

# TECHNICAL SPECIFICATION

## UNIVERSAL TOWBARS FOR NARROW BODY AIRCRAFT.

### **Description:**

The towbars are constructed of 8 "(203mm) outside diameter high quality aluminium tube.

The towbars are adaptable to almost the complete range of narrow bodied aircraft by simply assembling the correct towhead and shear pins and shear bushes.

The complete towbars are gimballed mounted from the adjustable undercarriage. This enables the towbar tube to rotate slightly or swing from under its top mounting in the undercarriage. Its function being to support the towbar during transit, to provide vertical adjustment when connecting to the aircraft or to the tug / tractor and to compensate for mis-alignments or angular movement while towing an aircraft. A combined pump, reservoir and hydraulic cylinder enable the towbar undercarriage to be raised and lowered. The handpump provides the necessary adjustment force, its design eliminates all external hose connections.

Towing overload protection to the aircraft nose leg/oleo comes in the form of both TORQUE and AXIAL shear pins. The axial pin will shear during an adverse aircraft towing or pushback manoeuvre, whilst the torque pin will shear and thus prevent an excess turning moment while manoeuvring.

### **Aircraft Servicing Capability (Narrow Body Aircraft):**

Providing that the appropriate towheads and shear pins are attached, they can tow or push back: A.319, A.320, A.321, B.707, B.727, B.737, B.757, BAC-III, F-70, F-100, etc. Some aircraft may require a swivel towing eye.

### **Towhead:**

The towheads are manufactured of high grade steel, fully plated. The head type will depend on the requirements of the aircraft and both "Jaw Type" and "Pin Type" heads are available, depending on the requirements of the customer and for the aircraft type.

### **Connecting Length:**

Typical: 264" (6705 mm).

### **Connecting Height Range:**

Typical: 6.5" to 23.5" (170 to 600 mm).

### **Handbooks:**

Workshop Manuals are provided which comprise Description, Operation, Maintenance, Lubrication, Fault Finding, Illustrated Parts Lists, for all of the towbars components, such as pump, ram, undercarriage, tyres, bar, head, etc.

**Works Test:**

The whole unit will be fully inspected and functionally tested before despatch.

**Shipping Dimensions (Typical):**

Length: 265" (3660 mm).  
Width: 33.5" (850 mm).  
Height: 6.5" to 23.5" (170 to 600 mm).  
Weight: 270 kgs.

**Optional Equipment:**

Swivel towing eye. Electrical and mechanical shear pin failure indication. Intercom harness racks. Sliding axles. Swivel toweye. Total towhead breakaway facility. Interchangeable towheads for other wide body aircraft. Anti jack-knife device. Tube transportation split/joint.

**Paint Finish:**

Unless otherwise specified, the towbars will be painted in Full Gloss Yellow, 'Skydrol' resistant paint finish, over the cleaned, shot-blasted and prepared, etch-primed metal surface.