brass DR
BC10	Blind Cap 10mm Brass DR
BC15	Blind Cap 15mm Brass DR
BC20	Blind Cap 20mm Brass DR
BC25	Blind Cap 25mm Brass DR
BC32	Blind Cap 32mm Brass DR
BC40	Blind Cap 40mm Brass DR
BC50	Blind Cap 50mm Brass DR
BCC15	Blind Cap 15mm Chrome DR

BCC20	Blind Cap 20mm Chrome DR
BCC32	Blind Cap 32mm Chrome DR
BCC50	Blind Cap 50mm Chrome DR
	Backnut
BN15	Backnut Standard Flanged 15mm Brass DR
BN20	Backnut Standard Flanged 20mm Brass DR
BN25	Backnut Standard Flanged 25mm Brass DR
BN32	Backnut Standard Flanged 32mm Brass DR
BN40	Backnut Standard Flanged 40mm Brass DR
BN50	Backnut Standard Flanged 50mm Brass DR
BNC15	Backnut Standard Flanged 15mm Chrome DR
BNC20	Backnut Standard Flanged 20mm Chrome DR
BNC25	Backnut Standard Flanged 25mm Chrome DR
BNC32	Backnut Standard Flanged 32mm Chrome DR
BNC40	Backnut Standard Flanged 40mm Chrome DR
BNWF15	Backnut Wide Flanged 15mm Brass DR
BNWF20	Backnut Wide Flanged 20mm Brass DR
BNWF25	Backnut Wide Flanged 25mm Brass DR
BNWF32	Backnut Wide Flanged 32mm Brass DR
BNWF40	Backnut Wide Flanged 40mm Brass DR
BNWFC25	Backnut Wide Flanged 25mm Chrome DR
	Coupling Nut
CN15	Coupling Nut 15mm Brass DR
CN20	Coupling Nut 20mm Brass DR
CN25	Coupling Nut 25mm Brass DR
CN32	Coupling Nut 32mm Brass DR
CN40	Coupling Nut 40mm Brass DR
CN50	Coupling Nut 50mm Brass DR
CNC15	Coupling Nut 15mm Chrome DR
CNC20	Coupling Nut 20mm Chrome DR
CNC25	Coupling Nut 25mm Chrome DR
	Cistern Overflow
CO20	Cistern Overflow With Backnut 20mm Brass DR
COC20	Cistern Overflow With Backnut 20mm Chrome DR
	Brazing Bracket Elbow
EBB15	Brazing Bracket Elbow 15mm Brass DR

EBB1542	Male Extension Bracket Elbow 15mm x 42mm Brass DR
EBB20	Brazing Bracket Elbow 20mm Brass DR
EBB2015	Brazing Bracket Elbow 20mm x 15mm Brass DR
	PVC Bracket Elbow
EBPVC15	PVC Bracket Elbow 15mm Brass DR
EBPVC20	PVC Bracket Elbow 20mm Brass DR
EBPVCC15	Bracket Elbow PVC 15mm Chrome DR
	Female Elbow
EF15	Female Elbow 15mm Brass DR
EF20	Female Elbow 20mm Brass DR
EF25	Female Elbow 25mm Brass DR
EF32	Female Elbow 32mm Brass DR
EF40	Female Elbow 40mm Brass DR
EF50	Female Elbow 50mm Brass DR
EFC15	Female Elbow 15mm Chrome DR
EFC20	Female Elbow 20mm Chrome DR
	Male Elbow with Nuts
EM15	Male Elbow With Nuts 15mm Brass DR
EM20	Male Elbow With Nuts 20mm Brass DR
EM25	Male Elbow With Nuts 25mm Brass DR
EMNN15	Male Elbow No Nuts 15mm Brass DR
EMNN20	Male Elbow No Nuts 20mm Brass DR
EMNN25	Male Elbow No Nuts 25mm Brass DR
EMC15	Male Elbow With Nuts 15mm Chrome DR
EMC20	Male Elbow With Nuts 20mm Chrome DR
	Male and Female Elbow
EMF15	Male & Female Elbow With Nut 15mm Brass DR
EMF20	Male & Female Elbow With Nut 20mm Brass DR
EMF25	Male & Female Elbow With Nut 25mm Brass DR
EMFNN15	Male & Female Elbow No Nut 15mm Brass DR
EMFNN20	Male & Female Elbow No Nut 20mm Brass DR
EMFNN25	Male & Female Elbow No Nut 25mm Brass DR
EMFC15	Male & Female Elbow With Nut 15mm Chrome DR
EMFC20	Male & Female Elbow With Nut 20mm Chrome DR
	Bracket Elbow

EMFB15	Bracket Elbow Male & Female With Nut 15mm Brass DR
EMFB20	Bracket Elbow Male & Female With Nut 20mm Brass DR
EMFBC15	Bracket Elbow Male & Female With Nut 15mm Chrome DR
EMFBNN15	Bracket Elbow Male & Female No Nut 15mm Brass DR
	Watermain Swivel Ferrule
GKMSF15	Watermain Swivel Ferrule 15mm Brass DR
GKMSF20	Watermain Swivel Ferrule 20mm Brass DR
GKMSF25	Watermain Swivel Ferrule 25mm Brass DR
	Male Flanged to Crox Elbow
EMFD15	Male Elbow Flanged With Nut 15mm Brass DR
EMFD20	Male Elbow Flanged With Nut 20mm Brass DR
EMFDNN15	Male Elbow Flanged No Nut 15mm Brass DR
EMFDNN20	Male Elbow Flanged No Nut 20mm Brass DR
EMFDC15	Male Elbow Flanged With Nut 15mm Chrome DR
EMFDC20	Male Elbow Flanged With Nut 20mm Chrome DR
FHNH15	Flexi Hose Hexagon Nipple 15mm Brass DR
FHNH20	Flexi Hose Hexagon Nipple 20mm Brass DR
FHNHC15	Flexi Hose Hexagon Nipple 15mm Chrome DR
	Hose Plate Brazing
HPB15	Hose Plate Brazing 15mm Brass DR
HPB20	Hose Plate Brazing 20mm Brass DR
HPPVC15	Hose Plate PVC 15mm Brass DR
	Barrel Nipples
NB1050	Barrel Nipple 10mm x 50mm Long Brass DR
NB1075	Barrel Nipple 10mm x 75mm Long Brass DR
NB109100	Barrel Nipple 10mm x 100mm Long Brass DR
NB1532	Barrel Nipple 15mm x 32mm Long Brass DR
NB1535	Barrel Nipple 15mm x 35mm Long Brass DR
NB1540	Barrel Nipple 15mm x 40mm Long Brass DR
NB1545	Barrel Nipple 15mm x 45mm Long Brass DR
NB1550	Barrel Nipple 15mm x 50mm Long Brass DR
NB1555	Barrel Nipple 15mm x 55mm Long Brass DR
NB1560	Barrel Nipple 15mm x 60mm Long Brass DR
NB1565	Barrel Nipple 15mm x 65mm Long Brass DR
NB1570	Barrel Nipple 15mm x 70mm Long Brass DR
NB1575	Barrel Nipple 15mm x 75mm Long Brass DR
NB1580	Barrel Nipple 15mm x 80mm Long Brass DR

NB1590	Barrel Nipple 15mm x 90mm Long Brass DR
NB1595	Barrel Nipple 15mm x 95mm Long Brass DR
NB159100	Barrel Nipple 15mm x 100mm Long Brass DR
NB159150	Barrel Nipple 15mm x 150mm Long Brass DR
NB2032	Barrel Nipple 20mm x 32mm Long Brass DR
NB2035	Barrel Nipple 20mm x 35mm Long Brass DR
NB2040	Barrel Nipple 20mm x 40mm Long Brass DR
NB2045	Barrel Nipple 20mm x 45mm Long Brass DR
NB2050	Barrel Nipple 20mm x 50mm Long Brass DR
NB2055	Barrel Nipple 20mm x 55mm Long Brass DR
NB2060	Barrel Nipple 20mm x 60mm Long Brass DR
NB2065	Barrel Nipple 20mm x 65mm Long Brass DR
NB2070	Barrel Nipple 20mm x 70mm Long Brass DR
NB2075	Barrel Nipple 20mm x 75mm Long Brass DR
NB2080	Barrel Nipple 20mm x 80mm Long Brass DR
NB2085	Barrel Nipple 20mm x 85mm Long Brass DR
NB2090	Barrel Nipple 20mm x 90mm Long Brass DR
NB209100	Barrel Nipple 20mm x 100mm Long Brass DR
NB209150	Barrel Nipple 20mm x 150mm Long Brass DR
NB2540	Barrel Nipple 25mm x 40mm Long Brass DR
NB2550	Barrel Nipple 25mm x 50mm Long Brass DR
NB2560	Barrel Nipple 25mm x 60mm Long Brass DR
NB2565	Barrel Nipple 25mm x 65mm Long Brass DR
NB2570	Barrel Nipple 25mm x 70mm Long Brass DR
NB2580	Barrel Nipple 25mm x 80mm Long Brass DR
NB259100	Barrel Nipple 25mm x 100mm Long Brass DR
NB259150	Barrel Nipple 25mm x 150mm Long Brass DR
NB3250	Barrel Nipple 32mm x 50mm Long Brass DR
NB3260	Barrel Nipple 32mm x 60mm Long Brass DR
NB3270	Barrel Nipple 32mm x 70mm Long Brass DR
NB3280	Barrel Nipple 32mm x 80mm Long Brass DR
NB3290	Barrel Nipple 32mm x 90mm Long Brass DR
NB329100	Barrel Nipple 32mm x 100mm Long Brass DR
NB329150	Barrel Nipple 32mm x 150mm Long Brass DR
NB4050	Barrel Nipple 40mm x 50mm Long Brass DR
NB4060	Barrel Nipple 40mm x 60mm Long Brass DR
NB4080	Barrel Nipple 40mm x 80mm Long Brass DR
NB4090	Barrel Nipple 40mm x 90mm Long Brass DR
NB409100	Barrel Nipple 40mm x 100mm Long Brass DR
NB409150	Barrel Nipple 40mm x 150mm Long Brass DR

NB5050LB	Barrel Nipple 50mm x 50mm Long Brass DR
NB5060LB	Barrel Nipple 50mm x 60mm Long Brass DR
NB5065LB	Barrel Nipple 50mm x 65mm Long Brass DR
NB5070LB	Barrel Nipple 50mm x 70mm Long Brass DR
NB5080LB	Barrel Nipple Large Bore 50mm x 80mm Long Brass DR
NB5090LB	Barrel Nipple Large Bore 50mm x 90mm Long Brass DR
NB509100LB	Barrel Nipple Large Bore 50mm x 100mm Long Brass DR
NB509150LB	Barrel Nipple Large Bore 50mm x 150mm Long Brass DR
NBC1532	Barrel Nipple 15mm x 32mm Long Chrome DR
NBC1540	Barrel Nipple 15mm x 40mm Long Chrome DR
NBC1545	Barrel Nipple 15mm x 45mm Long Chrome DR
NBC1550	Barrel Nipple 15mm x 50mm Long Chrome DR
NBC1560	Barrel Nipple 15mm x 60mm Long Chrome DR
NBC1565	Barrel Nipple 15mm x 65mm Long Chrome DR
NBC1570	Barrel Nipple 15mm x 70mm Long Chrome DR
NBC1580	Barrel Nipple 15mm x 80mm Long Chrome DR
NBC159100	Barrel Nipple 15mm x 100mm Long Chrome DR
NBC159150	Barrel Nipple 15mm x 150mm Long Chrome DR
NBC2032	Barrel Nipple 20mm x 32mm Long Chrome DR
NBC2050	Barrel Nipple 20mm x 50mm Long Chrome DR
NBC2060	Barrel Nipple 20mm x 60mm Long Chrome DR
NBC2080	Barrel Nipple 20mm x 80mm Long Chrome DR
NBC209100	Barrel Nipple 20mm x 100mm Long Chrome DR
NBC209150	Barrel Nipple 20mm x 150mm Long Chrome DR
NBTOE509100	Barrel Nipple Thread One End 50mm x 100mm Long Brass DR
NBTOE509150	Barrel Nipple Thread One End 50mm x 150mm Long Brass DR
	Hexagon Nipple
NH6	Hexagon Nipple 6mm Brass DR
NH8	Hexagon Nipple 8mm Brass DR
NH10	Hexagon Nipple 10mm Brass DR
NH15	Hexagon Nipple 15mm Brass DR
NH20	Hexagon Nipple 20mm Brass DR
NH25	Hexagon Nipple 25mm Brass DR
NH32	Hexagon Nipple 32mm Brass DR
NH40	Hexagon Nipple 40mm Brass DR
NH50	Hexagon Nipple 50mm Brass DR
NHC15	Hexagon Nipple 15mm Chrome DR
NHC20	Hexagon Nipple 20mm Chrome DR

NHC25	Hexagon Nipple 25mm Chrome DR
	Half Hexagon Nipple
NHH15	Half Hexagon Nipple 15mm Brass DR
NHH20	Half Hexagon Nipple 20mm Brass DR
NHH25	Half Hexagon Nipple 25mm Brass DR
NHH32	Half Hexagon Nipple 32mm Brass DR
NHH40	Half Hexagon Nipple 40mm Brass DR
NHH50	Half Hexagon Nipple 50mm Brass DR
	Lug Nipple
NL15	Lug Nipple 15mm Brass DR
NLC15	Lug Nipple 15mm Chrome DR
	Hexagon Reducing Nipple
NR86	Hexagon Reducing Nipple 8mm x 6mm Brass DR
NR106	Hexagon Reducing Nipple 10mm x 6mm Brass DR
NR108	Hexagon Reducing Nipple 10mm x 8mm Brass DR
NR156	Hexagon Reducing Nipple 15mm x 6mm Brass DR
NR158	Hexagon Reducing Nipple 15mm x 8mm Brass DR
NR1510	Hexagon Reducing Nipple 15mm x 10mm Brass DR
NR2015	Hexagon Reducing Nipple 20mm x 15mm Brass DR
NR2015L	Hexagon Reducing Nipple 20mm x 15mm Brass DR
NR2515	Hexagon Reducing Nipple 25mm x 15mm Brass DR
NR2520	Hexagon Reducing Nipple 25mm x 20mm Brass DR
NR3215	Hexagon Reducing Nipple 32mm x 15mm Brass DR
NR3220	Hexagon Reducing Nipple 32mm x 20mm Brass DR
NR3225	Hexagon Reducing Nipple 32mm x 25mm Brass DR
NR4015	Hexagon Reducing Nipple 40mm x 15mm Brass DR
NR4020	Hexagon Reducing Nipple 40mm x 20mm Brass DR
NR4025	Hexagon Reducing Nipple 40mm x 25mm Brass DR
NR4032	Hexagon Reducing Nipple 40mm x 32mm Brass DR
NR5015	Hexagon Reducing Nipple 50mm x 15mm Brass DR
NR5020	Hexagon Reducing Nipple 50mm x 20mm Brass DR
NR5025	Hexagon Reducing Nipple 50mm x 25mm Brass DR
NR5032	Hexagon Reducing Nipple 50mm x 32mm Brass DR
NR5040	Hexagon Reducing Nipple 50mm x 40mm Brass DR
NRC1510	Hexagon Reducing Nipple 15mm x 10mm Chrome DR
NRC2015	Hexagon Reducing Nipple 20mm x 15mm Chrome DR
NRC2520	Hexagon Reducing Nipple 25mm x 20mm Chrome DR
	Hexagon Reducing Nipple Restrictor

NRST	Hexagon Nipple Restrictor 15mm x 3mm Brass DR
NRSTC	Hexagon Nipple Restrictor 15mm x 3mm Chrome DR
	Nippling Tube
NT15	Threaded Nippling Tube 15mm x 600mm Brass DR
NT20	Threaded Nippling Tube 20mm x 600mm Brass DR
NT25	Threaded Nippling Tube 25mm x 600mm Brass DR
NT32	Threaded Nippling Tube 32mm x 600mm Brass DR
NT40	Threaded Nippling Tube 40mm x 600mm Brass DR
NT50	Threaded Nippling Tube 50mm x 450mm Brass DR
DTNT15100	Threaded Nippling Tube 15mm x 100mm Brass DR
	Washing Machine Nipple
NWM20	Washing Machine Nipple 20mm x 15mm Brass Chrome DR
NWMC20	Washing Machine Nipple 20mm x 15mm Chrome DR
	Boiler Tee With Nuts
TB20	Boiler Tee With Nuts 20mm Barss DR
	Flat Head Plug
P6	Flat Head Plug 6mm Brass DR
P8	Flat Head Plug 8mm Brass DR
P10	Flat Head Plug 10mm Brass DR
P15	Flat Head Plug 15mm Brass DR
P20	Flat Head Plug 20mm Brass DR
PC15	Flat Head Plug 15mm Chrome DR
PC20	Flat Head Plug 20mm Chrome DR
PSH15	Square Head Plug 15mm Brass DR
PSH20	Square Head Plug 20mm Brass DR
P25	Square Head Plug 25mm Brass DR
P32	Square Head Plug 32mm Brass DR
P40	Square Head Plug 40mm Brass DR
P50	Square Head Plug 50mm Brass DR
	Shower Elbow
SE15C	Shower Elbow 15mm Chrome
	Male & Female Extension Socket
SMF6	Male & Female Hexagon Extension Socket 6mm Brass DR
SMF8	Male & Female Hexagon Extension Socket 8mm Brass DR
SMF10	Male & Female Hexagon Extension Socket 10mm Brass DR
SMF15	Male & Female Hexagon Extension Socket 15mm Brass DR

SMF20	Male & Female Hexagon Extension Socket 20mm Brass DR
SMF25	Male & Female Hexagon Extension Socket 25mm Brass DR
SMF32	Male & Female Hexagon Extension Socket 32mm Brass DR
SMF40	Male & Female Hexagon Extension Socket 40mm Brass DR
SMF50	Male & Female Hexagon Extension Socket 50mm Brass DR
SMFC15	Male & Female Hexagon Extension Socket 15mm Chrome DR
SMFC20	Male & Female Hexagon Extension Socket 20mm Chrome DR
SMFC1532	Male & Female Hexagon Extension Socket 15mm x 32mm Chrome DR
	Male & Female Reducing Socket
SMF0806	Male & Female Hexagon Reducing Socket 8mm x 6mm Brass
SMF1006	Male & Female Hexagon Reducing Socket 10mm x 6mm Brass
SMF1008	Male & Female Hexagon Reducing Socket 10mm x 8mm Brass
SMF1508	Male & Female Hexagon Reducing Socket 15mm x 8mm Brass
SMF1510	Male & Female Hexagon Reducing Socket 15mm x 10mm Bras
SMF2015	Male & Female Hexagon Reducing Socket 20mm x 15mm Brass
SMF2515	Male & Female Hexagon Reducing Socket 25mm x 15mm Brass
SMF2520	Male & Female Hexagon Reducing Socket 25mm x 20mm Brass
SMF1532	Male & Female Hexagon Reducing Socket 15mm x 32mm Brass
SMF3215	Male & Female Hexagon Reducing Socket 32mm x 15mm Brass
SMF3220	Male & Female Hexagon Reducing Socket 32mm x 20mm Brass
SMF3225	Male & Female Hexagon Reducing Socket 32mm x 25mm Brass DR
SMF4015	Male & Female Hexagon Reducing Socket 40mm x 15mm Brass DR
SMF4020	Male & Female Hexagon Reducing Socket 40mm x 20mm Brass DR
SMF4025	Male & Female Hexagon Reducing Socket 40mm x 25mm Brass
SMF4032	Male & Female Hexagon Reducing Socket 40mm x 32mm Brass
SMF5015	Male & Female Hexagon Reducing Socket 50mm x 15mm Brass
SMF5020	Male & Female Hexagon Reducing Socket 50mm x 20mm Brass
SMF5025	Male & Female Hexagon Reducing Socket 50mm x 20mm Brass
SMF5032	Male & Female Hexagon Reducing Socket 50mm x 32mm Brass
SMF5040	Male & Female Hexagon Reducing Socket 50mm x 40mm Brass
SMFC1510	Male & Female Hexagon Reducing Socket 15mm x 10mm Chrome DR
SMFC2015	Male & Female Hexagon Reducing Socket 20mm x 15mm Chrome DR
SMFC2515	Male & Female Hexagon Reducing Socket 25mm x 15mm Chrome DR
SMFC2520	Male & Female Hexagon Reducing Socket 25mm x 20mm Chrome DR
SMFC4015	Male & Female Hexagon Reducing Socket 40mm x 15mm Chrome DR

	Round Tubular Socket
ST6	Round Tubular Socket 6mm Brass DR
ST8	Round Tubular Socket 8mm Brass DR
ST10	Round Tubular Socket 10mm Brass DR
ST15	Round Tubular Socket 15mm Brass DR
ST20	Round Tubular Socket 20mm Brass DR
ST25	Round Tubular Socket 25mm Brass DR
ST32	Round Tubular Socket 32mm Brass DR
ST40	Round Tubular Socket 40mm Brass DR
ST50	Round Tubular Socket 50mm Brass DR
SR2015	Tubular Reducing Socket 20mm x 15mm Brass DR
STC15	Round Tubular Socket 15mm Chrome DR
STC20	Round Tubular Socket 20mm Chrome DR
STC25	Round Tubular Socket 25mm Chrome DR
STC40	Round Tubular Socket 40mm Chrome DR
	Hexagon Tubular Socket
STH15	Hexagon Tubular Socket 15mm Brass DR
STH20	Hexagon Tubular Socket 20mm Brass DR
STHC15	Hexagon Tubular Socket 15mm Chrome DR
	Female Tee
TF6	Female Tee 6mm Brass DR
TF8	Female Tee 8mm Brass DR
TF10	Female Tee 10mm Brass DR
TF15	Female Tee 15mm Brass DR
TF20	Female Tee 20mm Brass DR
TF25	Female Tee 25mm Brass DR
TF32	Female Tee 32mm Brass DR
TF40	Female Tee 40mm Brass DR
TF50	Female Tee 50mm Brass DR
TFC15	Female Tee 15mm Chrome DR
TFC20	Female Tee 20mm Chrome DR
	Bracket Tee
TMFB15	Bracket Tee Male & Female With Nuts 15mm Brass DR
TMFB20	Bracket Tee Male & Female With Nuts 20mm Brass DR
TMFB15NN	Bracket Tee Male & Female No Nuts 15mm Brass DR

TMFB20NN	Bracket Tee Male & Female No Nuts 20mm Brass DR
TMNN15	Male Tee No Nuts 15mm Brass DR
TMNN20	Male Tee No Nuts 20mm Brass DR
TMNN201520	Male Tee No Nuts 20mm x 15mm x 20mm Brass DR
TMNN25	Male Tee No Nuts 25mm Brass DR
WM3WT	Washing Machine Tap Adaptor 20mm x 15mm
	Crox Tee With Nuts
TM15	Male Tee With Nuts 15mm Brass DR
TM20	Male Tee With Nuts 20mm Brass DR
TM25	Male Tee With Nuts 25mm Brass DR
TM201520	Male Tee With Nuts 20mm x 15mm x 20mm Brass DR
TM202015	Male Tee With Nuts 20mm x 20mm x 15mm Brass DR
TMC15	Male Tee With Nuts 15mm Chrome DR
TMC20	Male Tee With Nuts 20mm Chrome DR
	Brazing Bracket Tee
TBB15	Brazing Bracket Tee 15mm Brass DR
	Shires Compression Fittings
SE15	Shires Male Elbow 15mm Brass DR
SE20	Shires Male Elbow 20mm Brass DR
SE25	Shires Male Elbow 25mm Brass DR
SE32	Shires Male Elbow 32mm Brass DR
SE40	Shires Male Elbow 40mm Brass DR
SE50	Shires Male Elbow 50mm Brass DR
SEF15	Shires Female Elbow 15mm Brass DR
SEF20	Shires Female Elbow 20mm Brass DR
SEF25	Shires Female Elbow 25mm Brass DR
SEF32	Shires Female Elbow 32mm Brass DR
SEF40	Shires Female Elbow 40mm Brass DR
SEF50	Shires Female Elbow 50mm Brass DR
SEFR2015	Shires Female Reducing Elbow 20mm x 15mm Brass DR
SEFR2520	Shires Female Reducing Elbow 25mm x 20mm Brass DR
SEM15	Shires Male Elbow 15mm Brass DR
SEM20	Shires Male Elbow 20mm Brass DR

SEM25	Shires Male Elbow 25mm Brass DR
SEM32	Shires Male Elbow 32mm Brass DR
SEM40	Shires Male Elbow 40mm Brass DR
SEM50	Shires Male Elbow 50mm Brass DR
SEZ15	Shires Stopend 15mm Brass DR
SEZ20	Shires Stopend 20mm Brass DR
SFC15	Shires Female Coupling 15mm Brass DR
SFC20	Shires Female Coupling 20mm Brass DR
SFC25	Shires Female Coupling 25mm Brass DR
SFC32	Shires Female Coupling 32mm Brass DR
SFC40	Shires Female Coupling 40mm Brass DR
SFC50	Shires Female Coupling 50mm Brass DR
SFR2015	Shires Female Reducng Coupling 20mm x 15mm Brass DR
SFR2520	Shires Female Reducng Coupling 25mm x 20mm Brass DR
SMC15	Shires Male Coupling 15mm Brass DR
SMC20	Shires Male Coupling 20mm Brass DR
SMC25	Shires Male Coupling 25mm Brass DR
SMC32	Shires Male Coupling 32mm Brass DR
SMC40	Shires Male Coupling 40mm Brass DR
SMC50	Shires Male Coupling 50mm Brass DR
SMR2015	Shires Male Reducing Coupling 20mm x 15mm Brass DR
SMR2520	Shires Male Reducing Coupling 25mm x 15mm Brass DR
SNT15	Shires Nut 15mm Brass DR
SNT20	Shires Nut 20mm Brass DR
SNT25	Shires Nut 25mm Brass DR
SNT32	Shires Nut 32mm Brass DR
SNT40	Shires Nut 40mm Brass DR
SNT50	Shires Nut 50mm Brass DR
SO15	Shires Olive 15mm Brass DR
SO20	Shires Olive 20mm Brass DR
SO25	Shires Olive 25mm Brass DR
SO32	Shires Olive 32mm Brass DR
SO40	Shires Olive 40mm Brass DR
SO50	Shires Olive 50mm Brass DR
SSC15	Shires Straight Coupling 15mm Brass DR
SSC20	Shires Straight Coupling 20mm Brass DR

SSC25	Shires Straight Coupling 25mm Brass DR
SSC32	Shires Straight Coupling 32mm Brass DR
SSC40	Shires Straight Coupling 40mm Brass DR
SSC50	Shires Straight Coupling 50mm Brass DR
SSE15	Shires Swivel Elbow 15mm Brass DR
SSR2015	Shires Straight Reducing Coupling 20mm x 15mm Brass DR
SSR2520	Shires Straight Reducing Coupling 25mm x 20mm Brass DR
STM15	Shires Male Tee 15mm Brass DR
STM20	Shires Male Tee 20mm Brass DR
STM25	Shires Male Tee 25mm Brass DR
STM32	Shires Male Tee 32mm Brass DR
STM40	Shires Male Tee 40mm Brass DR
STM50	Shires Male Tee 50mm Brass DR
STR201520	Shires Male Tee 20mm x 15mm x 20mm Brass DR
STR202015	Shires Male Tee 25mm x 20mm x 15mm Brass DR
STR252020	Shires Male Tee 25mm x 20mm x 20mm Brass DR
STR252025	Shires Male Tee 25mm x 20mm x 25mm Brass DR
STR252515	Shires Male Tee 25mm x 25mm x 15mm Brass DR