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Male Weld-On Adapters



A.N Male Aluminium

Part Number	Thread Size
997103	-3
997104	-4
997106	-6
997108	-8
997110	-10
997112	-12
997116	-16
997120	-20

A.N Male Stainless Steel

Part Number	Thread Size
997193	-3
997194	-4
997196	-6
997198	-8
9971910	-10
9971912	-12
9971916	-16

A.N Male Steel

Part Number	Thread Size
967104	-4
967106	-6
967108	-8
967110	-10
967112	-12
967116	-16

Machined in our in house machining facility, these parts are made of high quality materials and manufactured to a very high standard. We are also able to supply these parts in Titanium & Brass to order.

Female Weld-On Adapters



A.N Female Aluminium

Part Number	Thread Size
987104	-4
987106	-6
987108	-8
987110	-10
987112	-12
987116	-16

NPT Female Aluminium

Part Number	Thread Size
996701	1/8"
996702	1/4"
996703	3/8"
996704	1/2"
996706	3/4"

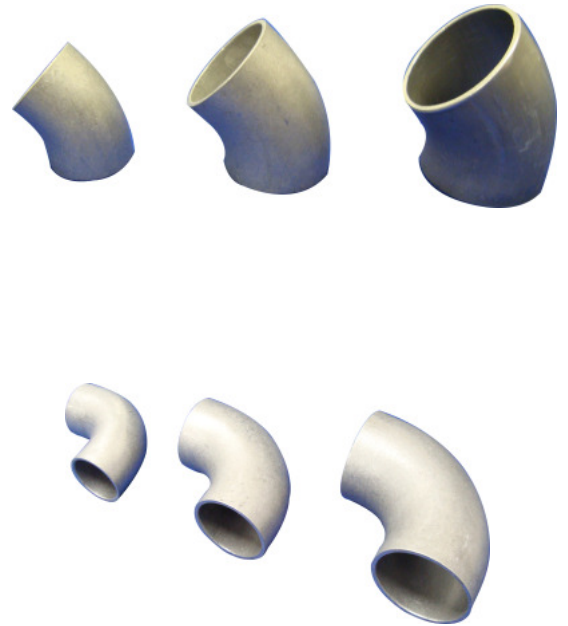
NPT Female Boss

Part Number	Thread Size
986701	1/8"
986702	1/4"
986703	3/8"
986704	1/2"
986706	3/4"

Aluminium Weld Bends

Lightweight, drawn aluminium tube weld bends manufactured from high grade aircraft quality materials for use in limited space installations where conventional fixings cannot be accommodated. Suitable for use with Wiggins male & female weld connectors, offering a reliable and compact solution.

Part Number	Description	Wall Thickness	Int / Ext Radius
B8B4B-10	45° alloytube, 5/8" OD, -10	1.6	13.43 / 28.92
B8B4B-12	45° alloytube, 3/4" OD, -12	1.6	17.00 / 36.00
B8B4B-16	45° alloytube, 1" OD, -16	1.6	21.30 / 47.20
B8B4B-20	45° alloytube, 1 1/4" OD, -20	1.6	23.90 / 55.10
B8B4B-24	45° alloytube, 1 1/2" OD, -24	1.6	27.20 / 65.00
B8B3B-8	90° alloytube, 1/2" OD, -8	1.16	10.55 / 23.10
B8B3B-10	90° alloytube, 5/8" OD, -10	1.6	13.43 / 28.92
B8B3B-12	90° alloytube, 3/4" OD, -12	1.6	17.00 / 36.00
B8B3B-16	90° alloytube, 1" OD, -16	1.6	21.30 / 47.20
B8B3B-20	90° alloytube, 1 1/4" OD, -20	1.6	23.90 / 55.10
B8B3B-24	90° alloytube, 1 1/2" OD, -24	1.6	27.20 / 65.00



Alloy Bends

ESCO-8-90-3.5S	90 Deg Alloy Tube 1/2" OD
ESCO-10-90-3.5S	90 Deg Alloy Tube 5/8" OD
ESCO-12-90-3.5S	90 Deg Alloy Tube 3/4" OD
ESCO-14-90-3.5S	90 Deg Alloy Tube 7/8" OD
ESCO-16-90-3.5S	90 Deg Alloy Tube 1" OD
ESCO-18-90-3.5S	90 Deg Alloy Tube 1- 1/8" OD
ESCO-20-90-3.5S	90 Deg Alloy Tube 1- 1/4" OD
ESCO-22-90-3.5S	90 Deg Alloy Tube 1- 3/8" OD
ESCO-24-90-3.5S	90 Deg Alloy Tube 1- 1/2" OD
ESCO-28-90-3.5S	90 Deg Alloy Tube 1- 3/4" OD
ESCO-2.25" 90DEG	90 Deg Alloy Tube 2 1/4" OD



Wiggins Weld-On Adapters (Aluminium)

Wiggins Male Weld Ferrules		Dimensions	
Part no.	Description	A	B
ES903-08D	Male weld ferrule, 1/2" tube	0.690"	0.684"
ES903-10D	Male weld ferrule, 5/8" tube	0.690"	0.809"
ES903-12D	Male weld ferrule, 3/4" tube	0.738"	0.994"
ES903-16D	Male weld ferrule, 1" tube	0.838"	1.270"
ES903-20D	Male weld ferrule, 1 1/4" tube	0.838"	1.520"
ES903-24D	Male weld ferrule, 1 1/2" tube	0.838"	1.790"
ES903-28D	Male weld ferrule, 1 3/4" tube	0.854"	2.313"
ES903-32D	Male weld ferrule, 2" tube	0.854"	2.313"
ES903-40D	Male weld ferrule, 2 1/2" tube	0.854"	2.813"
ES903-48D	Male weld ferrule, 3" tube	0.854"	3.313"



Wiggins Female Weld Ferrules		Dimensions	
Part no.	Description	A	B
ES905-08D	Female weld ferrule, 1/2" tube	0.684"	0.766"
ES905-10D	Female weld ferrule, 5/8" tube	0.809"	0.891"
ES905-12D	Female weld ferrule, 3/4" tube	0.810"	1.071"
ES905-16D	Female weld ferrule, 1" tube	0.885"	1.347"
ES905-20D	Female weld ferrule, 1 1/4" tube	0.885"	1.597"
ES905-24D	Female weld ferrule, 1 1/2" tube	1.090"	1.867"
ES905-28D	Female weld ferrule, 1 3/4" tube	1.110"	2.391"
ES905-32D	Female weld ferrule, 2" tube	1.110"	2.391"
ES905-40D	Female weld ferrule, 2 1/2" tube	1.110"	2.891"
ES905-48D	Female weld ferrule, 3" tube	1.110"	3.391"

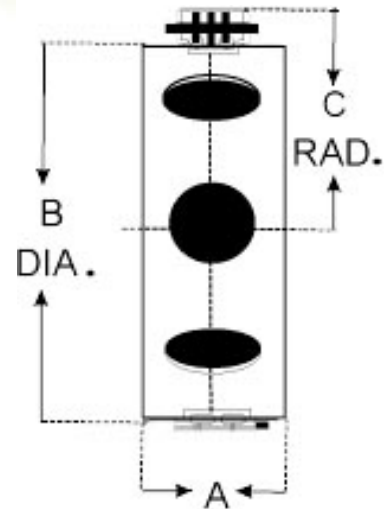


Machined in our in house machining facility, these parts are made of high quality materials and manufactured to a very high standard. We are also able to supply these parts in Steel, Stainless and Titanium to order.

Wiggins Connectors

The Wiggins W900 rigid tube connector range has evolved from over 50 years' experience designing aerospace flexible tube connectors allowing instant, reliable quick disconnection of rigid air or liquid tubing. These connectors are invaluable for race teams requiring fast engine & transmission changes and also for dynamometer rooms and pressure testing.

- Up to 8° of angular misalignment and up to 1/4" of axial travel, therefore serving as vibration isolators.
- Available for a rigid tube size range from 1/2" to 3" O.D.
- Maximum operating pressure 125psi, proof pressure 250psi, burst pressure 375psi.
- Maximum working temperature 450°F (depending on O-ring seal compound).



Wiggins Tube Connectors		Weight lb	A	B	C
W991-08DE	Aluminium Wiggins connector, 1/2" tube	0.034	0.739"	0.851"	0.90"
W991-10DE	Aluminium Wiggins connector, 5/8" tube	0.036	0.739"	0.976"	0.96"
W991-12DE	Aluminium Wiggins connector, 3/4" tube	0.043	0.829"	1.156"	1.04"
W991-16DE	Aluminium Wiggins connector, 1" tube	0.052	0.923"	1.432"	1.16"
W991-20DE	Aluminium Wiggins connector, 1 1/4" tube	0.058	0.923"	1.682"	1.27"
W991-24DE	Aluminium Wiggins connector, 1 1/2" tube	0.062	0.923"	1.952"	1.40"
W991-28DE	Aluminium Wiggins connector, 1 3/4" tube	0.070	0.923"	2.211"	1.52"
W991-32DE	Aluminium Wiggins connector, 2" tube	0.083	0.989"	2.505"	1.66"
W991-40DE	Aluminium Wiggins connector, 2 1/2" tube	0.097	0.989"	2.996"	1.90"
W991-48DE	Aluminium Wiggins connector, 3" tube	0.144	0.989"	3.554"	2.17"
W991-56DE	Aluminium Wiggins connector, 3 1/2" tube	0.176	0.989"	4.088"	2.43"
W991-64DE	Aluminium Wiggins connector, 4" tube	0.201	1.002"	4.596"	2.67"

Cores

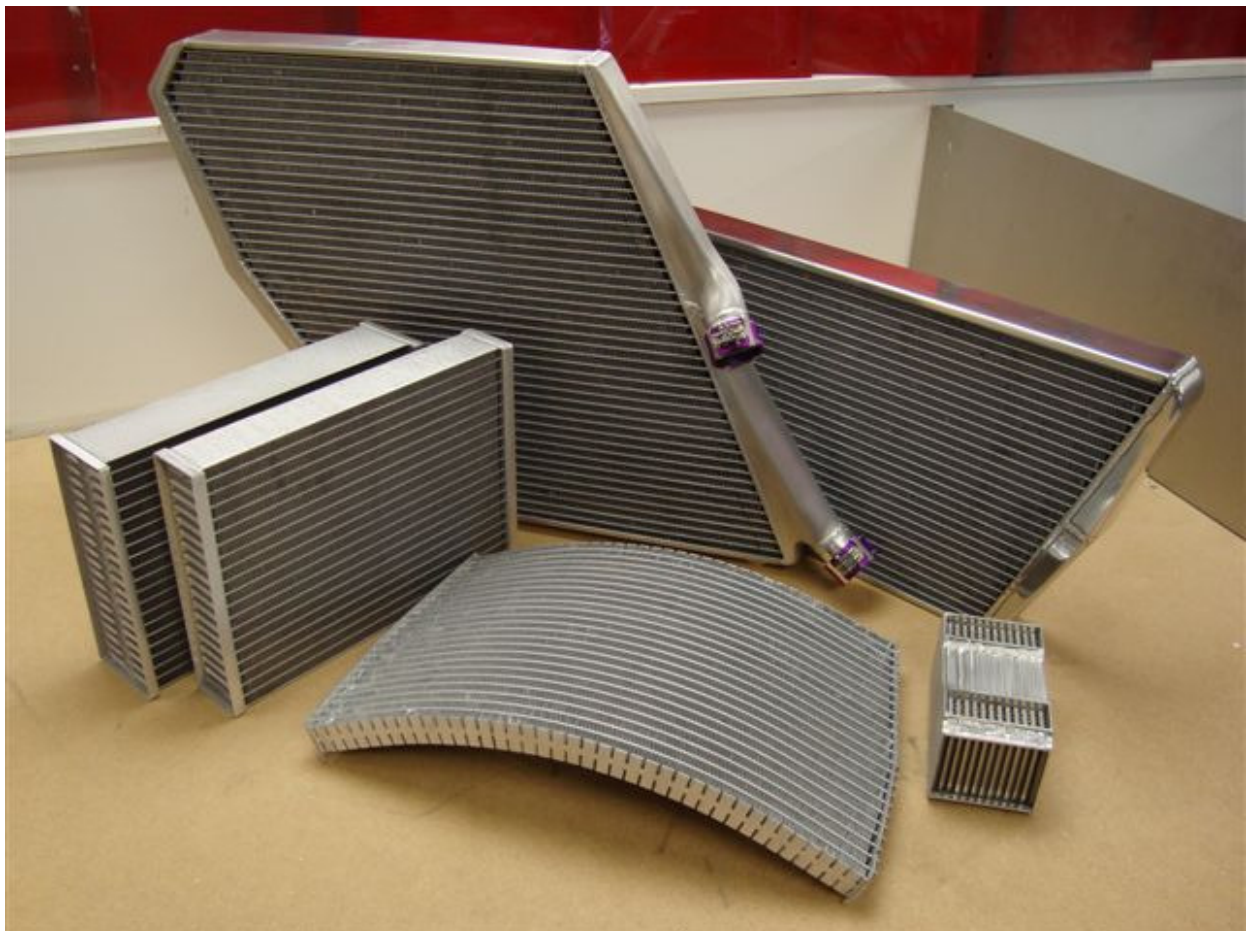
WATER CORES

OIL COOLER CORES

INTERCOOLER CORES

WATER/OIL HEAT EXCHANGERS

Maximum size available for each 700mm x 1500mm



Radiator Necks (Aluminium)

These filler necks are CNC machined and are ready for welding. They come with a 1/4" barb overflow fitting attached.

Part Number
166014
166015

Opening
1.25" (32mm)
1.5" (38mm)



Radiator Caps

Part Number	Description
PCL10	Large Pressure Cap 10lbs
PCL1822	Large Pressure Cap 18-22lbs
PCL2125	Large Pressure Cap 28-32lbs
PCS13	Small Pressure Cap 13psi
PCS16	Small Pressure Cap 16psi
PCS1921	Small Pressure Cap 19-21psi
PCS2224	Small Pressure Cap 22-24psi



Water Pumps

EWP8005 Large Engine Water Pump
EWP8010 Pump Controller Kit



EWP9010 Small Water Pump



Cooling Fans



Full range of SPAL fans available ranging from 4" to 16" singular, and 11" x 2 and 12" x 2 dual fans.

SPAL fans are regarded as the best on the market. Not only do many of the worlds finest auto makers rely on SPAL products, but also a vast majority of professional race teams.



ITEM#	DESCRIPTION	A	B	C	AIRFLOW (CFM)
4"					
30103018	4" Fan-Pull	4.29	2.38	4.29	147
30103009	4" Fan-Push	4.29	2.38	4.29	124.6
5.2"					
30103011	5.2" Fan-Pull	5.51	2.36	5.51	312
30103013	5.2" Fan-Push	5.51	2.36	5.51	312
5.6"					
30100291	5.6" Fan-Pull	5.91	3.86	5.91	295
6.5"					
30100402	6.5" Fan-Pull	7.24	2.05	7.03	330
30100403	6.5" Fan-Push	7.24	2.05	7.03	330
7.5"					
30100358	7.5" Fan-Pull	8.27	2.05	7.95	440
30100393	7.5" Fan-Push	8.27	2.05	7.95	440
9"					
30102061	9" High Performance Fan-Pull	9.72	3.7	9.37	740
30102053	9" High Performance Fan-Push	9.72	3.7	9.37	740
30100392	9" Fan-Pull	9.72	2.05	9.72	590
30100381	9" Fan-Push	9.72	2.05	9.72	590
10"					
30102057	10" High Performance Fan-Pull	10.9	3.7	10.6	1120
30102058	10" High Performance Fan-Push	10.9	3.7	10.6	1120
30100360	10" Fan-Pull	11.2	2.05	10.59	650
30100374	10" Fan-Push	11.2	2.05	10.59	650
11"					
30102052	11" Dual High Performance Fan-Pull	16.26	4.25	23.46	2720
30102054	11" High Performance Fan-Pull	12.36	3.7	11.93	1360
30102040	11" High Performance Fan-Push	12.36	3.7	11.93	1360
30101500	11" Medium Profile Fan-Pull	12.2	2.48	11.57	970
30101502	11" Medium Profile Fan-Push	12.2	2.48	11.57	970
30100364	11" Fan-Pull	12.2	2.05	11.57	810
30100365	11" Fan-Push	12.2	2.05	11.57	810
12"					
30102130	12" Dual High Performance Fan-Pull	17.52	4.02	25.83	3170
30102029	12" High Performance Fan-Pull Curved Blade	13.23	3.39	12.64	1450
30102030	12" High Performance Fan-Push Curved Blade	13.23	3.39	12.64	1380
30102038	12" High Performance Fan-Pull	13.03	3.7	13.03	1640
30102025	12" High Performance Fan-Push	13.03	3.7	13.03	1640
30101504	12" Medium Profile Fan-Pull	13.23	2.48	12.64	1230
30101505	12" Medium Profile Fan-Push	13.23	2.48	12.64	1230
30100375	12" Fan-Pull	13.23	2.05	12.64	860
30100384	12" Fan-Push	13.23	2.05	12.64	860
13"					
30102044	13" High Performance Fan-Pull Curved Blade	14.17	3.39	13.62	1640
30102045	13" High Performance Fan-Push Curved Blade	14.17	3.39	13.62	1640
30101507	13" Medium Profile Fan-Pull	14.17	2.48	13.62	1250
30101508	13" Medium Profile Fan-Push	14.17	2.48	13.62	1250
30100398	13" Fan-Pull	14.17	2.05	13.62	1030
30100399	13" Fan-Push	14.17	2.05	13.62	1030
14"					
30102041	14" High Performance Fan-Pull Straight Blade	15.04	3.39	14.45	1650
30102055	14" High Performance Fan-Push Straight Blade	15.04	3.39	14.45	1650
30102042	14" High Performance Fan-Pull Curved Blade	15.04	3.39	14.45	1780
30102056	14" High Performance Fan-Push Curved Blade	15.04	3.39	14.45	1840
30101509	14" Medium Profile Fan-Pull	15.04	2.48	14.48	1280
30101510	14" Medium Profile Fan-Push	15.04	2.48	14.48	1280
30100385	14" Fan-Pull	15.04	2.05	14.48	1040
30100382	14" Fan-Push	15.04	2.05	14.48	1040
16"					
30102113	16" Extreme Performance Pull Fan	16.3	3.65	15.75	2315
30102120	16" High Performance Fan-Pull Straight Blade	16.3	3.39	15.75	1920
30102047	16" High Performance Fan-Push Straight Blade	16.3	3.39	15.75	2035
30102049	16" High Performance Fan-Pull Curved Blade	16.3	3.39	15.75	2025
30102048	16" High Performance Fan-Push Curved Blade	16.3	3.39	15.75	1960
30102082	16" High Performance Fan-Pull Paddle Blade	15.75	3.75	15.75	1880
30101516	16" Medium Profile Fan-Pull	16.3	2.48	15.75	1610
30101517	16" Medium Profile Fan-Push	16.3	2.48	15.75	1610
30100400	16" Fan-Pull	16.3	2.05	15.75	1300
30100401	16" Fan-Push	16.3	2.05	15.75	1300
30130074	16" Fan Shroud Gasket				

Sealing Washers

Copper

Internal Diameter	Part No.
8mm	44515
10mm- 3/8" UNF-	44516
7/16" UNF	44518
12mm	445M12
14mm	445M14
16mm	445M16
18mm	445M18
20mm	445M20
22mm	445M22
24mm	445M24
26mm	445M26
28mm	445M28
30mm	445M30



Aluminium

Internal Diameter	Part No.
10mm- 3/8" UNF-	177003
7/16" UNF	177004
1/2" UNF	177005
9/16" UNF	177006
3/4" UNF	177008
7/8" UNF	177010
1 1/16" UNF	177012
1 5/16" UNF	177016



Dowty & Stat-O-Seals

Internal Diameter	Part No.
6mm	DW006
8mm	DW008
7/16 JIC	DW009
9/16 JIC - M14	DW010
5/8 JIC	DW011
3/8 JIC-1/8 BSP-M10	DW020
1/2 JIC-1/4 BSP	DW021
3/8 BSP	DW023
3/4 JIC-M18	DW024
1/2 BSP-M20	DW025
7/8 JIC-5/8 BSP-M22	DW026
3/4 BSP-M26	DW027
1 1/16 JIC	DW028
To fit -18	DW029
1 5/16 1" BSP	DW030
1 5/8	DW031
Fits M12	DW222



The Stat-O-Seal consists of a synthetic rubber "O" ring mechanically locked to the I.D. of an aluminium washer. When tightened, the "O" ring is compressed, forcing the sealing surfaces around the bolt shank. They will form a positive seal over a temperature range of -85° to +450° F. They provide the advantages of an "O" ring type seal without the necessity of machining "O" ring grooves into the part. In any application where you are now using a copper or aluminium sealing washer, the Stat-O-Seal will do a better job.



Internal Diameter	Part No.
3/16"	178003
1/4"	178004
5/16"	178005
3/8"	178006
7/16"	178007
1/2"	178008
9/16"	178009
5/8"	178010
3/4"	178012
7/8"	178014

Aluminium Tubing

ANNEALED ALUMINUM TUBING is easily hand-formed to virtually any requirement. The tubing can be used with Earl's TUBE-MATE AUTO-FIT™ hose ends. It can be flared and used with Earl's 5818 tube nut and 5819 tube sleeve or an adapter can be welded onto the end(s) of the tube, or the ends can be beaded and used with Earl's ECON-O-FIT™ hose ends or with standard hose dams. For damping hose, tubing should be beaded.

Part No	O.D.	Length	Finish
100031	1/4	10'(3m)	Unanodized
100034	3/8	10'(3m)	Unanodized
100037	1/2	10'(3m)	Unanodized



Caps & Plugs

Caps, Flare and Port Plugs available in AN, NPT, BSP and Metric Sizes. We are also able to produce bespoke caps & plugs.

A.N. Cap



A.N. Flare Plug



A.N. Port Plug



Metric Port Plug



Internal Hex Plug



A large range of plastic caps and plugs also available.

A.N. Plastic Cap



A.N. Plastic Cap



Tube Beading Tool

A compact and well thought out tool, the **Hand Beading Tool** quickly and easily forms a raised bead 1mm high on aluminium and copper pipes ranging in size from 12.7mm to 100mm in diameter.

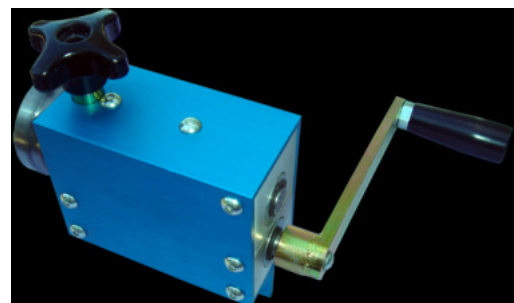
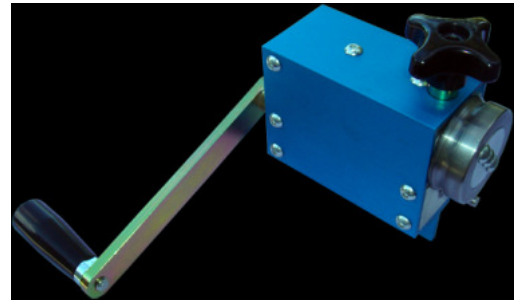
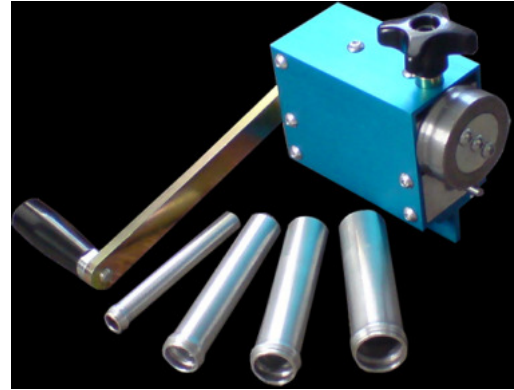
Can also be used with care on 18swg & 20swg mild steel.

This tool has been designed and built with reliability and ease of use as key features:

- EN36 shafts run in DU bushes and thrust washers.
- All major drive components woodruff keyed to the shafts, and not simply pinned.
- The pressure adjusting mechanism has steel threads running in a steel bush for long life.
- Particular attention has been paid to the quality of the component parts and assembly of the tool to ensure it is sturdy, reliable, and long lasting.
- The aluminium case and end bearing carriers are anodised for appearance and corrosion resistance.

An absolutely essential tool to have when plumbing water, fuel, oil, and air systems when using push-on hoses.

Simple, easy to use, and very effective producing fast, secure, and safe results.



Mandrel Tube Bending Tool

Designed to bend aluminium, steel, stainless steel and copper tubes in the following sizes:

- **MK 1 bender** For uses with:
 - 1/2" x 16 and 18 SWG
 - 5/8" x 16 and 18 SWG
 - 3/4" x 16 and 18 SWG
 - Aluminium, steel, copper, stainless steelAll with a 1.5" centre line bend radius

- **MK 2 Bender (will handle as per Mk 1 but also including)**
 - 7/8" x 16 and 18 SWG (aluminium tube only)
 - 1" x 16 and 18 SWG (aluminium tube only)

With a 2" centre line bend radius

Due to the unique design, the **hand tube benders** will bend any of the above size tubes with an amazingly tight centre line radius of 1.5" or 2", with up to 180° of bend and with the minimum of tube distortion (a nominal 3%).

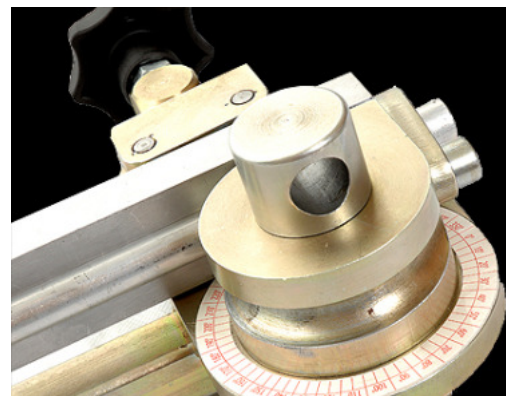
The tube benders come equipped with a large, easily read degree dial to allow precise angles of bend to be achieved and repeated.

The machines are extremely easy to use and allow for multiple bends in the same piece of tube at alternate angles on different planes. Once the machines are set for a particular size of tube it will be found that multiple bends are rapidly achieved.

Each machine is delivered complete with a main mandrel size of your choice (either 1/2", 5/8", 3/4", 7/8", or 1"), plus 2 alternate "bullets" for the mandrel size covering 16 and 18 SWG tube sizes. All machines are tested before despatch.

Alternate main mandrels are available (1.5" & 2" radius) and alternate "bullets" are available for each size.

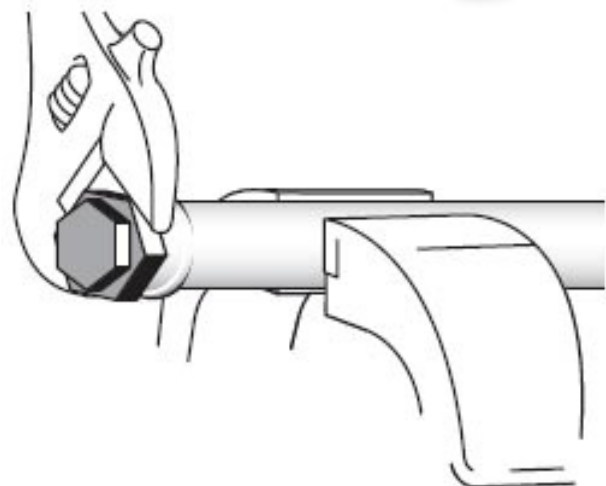
We can produce 2" bend radius mandrels for 1/2", 5/8", and 3/4" diameter tube to special order and can also produce mandrels/bullets for mm tube. (16mm, 20mm and 25mm x 1.5mm wall)



EZ Beading Tool

EARL'S patented EZ (ROLLER) BEADER is a fresh approach to an old problem. In order to securely attach rubber water hose to rigid aluminium tubing, the end of the tubing must be beaded. Generations of racing mechanics have used military surplus Parker beading tools to do the job. We probably sold more of them than anyone. Unfortunately production ceased after WWII and the surplus kits have been scarce for over a decade. Compact enough to be used on already installed tubing, Earl's EZ-BEADER produces a properly positioned and perfectly radiused bead on aluminium tubing with wall thicknesses from .035" to .065".

Part Number	Tube OD
008	3/8"
009	1/2"
010	5/8"
011	3/4"
012	1"
013	1-1/4"
014	1-1/2"
015	1-3/4"
016	2"
018	Set of all 9



PTFE Tape & Paste

Every time you install a tapered pipe threaded fitting, it is essential to use some form of anti-seize to prevent galling. Our Teflon Tape is not only the easiest and least messy for or anti-seize available, but it also forms a positive seal.

For Tapered Pipe Thread Fitting

- Form Of Anti-Seize
- Prevents Galling
- Easiest/Least Messy
- Forms A Positive Seal



Earl's instant pipe sealant secures metal pipes and fittings by filling the space between threaded metal parts. Thread sealants prevent leakage caused by tape shredding, vibration loosening, solvent evaporation and damaged threads. Pipe sealant can be used for both low and high pressure applications and seals to the burst strength of most piping systems. Because of the lubricating properties, fitting assembly is easy. It works on any liquid, gas, fuel, air, oil lines and has an anti-galling compound to work with stainless and aluminium fittings. Parts can be disassembled with basic hand tools. Comes in a 50ML tube

- Operating Temperature: -65° F to +400° F
- Full Cure Time: 24 Hours @ 68° F
- Pressure Resistance: 10,000 PSI



Pressure Testing Kit

Consists of AN fitting with air valve in each size and matching plugs.

Sizes -3 to -16

Part Number D016



Aluminium Wrenches

Part Number	Hex Size	Nut Size	Colour
230406	11/16"	6 Nut	Black
230408	7/8"	8 Nut	Blue
230410	1"	10 Nut	Purple
230412	1-1/4"	12 Nut	Red
230416	1-1/2"	16 Nut	Bronze
230420	1-13/16"	20 Nut	Gold
230402	Set of all Six	-	-

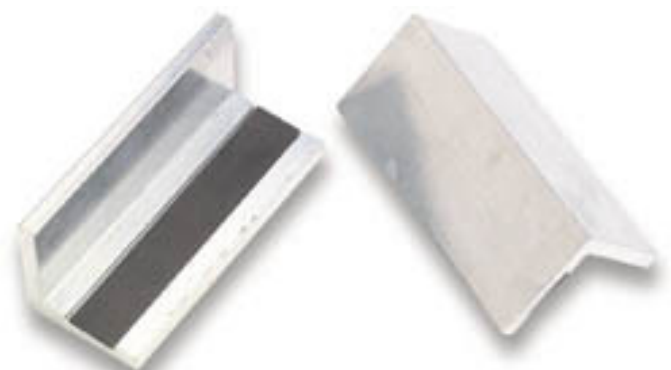


Part Number	Hex Size	Nut Size	Colour
230405	9/16 x 1/2	4 Nut -3 Nut	Natural
230407	11/16 x 5/8	6 Nut - 4 Socket	Black
230409	7/8 x 3/4	8 Nut - 6 Socket	Blue
230411	1 x 7/8	10 Nut - 8 Socket	Purple
230413	1-1/4 x 1-1/16	12 Nut - 10 Socket	Red
230415	1-1/2 x 1-3/16	16 Nut - 12 Socket	Bronze
230419	2 x 1-7/16	20 Nut - 16 Socket	Gold
230401	Set of all Seven	-	-



Aluminium Vice Jaws

These handy vice jaw liners help prevent scratching of anodized aluminium hose ends during assembly. Internal magnets hold the extruded aluminium liners securely to most popular bench vices. The jaws are available in both of the standard jaw widths and are designed to hold almost any soft part without marking its surface. Earl's assembly department uses these jaws.



Part Number:004 (3" Wide) - 005 (5" Wide)

In House-Machining Facility

Earl's Precision Engineering was formed in 1996 to supplement the capabilities of Earl's traditional hose and fittings core business. Initially manufacturing bespoke fittings such as small lightweight swaged tailed hose ends, we now offer a full range of CNC machining. Our work includes supplying parts to top F1 teams, engine manufacturers and fabrication shops.



Please call **+44(0)1803 869850** or e-mail andy.spencer@earls.co.uk to discuss your requirements.

"AN" THREAD SIZES

"AN" (Army-Navy) Sizes were established by the Aerospace industry years ago and were the designated O.D. of the rigid metal tube that each size fitting is used with. (The chart to the right will clarify this point.)

The numbers assigned equate to the O.D. (outside diameters) of the tubing in 1/16". Since tubing and hoses are to be found with assorted wall thicknesses we can now understand that the designated size number does not necessarily tell you how large the inside diameter will be. (For example, the inside diameter of an Earl's size 6 hose end is nearly as large as the inside diameter of some other manufacturers' -8 hose ends.)

Each AN size number has its own standard thread size which can be seen in column three of the chart. Again, these are the same thread sizes that have been used in aircraft and industrial applications for many years.

AN SIZE	METAL TUBE O.D.	THREAD SIZE
2	1/8	5/16-24 SAE
3	3/16	3/8-24 SAE
4	1/4	7/16-20 SAE
5	5/16	1/2-20 SAE
6	3/8	9/16-18 SAE
8	1/2	3/4-16 SAE
10	5/8	7/8-14 SAE
12	3/4	1-1/16-12 SAE
16	1"	1-5/16-12 SAE
20	1-1/4	1-5/8-12 SAE
24	1-1/2	1-7/8-12 SAE
28	1-3/4	2-1/4-12 SAE
32	2"	2-1/2-12 SAE



National Pipe Threads (NPT) are the next most popular thread size used in "Competition Plumbing." We can actually find a resemblance between the size call outs and the I.D. (inside diameter) of the fitting as shown in the chart below.

"NPT" THREAD SIZES

Some of the most popular adapter fittings shown in our catalog are AN to NPT adapters. While many variations are offered, column four in the chart shows which AN size corresponds to each NPT size when inside diameters (flow dimensions) are considered.

All Earl's Swivel-Seal™ hose ends are designed to provide little or no restriction when used with the corresponding AN fitting size.

We also offer a number of Metric threads to AN fitting adapters.

PIPE THREAD SIZE	THREADS PER INCH	THEORETICAL I.D. OF FTG.	CLOSEST AN FTG. SIZE
1/16"	27	1/16"	
1/8"	27	1/8"	4
1/4"	18	1/4"	6
3/8"	18	3/8"	8
1/2"	14	1/2"	10
3/4"	14	3/4"	12
1"	11-1/2	1"	16
1-1/4"	11-1/2	1-1/4"	20
1-1/2"	11-1/2	1-1/2"	24
2"	11-1/2	2"	32



TORQUE VALUES

The table below gives the torque tightening values for JIC (AN) fittings in both stainless steel and aluminum. When a combination of aluminum and stainless steel fittings are being mated always use the aluminum fitting torque values

DASH SIZE	ALUMINUM		STAINLESS STEEL	
	INCH/LBS MIN-MAX	NEWTON/m MIN-MAX	INCH/LBS MIN-MAX	NEWTON/m MIN-MAX
-02	50 - 80	5.64 - 9.03	75 - 120	8.47 - 13.55
-03	70 - 105	7.90 - 11.86	95 - 140	10.73 - 15.81
-04	100 - 104	11.29 - 15.81	135 - 190	15.25 - 21.46
-05	130 - 180	14.68 - 20.33	170 - 240	19.20 - 27.11
-06	150 - 195	16.94 - 22.03	215 - 280	24.29 - 31.63
-08	270 - 350	30.50 - 39.54	470 - 550	53.08 - 62.14
-10	360 - 430	40.67 - 48.58	620 - 745	70.05 - 84.17
-12	460 - 550	51.97 - 62.14	855 - 1055	96.60 - 119.18
-16	700 - 840	79.08 - 94.90	1140 - 1370	128.80 - 154.78
-20	850 - 1020	96.03 - 115.24	1520 - 1825	171.73 - 206.19
-24	900 - 1080	101.68 - 122.02	1900 - 2280	214.67 - 257.60
-32	1800 - 2000	203.37 - 255.97	2660 - 2940	300.54 - 332.17

The torque values apply to machined fitting connections only, not flared tube or compression. Fitting mating faces and threads should be lubricated prior to assembly. Generally the system working fluid (engine oil, hydraulic etc.) is used. If another lubricant is used, insure it is compatible with the working fluid and system. Dry assembly should be avoided if all possible.

It is important not to over tighten hose fittings to their mating adapters. Over tightening causes permanent deformation of the fitting seat (37° AN flare) and will result in the mating adapter sealing face to be made concave, this will inhibit repeated reliable use of both the fitting and the adapter.

