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PIRTEK Race Team
fluid transfer solutions
2013 British Touring Car
Champions



Radical Sports Cars



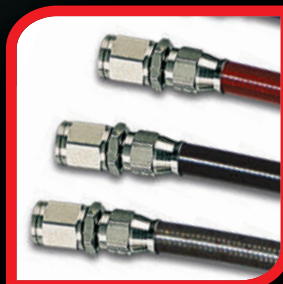
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Product Catalogue

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XRP

THE XTREME IN RACECAR PLUMBING

Always at the forefront of design with top quality hoses, adapters and fittings, and are probably the most technically advanced fluid delivery systems available today to the worlds motor sport arena.

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Air Jack Systems

Air Jacks

JLS Air Jacks

JLS Airjacks systems are used by Touring Car, Sports Car, Saloon Car and GT series race teams throughout the world motorsport markets.

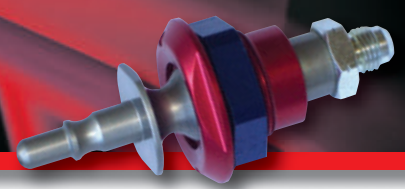
The JLS Airjacks are designed and manufactured to withstand the most challenging race operating conditions, and the use of light weigh low friction materials lifts the car with the least amount of effort and in the fastest possible time.

- Body: Constructed from Isothermal forged aluminium for the thinnest possible wall thickness.
- Piston Rod: Seamless heat-treated steel tube with a ground chrome finish outside diameter.
- Spring: Made to BS2803 standard from Chrome Spring Steel Zylon Coated.
- Bearing: Sintered Bronze.
- Foot: Machined from aerospace quality aluminium with a Hard Anodised finish.
- M14 x 1.5mm Inlet



Code	Overall Length (mm)	Cylinder Diameter (mm)	Stroke (mm)	Maximum Lift (kg)	Weight Bare (kg)	Lock Nut Weight (g)	WP (Bar)
AJ01	407	52	270	500	1.330	45	35
AJ02	305	52	180	500	1.035	45	35
AJ03	355	88	230	1500	1.795	50	35
AJ05	307	60	195	725	1.200	30	35
AJ06	340	60	230	725	1.300	30	35
AJ07	365	60	250	725	1.360	30	35

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium B = Brass



JLS Lance

The JLS Lance has been designed to work with ease of operation being paramount. It is constructed using high quality materials to ensure reliability, with an ideal working pressure of 35bar.

Code	
AJL01	Inlet 3/8" NPT

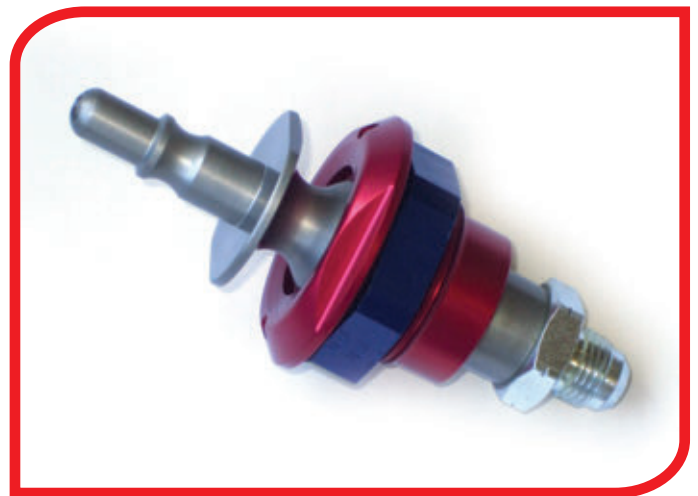


JLS Probe

The JLS Probe can be used to temporarily keep Air Jacks active without the need for a continuous air supply.

This unit is manufactured using special coated lightweight materials to ensure durability and smoothness of operation.

Code	
AJP01	Inlet – 6 JIC



JLS Air Jack Safety Support Stands

Air Jack Safety Support Stands are designed to be used when the piston rod is exhausted, it is an ideal Health & Safety device to prevent the piston rod from retracting in the event of an air supply failure.

Code	Air Jack Model	Material
SSJ01D	AJ01	D
SSJ02	AJ02	D



Air Jacks

Elephants Feet Airjack Stands

These stands are a perfect addition to the system if you need to lift the car to a second stage giving more working space under the car these are made from lightweight aluminium construction for ease of use.

Code	Air Jack Model
AJEF-01	AJ01
AJEF-02	AJ02



Elephant Feet Kits

Elephant Feet can also be supplied in kits of either 3 or 4 and are packed in a secure robust portable trolley for storage and transportation.

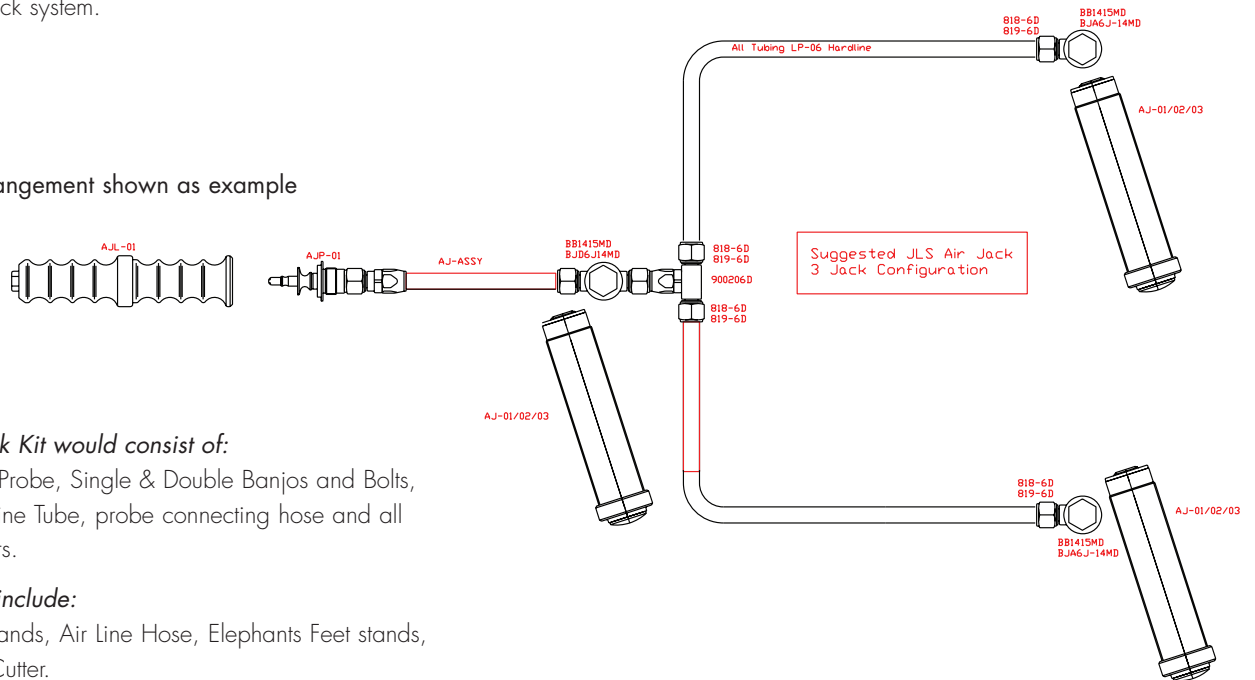
Code	Air Jack Model
AJEF - 01Kit3	AJ01
AJEF - 02Kit3	AJ02
AJEF - 01Kit4	AJ01
AJEF - 02Kit4	AJ02



Typical Air Jack System

JLS Motorsport can supply all of the necessary components to make up a 4 or 3 Airjack system.

3 x Air Jack Arrangement shown as example



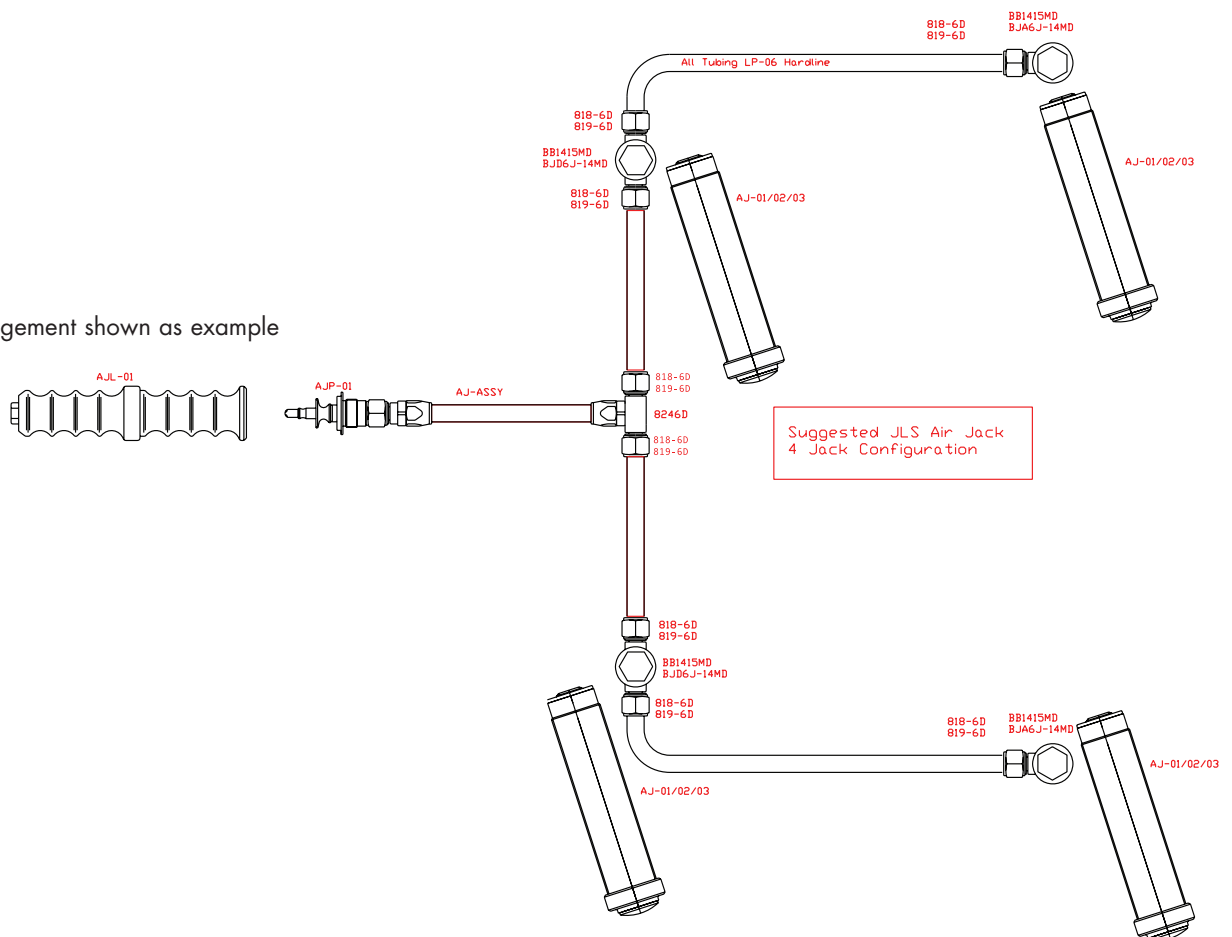
A typical Air Jack Kit would consist of:

Air Jacks, Lance, Probe, Single & Double Banjos and Bolts, Tee piece, Hard-line Tube, probe connecting hose and all necessary washers.

Optional extras include:

Safety Support Stands, Air Line Hose, Elephants Feet stands, Tube Flarer and Cutter.

4 x Air Jack Arrangement shown as example

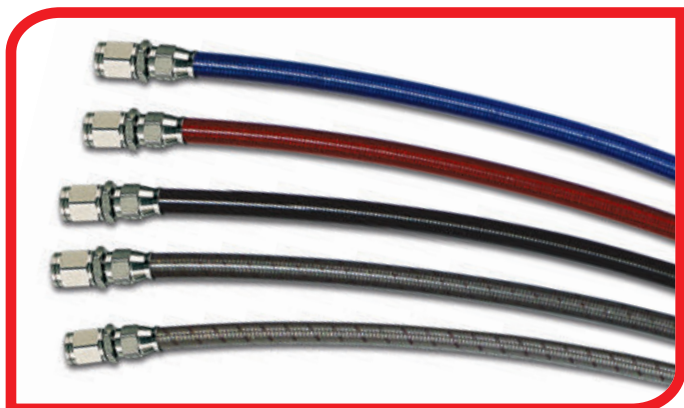


JLS Stainless Steel Braided Hose

Also available in crimp (swage) configuration

411 Series

Type 4011-3 PTFE Smooth Bore Hose



The exceptional resistance of PTFE to high temperatures, permeability, chemical attack, water resistance and its low friction properties make it an ideal choice for motorsport applications.

Other benefits include high working pressures and an extremely wide range of end fitting configurations. JLS Brake Hose 4011 has a PTFE core, with an improved closely controlled braid specification that provides a greatly increased resistance to volumetric expansion, resulting in a positive and responsive brake and clutch pedal.

For larger size hose on fuel and lubrication JLS PTFE hose also has many advantages. Because of its smooth bore, this series provides an uninterrupted passage for fuels and oils, thus eliminating the starvation and cavitation problems sometimes associated with convoluted hose when high flow rates are used. The stainless steel outer braid offers excellent resistance to heat, abrasion and mechanical damage and will not absorb oil and fuel into its braiding, thus eliminating weight gain.

Construction:

- Inner Core: Extruded smooth bore PTFE Resin.
- Reinforcement: One layer of 304 wire braid.
- Temperature Rating: -55°C to +232°C (-67°F to +45°F).
- Couplings: Re-useable or permanently attached.
- Applications: Brake, Clutch, Instrumentation, Fuel & Lubrication.
- PC: Clear extruded outer cover to prevent damage to the stainless steel braid.
- C: Carbon Lined to prevent static build-up.
- Colours: BE-Blue, RD-Red, PC-Clear, HB-Black.

Code	Type	I.D (mm)	O.D (mm)	Operating Pressure (PSI)	Min. Burst Pressure (PSI)
4011-03	Standard	3.2	6.4	3,000	12,000
4011-03-BE	Blue	3.2	6.7	3,000	12,000
4011-03-HB	Black	3.2	6.7	3,000	12,000
4011-03-PC	Clear	3.2	6.7	3,000	12,000
4011-03-RD	Red	3.2	6.7	3,000	12,000
4011-04	Standard	4.8	7.6	3,000	12,000
4011-06-C	Carbon	8.1	10.9	2,500	10,000



A Full Range of Hose Assemblies are available to Customer Requirements in Crimped configuration. Call for more information: Tel: 0121 525 5800

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

411 Series – Hose Fittings

Standard Banjo Series 2



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A15-3HC	3/8UNF, M10, 1/8 BSP.	3	HC
A15-3Z	3/8UNF, M10, 1/8 BSP.	3	Z
A15-3-4HC	7/16UNF	3	HC
A15-3-4Z	7/16UNF	3	Z
A15-4-3Z	3/8UNF, M10, 1/8 BSP.	4	Z
A15-4Z	7/16UNF	4	Z
A15-4MZ	M12	4	Z

Straight Extended Neck Banjo Bolt Series 1



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A08-3HC	M8 x 1.0	3	HC
A08-3Z	M8 x 1.1	3	Z
A11-3D	3/8UNF, M10, 1/8BSP	3	D
A11-3HC	3/8UNF, M10, 1/8BSP	3	HC
A11-3Z	3/8UNF, M10, 1/8BSP	3	Z

20° Extended Neck Banjo Series 1



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A12-3D	3/8UNF, M10, 1/8BSP	3	D
A12-3HC	3/8UNF, M10, 1/8BSP	3	HC
A12-3Z	3/8UNF, M10, 1/8BSP	3	Z

20° Side Extended Neck Banjo Series 1



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A14-3D	3/8UNF, M10, 1/8BSP	3	D
A14-3HC	3/8UNF, M10, 1/8BSP	3	HC
A14-3Z	3/8UNF, M10, 1/8BSP	3	Z

40° Extended Neck Banjo Series 1



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A13-3D	3/8UNF, M10, 1/8BSP	3	D
A13-3HC	3/8UNF, M10, 1/8BSP	3	HC
A13-3Z	3/8UNF, M10, 1/8BSP	3	Z

90° Extended Neck Banjo Series 1



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A82-3D	3/8UNF, M10, 1/8BSP	3	D
A82-3HC	3/8UNF, M10, 1/8BSP	3	HC
A82-3Z	3/8UNF, M10, 1/8BSP	3	Z

70° Extended Neck Banjo Series 1



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A83-3Z	3/8UNF, M10, 1/8BSP	3	Z

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

411 Series – Hose Fittings

Double Extended Neck Banjo Series 1



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A59-3D	3/8UNF, M10, 1/8BSP	3	D
A59-3HC	3/8UNF, M10, 1/8BSP	3	HC
A59-3Z	3/8UNF, M10, 1/8BSP	3	Z

Double Take Off Series 2



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A16-3HC	3/8UNF, M10, 1/8BSP	3	HC
A16-3Z	3/8UNF, M10, 1/8BSP	3	Z

45° Swept Female (Swivel)

Includes Multi-Seal Face



Code	Thread	Hose Dash Size	Material
A20-3Z	1/8 BSP	3	Z
A88-3D	3/8 JIC x 24 TPI	3	D
A88-3HC	3/8 JIC x 24 TPI	3	HC
A88-3Z	3/8 JIC x 24 TPI	3	Z
A88-3-2HC	M10 x 1.0	3	HC
A88-3-2Z	M10 x 1.0	3	Z
A88-4Z	7/16 JIC x 20 TPI	4	Z
A20-4Z	1/4 BSP	4	Z

90° Swept Female (Swivel)

Includes Multi-Seal Face



Code	Thread	Hose Dash Size	Material
A19-3Z	1/8 BSP	3	Z
A86-3D	3/8 JIC x 24 TPI	3	D
A86-3HC	3/8 JIC x 24 TPI	3	HC
A86-3Z	3/8 JIC x 24 TPI	3	Z
A86-3-2Z	M10 x 1.0	3	Z
A86-4Z	7/16 JIC x 20 TPI	4	Z
A19-4Z	1/4 BSP	4	Z

45° Block Female (Block Forged)

Includes Multi-Seal Face



Code	Thread	Hose Dash Size	Material
A581-3HC	3/8 JIC x 24 TPI	3	HC
A58-4HC	7/16 JIC x 20 TPI	4	HC
A58-6HC	9/16 JIC x 18 TPI	6	HC

90° Block Female (Block Forged)

Includes Multi-Seal Face



Code	Thread	Hose Dash Size	Material
A561-3HC	3/8 JIC x 24 TPI	3	HC
A56-4HC	7/16 JIC x 20 TPI	4	HC
A56-6HC	9/16 JIC x 18 TPI	6	HC

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

Bulkhead Male, Flare



Code	Thread	Hose Dash Size	Material
A30-3HC	3/8 UNF x 24 TPI	3	HC
A30-3Z	3/8 UNF x 24 TPI	3	Z
A31-3HC	M10 x 1.0	3	HC
A31-3Z	M10 x 1.0	3	Z

Banjo Bolt with Bleed Nipple Series 1



Code	Thread	Material
A135-3HC	3/8 UNF x 24 TPI	HC
A135-3Z	3/8 UNF x 24 TPI	Z
A136-3HC SGL	M10 x 1.0	HC
A136-3Z	M10 x 1.0	Z
A137-3HC	M10 x 1.0	HC
A137-3Z	M10 x 1.0	Z

Double Banjo Bolt with Bleed Nipple Series 1



Code	Thread	Material
A138-3HC	3/8 UNF x 24 TPI	HC
A138-3Z	3/8 UNF x 24 TPI	Z
A139-3HC	M10 x 1.0	HC
A139-3Z	M10 x 1.0	Z
A140-3HC DBL	M10 x 1.25	HC
A140-3Z	M10 x 1.25	Z

Double Banjo Bolts for Series 1 Banjos



Code	Thread	Material
A49-3D	3/8 UNF x 24 TPI	D
A49-3HC	3/8 UNF x 24 TPI	HC
A49-3Z	3/8 UNF x 24 TPI	Z
A50-3D	M10 x 1.0	D
A50-3HC	M10 x 1.0	HC
A50-3Z	M10 x 1.0	Z
A51-3D	M10 x 1.25	D
A51-3HC	M10 x 1.25	HC
A51-3Z	M10 x 1.25	Z

Single Banjo Bolts



Code	Thread	Material
A43-3D	3/8 UNF x 24 TPI	D
A43-3HC	3/8 UNF x 24 TPI	HC
A43-3Z	3/8 UNF x 24 TPI	Z
A44-3D	M10 x 1.0	D
A44-3HC	M10 x 1.0	HC
A44-3Z	M10 x 1.0	Z
A44-3-15Z	M10 x 1.5	Z, HC
A45-3D	M10 x 1.25	D
A45-3HC	M10 x 1.25	HC
A45-3Z	M10 x 1.25	Z
A46-3Z	1/8 BSP	Z
A47-4HC	7/16 UNF x 20 TPI	HC
A47-4Z	7/16 UNF x 20 TPI	Z
A47-424HC	7/16 x 24 TPI	HC
A48-4Z	M12 x 1.0	Z
A48-4-15Z	M12 x 1.5	Z
A141-3Z	M8 x 1.0	Z
A141-3-2Z	M8 x 1.25	Z
A147-424HC	7/16 x 24 TPI	HC

Series 2 - Extra Length.

A43-3LHC	3/8 UNF x 24 TPI	HC
A43-3LZ	3/8 UNF x 24 TPI	Z
A44-3LHC	M10 x 1.0	HC
A44-3LZ	M10 x 1.0	Z
A44-3-15LZ	M10 x 1.5	Z
A45-3LZ	M10 x 1.25	Z

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

411 Series – Hose Fittings

Female Bulkhead, Clip Fixing



Code	Thread	Hose Dash Size	Material
A85-3HC	M10 x 1.0 Inverted Flare	3	HC
A85-3Z	M10 x 1.0 Inverted Flare	3	Z
A84-3Z	3/8 UNF Inverted Flare	3	Z
A87-3Z	M10 x 1.0 Concave Flare	3	Z

Female Bulkhead, Locknut Fixing



Code	Thread	Hose Dash Size	Material
A38-3HC	3/8 UNF Concave Flare	3	HC
A38-3Z	3/8 UNF Concave Flare	3	Z
A39-3Z	M10 x 1.0 Concave Flare	3	Z
A40-3Z	M10 x 1.0 Inverted Flare	3	Z
A55-3Z	3/8 UNF Inverted Flare	3	Z

Fixed Female



Code	Thread	Hose Dash Size	Material
A91-3HC	M10 x 1.0 Concave Flare	3	HC
A91-3Z	M10 x 1.0 Concave Flare	3	Z

Male Flare



Code	Thread	Hose Dash Size	Material
A22-3HC	3/8 UNF x 24 TPI	3	HC
A22-3Z	3/8 UNF x 24 TPI	3	Z
A23-3D	M10 x 1.0	3	D
A23-3HC	M10 x 1.0	3	HC
A23-3Z	M10 x 1.0	3	Z
A24-3HC	M10 x 1.25	3	HC
A24-3Z	M10 x 1.25	3	Z

Male, Inverted Flare



Code	Thread	Hose Dash Size	Material
A26-3HC	3/8 UNF x 24 TPI	3	HC
A26-3Z	3/8 UNF x 24 TPI	3	Z
A27-3D	M10 x 1.0	3	D
A27-3HC	M10 x 1.0	3	HC
A27-3Z	M10 x 1.0	3	Z
A28-3D	M10 x 1.25	3	D
A28-3HC	M10 x 1.25	3	HC
A28-3Z	M10 x 1.25	3	Z
A37-3HC	1/8 BSP	3	HC
A37-3Z	1/8 BSP	3	Z

Olive



Code	Hose Dash Size	Material
A42-3D	3	D
A42-3HC	3	HC
A42-3B	3	B
A42-4B	4	B
A42-4D	4	D
A42-6B	6	B
A42-6D	6	D
A42-8B	8	B
A42-8D	8	D

Socket



Code	Hose Dash Size	Material
A41-3D	3	D
A41-3HC	3	HC
A41-3Z	3	Z
A41-4HC	4	HC
A41-4Z	4	Z
A41-6Z	6	Z
A41-8Z	8	Z

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

Straight Female (Swivel)



Code	Thread	Hose Dash Size	Material
A18-3Z	1/8 BSP	3	Z
A21-3D	3/8 JIC x 24 TPI	3	D
A21-3HC	3/8 JIC x 24 TPI	3	HC
A21-3Z	3/8 JIC x 24 TPI	3	Z
A21-3-2HC	M10 x 1.0	3	HC
A21-3-2Z	M10 x 1.0	3	Z
A21-3-3HC	M10 x 1.25	3	HC
A18-4Z	1/4 BSP	4	Z
A21-4HC	7/16 JIC x 20 TPI	4	HC
A21-4Z	7/16 JIC x 20 TPI	4	Z
A21-4D	7/16 JIC x 20 TPI	4	D
A21-6D	9/16 JIC x 18 TPI	6	D
A21-6HC	9/16 JIC x 18 TPI	6	HC
A21-6Z	9/16 JIC x 18 TPI	6	Z

Copper Washers



Code	Description
CW2	Washer 10mm-1/8BSP
CW7	Washer 7/16
CWD8	Washer 3/4
CWM12	Washer 12mm - 1/2"
CWM14	Washer 14mm
CWM16	Washer 16mm
CWM8 8mm	Washer 8mm
CWM8/16	Washer

Tee – Hose Connection

Male Thread Bracketed



Code	Point A	Point B	Point C	Hose Dash Size	Material
A104-3HC	Hose Connection	Hose Connection	3/8 JIC	3	HC
A114-3HC	3/8 JI	3/8 JIC	3/8 JIC	3	HC
A111-3HC	Hose Connection	Hose Connection	Hose Connection	3	HC

Tee – Male all Points



Code	Point A	Point B	Point C	Hose Dash Size	Material
A94-3B	1/8 BSP	1/8 BSP	1/8 BSP	3	B

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

411 Series – Adaptors: Calliper, Clutch and other applications

Flare to UNF, Metric & BSP



Code	Description	Material
815-3HC	-3 JIC x -3	HC
815-3Z	-3 JIC x -3	Z
815-3MZ	M10 x 1.0 x M10 x 1.0	Z
919-4-3Z	-4 JIC x -3 JIC	Z
A62-3Z	3/8 JIC Flare x 1/8 BSP	Z
A63-3Z	M10 x 1.0 Flare x 1/8 BSP	Z
A64-3Z	M10 x 1.25 Flare x 1/8 BSP	Z
A72-3HC	3/8 JIC Flare x 3/8 UNF	HC
A72-3Z	3/8 JIC Flare 3/8 UNF	Z
A73-3HC	3/8 JIC Flare x M10 1.0	HC
A73-3Z	3/8 JIC Flare x M10 x 1.0	Z
A74-3HC	3/8 JIC Flare x M10 x 1.25	HC
A74-3Z	3/8 JIC Flare x M10 x 1.25	Z
A89-3Z	3/8 JIC Flare x M12 x 1.0 Inverted	Z
A89-4Z	7/16 JIC Flare x M12 x 1.0 Inverted	Z

JIC (AN) Male x NPT Male



Code	Description	Material
816-3-02HC	-3 Male x 1/8 NPT Male	HC
816-3-02Z	-3 Male x 1/8 NPT Male	Z

Inverted Flare to BSP



Code	Description	Material
A65-3Z	3/8 UNF Inverted x 1/8 BSP	Z
A66-3Z	M10 x 1.0 Inverted x 1/8 BSP	Z
A69-3Z	M12 x 1.0 Inverted x 1/8 BSP	Z

JIC/Metric Bulkhead, Flare



Code	Description	Material
832-3D	-3 JIC x -3	D
832-3HC	-3 JIC x -3	HC
832-3Z	-3 JIC x -3	Z
A77-3Z	M10 x 1.0 x M10 x 1.0	Z

90° JIC Bulkhead, Flare



Code	Description	Material
833-3D	-3 JIC x -3 JIC	D
833-3HC	-3 JIC x -3 JIC	HC
833-3Z	-3 JIC x -3 JIC	Z

Locknut



Code	Description	Material
A52-3HC	3/8 UNF Locknut	HC
A52-3Z	3/8 UNF Locknut	Z
A53-3HC	M10 x 1.0 Locknut	HC
A53-3Z	M10 x 1.0 Locknut	Z

Female Bulkhead, Locknut



Code	Banjo Bolt Sizes Accepted	Hose Dash Size	Material
A54-3Z	5/8 x 26 TPI	3	Z

BSP Male Adaptor



Code	Description	Material
MM-02-02	1/8 BSP x 1/8 BSP	Z

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

Bulkhead Tee



Code	Point A	Point B	Point C	Material
834-3D	3/8 JIC	3/8 JIC	3/8 JIC	D
834-3HC	3/8 JIC	3/8 JIC	3/8 JIC	HC
834-3Z	3/8 JIC	3/8 JIC	3/8 JIC	Z

Banjo Adaptor

For Series 2 Banjo Bolts



Code	Description	Material
A150-3D	To suit Bolt Ø 3/8 UNF, M10 & 1/8 BSP	D
A150-3HC	To suit Bolt Ø 3/8 UNF, M10 & 1/8 BSP	HC
A150-3Z	To suit Bolt Ø 3/8 UNF, M10 & 1/8 BSP	Z
A152-3D	To suit Bolt Ø M12	D
A152-3HC	To suit Bolt Ø M12	HC
A152-3Z	To suit Bolt Ø M12	Z
A157-3HC	To suit Bolt Ø 7/16 UNF	HC
A157-3Z	To suit Bolt Ø 7/16 UNF	Z

Banjo Adaptors, Double Thread JIC (AN)

To suit Metric Bolts



Code	Thread	Banjo Ø	Material
BJD6J-14MD	-6 JIC (AN)	14mm	D

JIC (AN) Welded Boss



Code	Description	Material
WB-03JD	-3 Welded Boss	D
WB-04JD	-4 Welded Boss	D
WB-06JD	-6 Welded Boss	D
WB-08JD	-8 Welded Boss	D
WB-10JD	-10 Welded Boss	D
WB-12JD	-12 Welded Boss	D
WB-16JD	-16 Welded Boss	D

Banjo Bolts, Metric Thread



Code	Thread	Length	Banjo Ø	Material
BB1210MD	M12 x 1.00	Standard	12mm	D
BB1212MD	M12 x 1.25	Standard	12mm	D
BB1215MD	M12 x 1.50	Standard	12mm	D
BB1415MD	M14 x 1.50	Standard	14mm	D
BB1415LMD	M14 x 1.50	Extended	14mm	D
BB1415DMD	M14 x 1.50	Extended (Double Bolt)	14mm	D
BB1615MD	M16 x 1.50	Standard	16mm	D
BB1615LMD	M16 x 1.50	Extended	16mm	D
BB1815MD	M18 x 1.50	Standard	18mm	D

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

411 Series – Adaptors: Calliper, Clutch and other applications

Metric x JIC Male Adaptors



Code	Metric Thread	JIC Thread	Material
MM6J-121MD	M12 x 1.00	-6 JIC	D
MM6J-122MD	M12 x 1.25	-6 JIC	D
MM6J-125MD	M12 x 1.50	-6 JIC	D
MM6J-125MZ	M12 x 1.50	-6 JIC	Z
MM6J-14M	M14 x 1.50	-6 JIC	D
MM6J-14MZ	M14 x 1.50	-6 JIC	Z
MM6J-16MD	M16 x 1.50	-6 JIC	D
MM6J-16MZ	M16 x 1.50	-6 JIC	Z
MM6J-18MD	M18 x 1.50	-6 JIC	D
MM6J-18MZ	M18 x 1.50	-6 JIC	Z
MM6J-24MD	M24 x 1.50	-6 JIC	D
MM8J-14MD	M14 x 1.50	-8 JIC	D
MM8J-14MZ	M14 x 1.50	-8 JIC	Z
MM8J-16MD	M16 x 1.50	-8 JIC	D
MM8J-16MZ	M16 x 1.50	-8 JIC	Z
MM8J-18MD	M18 x 1.50	-8 JIC	D
MM8J-18MZ	M18 x 1.50	-8 JIC	Z
MM10J-16MD	M16 x 1.50	-10 JIC	D
MM10J-16MZ	M16 x 1.50	-10 JIC	Z
MM10J-18MD	M18 x 1.50	-10 JIC	D
MM10J-18MZ	M18 x 1.50	-10 JIC	Z
MM10J-20MD	M20 x 1.50	-10 JIC	D
MM10J-20MZ	M20 x 1.50	-10 JIC	Z
MM10J-22MD	M22 x 1.50	-10 JIC	D
MM10J-22MZ	M22 x 1.50	-10 JIC	Z
MM10J-24MD	M24 x 1.50	-10 JIC	D
MM12J-18MD	M18 x 1.50	-12 JIC	D
MM12J-20MD	M20 x 1.50	-12 JIC	D
MM12J-22MD	M22 x 1.50	-12 JIC	D
MM12J-24MD	M24 x 1.50	-12 JIC	D

Banjo Adaptor, Double



Code	Description	Material
A151-3D	Double Banjo Adaptor -3 JIC	D
A151-3HC	Double Banjo Adaptor -3 JIC	HC
A151-3Z	Double Banjo Adaptor -3 JIC	Z

BSP x JIC Male Adaptors



Code	BSP Thread	JIC Thread	Material
MM4-6JD	1/4 BSP	-6 JIC	D
MM4-6JZ	1/4 BSP	-6 JIC	Z
MM4-8JD	1/4 BSP	-8 JIC	D
MM4-8JZ	1/4 BSP	-8 JIC	Z
MM6-6JD	3/8 BSP	-6 JIC	D
MM6-6JZ	3/8 BSP	-6 JIC	Z
MM6-8JD	3/8 BSP	-8 JIC	D
MM6-8JZ	3/8 BSP	-8 JIC	Z
MM6-10JD	3/8 BSP	-10 JIC	D
MM6-10JZ	3/8 BSP	-10 JIC	Z
MM8-8JD	1/2 BSP	-8 JIC	D
MM8-8JZ	1/2 BSP	-8 JIC	Z
MM8-10JD	1/2 BSP	-10 JIC	D
MM8-10JZ	1/2 BSP	-10 JIC	Z
MM8-12JD	1/2 BSP	-12 JIC	D
MM8-12JZ	1/2 BSP	-12 JIC	Z
MM10-10JD	5/8 BSP	-10 JIC	D
MM10-10JZ	5/8 BSP	-10 JIC	Z
MM10-12JD	5/8 BSP	-12 JIC	D
MM10-12JZ	5/8 BSP	-12 JIC	Z
MM12-12JD	3/4 BSP	-12 JIC	D
MM12-12JZ	3/4 BSP	-12 JIC	Z

Banjo Adaptor, JIC (AN) Thread

To suit Metric Bolts



Code	Thread	Banjo Ø	Material
BJA4J-12MD	-4 JIC (AN)	12mm	D
BJA6J-12MD	-6 JIC (AN)	12mm	D
BJA6J-14MD	-6 JIC (AN)	14mm	D
BJA6J-16MD	-6 JIC (AN)	16mm	D
BJA8J-14MD	-8 JIC (AN)	14mm	D
BJA8J-16MD	-8 JIC (AN)	16mm	D

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium (check availability) B = Brass

Better Plumbing. Better Performance.



Full Swivel, Dual Angled Seats
Aerospace Style Nipple & Cutter
TiTech & Other Custom Anodized
Finishes Available

Contoured
Entrances for
Excellent Flow

Braided
Stainless Steel
CPE Hose

XRP branded
aluminum hose ends
and adapters are
made in the USA

Flexible
HS-79 PTFE Hose
Aramid Fiber Braid
4-ply Construction
Tight Bend Radius.
High Hoop Strength
High Vacuum
& Temp Rated

HS-79 Hose with
Black CSM Outer Coating
to Resist Abrasion

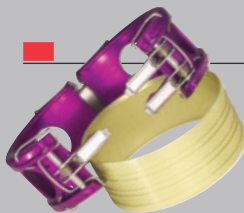
Quick Disconnect
Couplings with Triple Latch
Finger Snap Closures

Get the ConneXion.™



Top Quality Carburetor Kits
Demon, Holley, Braswell & QFT
Forged & Swept Tube Models
Choose From Red/Blue,
Black or Super Nickel
End Fittings

Clamshell Style
Quick Disconnect Coupling
Fast. Smart. Secure.



NEW In-Line Filter... Modular so changing fittings is easy
Anodized aluminum body (2.5" diameter; Max. length 11")
Use AN end fittings (-8 thru -20) or Clamshell Style
Quick Disconnect Couplings (call for sizes)
Fittings available with optional female
accessory port on the inlet side
for temp probes, etc.

Pleated
stainless element
60 sq. in. filtering area
45, 60, 75, 100 or 120
micron screens

Optional 15 psi
pressure differential
relief valve.
Heavy-duty cores
also available.



XRP®

THE XTREME IN RACECAR PLUMBING

jls
motor sport

Are the European
Master Distributors **17**

**REQUEST AN XRP
CATALOGUE FROM JLS**

A Tradition of Innovation
now over 20 years

Stainless Steel Braided CPE Race Hose Series

The Leno Mesh Layer:

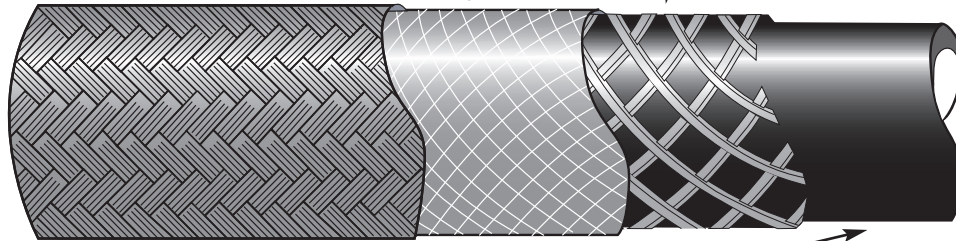
Embeds into the hose wall during the curing process, trapping the reinforcing braid and forming an extra-strength bond.

The Middle Layer:

A partial stainless reinforcing braid, embedded in the tube wall, resists pullout and vacuum collapse while increasing pressure capability.

Beware of lesser quality

hose with poor adhesion or weaker textile inner braid. There is a difference.



The Outer Layer:

A high tensile stainless steel outer braid with superior adhesion provides maximum pressure capability, abrasion protection and ease of assembly.

The Inner Layer:

High temp seamless CPE synthetic elastomer inner tube.

Manufactured using aerospace Rigid Mandrel Technology.

CPE Stainless Braided Racing Hose

CPE series hose is an extremely flexible full competition race hose. Externally the hose is protected from abrasion and corrosion by its 304 HC outer braiding. The compact nature of the braid construction ensures a tight bend radius, an important feature often demanded by many motorsport applications. Its high grade synthetic rubber innercore provides excellent compatibility with fuels, oils, coolants, lubricants, hydrocarbons and alcohol's.

A large selection of end fittings are available for CPE hose, details of which can be found on the following pages.

Also available to suit all hose is our "XRP Fire Sleeve" for added protection against heat and abrasive surfaces.

- Inner Core: Seamless synthetic Rubber compound
- Re-enforcement: Stainless Steel wire braid consisting of partial inner braid & full cover outer braiding to AISI 304
- Temperature Range: -54°C to +150°C (-65°F to 300°F)
- Fittings: Re-usable
- Applications: Fuel, Oil & Coolant Systems
- Due to continual hose development specification may vary from above

Code	Internal Diameter (mm)	Outside Diameter (mm)	Operation G Pressure (mm)	Min. Burst Pressure E (PSI)	Minimum Bend Radius (mm)	Weight (g/m)
300004	5.5	11.6	1000	6000	50	169
300006	9	14.5	1000	6000	65	230
300008	11	16.8	1000	5000	90	250
300010	14	20.8	1000	5000	100	305
300012	17.5	24.3	1000	4000	115	420
300016	22	29.7	750	3000	140	560
300020	29	36.8	500	2000	200	720



Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium B = Brass

CPE – Hose Fittings

2024 aluminium alloy swivel nuts and cutters T851 heat-treated for longer life.

Exclusive massive double angled seat area provides line contact sealing. Eliminates torque-induced cracking common to lightweight flared tube designs.

Stainless steel lock wires, dry film lubed with moly to prevent galling.

Our exclusive dual radial Viton O-Ring seals. (Seals #2 and #3)

Recessed area on nipple for truer fit.

Tapered nipple is easy to assemble. (Seal #1)

Piloted nipple and cutter keeps hose concentric to cutter for a better seal.

Cutter and nipple separates wire braid for maximum hose retention.

6061-T651 aluminium sockets prevent stress cracking.

US Patent No 5,340,168.

XRP Performance Hose Fittings

XRP Performance Alloy Hose Fittings are manufactured in the USA to a design based upon the aerospace 'cutter' format. This style of fitting was designed by the Aircraft & Military Industries to ensure perfect sealing when the fitting is assembled and also to prevent 'blow off' when a hose assembly is working under full pressure.

The fittings are manufactured from specially heat treated 2024-T851 (to QQA225/6) and 6061-T651 (to QQA225/8) alloys.

XRP Dual Sealing adjustable alloy hose fittings are the optimum choice for the professional motorsport team. They are manufactured from the same high specification alloys and possess all the same features as the XRP standard range, but Dual Sealing fittings incorporate an exclusive two stage Viton 'O'-Ring sealing design. When a hose assembly is made using Dual Sealing fittings, full 360° adjustability is available without fluid seepage that sometimes occurs in other adjustable fitting designs.

The XRP Dual Sealing System is available in swept fittings (45° through to 180°) and also in block forged (45° and 90°).

- Swivel nuts & cutters manufactured from 2024 Aluminium Alloy specially heat treated to T851 to provide higher strength thread durability while minimising cutter collapse
- Cutter & nipple design separates wire braid gripping area from the lip seal to provide maximum hose retention and sealing
- Exclusive Dual Viton 'O'-Ring seals for fail safe sealing and adjustability
- Piloted nipple & cutter reduces wobble and prevent uneven cutting of the hose wall during assembly
- Stainless Steel lock wires, dry film lubed with moly to prevent galling
- Recessed area on nipple to allow easier disassembly and maximum reusability of hose ends
- Tapered nipple design to ease assembly and prevent cutting of the hose bore
- Sockets manufactured from 6061-T651 Aluminium to prevent stress cracking

XRP
THE XTREME IN RACECAR PLUMBING

XRP® ProPLUS Race Hose and XRP® Race Crimp Hose Ends™

NEW XRP® RACE CRIMP HOSE ENDS™

Black is "in" and it is our standard color; Blue and Super Nickel are options. Hundreds of styles are available. Bent tube fixed, double O-Ring sealed swivels and ORB ends. Reducers and expanders in both 37° JIC and Clamshell Quick Disconnects. Your choice of full hex or lightweight turned down swivel nuts.

PATENTED MANUFACTURING PROCESS

Creates a full PTFE smooth-bore hose with external convolutions only on the outside of the tube wall, where they belong, not on the inside where they can impede flow.

ANTI-STATIC PTFE COMPATIBLE WITH ALL AUTOMOTIVE FLUIDS AND FUELS

A highly compressed, non-porous matrix that is resistant to fuel permeation and diffusion.

SMOOTH INTERNAL TUBE

For superior flow rates, minimum pressure drops AND ease of clean-out, not possible in convoluted hoses.

EXTERNAL CONVOLUTIONS

Promotes hoop strength for vacuum resistance and supports tight bend flexibility.

CRIMP COLLARS Two styles allow XRP Race Crimp Hose Ends™ to be used on the ProPLUS Race Hose™, Stainless braided CPE race hose, XR-31 Black Nylon braided CPE hose and some convoluted PTFE hoses currently on the market. Black, Gold and Super Nickel.

YOUR CHOICE OF OUTER BRAIDS

XS: Stainless Steel
XM: Lightweight XtraTemp Monofilament
XK: Aramid Fiber
XT: Tube only for inside fuel cells

XRP® ProPLUS RACE HOSE™ AND XRP® RACE CRIMP HOSE END™ ASSEMBLIES

are sized to compete directly with convoluted hose on both inside diameter and weight while allowing for a tighter bend radius and greater flow per size. Ten sizes from -4 PLUS through -20. Additional "PLUS" sizes allow for even larger inside hose diameters as an option.

XRP® ProPLUS Race Hose™

THE EVOLUTION IN FLUID HORSEPOWER™ A hose system utilizing a carbon impregnated anti-static PTFE inner tube that is manufactured using a patented process that creates a smooth interior wall surface and convolutions only on the outside of the tube wall where they belong for increased flexibility and vacuum resistance. There are no convolutions on the inside where they can impede flow by causing turbulence and trapping contamination that can be very difficult to remove.

XRP® ProPLUS™ Race Hose has been designed and sized to

directly target fully convoluted PTFE hose products in weight and bend radius while allowing for much greater flow rates due to the smooth inside tube wall. The smooth inside bore allows non-turbulent laminar flow capabilities and a hose assembly that can be cleaned out much easier than fully convoluted hoses.

Ten sizes in the range from -4 PLUS through -20. The PLUS sizes allow even larger I.D. hose options between normal size ranges to choose from. A choice of three braid options: XS Stainless Steel, XM XtraTemp Monofilament, XK Aramid Fiber and XT Tube (with

XRP®
THE XTREME IN RACECAR PLUMBING



no braid) for use inside fuel cells and vent lines. The anti-static PTFE tube is compatible with all automotive fluids and fuels including: Racing Gasoline, Ethanol, Methanol, Nitromethane and Flex-Fuel blends. XRP® ProPLUS Race Hose™ is much more resistant to permeation of liquids or gases than other PTFE hose products, due to its highly compressed, non-porous PTFE matrix.

Operating Temperature of ProPLUS XS -65° F to +500° F. Maximum Operating Pressure is reduced at temperatures over 160° C (320° F). ProPLUS XS is fully vacuum resistant up to 130° C (266° F). Consult with XRP, Inc. for information about vacuum reduction above these temperatures and for performance specifications on other braid coverings.

XS Grades – The Maximum Operating Pressure listed in the table should be reduced by 1% for each 1° C above 160° C (1% for each 1.8° F above 320° F) up to a maximum of 260° C (500° F).

XM and XK Grades – The Maximum Operating Pressure listed in the table should be reduced by 1% for each 1° C above 130° C (1% for each 1.8° F above 266° F) up to a maximum of 180° C (356° F). See the full line XRP® ProPLUS Race Hose™ product brochure for complete details.

XRP® ProPLUS Race Hose™ does NOT meet the SAE specifications for Coast Guard approval and should not be used for marine use requiring such ratings.

XRP® ProPLUS Race Hose™ is for fluid flow transfer use and not for pressure side power steering use or hydraulic impulse applications.

XRP® Race Crimp Hose Ends™

XRP introduces a new lightweight crimp-on hose end series that utilizes one hose end design and two different crimp collar designs to assemble with four different hose types. The XRP® Race Crimp Hose End™ series consists of virtually every hose end style available in our other hose end products and more. In fact, there are more than 100 different configurations of ends available in most sizes. Use one style crimp collar to assemble with our Stainless Steel braided CPE Race Hose as well as our Black Nylon braided CPE XR-31 Hose. Use a different crimp collar to assemble with XRP CT Race Hose and certain other convoluted PTFE hose products as well as the all new XRP® ProPLUS Race Hose™ series.

One hose end, two crimp collars, four hose types. Available in straights, all normal angles in bent tube fixed and bent tube double

Size	Hose Part Number	Hose I.D. (inches)	Hose O.D. (inches)	Min Bend Radius (inches)	Maximum Operating Pressure	Weight (LBS. per FT.)
-4 PLUS	333004XS	.270"	.378"	.75"	1280 psi	.062
	333004XM	.270"	.378"	.75"	250 psi	.042
	333004XK	.270"	.378"	.75"	900 psi	.038
	333004XT	.270"	.354"	1.50"	60 psi	.027
-6	333006XS	.312"	.420"	.75"	1220 psi	.084
	333006XM	.312"	.420"	.75"	250 psi	.052
	333006XK	.312"	.420"	.75"	850 psi	.050
	333006XT	.312"	.394"	1.50"	60 psi	.037
-6 PLUS	333007XS	.394"	.534"	1.00"	1160 psi	.107
	333007XM	.394"	.534"	1.00"	250 psi	.066
	333007XK	.394"	.534"	1.00"	810 psi	.067
	333007XT	.394"	.492"	2.00"	60 psi	.047
-8	333008XS	.465"	.607"	1.25"	1000 psi	.103
	333008XM	.465"	.607"	1.25"	250 psi	.064
	333008XK	.465"	.607"	1.25"	725 psi	.067
	333008XT	.465"	.555"	2.50"	60 psi	.051
-10	333010XS	.536"	.690"	1.50"	870 psi	.151
	333010XM	.536"	.690"	1.50"	250 psi	.064
	333010XK	.536"	.690"	1.50"	600 psi	.094
	333010XT	.536"	.640"	3.00"	58 psi	.074
-12	333012XS	.658"	.843"	2.00"	730 psi	.226
	333012XM	.658"	.843"	2.00"	250 psi	.090
	333012XK	.658"	.843"	2.00"	510 psi	.137
	333012XT	.658"	.787"	4.00"	44 psi	.108
-12 PLUS	333013XS	.780"	.953"	2.50"	610 psi	.257
	333013XM	.780"	.953"	2.50"	250 psi	.128
	333013XK	.780"	.953"	2.50"	430 psi	.158
	333013XT	.780"	.913"	5.00"	44 psi	.120
-16	333016XS	.875"	1.080"	2.75"	600 psi	.271
	333016XM	.875"	1.080"	2.75"	250 psi	.181
	333016XK	.875"	1.080"	2.75"	410 psi	.192
	333016XT	.875"	1.030"	5.50"	40 psi	.161
-16 PLUS	333017XS	1.040"	1.250"	3.00"	580 psi	.362
	333017XM	1.040"	1.250"	3.00"	250 psi	.215
	333017XK	1.040"	1.250"	3.00"	400 psi	.237
	333017XT	1.040"	1.193"	6.00"	29 psi	.180
-20	PLEASE CALL FOR SPECIFICATIONS					

O-Ring sealed full swivel. Styles in 37° JIC, clamshell, O-Ring Boss, expander and reducer jump sizes, metrics and specials.

These hose ends are available with our standard Full hex nuts or lighter weight Turned Down (TD) hex nuts. Hose end color options: Black, Blue and Super Nickel. Crimp collar color options: Black, Blue, Super Nickel and bare aluminum. Call for ordering and part number information.



Double O-Ring Sealed Full Swivel



Fixed Non-Swivel



ORB O-Ring Boss (Swivel Shown)



Jump Size Reducers (Swivel Shown)



Jump Size Expanders (Non-Swivel Shown)



Clamshell Quick Disconnects (Swivel Shown)

Performance Hose Ends

XRP Performance Hose Ends are designed with the aviation nipple and cutter design, to prevent blow off and leakage problems that can be encountered by other styles of hose ends when assembled with stainless steel braided hose. To many top race teams, no other style is acceptable. XRP Performance Hose Ends are manufactured from specially heat treated 2024-T851 aluminium per QQA-225/6 and 6061-T651 aluminium per QQA-225/8 as specified for these hose fittings. Manufactured in XRP's facility in the U.S.A., every Performance Hose End is race-ready when it reaches our customers. All hose ends are aluminium unless otherwise noted. All hose ends are JIC 37°. Hose assemblies consisting of two angled non-swivel hose ends must be orientated to the correct angular position during hose assembly. Double swivel hose ends allow for angular orientation after hose assembly. Compatible with XRP Stainless Steel CPE race hose and XR-31 hose.

Straight



Anodized	Super Nickel	Ti Tech	Black	Dash Size
130004(Steel)*	–	130004TT(Steel)*	–	4
100004	100004SN	100004TT	100004BB	4
100006	100006SN	100006TT	100006BB	6
100008	100008SN	100008TT	100008BB	8
100010	100010SN	100010TT	100010BB	10
100012	100012SN	100012TT	100012BB	12
100016	100016SN	100016TT	100016BB	16
100020	100020SN	100020TT	100020BB	20
100011	100011SN	100011TT	100011BB	12 hose to 10 nut
100013	100013SN	100013TT	100013BB	12 hose to 16 nut
100017	100017SN	100017TT	100017BB	16 hose to 12 nut

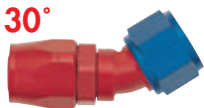
*All -4 steel hose ends have nickel plated steel bodies with red aluminium sockets.
 – These are nickel plated steel fittings with black anodized nut and ti-tech sockets.

Double Swivel, Triple Sealed Hose Ends

Patented aviation-style nipple and cutter design, to prevent blow off and leakage. Triple sealed. Design allows for full angular positioning after assembly – see illustration US Patent No 5,340,168 on page 19. **Fittings are available in anodized aluminium, Super Nickel finish, Black anodized and Ti-Tech finishes – SIMPLY THE BEST.** These fittings feature the latest in racing plumbing. All hose ends are JIC 37°. Custom ends and metrics are available, compatible with XRP's Stainless Steel CPE race hose and XR-31 hose.

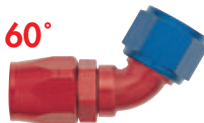
*Call for details
& availability*

30°



Anodized	Super Nickel	Dash Size
103004**	103004SN**	4
203006	203006SN	6
203008	203008SN	8
203010	203010SN	10
203012	203012SN	12
203016	203016SN	16
103020**	103020SN**	20

60°



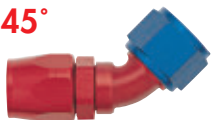
Anodized	Super Nickel	Dash Size
106004**	106004SN**	4
206006	206006SN	6
206008	206008SN	8
206010	206010SN	10
206012	206012SN	12
206016	206016SN	16
106020**	106020SN**	20

120°



Anodized	Super Nickel	Dash Size
112004**	112004SN**	4
212006	212006SN	6
212008	212008SN	8
212010	212010SN	10
212012	212012SN	12
212016	212016SN	16
112020**	112020SN**	20

45°



Anodized	Super Nickel	Dash Size
104504**	104504SN**	4
204506	204506SN	6
204508	204508SN	8
204510	204510SN	10
204512	204512SN	12
204516	204516SN	16
104520**	104520SN**	20
204511	204511SN	12 hose to 10 nut
204513	204513SN	12 hose to 16 nut
204517	204517SN	16 hose to 12 nut

90°



Anodized	Super Nickel	Dash Size
109004**	109004SN**	4
209006	209006SN	6
209008	209008SN	8
209010	209010SN	10
209012	209012SN	12
209016	209016SN	16
109020**	109020SN**	20
209011	209011SN	12 hose to 10 nut
209013	209013SN	12 hose to 16 nut
209017	209017SN	16 hose to 12 nut

150°



Anodized	Super Nickel	Dash Size
115004**	115004SN**	4
215006	215006SN	6
215008	215008SN	8
215010	215010SN	10
215012	215012SN	12
215016	215016SN	16
115020**	115020SN**	20

180° See Page 23

**All size 4 and 20 hose ends are non-swivel.

Technical information on XR-31 hose can be found on page 22 or www.jlsmotorsport.com and follow the XRP link.

T: +44 (0)121 525 5800 F: +44 (0)121 525 4833 www.jlsmotorsport.com



These reusable nipple-and-cutter style hose ends are compatible with our Stainless Steel CPE race hose and XR-31 hose. XR-31 looks especially handsome when paired with either our Ti-Tech finish (with the look of titanium) or our black anodized end fittings. **All the hose ends shown are also available in RED/BLUE anodized aluminium and super nickel finish. SIMPLY THE BEST.** All hose ends are JIC 37°, triple sealed and double swivel to allow for full angular positioning after assembly. Huge double-angled seat area provides line contact sealing and eliminates torque-induced cracking common to lightweight flared tube designs. 2024 aluminium alloy swivel nuts and cutters are T851 heat-treated for longer life. 6061-T651 aluminium sockets prevent stress cracking.

30°



Ti Tech	Black	Dash Size
133004TT(steel)~	—	4
103004TT**	103004BB**	4
203006TT	203006BB	6
203008TT	203008BB	8
203010TT	203010BB	10
203012TT	203012BB	12
203016TT	203016BB	16
103020TT**	103020BB**	20

60°



Ti Tech	Black	Dash Size
136004TT(steel)~	—	4
106004TT**	106004BB**	4
206006TT	206006BB	6
206008TT	206008BB	8
206010TT	206010BB	10
206012TT	206012BB	12
206016TT	206016BB	16
106020TT**	106020BB**	20

120°



Ti Tech	Black	Dash Size
112004TT(steel)~	—	4
112004TT**	112004BB**	4
212006TT	212006BB	6
212008TT	212008BB	8
212010TT	212010BB	10
212012TT	212012BB	12
212016TT	212016BB	16
112020TT**	112020BB**	20

45°



Ti Tech	Black	Dash Size
134504TT(steel)~	—	4
104504TT**	104504BB**	4
204506TT	204506BB	6
204508TT	204508BB	8
204510TT	204510BB	10
204512TT	204512BB	12
204516TT	204516BB	16
104520TT**	104520BB**	20
204511TT	204511BB	12 hose to 10 nut
204513TT	204513BB	12 hose to 10 nut
204517TT	204517BB	16 hose to 10 nut

90°



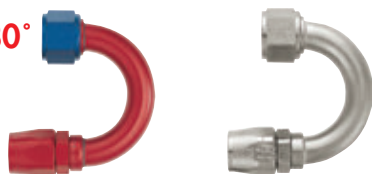
Ti Tech	Black	Dash Size
139004TT(steel)~	—	4
109004TT**	109004BB**	4
209006TT	209006BB	6
209008TT	209008BB	8
209010TT	209010BB	10
209012TT	209012BB	12
209016TT	209016BB	16
109020TT**	109020BB**	20
209011TT	209011BB	12 hose to 10 nut
209013TT	209013BB	12 hose to 10 nut
209017TT	209017BB	16 hose to 10 nut

150°



Ti Tech	Black	Dash Size
131504TT(steel)~	—	4
115004TT**	115004BB**	4
215006TT	215006BB	6
215008TT	215008BB	8
215010TT	215010BB	10
215012TT	215012BB	12
215016TT	215016BB	16
115020TT**	115020BB**	20

180°



Anodized	Super Nickel	Dash Size
118004**	118004SN**	4
218006	218006SN	6
218008	218008SN	8
218010	218010SN	10
218012 (Std)	218012SN	12†
218512 (Short)	218512SN	12†
218016	218016SN	16
118020**	118020SN**	20

† Standard radius is 1-1/2" Short radius is 1"



**All size 4 and 20 hose ends are non-swivel.
~ These are nickel plated steel fittings with black anodized nut and ti-tech sockets.

Call for details & availability

180°



Ti Tech	Black	Dash Size
131804TT(steel)~	—	4
118004TT**	118004BB**	4
218006TT	218006BB	6
218008TT	218008BB	8
218010TT	218010BB	10
218012TT	218012BB	12
218016TT	218016BB	16
118020TT**	118020BB**	20

XRP Hose Finishers

XRP anodized aluminium hose finishers add cosmetic appeal to your engine. A unique design ensures a secure placement of the worm gear clamp. Machined from the finest aluminium alloy, our hose finishers are available in three anodized aluminium colors and our new super nickel finish. Hose finishers are supplied with a stainless steel worm gear clamp pre-installed.



RED

BLUE

SUPER NICKEL

BLACK

Hose Size	I.D.	Hex	Hex	Hex	Hex
4	½"	550104	550204	550304	550404
6	¾"	550106	550206	550306	550406
8	1 ¼"	550108	550208	550308	550408
10	7/8"	550110	550210	550310	550410
12	1"	550112	550212	550312	550412
14	1 ½"	550114	550214	550314	550414
16	1 ¾"	550116	550216	550316	550416

XR-31 Lightweight Performance Hose

Tough, lightweight XR-31 hose is a sure bet for racers and street performance enthusiasts. It's versatile, flexible, easy to cut and assemble with a number of attractive characteristics including: excellent temperature resistance -40°C to 148°C (-40°F to +300°F), high tube strength, tight bend radius capable for tight engine compartments. **3-ply construction** consists of full coverage Nylon-bonded outer braid for abrasion-resistance, partial coverage embedded braid middle layer, and CPE synthetic rubber inner tube for great flow and high-temperature resistance. XR-31 hose is **made in the U.S.A.** XR-31 offers a significant weight-savings over stainless steel braided hose.

Because today's fuels can contain a wide variety of unpublished additives, it is not possible for us to accurately predict compatibility of the inner liner of XR-31 hose with any specific fuel. We recommend our HS-79 PTFE-lined hose, if in doubt. XR-31 hose is not compatible with brake fluid.

NHRA Accepted Woven Hose



XR-31 3-PLY Construction

Size	Hose I.D. (Inches)	(mm)	Bulk Hose • (specify length)
4	7/32"	5.6	3104-00
6	1 1/32"	8.75	3106-00
8	7/16"	11.1	3108-00
10	9/16"	14.3	3110-00
12	1 1/16"	17.5	3112-00
16	7/8"	22.25	3116-00
20	1 1/8"	28.6	3120-00

**INNER LAYER: FAST FLOWING
CPE SYNTHETIC RUBBER TUBE
-40 TO +300F TEMP. RANGE**

**MIDDLE LAYER:
EMBEDDED
BRAID**



**OUTER LAYER: FULL COVERAGE NYLON OUTER BRAID. ABRASION-RESISTANT
AND EXTREMELY FLEXIBLE FOR LONG LIFE AND EASE OF INSTALLATION**

Call for details & availability

Technical Specifications – Temperature Range:

Size	Hose I.D. (Inches)	(mm)	Hose O.D. (Inches)	(mm)	Max Operating Pressure (PSI)	(Bar)	Burst Pressure (PSI)	(Bar)	Weight (Ft/Lbs)	(Kg/m)	Minimum Bend Radius (Inches)	(mm)
4	0.22"	5.6	0.44"	11.2	500	34	2000	136	0.075	0.111	2.00"	50.8
6	0.35"	8.9	0.56"	14.25	500	34	2000	136	0.095	0.141	2.50"	63.5
8	0.44"	11.2	0.67"	17.0	500	34	2000	136	0.120	0.178	3.50"	88.9
10	0.57"	14.5	0.82"	20.8	500	34	2000	136	0.155	0.230	4.00"	101.6
12	0.69"	17.5	0.96"	24.4	350	23.8	1400	95	0.250	0.371	4.50"	114.3
16	0.88"	22.4	1.15"	29.2	350	23.8	1400	95	0.320	0.476	5.50"	139.7
20	1.125"	28.6	1.437"	36.5	350	23.8	1400	95	0.320	0.476	8.00"	203.2



Aluminium Adapter Fittings

XRP offers the industry's most extensive inventory of popular adapter fittings for race cars, street performance vehicles and watercraft. All male flare adapters are JIC 37°. Most adapter fittings are also available in both **steel** and **stainless**. To order **steel** – change the first digit of the part number from a "9" to a "4" EXAMPLE: 981606 changes to 481606. To order **stainless** – change the first digit of the part number from a "9" to a "5" EXAMPLE: 981606 changes to 581606.



804

Uses
924 nut,
not included



806



814

Uses O-ring, crush washer or
Stat-O-Seal, not included



814 IHP



FKM O-ring included



815



Size	Flare Bulkhead Tee On Run	Red	Flare Plug Super Nickel	Black	Straight Thread Port Plug Blue	Black	Internal Hex Port Plug	Blue	Male Flare Union Super Nickel	Black
3	980403	980603	980603SN	980603BB	981403	981403BB	IHP003	981503	981503SN	981503BB
4	980404	980604	980604SN	980604BB	981404	981404BB	IHP004	981504	981504SN	981504BB
6	980406	980606	980606SN	980606BB	981406	981406BB	IHP006	981506	981506SN	981506BB
8	980408	980608	980608SN	980608BB	981408	981408BB	IHP008	981508	981508SN	981508BB
10	980410	980610	980610SN	980610BB	981410	981410BB	IHP010	981510	981510SN	981510BB
12	980412	980612	980612SN	980612BB	981412	981412BB	IHP012	981512	981512SN	981512BB
16	980416	980616	980616SN	980616BB	981416	981416BB	IHP016	981516	981516SN	981516BB
20	980420	980620	980620SN	980620BB	981420	981420BB	IHP020	981520	981520SN	981520BB

818*



Use with
819 sleeve



819*



Use with
818 nut



821



Size	Blue	Tube Nut Super Nickel	Black	Tube Size	Blue	Tube Sleeve Super Nickel	Black	Blue	90° Flare Union Super Nickel	Black
3	981803	981803SN	981803BB	3/8"	981903	981903SN	981903BB	982103	982103SN	982103BB
4	981804	981804SN	981804BB	1/2"	981904	981904SN	981904BB	982104	982104SN	982104BB
5	981805	981805SN	981805BB	5/8"	981905	981905SN	981905BB	–	–	–
6	981806	981806SN	981806BB	3/4"	981906	981906SN	981906BB	982106	982106SN	982106BB
8	981808	981808SN	981808BB	1"	981908	981908SN	981908BB	982108	982108SN	982108BB
10	981810	981810SN	981810BB	1 1/4"	981910	981910SN	981910BB	982110	982110SN	982110BB
12	981812	981812SN	981812BB	1 1/2"	981912	981912SN	981912BB	982112	982112SN	982112BB
16	981816	981816SN	981816BB	2"	981916	981916SN	981916BB	982116	982116SN	982116BB
20	981820	981820SN	981820BB	2 1/2"	981920	981920SN	981920BB	982120	982120SN	982120BB

824



825



826



Size	Blue	Flared Tees Super Nickel	Black	Pipe Size (inches)	Blue	Male Branch Tee Super Nickel	Black	Pipe Size (inches)	Blue	Male Run Tee Super Nickel	Black
3	982403	982403SN	982403BB	1/8"	982503	982503SN	982503BB	1/8"	982603	982603SN	982603BB
4	982404	982404SN	982404BB	1/4"	982504	982504SN	982504BB	1/4"	982604	982604SN	982604BB
6	982406	982406SN	982406BB	3/8"	982506	982506SN	982506BB	3/8"	982606	982606SN	982606BB
8	982408	982408SN	982408BB	1/2"	982508	982508SN	982508BB	1/2"	982608	982608SN	982608BB
10	982410	982410SN	982410BB	3/4"	982510	982510SN	982510BB	3/4"	982610	982610SN	982610BB
12	982412	982412SN	982412BB	1"	982512	982512SN	982512BB	1"	982612	982612SN	982612BB
16	982416	982416SN	982416BB	1 1/4"	982516	982516SN	982516BB	1 1/4"	982616	982616SN	982616BB
20	982420	982420SN	982420BB	1 1/2"	982520	982520SN	982520BB	1 1/2"	982620	982620SN	982620BB

Aluminium Adapter Fittings Continued



Size	Blue	Flare Bulkheads Super Nickel	Black	90° Flare Bulkhead	Flare Bulkhead Tee	45° Flare Bulkhead
3	983203	983203SN	983203BB	983303	983403	983703
4	983204	983204SN	983204BB	983304	983404	983704
6	983206	983206SN	983206BB	983306	983406	983706
8	983208	983208SN	983208BB	983308	983408	983708
10	983210	983210SN	983210BB	983310	983410	983710
12	983212*	983212SN	983212BB	983312	983412	983712
16	983216*	983216SN	983216BB	983316	983416	983716
20	983220	983220SN	983220BB	983320	983420	983720

*Special -16 bulkhead to -12 AN flare also available, order 983217.

Male Flare To NPT Pipe Adapters



Flare Size	Pipe Size	Blue	Straights Super Nickel	Black	Blue	90° Super Nickel	Black	Blue	45° Super Nickel	Black
3	1/8"	981603	981603SN	981603BB	982203	982203SN	982203BB	982303	982303SN	982303BB
3	1/4"	981634	981634SN	981634BB	982234	982234SN	982234BB	982334	982334SN	982334BB
3	3/8"	981636	981636SN	981636BB	982236	982236SN	982236BB	982336	982336SN	982336BB
4	1/8"	981604	981604SN	981604BB	982204	982204SN	982204BB	982304	982304SN	982304BB
4	1/4"	981644	981644SN	981644BB	982244	982244SN	982244BB	982344	982344SN	982344BB
4	3/8"	981646	981646SN	981646BB	982246	982246SN	982246BB	982346	982346SN	982346BB
6	1/8"	981662	981662SN	981662BB	982262	982262SN	982262BB	982362	982362SN	982362BB
6	1/4"	981606	981606SN	981606BB	982206	982206SN	982206BB	982306	982306SN	982306BB
6	3/8"	981666	981666SN	981666BB	982266	982266SN	982266BB	982366	982366SN	982366BB
6	1/2"	981668	981668SN	981668BB	982268	982268SN	982268BB	982368	982368SN	982368BB
8	1/4"	981607	981607SN	981607BB	982207	982207SN	982207BB	982307	982307SN	982307BB
8	3/8"	981608	981608SN	981608BB	982208	982208SN	982208BB	982308	982308SN	982308BB
8	1/2"	981688	981688SN	981688BB	982288	982288SN	982288BB	982388	982388SN	982388BB
8	3/4"	981609	981609SN	981609BB	982209	982209SN	982209BB	982309	982309SN	982309BB
10	1/4"	981699	-	-	-	-	-	-	-	-
10	3/8"	981611	981611SN	981611BB	982211	982211SN	982211BB	982311	982311SN	982311BB
10	1/2"	981610	981610SN	981610BB	982210	982210SN	982210BB	982310	982310SN	982310BB
10	3/4"	981613	981613SN	981613BB	982213	982213SN	982213BB	982313	982313SN	982313BB
12	1/2"	981614	981614SN	981614BB	982214	982214SN	982214BB	982314	982314SN	982314BB
12	3/4"	981612	981612SN	981612BB	982212	982212SN	982212BB	982312	982312SN	982312BB
12	1"	981615	981615SN	981615BB	982215	982215SN	982215BB	982315	982315SN	982315BB
16	3/4"	981617	981617SN	981617BB	982217	982217SN	982217BB	982317	982317SN	982317BB
16	1"	981616	981616SN	981616BB	982216	982216SN	982216BB	982316	982316SN	982316BB
20	1"	981621	981621SN	981621BB	982221	982221SN	982221BB	982321	982321SN	982321BB
20	1-1/4"	981620	981620SN	981620BB	982220	982220SN	982220BB	982320	982320SN	982320BB

All male flare adapters are JIC 37°. Most adapter fittings are also available in **steel** and **stainless**. Some are available in black, to coordinate with Ti-Tech hose ends with the look of titanium and our new XR-31 hose. To order **steel** – change the first digit of the part number from a “9” to a “4” EXAMPLE: 981606 changes to 481606. To order **stainless** – change the first digit of the part number from a “9” to a “5” EXAMPLE: 981606 changes to 581606.

910



911



917



912



919



Pipe Size	Female Pipe Coupling	Female Pipe Nipple	Female Pipe Tee
1/8"	991001	991101	991701
1/4"	991002	991102	991702
3/8"	991003	991103	991703
1/2"	991004	991104	991704
3/4"	991006	991106	991706
1"	991007	991107	991707
1-1/4"	991008	991108	991708

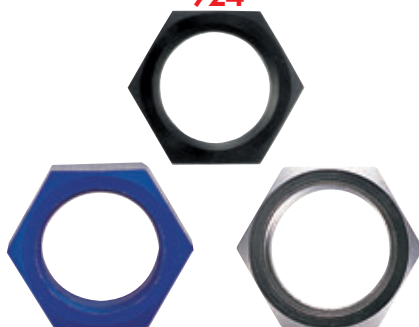
Pipe Bushing Reducer	Male to Female	Flare Reducer	Size
991201	1/4" 1/8"	991902	4 to 3
991202	3/8" 1/4"	991903	4 to 5
991203	3/8" 1/8"	991904	5 to 3
991204	1/2" 3/8"	991905	6 to 3
991205	1/2" 1/4"	991906	6 to 4
991206	1/2" 1/8"	991907	6 to 5
991207	3/4" 1/2"	991908	8 to 4
991208	3/4" 3/8"	991909	8 to 3
991209	3/4" 1/4"	991911	8 to 5
991210	1" 3/4"	991912	8 to 6
991211	1" 1/2"	991913	10 to 4
991212	1" 3/8"	991914	10 to 6
		991915	10 to 8
		991916	12 to 4
		991918	12 to 6
		991919	12 to 8
		991920	12 to 10
		991929	16 to 8
		991922	16 to 10
		991923	16 to 12
		991925	20 to 12
		991926	20 to 16

*Call for details
& availability*

932



924



929



938



Pipe Size	Allen Socket Plug Blue	Black	Size	Blue	Bulkhead Nuts Super Nickel	Black	Thread Size	Blue	37° Flare Cap Female Super Nickel	Black	Female STRT Thread AN Tee O-Ring Boss
1/6"	993201	993201BB	3	992403	992403SN	992403BB	3/6"-24	992903	992903SN	992903BB	993803
1/8"	993202	993202BB	4	992404	992404SN	992404BB	7/6"-20	992904	992904SN	992904BB	993804
1/4"	993203	993203BB	6	992406	992406SN	992406BB	1/6"-18	992906	992906SN	992906BB	993806
3/8"	993204	993204BB	8	992408	992408SN	992408BB	3/4"-16	992908	992908SN	992908BB	993808
1/2"	993205	993205BB	10	992410	992410SN	992410BB	7/6"-14	992910	992910SN	992910BB	993810
3/4"	993206	993206BB	12	992412	992412SN	992412BB	1-1/6"-12	992912	992912SN	992912BB	993812
1"	993207	993207BB	16	992416	992416SN	992416BB	1-3/6"-12	992916	992916SN	992916BB	993816
1-1/4"	993208	993208BB	20	992420	992420SN	992420BB	1-5/6"-12	992920	992920SN	992920BB	993820

Special 37° JIC Adapters & Fittings

Tee Male Flare to Female Swivel On Side



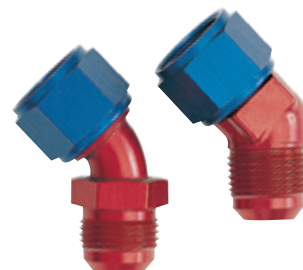
Part No.	Thread Size
900233	3 (Steel)
900203	3 (Alum)
900204	4
900206	6
900208	8
900210	10
900212	12
900216	16

Tee Male Flare to Female Swivel On Run



Part No.	Thread Size
900333	3 (Steel)
900303	3 (Alum)
900304	4
900306	6
900308	8
900310	10
900312	12
900316	16

45° Female Swivel to Male Flare

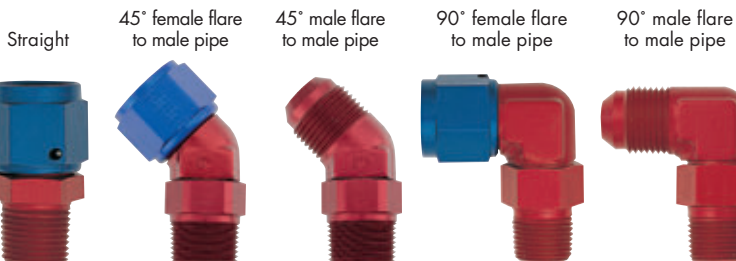


Size	45° Tube	45° Forged
3 (Steel)	–	900433
4 (Steel)	–	900444
3 (Alum)	–	900403
4	920404	900404
6	920406	900406
8	920408	900408
10	920410	900410
12	920412	900412
16	920416	900416
20	920420	900420

90° female swivel to male flare



Swivel Pipe Adapters Steel and Aluminium



An Size	90° Tube	90° Forged
3 (Steel)	–	900533
4 (Steel)	–	900544
3 (Alum)	–	900503
4	920504	900504
6	920506	900506
8	920508	900508
10	920510	900510
12	920512	900512
16	920516	900516
20	920520	900520

Straight Fem. Flare To Pipe	45° Female Flare To Pipe	45° Male Flare To Pipe	90° Female Flare To Pipe	90° Male Flare To Pipe	AN Size	NPT Size (inches)
900631 (Steel)	910731 (Steel)	910831 (Steel)	900731 (Steel)	900831 (Steel)	3	1/8"
900603	910703	910803	900703	900803	3	1/8"
900641 (Steel)	910741 (Steel)	910841 (Steel)	900741 (Steel)	900841 (Steel)	4	1/8"
900604	910704	910804	900704	900804	4	1/8"
900644	910744	910844	900744	900844	4	1/4"
900606	910706	910806	900706	900806	6	1/4"
900662	910762	910862	900762	900862	6	1/8"
900666	910766	910866	900766	900866	6	3/8"
900667	910767	910867	900767	900867	8	1/4"
900608	910708	910808	900708	900808	8	3/8"
900688	910788	910888	900788	900888	8	1/2"
900610	910710	910810	900710	900810	10	1/2"
900611	910711	910811	900711	900811	10	3/8"
900612	910712	910812	900712	900812	12	3/4"
900614	910714	910814	900714	900814	12	1/2"

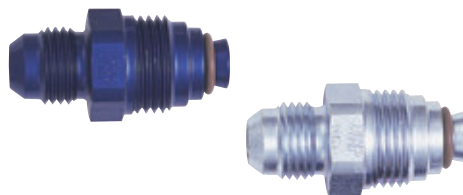
Carburettor Adapters & Fittings

Double Swivel Hose Ends For Metric Carburettor Kits



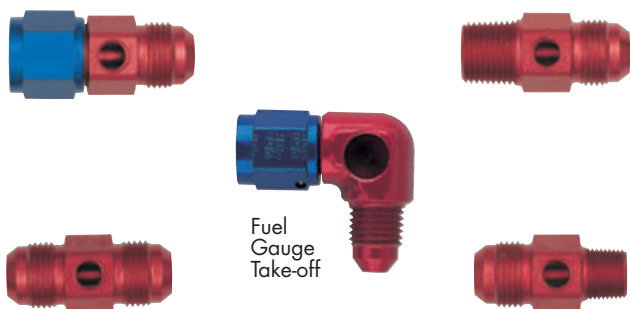
Size	Part No.	Description
6	289125	M12 X 1.25 SOLEX
6	289150	M12 X 1.50 WEBER

Bump Tube Adapters Aluminium and Steel



Part No. Aluminium	Thread W/O-Ring	Size	Part No. Steel
791415	M14 x 1.5	6	491415
791615	M16 x 1.5	6	491615
791815	M18 x 1.5	6	491815

Fuel Pressure Take-Off Adapters With 1/8" Female NPT Port



Part No.	Description
700192	-6 Male To -6 Male
700193	-6 Male To 1/4" Male Npt
700194	-6 Male To 3/8" Male Npt
700195	-6 Male To -6 Female Swivel
700196	-8 Male To -8 Male
700202	-10 Male To -10 Female Swivel
700210	-10 Male To 1/2" Male Npt
700201	-10 Male To -10 Male
700211	-10 Male To 3/8" Male Npt
700197	-8 Male To 1/4" Male Npt
700198	-8 Male To 3/8" Male Npt
700199	-8 Male To -8 Female Swivel
700204	-12 Male To -12 Female Swivel
782144*	-4 Male An To -4 Female Swivel 90° (Npt On Right Side As Shown Above)

*Excellent For Fuel And Oil Gauges Where A Pressure Sending Unit Needs To Be Added.

Hardline Tubing



Coated Aluminium Tube

Hardline Tube

The incorporation of the PA 12 coating and 1AlMn 1 Aluminium Tube has created a new automotive standard.

The advantages include:

1. High resistance to wear, abrasion, corrosion and impact damage.
2. Weight saving over conventional tube and hose.
3. The PA 12 coating has excellent adhesion to the tube. The coating will not chip, peel or flake.
4. Excellent Bend Radius as shown in the data table.
5. Smooth bore for a low friction coefficient.



- Construction:
- Tube - Seamless Drawn Aluminium Tube (AlMn 1) to DIN 1725
- Coating – Polyamide 12 (Pa12)
- Temperature Range: -40°C to +155°C (-40°F to +310°F)
- Couplings: JLS Compression Fittings or AN 37° Flare Fittings
- Applications: Fuel, Oil, Air Jack Systems, Fire Extinguisher, Power Steering, Cooling Lines & Breathers

Code	Tube O.D. (inches)	Wall Thickness (inches)	Burst Pressure (PSI)	Bend Radii (mm)	AN Size Centerline	Weight (g/m)
LP06100150	3/8	0.039	3739	13.2	6	64.7

Other sizes available on request. Minimum orders may apply.

Hardline Tooling

Tube Flarer

Hardline Tube

To Suit Tube Sizes 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4".

Code
821050



Hydraflow Clamps

Quick Disconnect Fittings

Hydraflow 14J02/14J34 Series flexible fluid couplings offer a remarkable list of features and have earned a reputation for superior quality and reliability in both the marine and automotive industry.

These flexible tube couplings are designed to accommodate angular and linear motion that can occur due to changes in both attitude and environment conditions.

They are fast to use;

- No tooling needed.
- Snaps on & off.
- Double swivel hinge for easier assembly.
- Optional safety strap for visual inspection (14J34 Series)
- Saves time, where time is an issue.
- Lightweight.
- Full flow, no restrictions.
- Double "O" ring sealing.
- Threadless fixed cavity design for a seal that is fast and secure.
- Axial adjustment 6.35mm minimum, with angular misalignment for full coupling $\pm 4^\circ$

Cannot be accidentally opened;

- The latch pawls lock automatically when the clamshell is snapped shut and will not open unless all three pawls are lifted simultaneously.

No improper installation;

- The safety strap on 14J34 cannot be fastened unless the clamshell is fully closed.

Quick assembly;

- Quick disconnect action of the safety strap and latch simplifies and facilitates assembly and removal with one hand.

Couplings design conforms to and has been qualified to all applicable military and commercial specification requirements for flexible fuel or environmental control systems for service at pressures of 125 PSIG (operating); 250 PSIG (proof) and 375 PSIG (burst) and temperature from -65°F to 450°F (-55°C to +232°C).

Electrical bonding to class "S" of MIL-5087B is automatically provided when coupling is assembled.



14J02 or 14J34

2 piece Assembly Clamshell and Sleeve standard or with safety strap

14C02 or 14C34

Clamshell only standard or with safety strap

14R02

Sleeve only



Each coupling assembly consists of two pieces; a Clamshell (14C02) and Sleeve (14R02).

Part Numbers Explained.

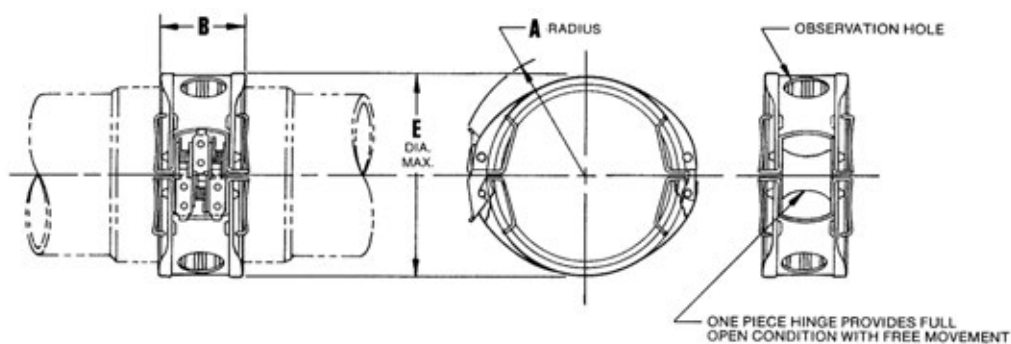
14J02 = Description,
-08 = Size/Tube O.D.
A = Aluminium,
C = Stainless
SN = Super Nickel.

Example 14J02 -08 A



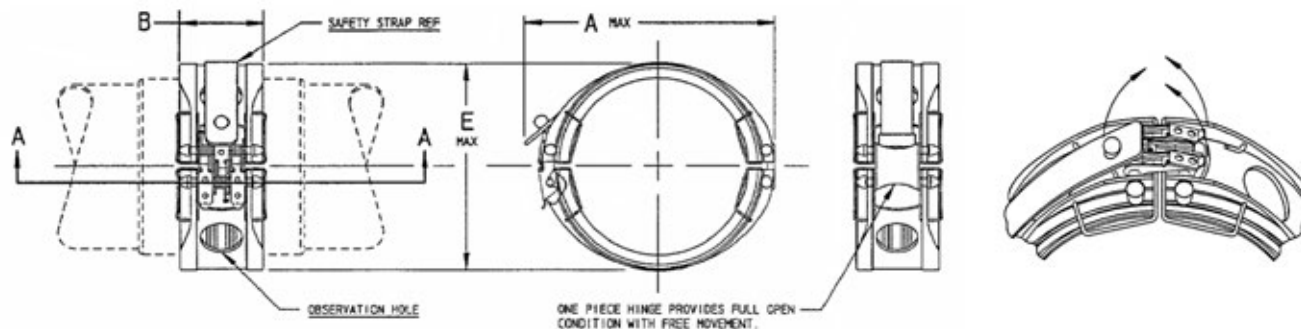
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Clamshell without Nylon Strap



Code	Tube O.D (inches)	Weight (kg)	"A" Dim Max(mm)	"B" Dim Max(mm)	"D" Dim Max (mm)
14J02 - 08	0.500"	0.012	18.03	18.29	26.92
14J02 - 10	0.625"	0.014	19.81	18.29	29.46
14J02 - 12	0.750"	0.018	21.59	20.83	32.26
14J02 - 16	1.000"	0.022	24.89	23.11	37.85
14J02 - 20	1.250"	0.025	28.19	23.11	44.20
14J02 - 24	1.500"	0.026	31.24	23.11	51.56
14J02 - 28	1.750"	0.032	34.54	23.11	56.90
14J02 - 32	2.000"	0.035	38.10	24.13	64.26
14J02 - 40	2.500"	0.044	44.45	24.13	76.96
14J02 - 48	3.000"	0.067	51.56	25.15	93.73
14J02 - 56	3.500"	0.080	57.91	25.15	106.43
14J02 - 64	4.000"	0.108	64.26	25.15	121.67

Clamshell with Nylon Strap



Code	Tube O.D (inches)	Weight (kg)	"A" Dim Max(mm)	"B" Dim Max(mm)	"D" Dim Max (mm)
14J34 - 08	0.500"	0.016	22.60	18.29	26.92
14J34 - 10	0.625"	0.017	24.13	18.29	29.97
14J34 - 12	0.750"	0.021	26.42	20.81	32.77
14J34 - 16	1.000"	0.026	29.97	23.11	38.61
14J34 - 20	1.250"	0.030	32.77	23.11	44.96
14J34 - 24	1.500"	0.033	36.32	23.11	52.32
14J34 - 28	1.750"	0.036	39.37	23.11	57.66
14J34 - 32	2.000"	0.043	42.92	24.13	65.28
14J34 - 36	2.250"	0.046	45.72	24.13	73.91
14J34 - 40	2.500"	0.050	48.51	24.13	78.23
14J34 - 48	3.000"	0.079	55.37	25.15	95.00
14J34 - 56	3.500"	0.091	61.97	25.15	107.70

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Hydraflow Clamps



Weld Flanges

Code	Tube O.D (inches)	Weight (kg)	"A" Dim Max(mm)	"B" Dim Max(mm)
14F03-8D	0.50"	0.004	17.40	18.77
14F03-10D	0.625"	0.005	20.57	18.77
14F03-12D	0.75"	0.007	25.15	19.63
14F03-16D	1.00"	0.010	32.16	21.03
14F03-20D	1.25"	0.011	38.51	21.03
14F03-24D	1.50"	0.015	45.36	21.03
14F03-28D	1.75"	0.017	51.71	21.03
14F03-32D	2.00"	0.020	58.65	21.44
14F03-40D	2.50"	0.027	71.35	21.44
14F03-48D	3.00"	0.033	84.05	21.44
14F03-56D	3.50"	0.039	97.05	21.44
14F03-64D	4.00"	0.045	109.98	21.44



Socket Weld-ons

Size Tube O.D.	Sleeve	Double O-Ring	Single O-Ring
8	1005-08HC	997208SWHC	997108SWHC
10	1005-10HC	997210SWHC	997110SWHC
12	1005-12HC	997212SWHC	997112SWHC
16	1005-16HC	997216SWHC	997116SWHC
20	1005-20HC	997220SWHC	997120SWHC
24	1005-24HC	997224SWHC	997124SWHC
28	1005-28HC	997228SWHC	997128SWHC
32	1005-32HC	997232SWHC	997132SWHC
36	1005-36HC	997236SWHC	997136SWHC
40	1005-40HC	997240SWHC	997140SWHC
48	1005-48HC	997248SWHC	997148SWHC
56	1005-56HC	997256SWHC	997156SWHC
64	1005-64HC	997264SWHC	997164SWHC



Butt Weld-ons

Size Tube O.D.	Sleeve	Double O-Ring
8	1005-08BWHC	997208BWHC
10	1005-10BWHC	997210BWHC
12	1005-12BWHC	997212BWHC
16	1005-16BWHC	997216BWHC
20	1005-20BWHC	997220BWHC
24	1005-24BWHC	997224BWHC
28	1005-28BWHC	997228BWHC
32	1005-32BWHC	997232BWHC
36	1005-36BWHC	997236BWHC
40	1005-40BWHC	997240BWHC
48	1005-48BWHC	997248BWHC
56	1005-56BWHC	997256BWHC
64	1005-64BWHC	997264BWHC

Clamshell and Sleeve Specifications

Coupling assemblies 14J02 is exactly the same as 14J34, except 14J34 includes a nylon safety strap.

Please consult factory for pressure ratings for particular applications.

Temperature rating -65°F to +450°F. Nylon Strap is rated at maximum of 400F.

Coupling Flanges and O-ring seals are not furnished with coupling assemblies. O-ring seal material should be selected for fluid compatibility.

Material and finishes for 14C02-A & 14C34-A Clamshell is 2024-T6 or equivalent aluminium anodized and dyed magenta. Latch pawls, hinges, rivets, latch springs are 300 series stainless steel passivated. Bonding springs are beryllium copper wire tin coated. Safety strap on 14J34-A is nylon.

Materials and finishes for 14C02 & 14C34-C Clamshell is 300 series stainless steel passivated. Latch pawls, hinges, rivets, latch springs are 300 series stainless steel passivated. Bonding springs are beryllium copper wire tin coated. Safety strap on 14J34-C is nylon.

Materials and finishes for 14R02-A Sleeve is 2024-T6 or equivalent aluminium anodised dichromate colour.

Materials and finishes for 14R02-C Sleeve is 300 series stainless steel passivated.



All images are for illustration purposes only

Silicone Hoses and Aluminium Pipes

JLS Motorsport Performance Silicone Hoses & Aluminium Pipes

Our range of **Performance Silicone Hoses** and associated accessories are hand crafted in the UK to the highest standard. With hundreds of sizes & shaped hoses & pipes for Motorsport, classic cars and kit cars. Combined the hoses with our aluminium

pipes for DIY custom intercooler, intake, coolant set ups. All our **Performance Silicone Hoses** and Aluminium Pipes come with a 3 year warranty.



Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium B = Brass

**NEW
PRODUCT**

JLS Motorsport Oil Cooler Range

JLS Motorsport has introduced a new range of versatile Oil Coolers to fit the budget of all Motorsport professionals and enthusiasts offering a variety of cooling specifications.

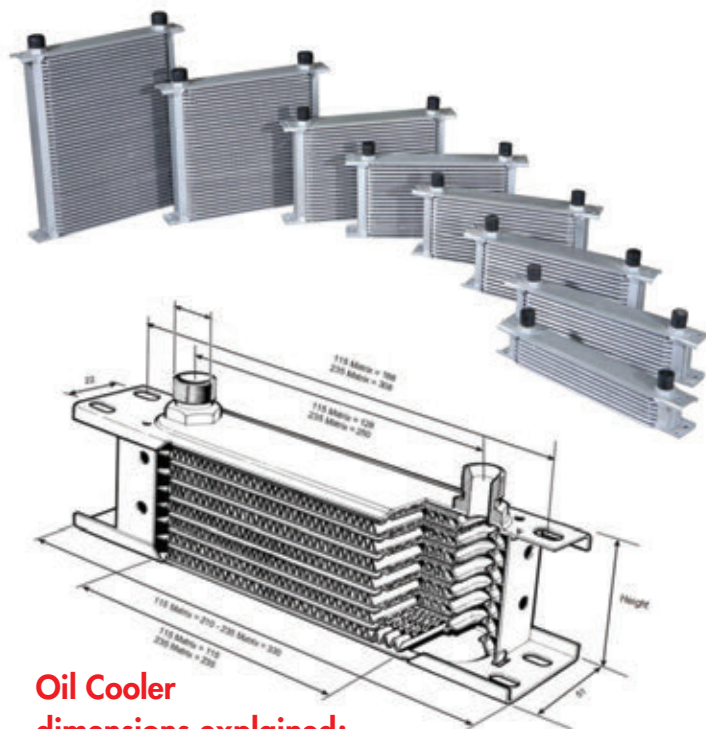
Height of the Oil Coolers is measured and referred to in row numbers. These Oil Coolers are available in two Matrix sizes 235mm & 115mm.

The 235 Matrix oil cooler is available in six row heights 7, 10, 13, 16, 19, and 25 with a variety of fittings ranging from -6 JIC through to -12 JIC and BSP ½", ¾" & 1".

The 115 Matrix oil cooler is available in three row heights 10, 13 & 16 with a similar variety of fittings ranging from -6 through to -12 and ½" BSP.

Every Oil Cooler has been pressure tested to 10bar before despatch which is more than sufficient for the demanding conditions of motorsport racing and general automotive purposes with a recommended working pressure of 7bar.

Oil Cooler fitting kits can be built to suit customer specification using our high quality branded braided hose and fittings available from JLS Motorsport, please ask for details.



**Oil Cooler
dimensions explained;**

235 Matrix Specification Sheet

Part No Prefix	No of Rows	Matrix	Fitting Sizes (Check for availability)	Length (mm)	Dept (mm)	Height (mm)	Weight (grams)	Capacity Litres (approx)
OC23507	7	235	-6, -8, -10, -12 & ½" BSP	330	51	53	706	0.14
OC23510	10	235	-6, -8, -10, -12, ½" & ¾" BSP	330	51	77	878	0.20
OC23513	13	235	-6, -8, -10, -12, ½", ¾" & 1" BSP	330	51	100	1084	0.25
OC23516	16	235	-8, -10, -12, ½", ¾" & 1" BSP	330	51	124	1392	0.30
OC23519	19	235	-8, -10, -12, ½", ¾" & 1" BSP	330	51	147	1520	0.375
OC23525	25	235	-8, -10, -12, ½", ¾" & 1" BSP	330	51	194	2040	0.475

115 Matrix Specifications

Part No Prefix	No of Rows	Matrix	Fitting Sizes (Check for availability)	Length (mm)	Dept (mm)	Height (mm)	Weight (grams)	Capacity Litres (approx)
OC11510	10	115	-6, -8, & ½" BSP	210	51	77	500	0.120
OC11513	13	115	-6, -8, & ½" BSP	210	51	100	615	0.180
OC11516	16	115	-6, -8, -10, -12 & ½" BSP	210	51	124	730	0.210

Cables

JLS F.A.S.T Tension/Push-Pull Cables

JLS F.A.S.T. System Series 3 Cables



JLS – F.A.S.T. CABLES are technically advanced control cables ideal for use in all classes of motorsport. Various types of cable are available; brake bias, tension and push-pull. Tension cables are designed for use on throttle and clutch applications. Push-Pull cables are designed for gearshift and anti-roll bar adjustment.

All cables share the same key advantages of flexibility, low frictional resistance, high strength and thermal stability. All 3 Series cables are extremely flexible with a minimum bend radius of only 75mm. This allows cables to be routed through the most confined spaces.

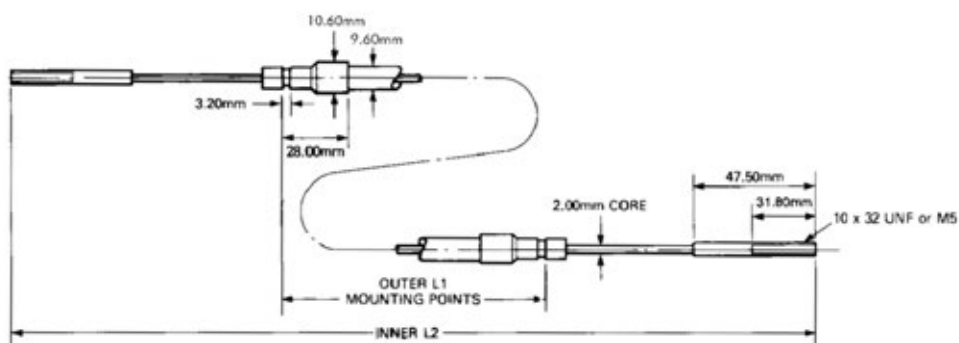
The inner core on both Tension and Push-Pull cables is polymer coated providing a fast smooth and lubrication-free operation.

The outer conduit is steel stranded with a temperature resistant polymer cover which is ideal for operation in many of the high temperature environments that are commonplace in motorsport applications.

The JLS F.A.S.T. programme has a wide range of end configurations, available in several material options. Specials can also be manufactured. Please refer to head office for details.

Series 3 Tension Cables

74080 – Clamp to Clamp fixing



Technical Information:

Tension Cable:	HEFT 2
• Outer Conduit:	Reinforced HEFT 2 thermoplastic
• Inner Core:	1 x 19 High Tensile stainless steel rope with polymer cover
• Temperature Rating:	-54° (-65°F) to 149°C (300°F)
• Colour:	Black
Push-Pull Cables:	
• Outer Conduit:	Reinforced HEFT 2 thermoplastic
• Inner Core:	HP stainless steel core with polymer cover
• Temperature Rating:	-54° (-65°F) to 149°C (300°F)
• Colour:	Black

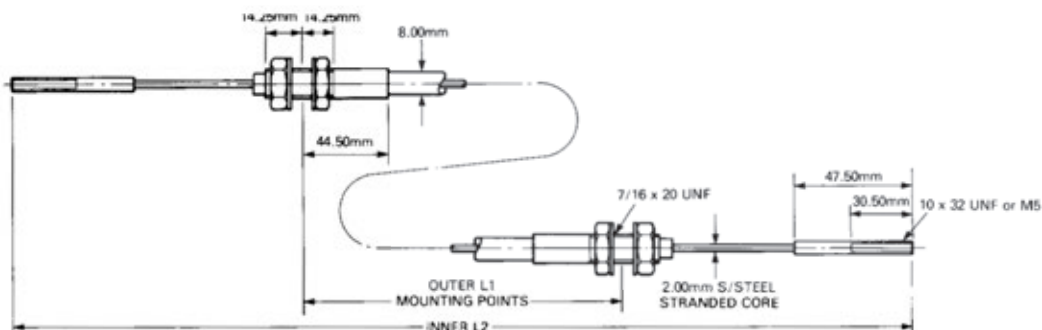
Operating Loads:

Travel	Push Operating Load		Pull Operating Load	
	Kg	lbs	Kg	lbs
Push-Pull Cables:				
1"	27.2	60	27.2	60
2"	27.2	60	27.2	60
3"	27.2	60	27.2	60
4"	18.1	40	27.2	60
5"	13.6	30	27.2	60
Tension Cables:				
Pull Load	27.2	60	27.2	60

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium B = Brass

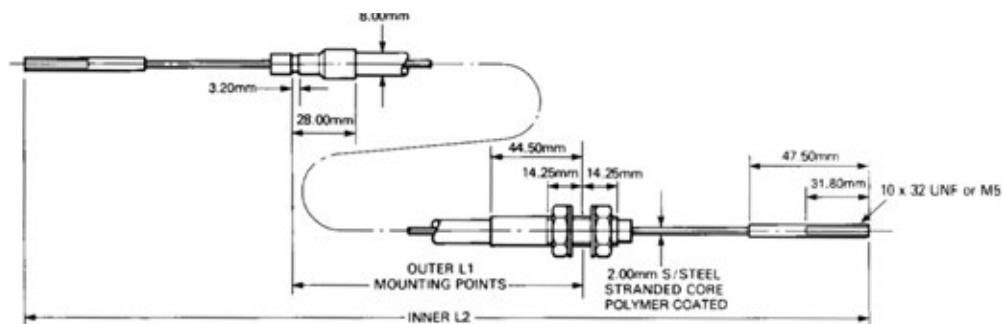
Series 3 Tension Cables

74086 – Bulkhead to Bulkhead fixing

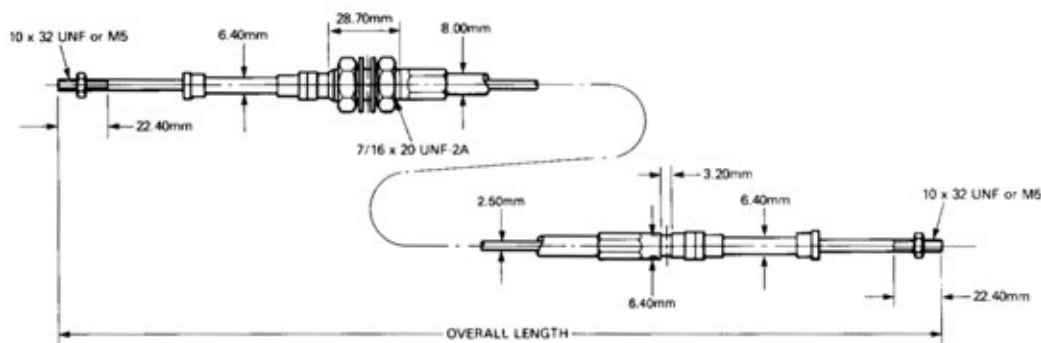


Series 3 Tension Cables

74083 – Clamp to Bulkhead Fixing



Series 3 Push-Pull Cables



When you place an order or enquiry for cables we require the following information:

Tension Cables	Push-Pull Cables
Part No (eg. 74080)	Rod Travel (1", 2", 3", 4" or 5")
L1 Dimension	X & Y cable fixing (eg. Bulkhead or Clamp)
L2 Dimension	Overall Length
Special Requirements	Special Requirements

Brake Bias Cable

As specified by many major racecar constructors and Kart Manufacturers.

A brake bias cable assembly allows the driver to adjust the brake bias of the vehicles brakes during competition.

Brake bias cables manufactured to customer requirements, with positive click positioning for accurate setting and prevention of movement caused by vibration. Includes easily visible handle.

Directional arrow indicator decals fitted on request.

End Fittings

- 3/8 UNF Female
- 7/16 UNF Female
- M8 x 1.25 Female
- M8 x 1.0 Female
- Plain Shafts
- Specials on request



Accessories

JLS Valves



Brake Balance Adjuster

BV3

Place in any hydraulic circuit to reduce pressure, maximum reduction 57%. Normally positioned in line to the rear brakes, but can be positioned anywhere to produce weird and wonderful effects e.g. on inside front wheel on oval tracks. Aluminium and steel construction. Available with handle giving 7 positive click settings or knob to allow even finer adjustment. Weight 8oz.

Fuel/Oil

Sandwich Plates



Code	Description
SP1	3/4 UNF
SP1-A	5/8 UNF
SP1-C	13/16 UNF
SP1-D	M18 x 1.5
SP1-F	M20 x 1.5
OT-SP1	3/4 UNF C/W T. STAT

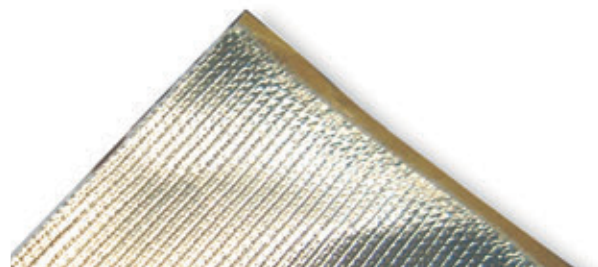
Hose Protection

Heat Protection Sheet

Ohler® Flexrohr Type 332 ALFOL

For use to insulate against ambient heat.

- Self adhesive backing for easy mounting on any surface
- Glossy foil with good heat reflection properties
- Buckle and abrasive resistant



Code	Size
332-ALFOL-1-10-SA	Available by 1m wide by up to 25m long

Fuel Pumps



Code	Description
476087	Silver Top - Road Use
480530	Silver Top - Road/Competition Use
480532	Red Top - Works/Competition Use
40106	Solid State - Road Use
40107	Solid State - Competition Use
FPA-905	FACET Pump Mounting Kit

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium B = Brass

FSE, Sytec – Motorsport – Fuel Pump, Filter Brackets, Billet Filter & One Way Valves

FSE Bosch 044 Fuel Pump

Bosch Motorsports "044" fuel pump as used by JGTC cars, Touring cars, most of the WRC cars, and many more, and possibly, the most popular aftermarket fuel pump.



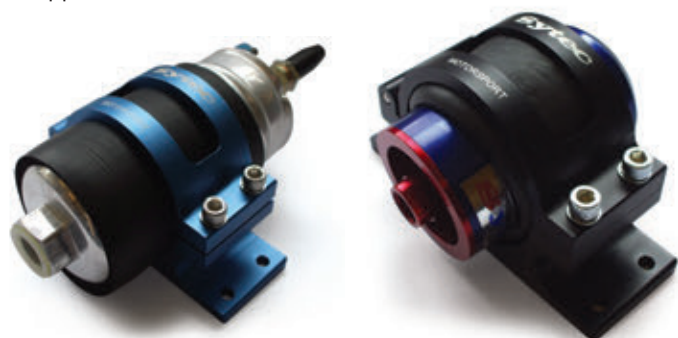
Code	Description
PT254044	

FSE Sytec Filter Bracket

Fuel pump mounting bracket for Bosch in-line fuel pumps and Bullet Filters. For use in competition applications i.e. Rally and Race for light, strong and secure fixing. This mounting bracket will ensure the fuel pumps are mounted securely and safely. Sound sleeve will allow a soft mount flexibility reducing vibration and assisting with noise suppression.

The main benefits are as follows:-

- Solid/rigid construction
- Lightweight design
- Hinged clamp
- Available in anodised silver, black or blue
- Four bolt mounting for secure location
- Supplied with 'standard' sound sleeve



Code	Description
MPB001B	Mounting Bracket to Suit 044 Fuel Pump – Blue
MPB002BK	Mounting Bracket to Suit 044 Fuel Pump – Black
MPB003S	Mounting Bracket to Suit 044 Fuel Pump – Silver

FSE Bullet Fuel Filter

This Bullet Fuel Filter from FSE Sytec is designed for motorsport use and suitable for both carburettor and fuel injections applications.

Can be used as a pump pre-filter or main high pressure filter. Pre-pump filter installation between the fuel tank and the fuel pump (external out of the tank). High pressure filter – fits into the fuel line between the injection pump and the engine.

With anodised solid billet filter case and end cover this item is not only functional, meeting requirements of British Touring car series, it also looks great. Contains replaceable paper cartridge filter and is supplied with bracket fixings. High Flow metal cleanable filter element is also available as optional extra. This unit has been tested to 10bar (146psi).

- includes mounting brackets,
- includes instructions,
- 12 month warranty



Code	Description
JLS001	Sytec Bullet Fuel Filter

Sytec, One Way Valves

- Suitable for both carburettor & fuel injection systems
- Flow tested to 480lts/hr
- Prevents syphoning
- Anodised body
- Viton seal
- E85 compatible
- Light weight & compact



Code	Description	Diameter (mm)	Length (mm)	Weight (grams)
OWVS008-BK	8mm Push-on – Black	19	60	20
OWVS008-S	8mm Push-on – Silver	19	60	20
OWVS000-BK	1/8" Nptf Female – Black	19	40	20
OWVS000-S	1/8" Nptf Female – Silver	19	40	20



Heat Protection Range

Exhaust Insulating Wrap

- Reduces under bonnet temperatures by up to 70%
- Increases horsepower and fuel efficiency
- Withstands continuous heat up to 2000 °F
- Contains no asbestos
- Increases life of the engine and electronic system components



Part No.	Description
11001	Exhaust wrap 1" width 50 ft length
11002	Exhaust wrap 2" width 50 ft length
11021	Exhaust wrap graphite black 1" width 50 ft length
11022	Exhaust wrap graphite black 2" width 50 ft length
11151	Exhaust wrap white 1" width 15 ft length
11152	Exhaust wrap white 2" width 15 ft length
11153	Exhaust wrap graphite black 1" width 15 ft length
11154	Exhaust wrap graphite black 2" width 15 ft length

Generation II Copper Exhaust Insulating Wrap™

- Improves heat resistance up to 30% more than current insulating technology using a new proprietary coating developed by Thermo-Tec



Part No.	Description
11031	Exhaust wrap copper 1" width 50 ft length
11032	Exhaust wrap copper 2" width 50 ft length

Turbo Insulating Kit

- Eliminates turbo lag
- Custom fit cut-to-fit will fit any size turbo from sports vehicles to diesel trucks
- Two turbo kits available



Part No.	Description
15001	4 cyl turbo insulating kit
15002	6 & 8 cyl turbo insulating kit



Snap Strap Kit

- Stainless steel straps with multi-lock system
- Pre-cut lengths with multi-lock attached – just insert the end and pull to tighten

*Call
for further
details*



Part No.	Description
13150	Snap strapkit 9" – pack of 12
13160	Snap strap kit 18" – pack of 6

Thermo-Shield™

- Prevents vapour lock
- Easy-to-apply adhesive backing
- Reflects radiant heat up to 2000°F

Part No.	Description
14002	Thermo Shield 1½" width x 15ft
13995	Thermo Shield 2" width x 50ft



Tube Manipulation

Whatever your needs for formed tube we can help!

We can

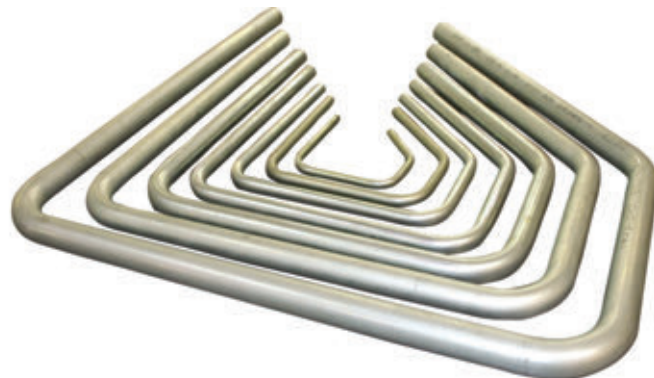
- Work from drawings or samples or even on site to connect two points
- Produce one-offs or large batches
- Provide a range of steel, copper or aluminium components
- Handle tube sizes from 6mm to 42mm
- Complete the job with welding, brazing and all associated fittings
- Respond quickly and work fast!

Benefits

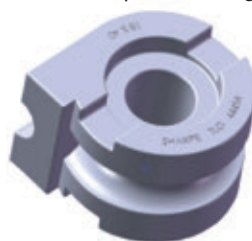
- Rigid tube offers a more robust, longer life, often lower total cost solution to flexible hose and is more visually appealing
- Complex bend paths or hose tube combinations can eliminate multiple components & leak paths
- In combination with our other hydraulics and pneumatics product ranges we can meet all your fluid power requirements

Support

- Rapid turnaround
- 5-axis co-ordinate checking
- Free delivery
- Stocking arrangements for volume supply
- Design Facilities



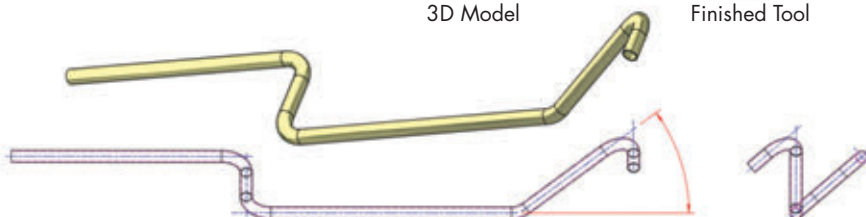
Bespoke Tooling Design capability



3D Model



Finished Tool



5-axis co-ordinate checking



CNC Tube Bending Equipment

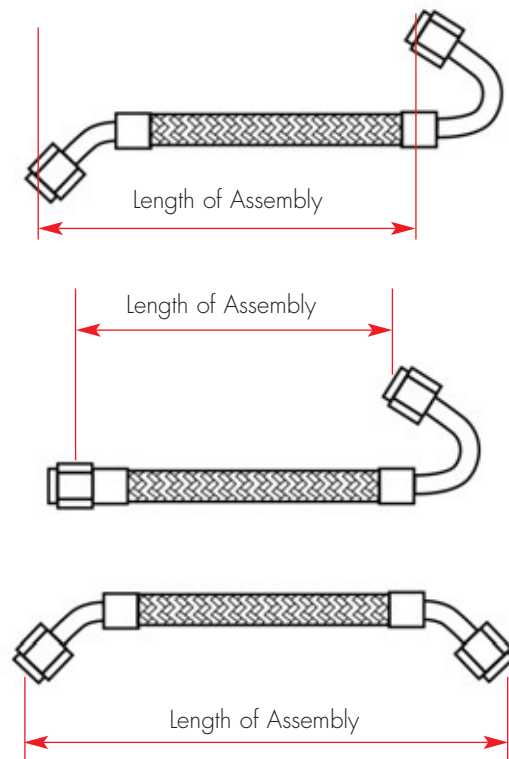
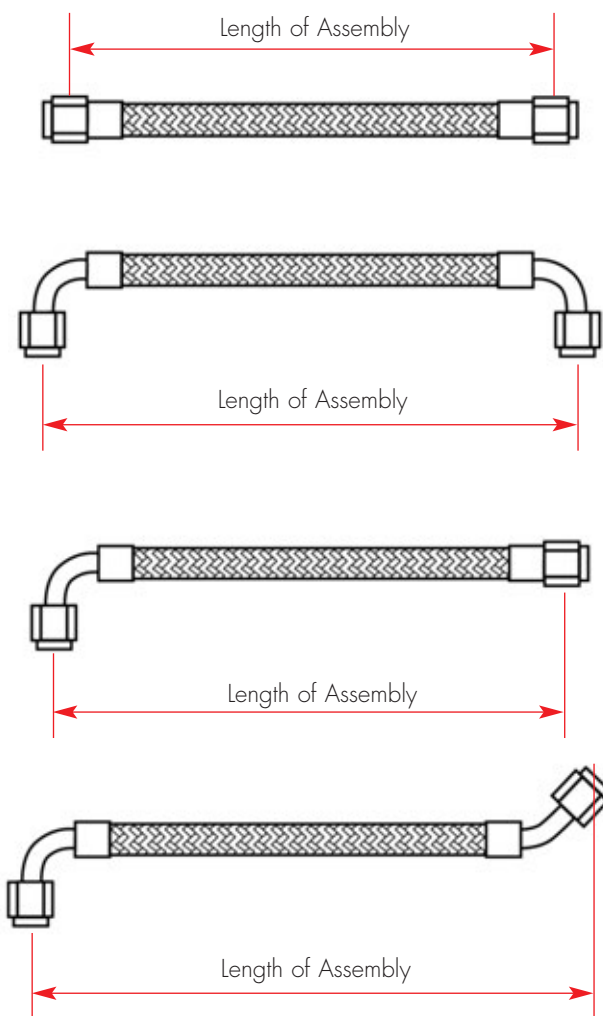
Technical Details

Hose Length Measurement Techniques

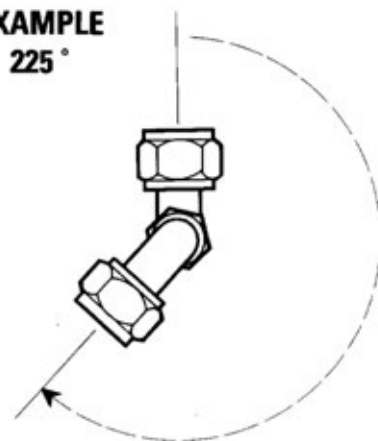
There are a number of factors to be considered when selecting the most suitable type of hose and couplings for your application. Flow, media, operating/ambient temperature and system working pressure all have a varying degree of effect on the life of a hose assembly.

When ordering an assembly the following information is required:

- 1: Code numbers for hose type/size and end couplings.
- 2: Overall assembly length (taken from the centreline of the sealing faces) as illustrated below



EXAMPLE
225°



How to measure the fitting angle

You need to check the angular relationship of both couplings. This is described by the number of degrees in a clockwise direction between the furthest fitting from the eye in the vertical position and the fitting nearest the eye.

Material Identification: Z = Zinc Plated Mild Steel HC = Stainless Steel D = Aluminium B = Brass

Useful Technical Information

UN Thread Sizes

The figures below will help you determine the AN thread size before ordering. The chart on the right shows the corresponding tube outer diameter and thread size for each size.

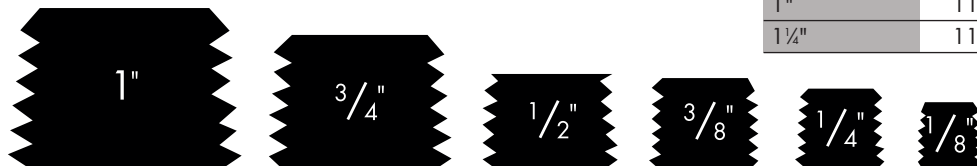
AN Size	Metal Tube Outer Diameter (inches)	Metal Tube Outer Diameter (mm)	Thread Size (inches)	(UNJ)
3	$\frac{3}{16}$ "	4.75	$\frac{3}{16}$ "	24
4	$\frac{1}{4}$ "	6.35	$\frac{7}{16}$ "	20
5	$\frac{5}{16}$ "	7.94	$\frac{1}{2}$ "	20
6	$\frac{3}{8}$ "	9.53	$\frac{5}{8}$ "	18
8	$\frac{1}{2}$ "	12.70	$\frac{3}{4}$ "	16
10	$\frac{5}{8}$ "	15.87	$\frac{7}{8}$ "	14
12	$\frac{3}{4}$ "	19.05	$1\frac{1}{8}$ "	12
16	1"	25.4	$1\frac{1}{2}$ "	12
20	$1\frac{1}{4}$ "	31.75	$1\frac{3}{4}$ "	12



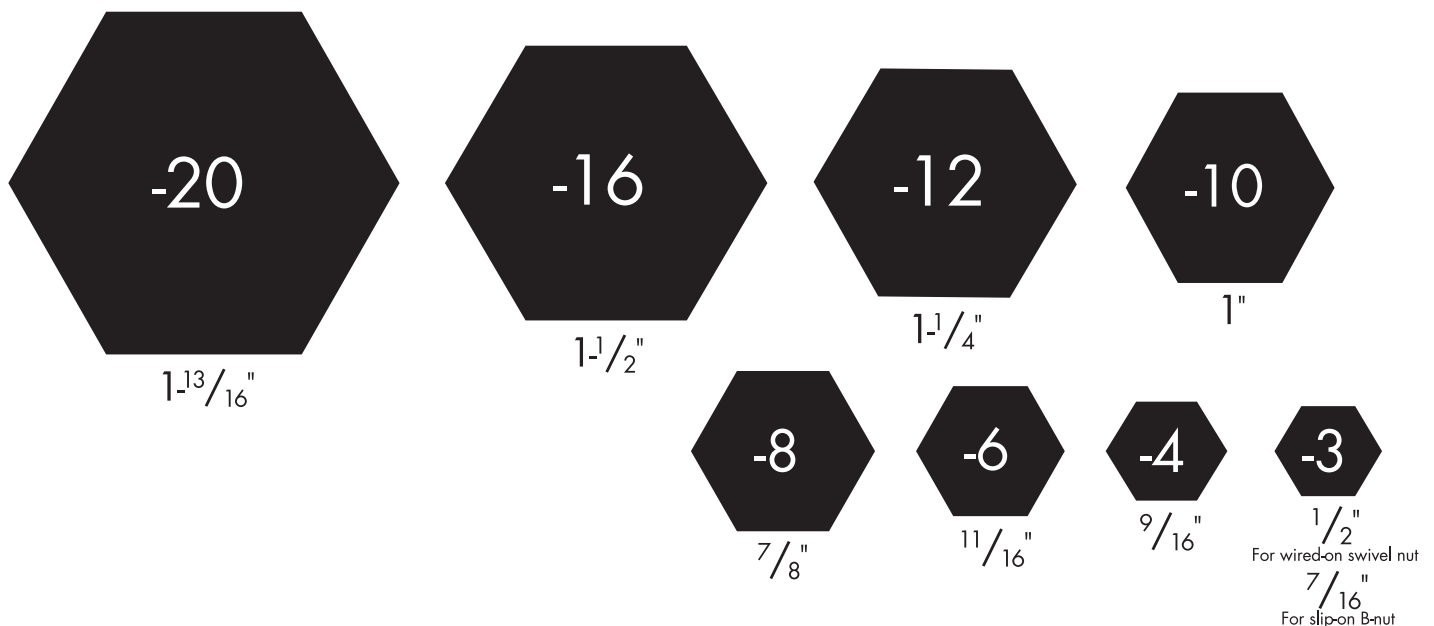
NPT Threads Sizes Explained

The figures below will explain the NPT thread sizes before ordering. The chart on the right shows the corresponding thread size for each size.

Pipe Thread Size	Thread per inch	Pipe O.D. (inches)	Closest AN Fitting Size
$\frac{3}{8}$ "	27	0.405"	4
$\frac{1}{4}$ "	18	0.540"	6
$\frac{3}{8}$ "	18	0.675"	8
$\frac{1}{2}$ "	14	0.840"	10
$\frac{3}{4}$ "	14	1.050"	12
1"	$1\frac{1}{2}$ "	1.315"	16
$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	1.660"	20



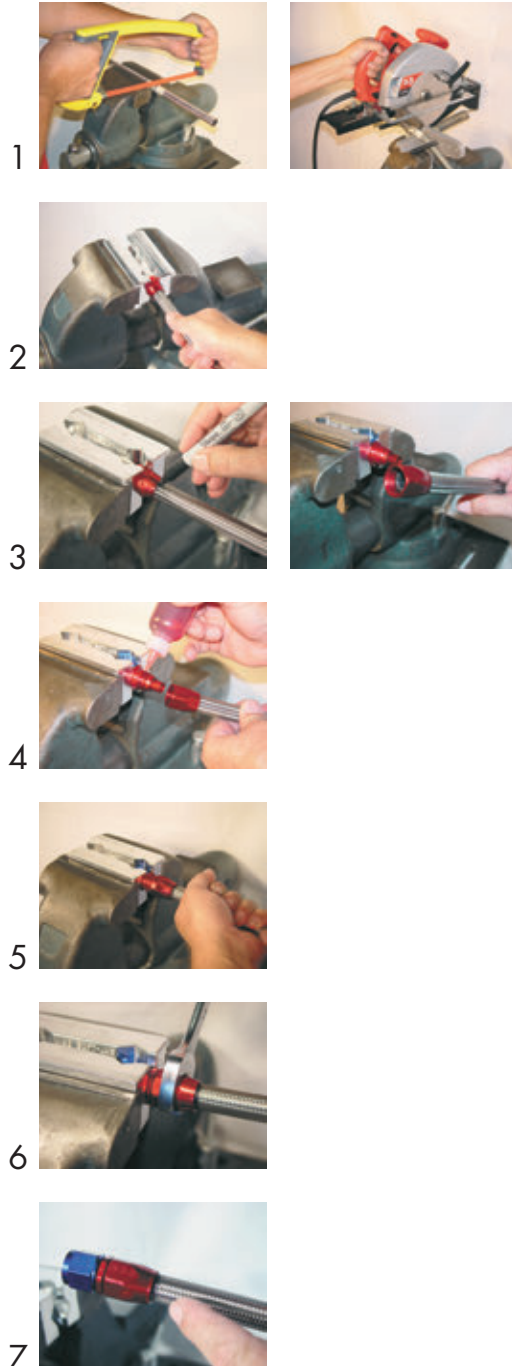
Determined B-Nut Sizes Use the figures below to determine the B-Nut size before ordering



Installation Tips

Stainless Steel Hose Assemblies

- 1** Wrap hose with masking tape at the point where hose is to be cut. Using a fine tooth hacksaw or radial wheel cut through hose squarely, remove the tape and trim any loose or frayed wires. Clean hose inner core.
- 2** Slip hose into the socket to the depth indicated by the hose insertion mark on the outside of the socket. This should be just short of the back of the tread.
- 3** Mark hose with tape or a suitable marking device at the rear of the socket. This mark will later indicate to you if the hose has pushed out of the socket during assembly.
- 4** Using an anti-seize lubricant, liberally lubricate inside of hose and threads on the nipple.
- 5** Holding the nipple horizontally in a vice, push socket end carefully with hose onto nipple with a turning motion and engage nipple threads into those of the socket. Continue tightening by hand as far as possible to make sure that the threads are properly mated and no cross threading has occurred.
- 6** Using a spanner, complete tightening assembly. When properly assembled, a small gap of 0.75mm or less should exist between the socket and shoulder of the nipple.
- 7** Check mark made on hose in step 3 for any evidence of deviation.
- 8** Hose assembly should be cleaned and tested to twice the maximum operating pressure. Hose assembly should also be checked for any leakage under normal operating conditions.



Engine Oils

Petro-Canada's Duron-E Synthetic Engine Oils



Duron-E engine oil is probably the highest grade engine oil you will ever use in your High Performance Engine with less engine stress, conserves energy to ensure all engine components are adequately lubricated helping to extend their working life in extremely harsh operating conditions.

Minimizing engine wear is critical and extending the life of your engine by controlling soot, DURON offers exceptional defence against wear.

The Duron-E heavy duty engine oils start off with one of the purest based oils in the world. The HT severe hydrocracking process produce based oils at the upper end of the purity spectrum going above and beyond the Standard Group II based oils. Petro-Canada 99.9% pure, highly hydrogenated, base oils react synergistically with selected dispersant technologies to provide advanced soot control in all tiers of the Duron-E product line.

Duron-E is formulated to meet the latest OEM Long life specifications for current low emission engines and exceeds the requirements of API CJ-4/SM & CI-4 Plus specifications.

Duron-E 5W/40

Duron-E 5W/40 is supplied in
1 litre, 5 litre, 20 litre and 205 litre containers.

Code	Container Sizes (Litres)
ZSPPCESY54C01	1
ZSPPCESY54C05	5
ZSPPCESY54J20	20
ZSPPCESY54DRM	205

Duron-E 5W/30

Duron-E 5W/30 is supplied in
1 litre, 4 litre and 205 litre containers.

Code	Container Sizes (Litres)
ZSPPMOSYN53C01	1
ZSPPMOSYN53C04	4
ZSPPMOSYN53DRM	205



JLS Motorsport is a major distributor for Petro-Canada Duron-E Engine Oils.

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