



CUSTOM RETRACTS

**MANUFACTURER AND SUPPLIER
OF QUALITY
PNEUMATIC RETRACTS**

CATALOGUE and PRICELIST

EFFECTIVE 1st JULY 2009

Suitable for: SCALE

PATTERN



SPORT



DUCTED FAN

Styles and sizes to suit most applications.

Contact: Alois Zuger

CUSTOM RETRACTS
P.O. Box 151
NORTH RYDE NSW 1670
AUSTRALIA

Tel: +61 2 9888 7384

Mob: +61 400 812 717

Email: zuger@idx.com.au



Payment Options:

Money Order: made to Alois Zuger

Cheque: payable to Custom Retracts

Internet Banking:

Name: Custom Retracts

BSB: 633-000

A/C #: 137369252

Reference: Your Name

CR-100

For '60' size and ducted fan aircraft up to 6KG.
Supplied with 3/8" diameter OLEO legs.

Specifications and features:

1. Low profile main body - only 29mm.
2. 16mm diameter air ram.
3. 6061 T6 extruded aluminium main body.
4. Brass trunion block.
5. Oleo legs constructed from 4130 aircraft grade cro-moly tubing [3/8" & 1/4" x .035"].
6. Investment cast stainless steel scissor links.
7. All integral components are metal.
8. Supplied with axles.
9. Supplied with a complete air system.

Operation:

These retracts are true oleo retracts and are based on the design of the successful design of the CR-200 retracts. The oleo leg is installed directly into the main cam. This style of oleo and main cam connection creates a far stronger and superior retract system than the past method of attaching oleo struts to wire leg retracts.

These retracts can be manufactured to retract away from the air ram in short leg applications, like the PC-9 and some ducted fan models.

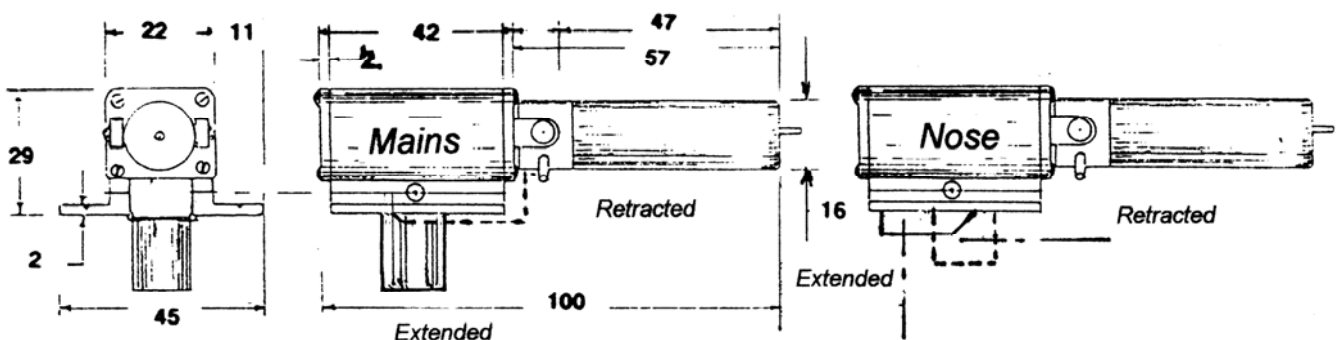
****The oleo length is manufactured to each customer's individual requirements.**



CR-100 MAINS....\$410.00* Pair

CR-130 TRICYCLE....\$580.00* Set

*Prices are in Australian Dollars (AUD). Prices include air system.



CR-200

For aircraft and ducted fan models up to 10KG.
Supplied with 1/2" diameter OLEO legs.

Specifications and features:

1. 19mm diameter air ram.
2. 6061 T6 extruded aluminium main body.
3. Brass trunion block.
4. Oleo legs constructed from 4130 aircraft grade cro-moly tubing [1/2" & 3/8" x .035"].
5. Investment cast stainless steel scissor links.
6. All integral components are metal.
7. Supplied with axles.
8. Supplied with a complete air system.

Operation:

The aluminium main body contains the trunion block and cam, which raises and lowers the retract leg. This style of mechanism provides a "positive lock" in both the up and down positions.

The oleo is brass bushed for smooth operation. The lower offset casting can be either steel or alloy, or can be replaced with a machined lower section to suit some applications.

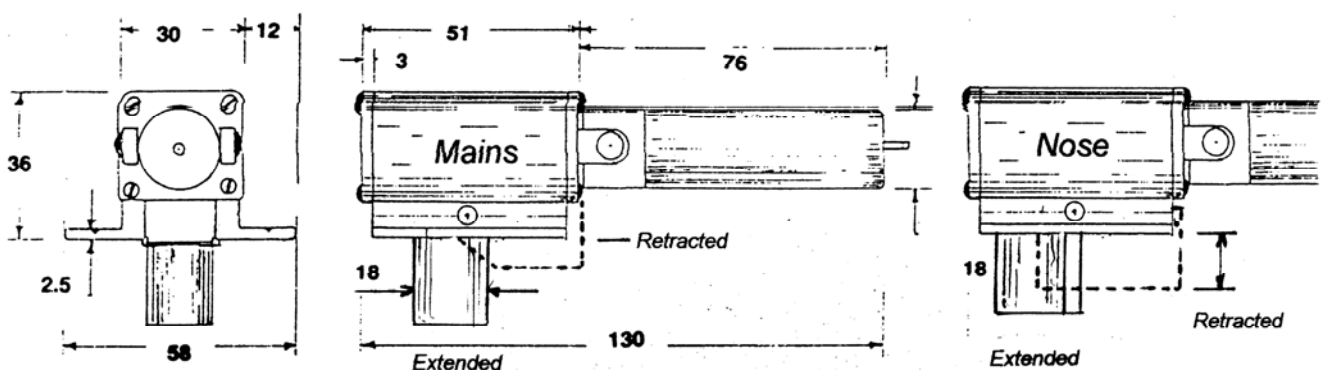
****The oleo length is manufactured to each customer's individual requirements**



CR-200 MAINS....\$460.00* Pair

CR-230 TRICYCLE....\$650.00* Set

*Prices are in Australian Dollars (AUD). Prices include air system.



CR-300

For 'mammoth' size aircraft up to 15KG.
Supplied with 1/2" diameter OLEO legs.

****Ideally suited to single leg 'Bomber' style aircraft with forward or rearward retraction, such as the B-17, B-25 or similar aircraft.****

Specifications and features:

1. 25mm diameter air ram.
2. Laser cut side plates from 1.6mm Stainless Steel.
3. Brass trunion block.
4. Oleo legs constructed from 4130 aircraft grade cro-moly tubing [1/2" & 3/8" x .035"].
5. Investment cast stainless steel scissor links.
6. Lifting and locking linkages are cast stainless steel.
7. ALL metal construction.
8. Supplied with axles.
9. Supplied with a complete air system.
10. Optional 5/8" diameter oleo leg available.

Operation:

The side plates contain the stainless steel lifting mechanism, which raises and lowers the retract leg. This style of operation provides a positive down lock using the over centre principle. The main cam pivots on special stainless steel bushes. The oleo action is brass bushed for smooth operation. The lower offset casting can be either steel or alloy or can be replaced with a machined lower section to suit some applications.

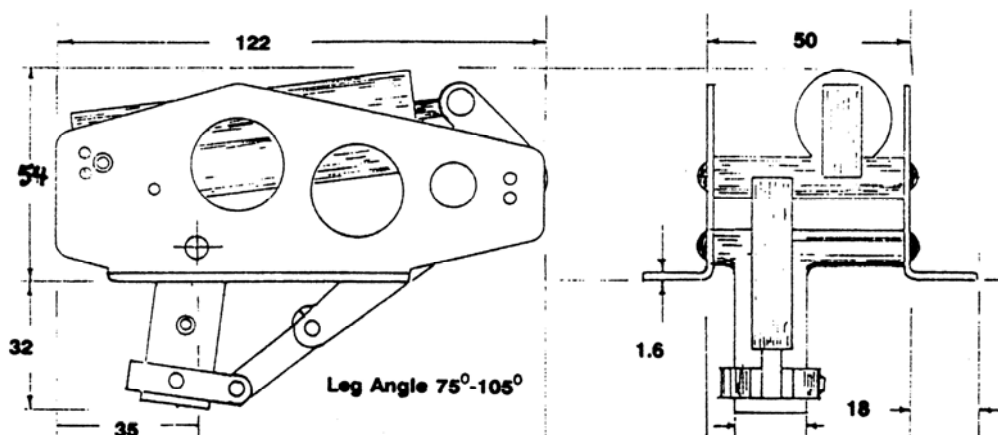


****The oleo length is manufactured to each customer's individual requirements.**

CR-300 MAINS....\$550.00* Pair or with optional 5/8" oleo....\$570.00* Pair

*Prices are in Australian Dollars (AUD). Prices include air system.

[Various styles of nose gear or tail wheel also available]



CR-300SF

Specifically designed for the 'SEA FURY' and 'TEMPEST'
'mammoth' size aircraft up to 15KG.

Supplied with SCALE functioning OLEO legs.

Specifications and features:

1. 25mm diameter air ram.
2. Laser cut side plates from 1.6mm Stainless Steel.
3. Brass trunion block.
4. Oleo legs constructed from 4130 aircraft grade cro-moly tubing [1/2" or 3/8" x .035"].
5. Investment cast stainless steel top and bottom pivot linkages.
6. Lifting and locking linkages are cast stainless steel.
7. ALL metal construction.
8. Supplied with axles.
9. Supplied with a complete air system.
10. Optional 5/8" diameter oleo leg available.

Operation:

The side plates contain the stainless steel lifting mechanism, which raises and lowers the retract leg. This style of operation provides a positive down lock using the over centre principle. The main cam pivots on special stainless steel bushes. The oleo action duplicates the full size SEA FURY and TEMPEST undercarriage action where the front leg section moves up and down in front of the rear leg section.

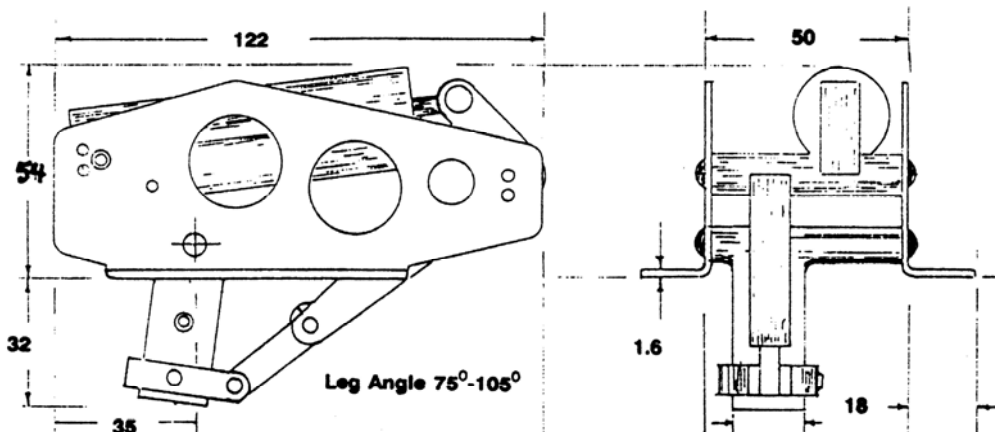


****The oleo length is manufactured to each customer's individual requirements.**

CR-300SF MAINS....1/2" \$650.00* Pair or with 5/8" oleo....\$695.00* Pair

[Retractable tailwheel also available, see page 9]

*Prices are in Australian Dollars (AUD). Prices include air system.



CR-350

90 degree rotating

For 'mammoth' size aircraft up to 15KG.
Supplied with 1/2" diameter OLEO legs.

Specifications and features:

1. 25mm diameter air ram.
2. Laser cut side plates from 1.6mm Stainless Steel.
3. Brass trunion block.
4. Oleo legs constructed from 4130 aircraft grade cro-moly tubing [1/2" or 3/8" x .035"].
5. Investment cast stainless steel scissor links.
6. Lifting and locking linkages are cast stainless steel.
7. ALL metal construction.
8. Supplied with axles.
9. Supplied with a complete air system.
10. Optional 5/8" diameter oleo leg available.

Operation:

The side plates contain the stainless steel lifting mechanism, which raises and lowers the retract leg and also the leg rotating cam, which is also made from stainless steel. The main cam has special stainless steel bushes. The oleo action is brass bushed for smooth operation. The oleo base is machined from 2011 aluminium.



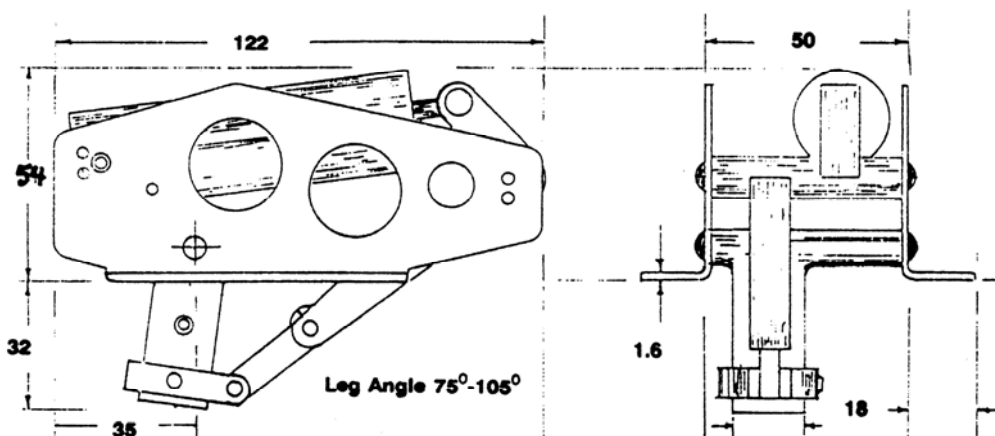
****The oleo length is manufactured to each customer's individual requirements.**

CR-350 MAINS....\$580.00* Pair or with optional 5/8" oleo....\$610.00 Pair

*Prices are in Australian Dollars (AUD).

Prices include air system.

[Retractable tailwheel also available, see page 9]



CR-355

Kittyhawk specials.

Specially developed for 'mammoth' size 'KITTYHAWK'
aircraft up to 15KG.

Supplied with 1/2" diameter oleo legs.

Specifications and features:

1. 25mm diameter air ram.
2. Laser cut side plates from 1.6mm Stainless Steel.
3. Brass trunion block.
4. Oleo legs constructed from 4130 aircraft grade cro-moly tubing [1/2" & 3/8" x .035"].
5. Investment cast stainless steel scissor links.
6. Lifting and locking linkages are cast stainless steel.
7. ALL metal construction.
8. Supplied with axles.
9. Supplied with a complete air system.
10. Optional 5/8" diameter oleo legs available.

Operation:

These retracts have been designed using the side plates and lifting mechanism of the CR-300 and CR-350 retracts. The CR-355 retracts also have side plate "extensions" made from 1.6mm stainless steel. These extension plates allow the oleo leg pivot point to be positioned 20mm below the mounting flanges. This provides a true SCALE position where the oleo leg remains under the surface of the wing when in the retracted position, as is the case with the full size "Kittyhawk". These retracts are also suitable for the "Skyraider".

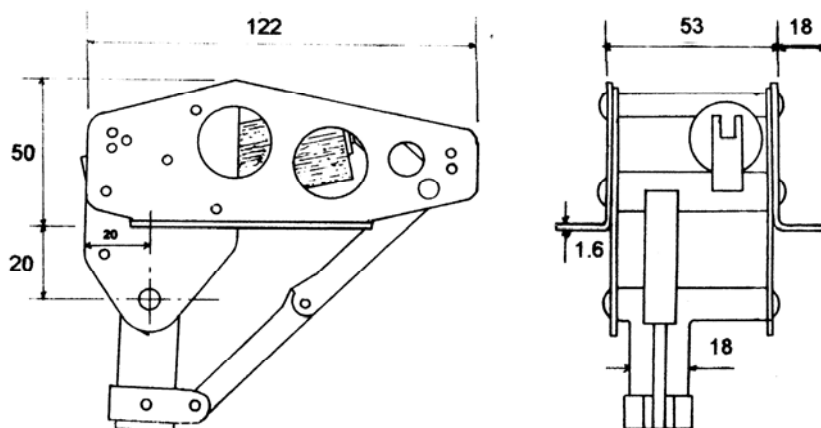
****The oleo length is manufactured to each customer's individual requirements.**

CR-355 MAINS....\$610.00* Pair or with optional 5/8" oleo....\$640.00 Pair

*Prices are in Australian Dollars (AUD).

[Retractable tailwheel also available, see page 9]

Prices include air system.



CR-400

For 'mammoth' size aircraft up to 15KG.
Supplied with 1/2" diameter OLEO legs.

****Originally developed for 1/5 and 1/6 scale Mustangs****
Also ideally suited to 1/5 scale Spitfires

Specifications and features:

1. 19mm diameter air ram.
2. 6061 T6 extruded aluminium low profile, tapered main body.
3. Brass trunion block.
4. Oleo legs constructed from 4130 aircraft grade cro-moly tubing [1/2" & 3/8" x .035"].
5. Investment cast stainless steel scissor links.
6. Lifting and locking linkages are cast stainless steel.
7. ALL metal construction.
8. Supplied with axles.
9. Supplied with a complete air system.
10. Optional 25mm diameter air ram available.

Operation:

Due to the design of the extruded main body, the air ram and the raise/lower mechanism is behind the oleo leg. This allows the leg to be installed close to the wing leading edge for a correct SCALE location. With a "standard" oleo leg, instead of the offset leg these retracts are suitable for the "Spitfire", "ME-109", FW-190 and many other aircraft. The leg retraction angle can be set at ANY angle to duplicate [unusual] full size angles as on the "FW-190" or the "Douglas Dauntless".



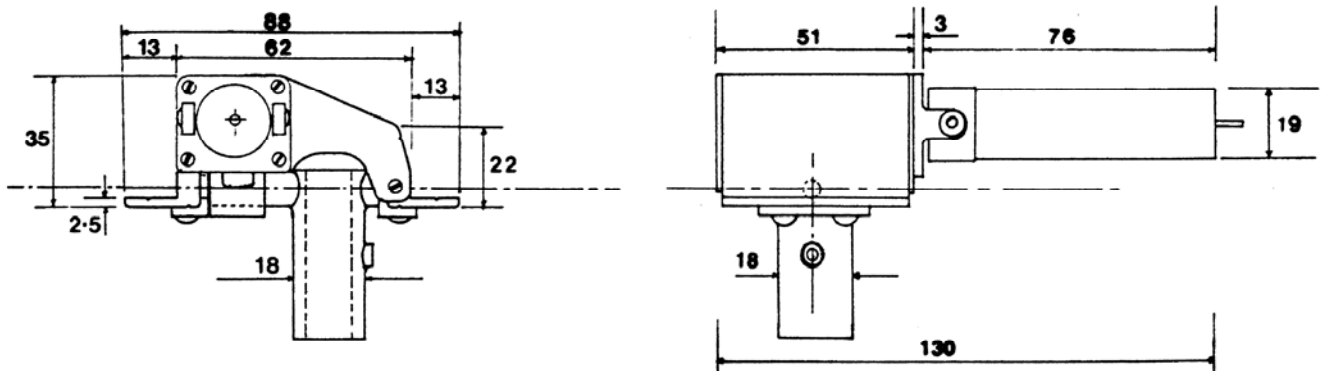
****The oleo length is manufactured to each customer's individual requirements.**

CR-400 MAINS....\$533.00* Pair

* Prices are in Australian Dollars (AUD).
Prices include air system.

CR-400 1/4 scale....\$570.00* Pair

[25mm air ram & 5/8" oleo supplied with 1/4 scale version]
[Tailwheel also available, see page 9]



CR-412

Developed for 'mammoth' size AT-6, HARVARD,
WIRRAWAY and BOOMERANG type aircraft up to 15KG.
Supplied with 1/2" diameter OLEO legs.

Specifications and features:

1. 19mm diameter air ram.
2. 6061 T6 extruded aluminium low profile, tapered main body.
3. Brass trunion block.
4. Oleo legs constructed from 4130 aircraft grade cro-moly tubing [1/2" & 3/8" x .035"].
5. Investment cast stainless steel scissor links.
6. ALL metal construction.
7. Supplied with axles.
8. Supplied with a complete air system.

Operation:

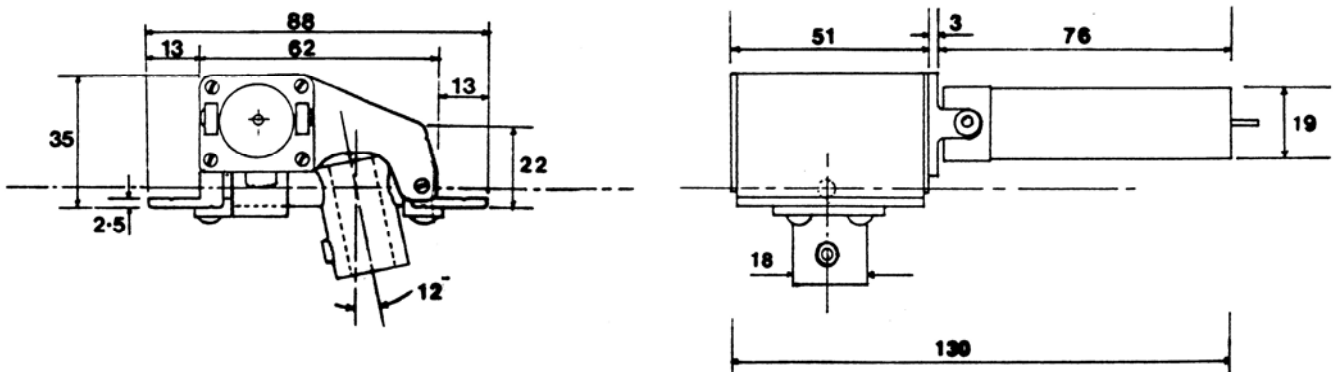
These retracts are supplied with a 12 degree, forward angled cam, which allows a far easier set-up technique for correct scale installation and oleo location in both the extended and retracted positions.

**The oleo length is manufactured to each customer's individual requirements.



CR-412 MAINS....\$540.00* Pair **CR-412 1/4 scale....\$580.00* Pair**

*Prices are in Australian Dollars (AUD). Prices include air system.



RETRACTABLE TAILWHEEL

[Forward or rearward retraction]

Specifications and features:

1. Extruded aluminium main body.
2. 16mm diameter air ram.
3. Brass trunnion block.
4. 5/32" diameter piano wire leg.
5. Supplied with air lines and "T" fittings to connect to a standard air system.

Operation:

When supplied as a forward retracting unit the steering arm operates on the pull-pull cable system.
[cables not supplied]

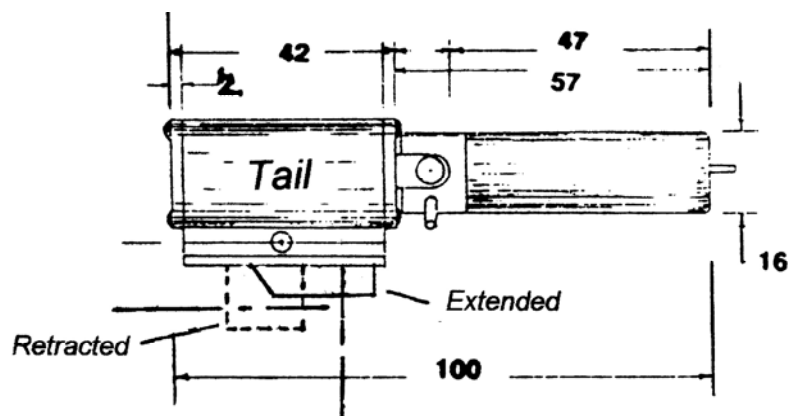
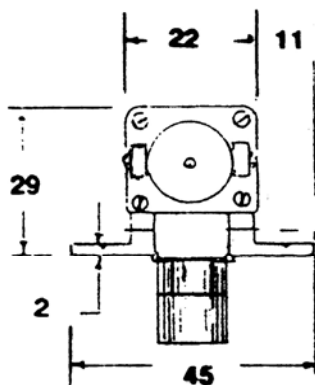
When supplied as a rearward retracting unit the steering arm is operated by a pushrod.
[pushrod not supplied]

**The leg is supplied as a universal length and will need to be trimmed to suit your aircraft.



RETRACTABLE TAILWHEEL....\$154.00* Each

*Prices are in Australian Dollars (AUD)



CUSTOM STRUTS

A range of three different diameter oleo struts.
3/8", 1/2" and 5/8" diameters.

Specifications and features:

1. Inner and outer oleo tubes are constructed from 4130 aircraft grade cro-moly tubing.
2. Brass bushed for smooth operation.
3. Investment cast stainless steel scissor links.
4. Available with either offset or standard oleo bases.
5. Supplied with axles.
6. The top plug can be counter-bored to attach to existing wire legs retracts.
7. The oleo spring pressure is set to suit your aircraft.

**Strut lengths are made to customer specifications.



3/8" diameter.....\$181.00* Pair.....\$N/A Trike
1/2" diameter.....\$205.00* Pair.....\$N/A Trike
5/8" diameter.....\$240.00* Pair

For fixed struts with mounting plates add \$45 pair to the above prices.

**Prices are in Australian Dollars (AUD)*

AIR SYSTEM

A complete air system is usually supplied with each set of retracts and consists of the following items:

1. 1 air tank [300cc] 152mm x 54mm diameter
2. 2 x 2mtr air line [two colours] 2 x 1.5mtr with "60" size retracts
3. 1 selector valve.
4. 1 filler valve with pump adaptor.
5. 1 'T'-fitting [3 with tricycle sets]

**Any of the above items can be supplied separately if required.

**Quick disconnects are available as an accessory.



SPARE PARTS

As all major components are Made in Australia, replacement parts are readily available should damage occur from any accidental 'heavy landings'.

CUSTOM DESIGN AND BUILDING SERVICE

As well as the standard range of retracts that I manufacture, I am also able to offer a 'custom building' service to modelers. For example, adapting oleo struts to multi-wing aircraft such as the 'Stearman'. I can also design and manufacture 'Scale' undercarriage systems for aircraft with twin legs such as the 'Mosquito', 'Lancaster', 'Beaufighter', and a number of others.

WARRANTY

All components supplied with any set of 'Custom Retracts' or 'Custom Struts' are covered by a 12 month warranty from the date of purchase. This warranty does not cover damage caused by incorrect installation, accident or abuse.

This warranty is void if the retracts or components have been modified in any way other than the adjustments outlined in the installation manual.

N.B. All prices quoted in this catalogue are in AUSTRALIAN DOLLARS (AUD).