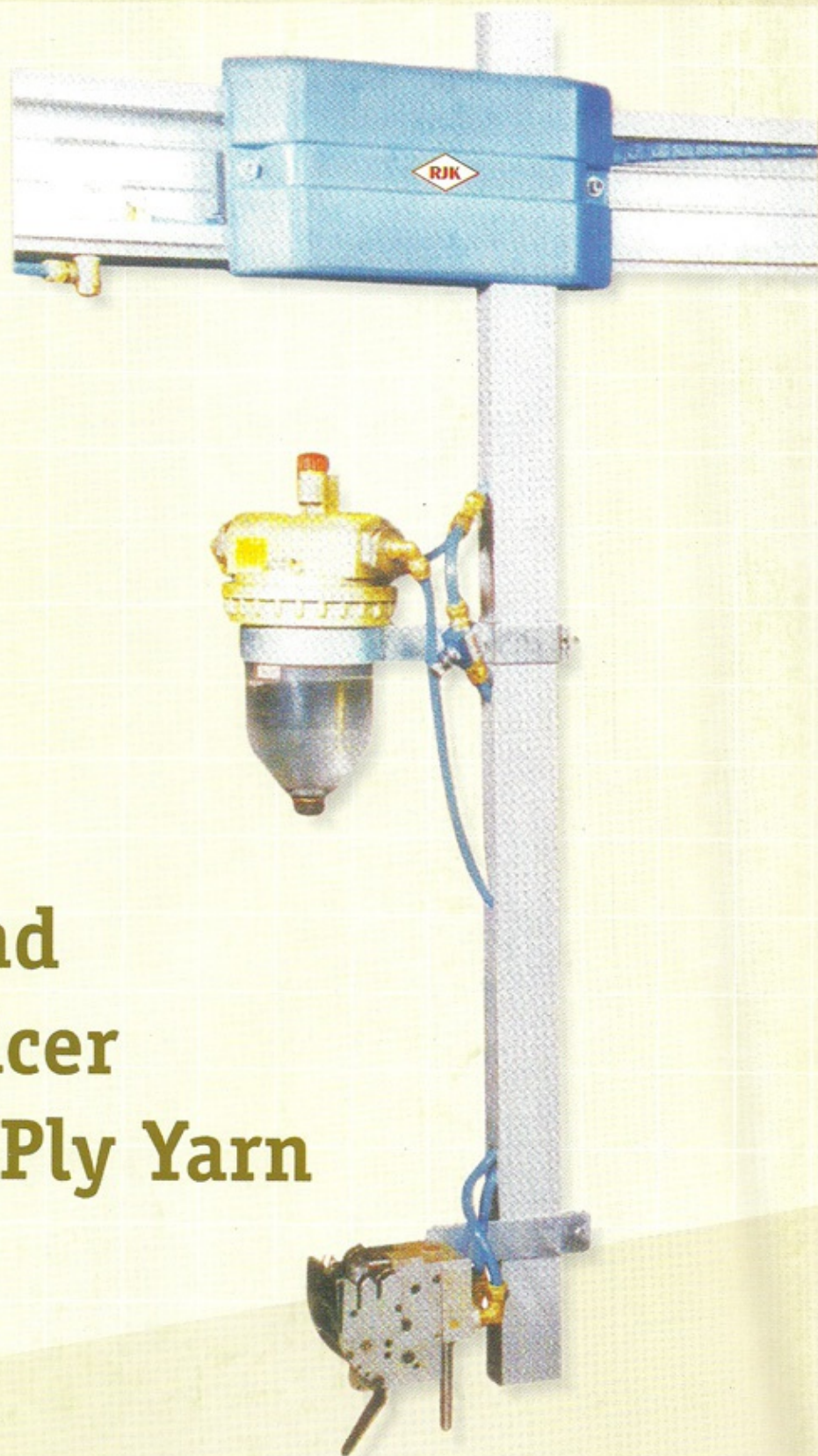




Hand Splicer for Ply Yarn

Hand Splicer for Ply Yarn



RJK Hand Splicer is the distinguish trademark of manual Splicer Units manufactured by RJK Automatics.

The Automatic Version Covered by this Catalogue is fitted on Winding Machines with opposite yarn feeding and enables knot free packages to be produced from a wide range of yarn.

Ideal for the joining of long & short staple single end. This model can be applied also to yarn multiple end twisted yarns. This versatility is achieved by the use of appropriate mingling chambers coordinated with positive regulation points, Incorporated in the Splicer and preliminary air blast, which prepares the yarn ends prior to mingling.

Hand Splicer is capable of Splicing variety of yarn like Cotton, Cotton Blends, Polyester, Polyester Blends, Acrylic, Viscose, Filament etc. Single as well as two ply parallel and twisted by use of various chambers, nozzles and resorting to process like wet splicing.

Joining Category

The RJK Splicer is designed to join yarns with a Count Range between Nm 1 and Nm 200 simply by variation of the Mingling. Chambers in accordance with particular yarn characteristics. There are other Factors which affect joining capacity apart from yarn counts. For example degree of twist and direction (Z or S), Staple Length & Material.

Mingling Chambers

The Mingling Chamber is the RJK Splicer Component where the Fibers of opposing yarn ends are mingled together by a controlled jet of compressed air. Various Mingling Chamber, all of which are easily identifiable by an engraved code are available for application relative to yarn counts, fiber length, twist direction and other Characteristics. Selection of the appropriate chambers should be the responsibility of a trained technician. An up to date list of chambers with some indication for use is provided on request.

Ends Preparation

Changes in count or quality of yarn being processed may require substitution of mingling chambers or variations in regulation as follow :

1. Pressure of Primary Air Blast can be changed by rotating the setscrew 'C'.
2. Tails Length can be regulated by means of rotating set screw 'B'.
3. Pressure of Secondary (Splicing) blast can be changed by rotating set screw 'A'.

RJK Hand Splicer Setting Parameter

- 1) Adjust Screw 'C' For Regulating Primary (Opening) Pressure. Achieve yarn end opening as follows.



In Adequate (Low Pressure)



Excessive (High Pressure)

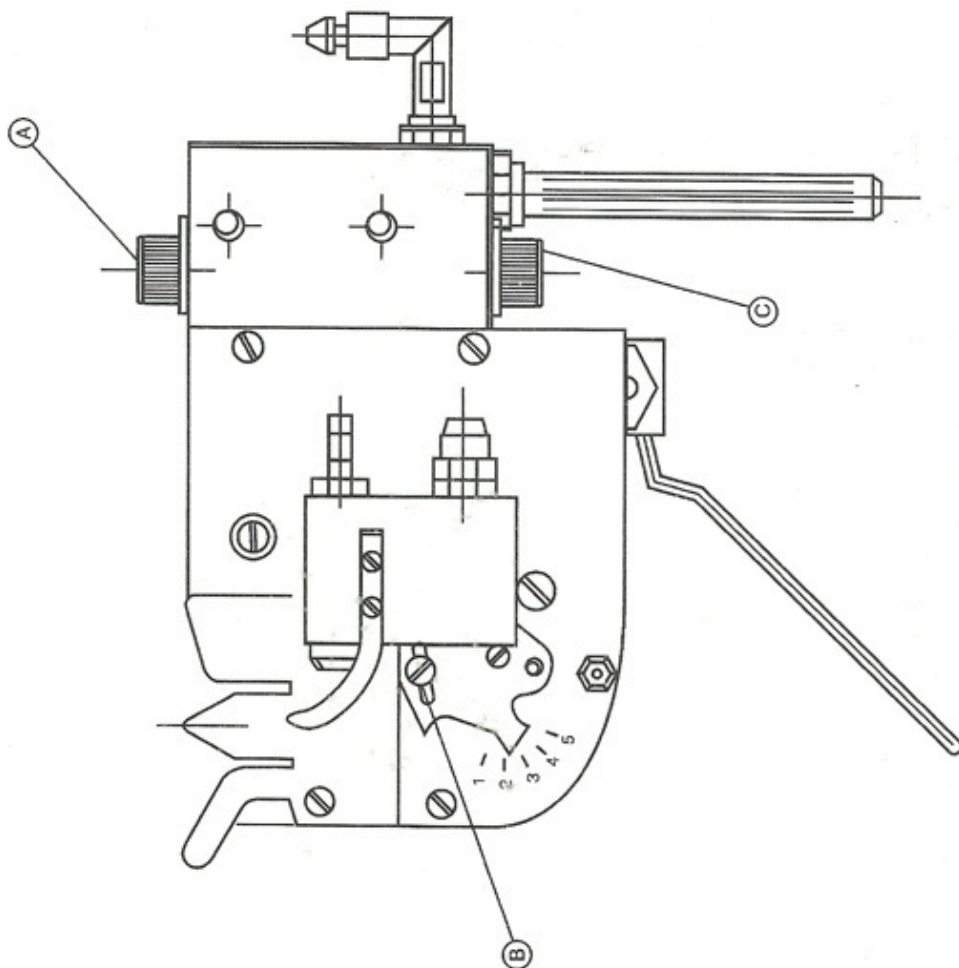


Correct

- 2) Adjust Screw 'B' for Regulating Tail Ends. Adjust such that
 - No loose end on either side of splice.
 - Adequate joint strength
 - 'B' towards 1 - Reduction in tail end (short splice)
 - 'B' towards 5 - Increase in tail ends (long splice)
- 3) Adjust 'A' for regulating Secondary (Splicing) Pressure such that
 - Weak Joint - Adjust 'A' towards '1'.
 - Low Strength Joint - Adjust 'A' towards '5'.
- 4) In case of wet splicer ensure few drop of water during splicing. This has to be done by rotating knob (Red color) provided on water bowl.

Note : 1) Ensure 6-7 kg/cm₂ air pressure to splice unit free from oil/moisture.
2) For wet splicer connect water line to 'S' marked corner of splicer.

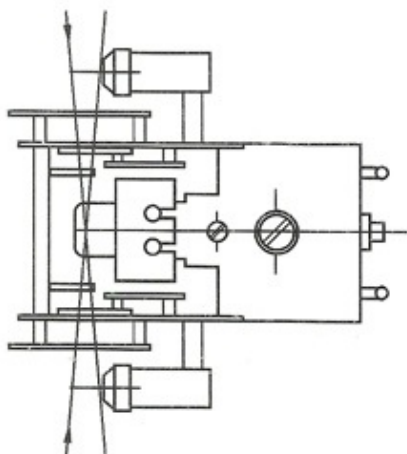
RJK



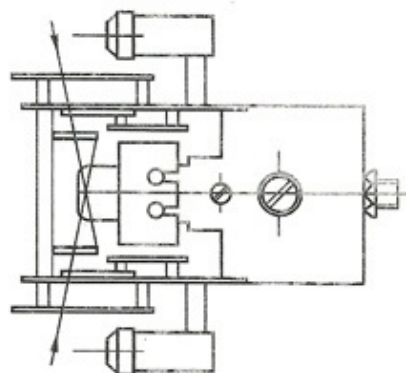
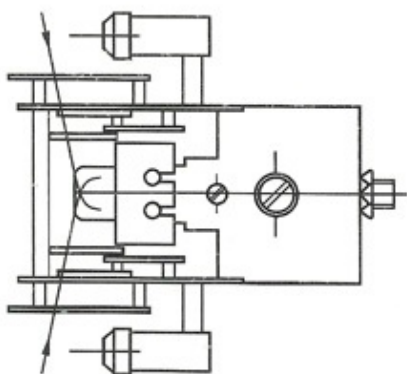
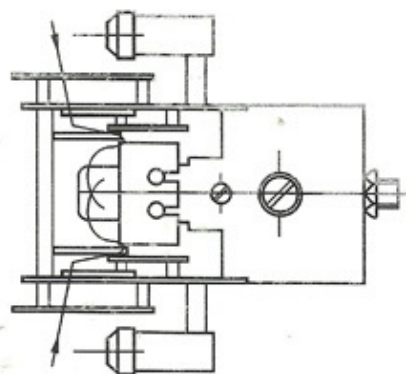
S DE V E W

MINGLING CHAMBER

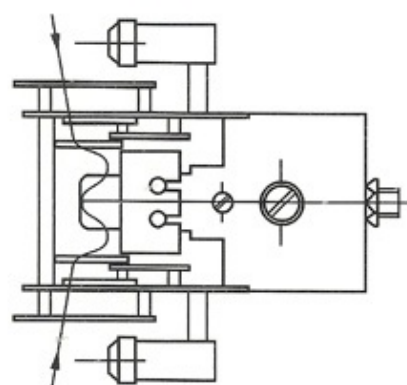
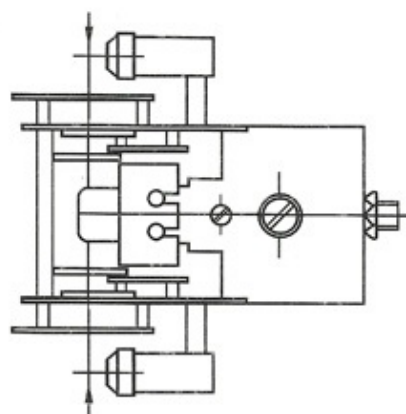
SPlicing CXCLE



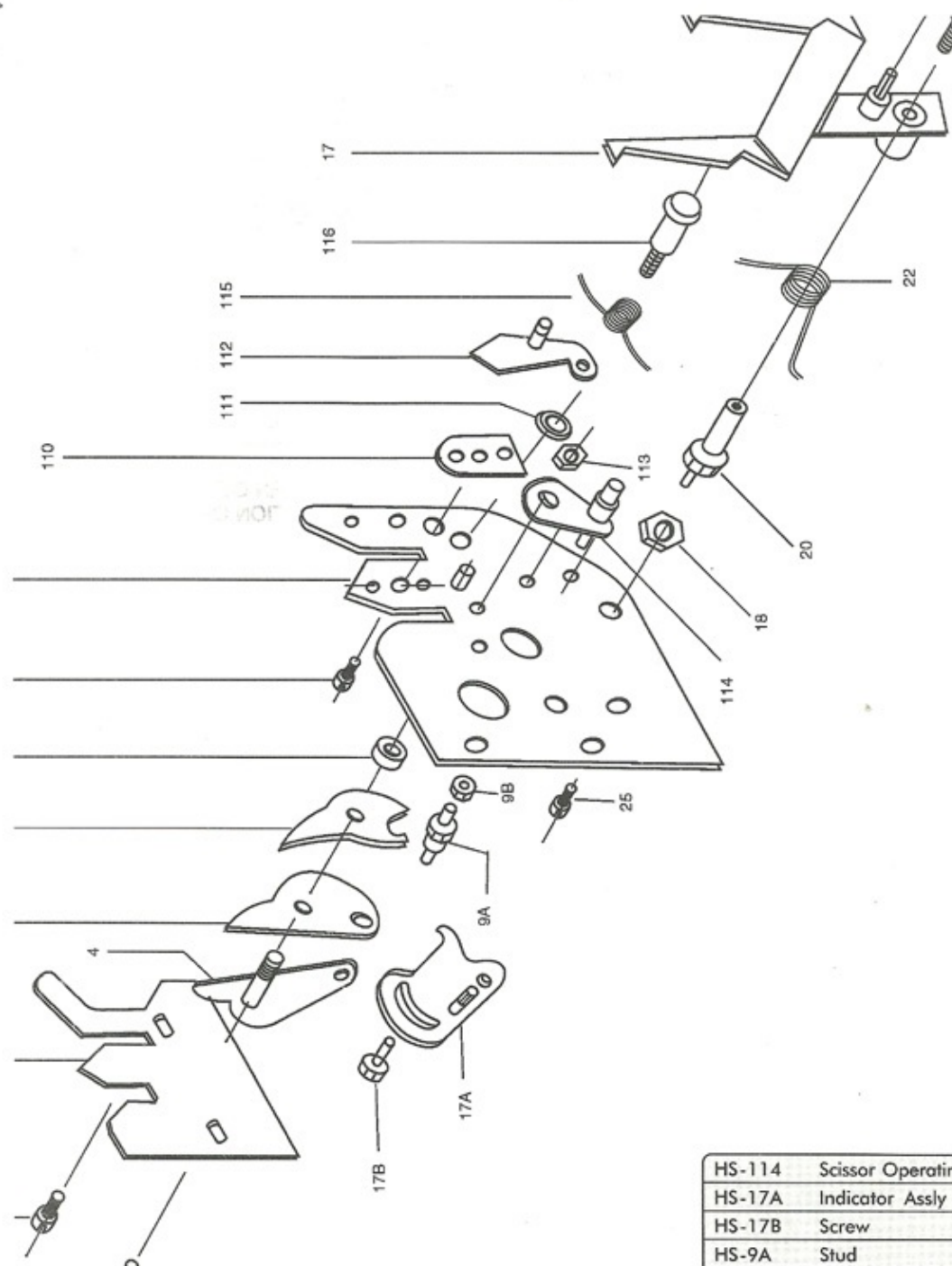
YARN THREADING

YARN CUTTING AND
SUCTION OF CUT ENDSPRIMARY BLAST
YARN OPENING IN NOZZLE

TAIL REGULATION

SECONDARY BLAST
SPlicing

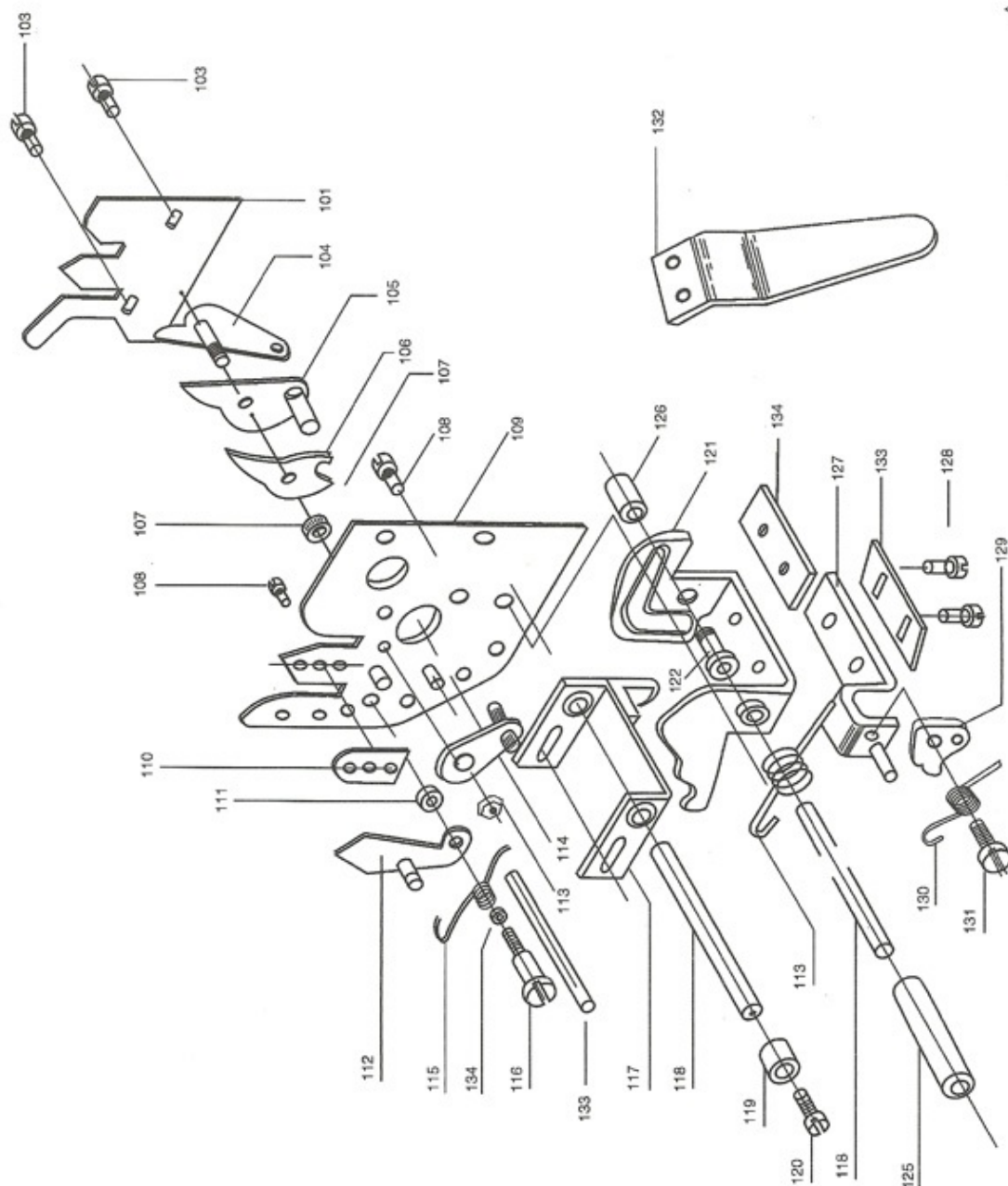
END OF CYCLE



Part No.	Description
HS-101	Guide Plate
HS-103	Screws
HS-4	Fix Scissor RH
HS-5	Moveable Scissor RH
HS-6	Leaf Spring RH
HS-107	Collar

HS-108	Screw
HS-9	Plate (R.II)
HS-110	Yarn Guide
HS-111	Collar
HS-112	Gripper
HS-113	Nut
HS-115	Torsion Spring

HS-114	Scissor Operating Lever
HS-17A	Indicator Assly
HS-17B	Screw
HS-9A	Stud
HS-9B	Nut
HS-25	Screw
HS-18	Hex Nut
HS-20	Stud
HS-22	Torsion Spring
HS-23	Screw
HS-116	Stud
HS-17	Tail Lever Assembly



Part No.	Description
HS-101	Guide Plate
HS-103	Screws
HS-104	Fix Scissor (LH)
HS-105	Moveable Scissor (LH)
HS-106	Leaf Spring (LH)
HS-107	Collar
HS-108	Screw
HS-109	Plate (LH)
HS-110	Yarn Guide
HS-111	Collar

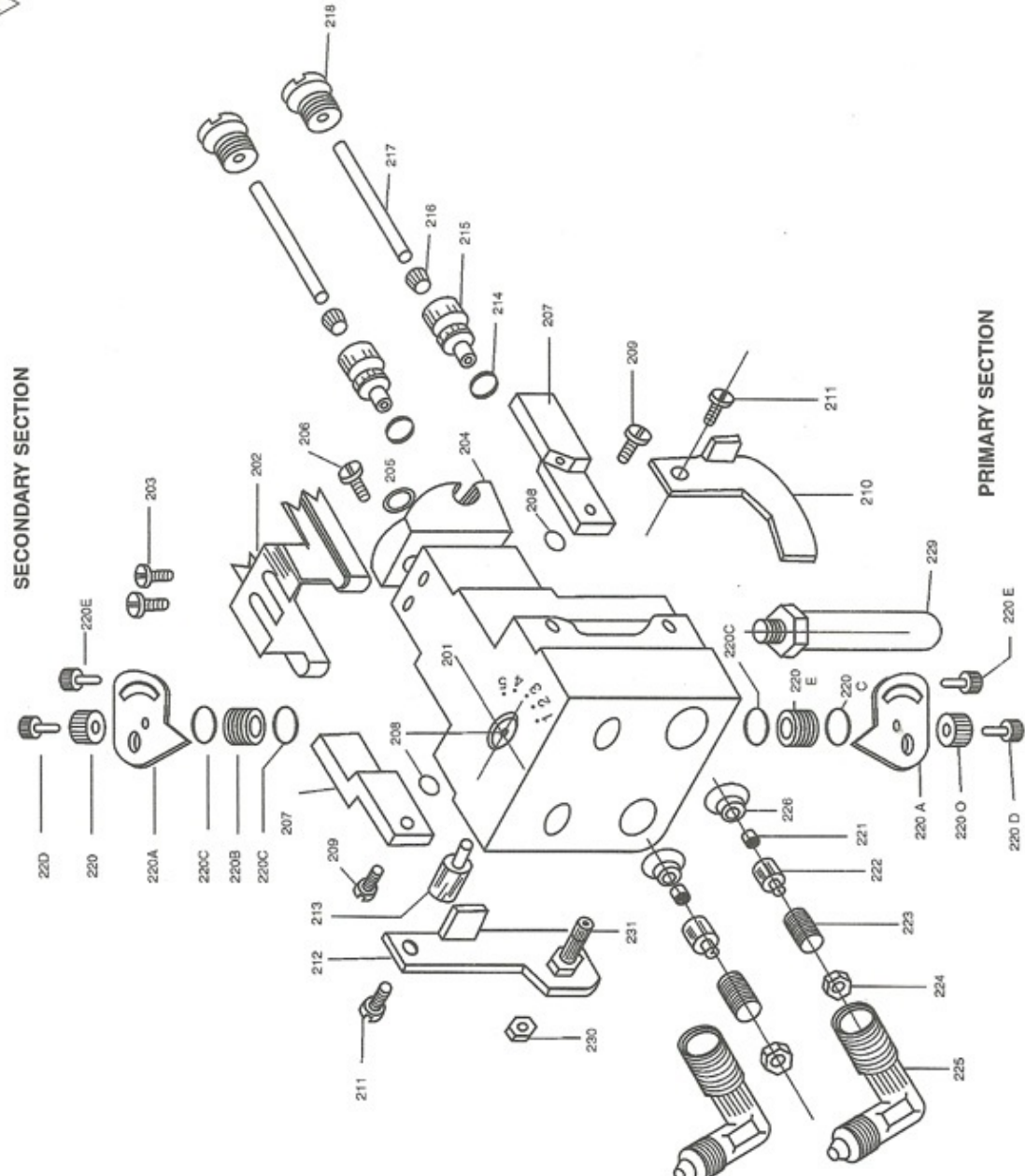
HS-112	Gripper
HS-113	Nut
HS-114	Scissor Operating Lever
HS-115	Torsion Spring
HS-116	Stud
HS-117	Scissor Lever
HS-118	Hinge Stand
HS-119	Spacer
HS-120	Screw
HS-121	Cam Lever
HS-122	Brass Bush

HS-123	Torsion Spring
HS-125	Brass Collar
HS-126	Spacer
HS-127	Primary Lever
HS-128	Screws
HS-129	Cam
HS-130	Torsion Spring
HS-131	Stud
HS-132	Trigger
HS-133	Cam
HS-134	Spacer

RJK

SECONDARY SECTION

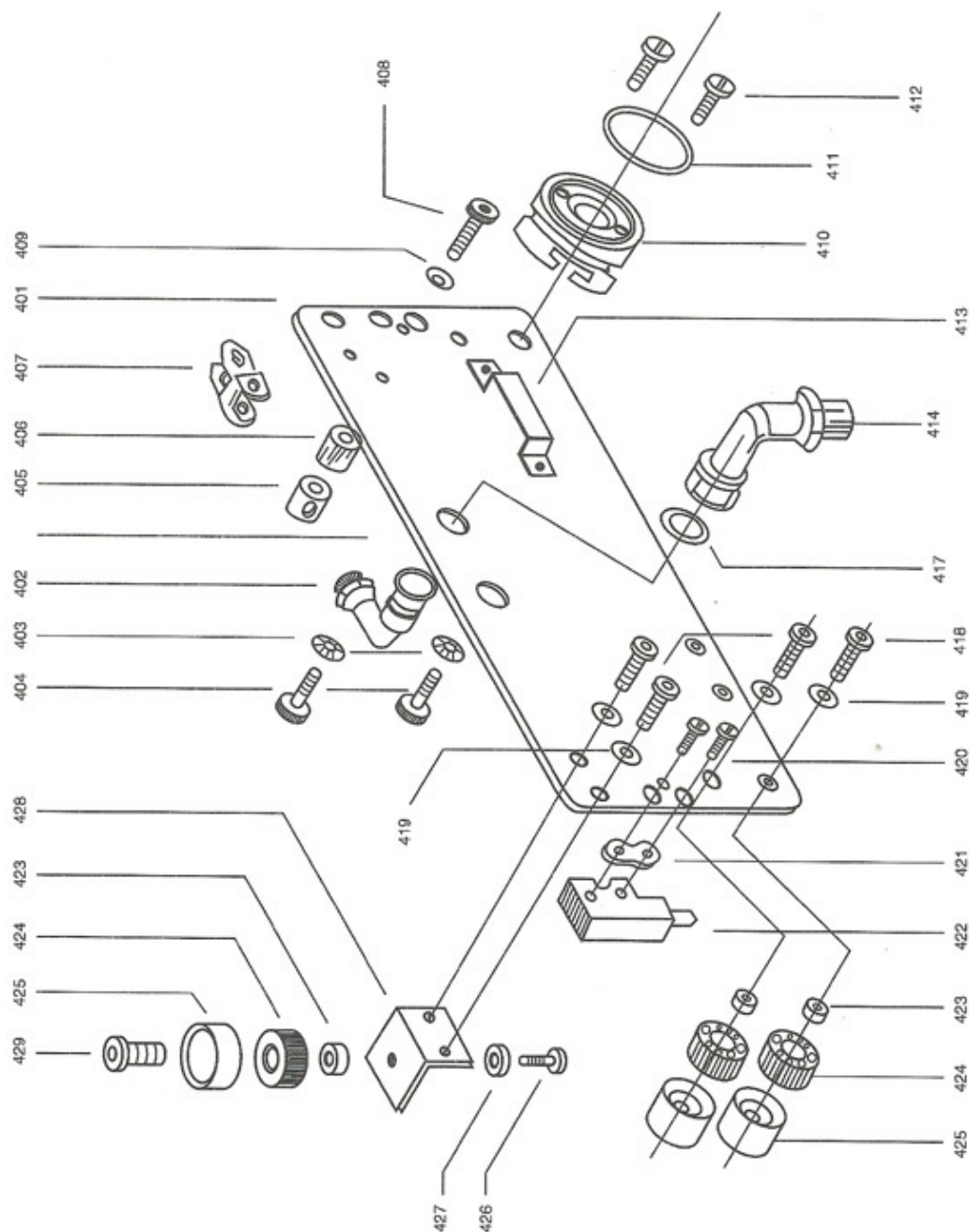
PRIMARY SECTION



Part No.	Description
HS-201	Main Body
HS-202	Yarn Guide
HS-203	Screw
HS-204	Chamber
HS-205	'O' Ring for Chamber
HS-206	Screw
HS-207	Nozzle
HS-208	'O' Ring
HS-209	Screw
HS-210	Valve Lever

HS-211	Stud
HS-212	Valve Lever
HS-213	Spacer Stud
HS-214	'O' Ring
HS-215	Stem Guide
HS-216	Oil Seal
HS-217	Valve Stem
HS-218	Lock Nut
HS-220	Plug
HS-220A	Indicator
HS-220B	Spacer

HS-220C	'O' Ring
HS-220D	Screw
HS-221	Washer (Rubber)
HS-222	Valve
HS-223	Spring
HS-224	Nut
HS-225	Brass Elbow
HS-226	Valve Seat
HS-229	Thumb rest
HS-230	Nut
HS-231	Follower Stud

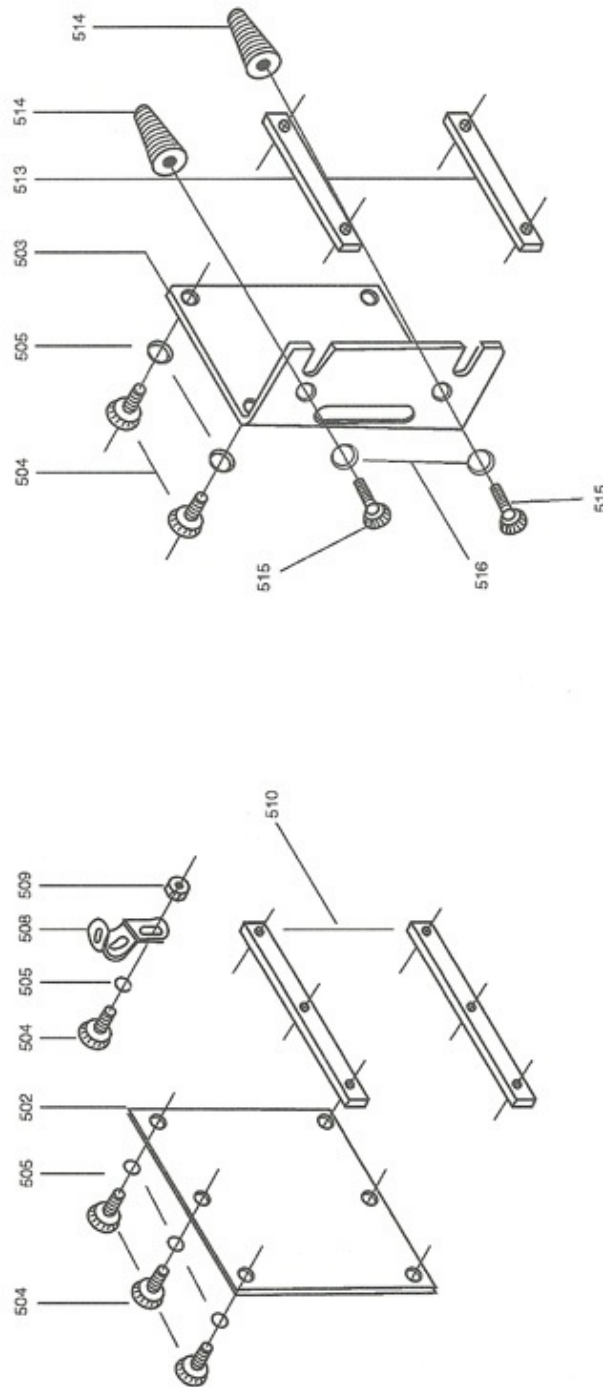


TROLLEY DETAILS

Part No.	Description
HS-401	Plate
HS-402	Brass Elbow
HS-403	Spring Washer
HS-404	Screw
HS-405	Spacer
HS-406	Collar
HS-407	Plastic Chain Link
HS-408	Screw
HS-409	Washer

HS-410	Stopper
HS-411	'O' Ring
HS-412	Screw
HS-413	Clamp
HS-414	Brass Elbow
HS-417	Nylon Washer
HS-418	Screw
HS-419	Washer
HS-420	Screw
HS-421	Spacer

HS-422	Brush
HS-423	Spacer
HS-424	Bearing (608 ZZ)
HS-425	Bearing Cover
HS-426	Screw
HS-427	Washer
HS-428	Supprt
HS-429	Stud



RAIL CONNECTING PARTS

Part No.	Description
HS-501	ATS Rail Section (2.5 Mtr. Long)
HS-502	Joining Plate
HS-503	End Plate
HS-508	Clamp
HS-509	Nut

HS-510	Clamping Strip (Joining Plate)
HS-513	Clamping Strip (End Plate)
HS-514	Nylon Collar
HS-515	Screw
HS-516	Washer

MAINTENANCE AND CLEANING OF SPLICER

Daily :

1. At every shift end clean the Splicer head first with compressed air and then clean the area like scissor, gripper, cap (introducer) chamber with the use of Soft Brush.
2. Clean the section nozzles using small wire for removal of any loose lint accumulated inside the nozzle.
3. Apply molykot spray after cleaning. Do not use oil, grease or lubricant especially on the front portion like scissor, chamber, gripper etc.

Weekly :

1. Remove the Splicer Head from the Machine.
2. Remove Both the Plates (2 and 109)
3. Thoroughly Clean the Head, Plates.
4. Apply low viscosity oil on Followers / Hinge Points / Valve Stem
5. Assemble the plates and apply molykot spray.
6. Install the Head on machine.

Important :

Do not use compressed air for External cleaning of the RJK Splicer as this will tend to increase dust accumulation density in certain areas.

Content of Tool Kit :

Fix Spanner : 6-7, 8-9, 10-11, 12-13, 14-15, 16-17, 18-19 & special spanner.

Screw Driver : No. 824 and No. 913

Allen Key : 2.0mm, 3.0mm, 4.0mm & 5.00mm

FOR SPLICER HEAD FUNCTIONING

Faults	Cause	Remedy
Scissor not cutting the yarn ends	a) Inadequate Spring Tension	If required adjust spring tension of leaf spring No. 6/106
Yarn Clamp (Gripper) Not gripping	b) Nut No. 113 got loosened	Tighten the nut fully.
Tail Regulator not functioning properly	a) Yarn Clamp (112) not free on its stud	Remove yarn clamp and clean it thoroughly if required slightly polish it with sand paper.
Weak Splice Joint	b) Yarn Clamp worn out	Replace the yarn clamp
	Movement of tail regulator not free.	As per the requirement adjust No. 17 to move freely in guide.
	a) Excessive opening of yarn	Reduce opening pressure through Screw 'B'.
	b) Excessive Secondary Pressure time	Reduce secondary pressure adjust setting Screw 'A'.
Low Strength of Splice Joint	a) Improper opening of Yarn End	Increase opening pressure adjusting setting Screw 'A'.
	b) Low splicing pressure	Increase splicing pressure by setting Screw 'A'.
	c) Excessive tail ends	Reduce tail ends by setting Screw 'C'.

RJK Hand Splicer is available

- 1) With air tracking supply system (A.T.S.)
- 2) With universally movable trolley
- 3) With trolley suitable to existing rail provided on machine.

Application

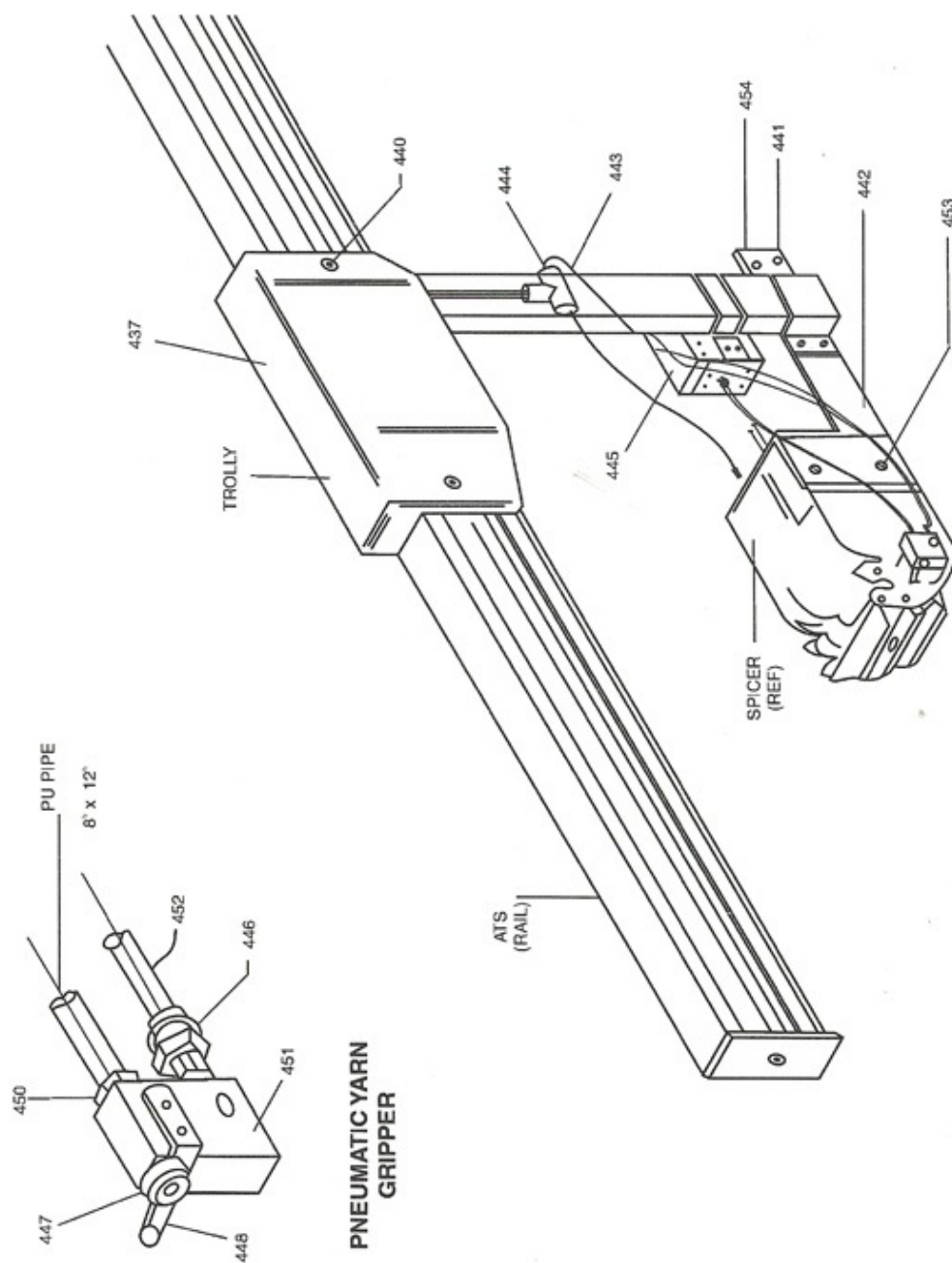
ATS System can be fitted to variety of Textile Machines such as cone winding, assembly, precision winding, T.F.O. etc.

Universally moveable trolley mounted splicer unit can be moved all around the machine and thus can cater to more than one side of machine.

A.T.S. is a complete system, which can be attached to all kind of textile machinery where yarn joining is necessary, RJK splicer being available to the operator at any desired position.

COVANTAGE

- | | | |
|---------------------|---|--|
| Productivity | — | The operator can move the Splicer to optimum working conserving time and energy and leaving both hands free for yarn manipulation and other tasks. |
| Reliability | — | A highly efficient compressed air supply system ensures reliability and uniformity of splice results. |
| Durability | — | A rail mounted splicing unit alleviates damage caused by careless handling, resulting in significant extension of working life with reduced maintenance costs. |
| Application | — | The A.T.S. System can be fitted to a variety of Textile Machines such as assembly winders, two for one twisters and Manual winders. |



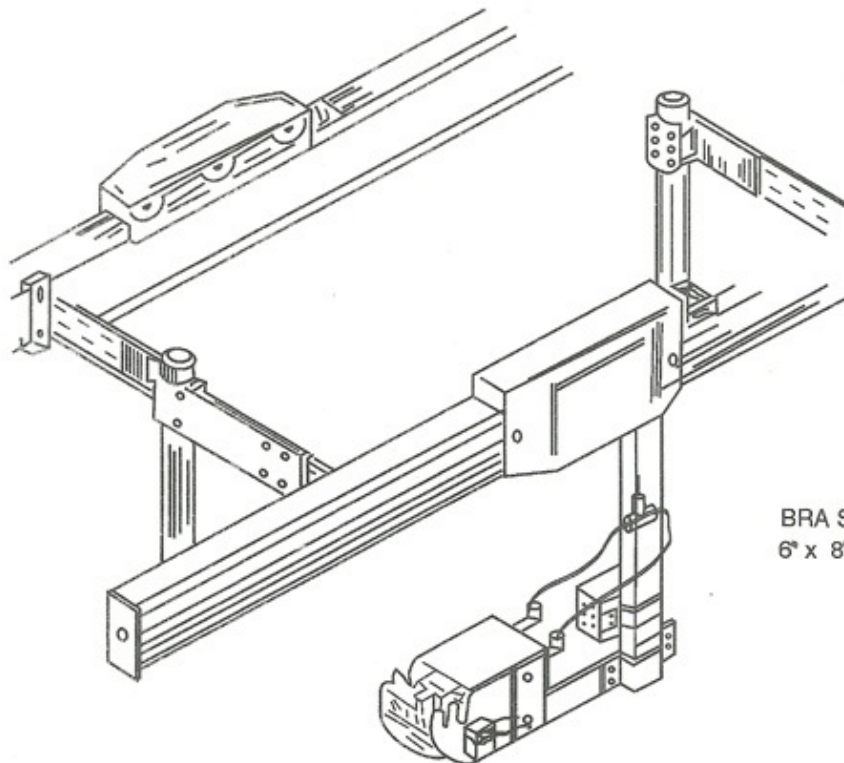
SPLICER WITH TROLLEY AND RAIL

PNEUMATIC YARN GRIPPER

Part No.	Description
HS-437	Trolley with Cover
HS-438	Guide Connector
HS-439	Air Coupling
HS-440	Air Connector
HS-441	Allen Screw
HS-442	Splicer Fixing / Bkt.

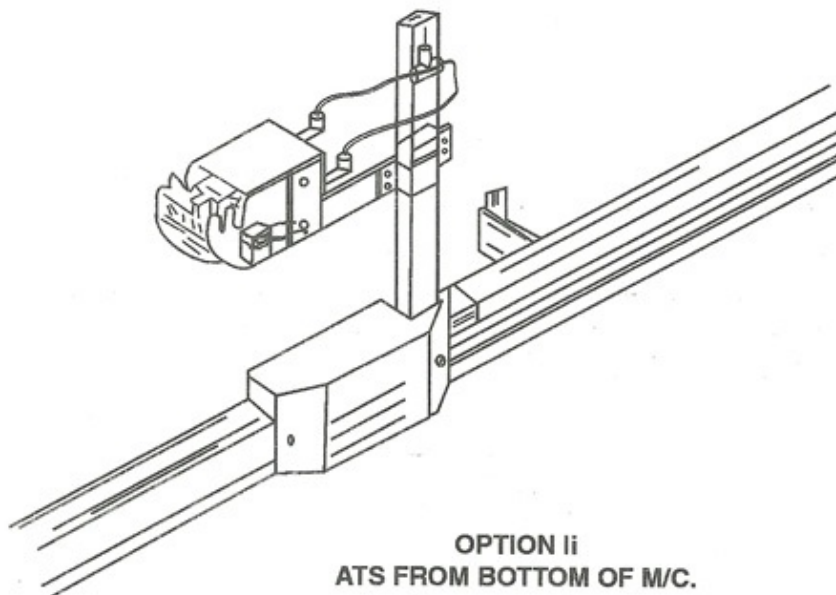
HS-443	Dia 6 x Dia 8 P U Pipe
HS-444	Brass 'T' for Dia 6 x Dia 3 P U Pipe with Nut
HS-445	Waste Collector
HS-446	Adjustable Sleeve
HS-447	Mouth
HS-448	Yarn Guide

HS-449	Screw
HS-450	Lock Nut
HS-451	Body
HS-452	Dia 8x Dia 12 P U Pipe
HS-453	Allen Screw
HS-454	Clamp

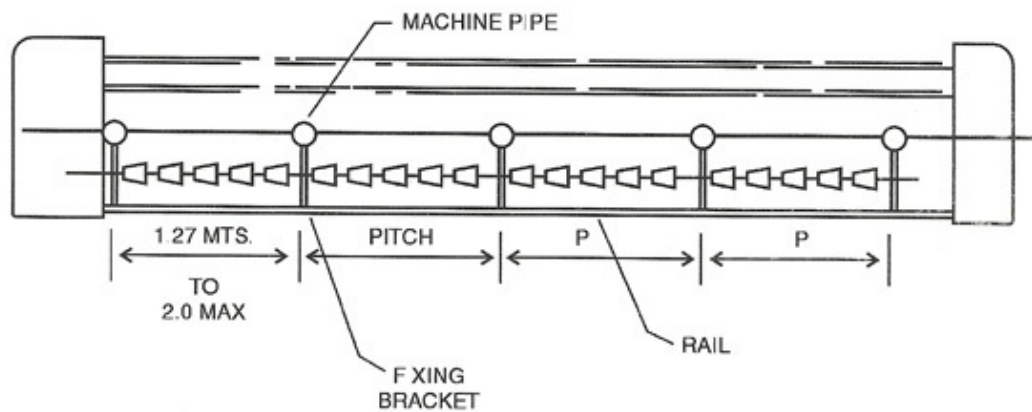
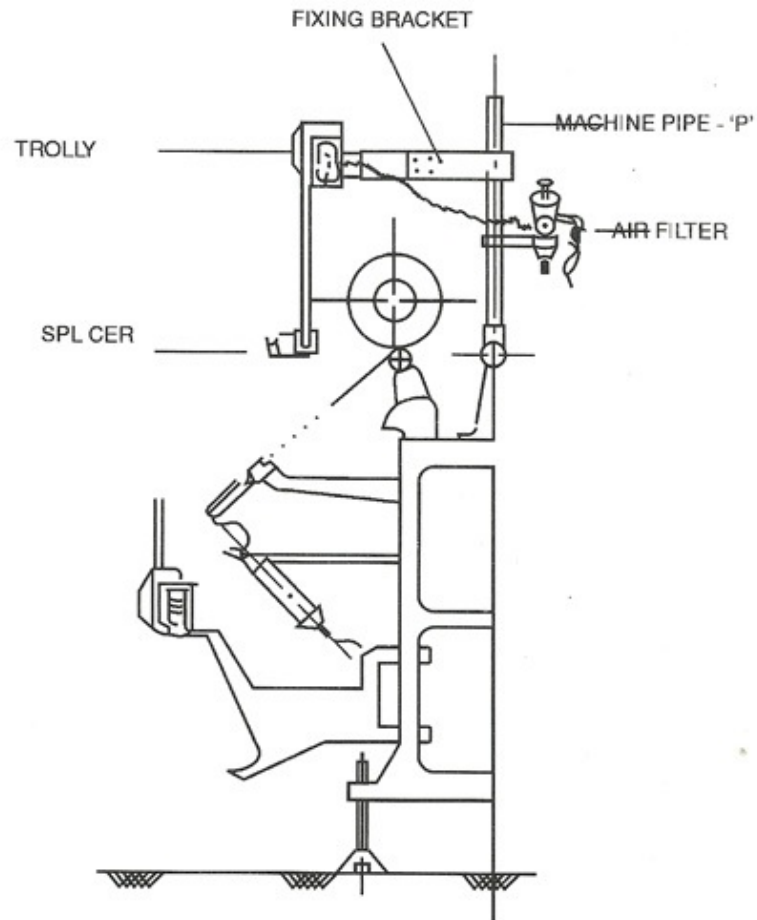


BRA SS 'T' FOR
6" x 8" PU PIPE

OPTION I
ATS FROM TO OF M/C.



OPTION II
ATS FROM BOTTOM OF M/C.



Note : No. of fixing brackets and length of rail required for the machine will be determined by the number machine pipe "P" and distance between two machine pipe "P".
Length of rail should 1.27 mts. to 2.0 mts. maximum.

In the A.T.S. "C" type the movement of the Air Supply Hose inside the rail is achieved by means of a caterpillar in which the Hose itself is confined.

The maximum Length services is 17.5 meters.

The Rail, Trolley and Brackets of the A.T.S. are designed to enable the system to be attached to virtually any type of machine.

The drawing on Page 2 illustrates the most common methods of rail mounting installation, which are

B.M. = From below

A.M. = From above

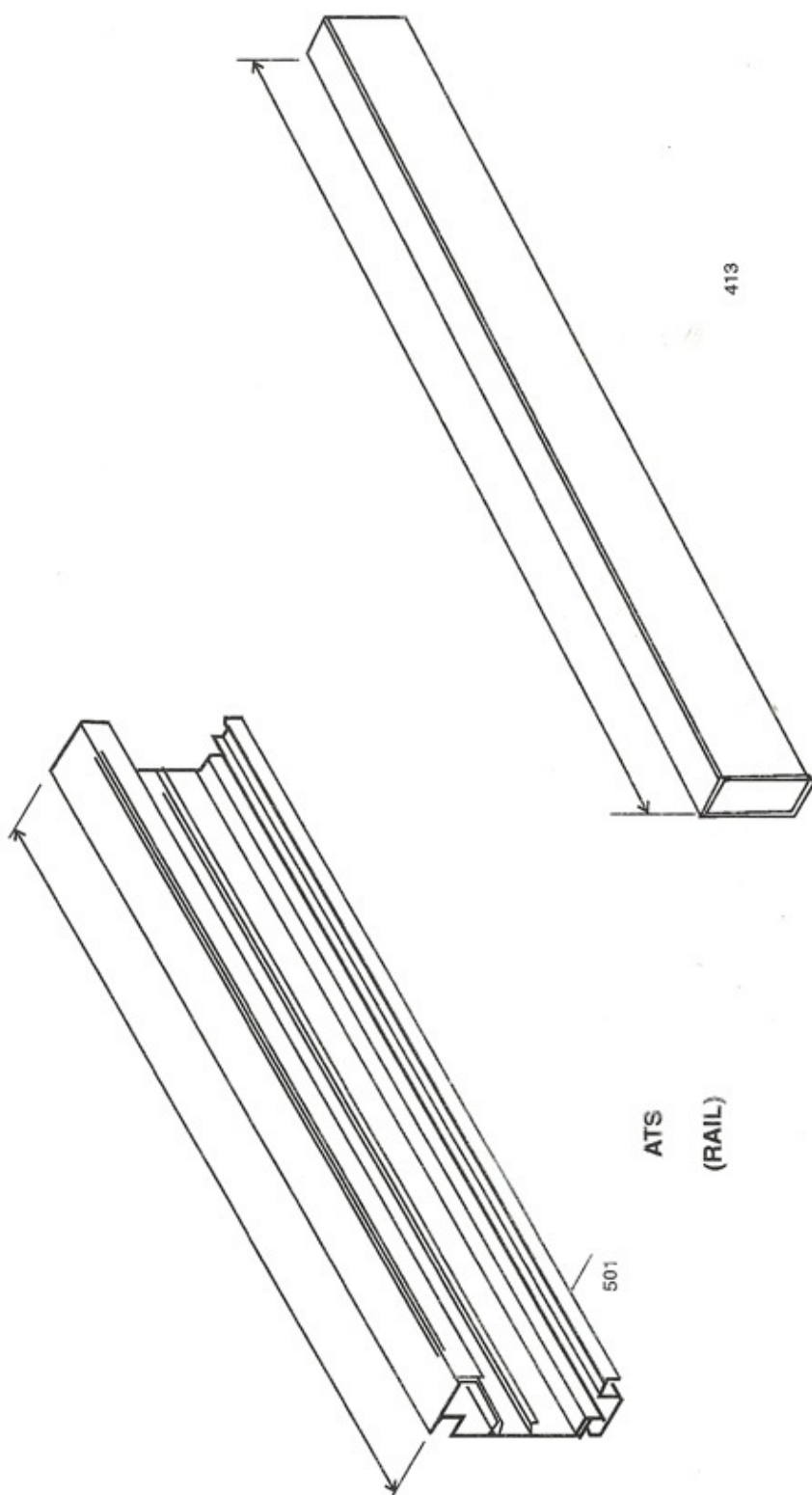
A.B. = From above on double sided machines.

Note : On double sided machines using the A.B. method, both ATS rails can be attached to one fixing bracket.

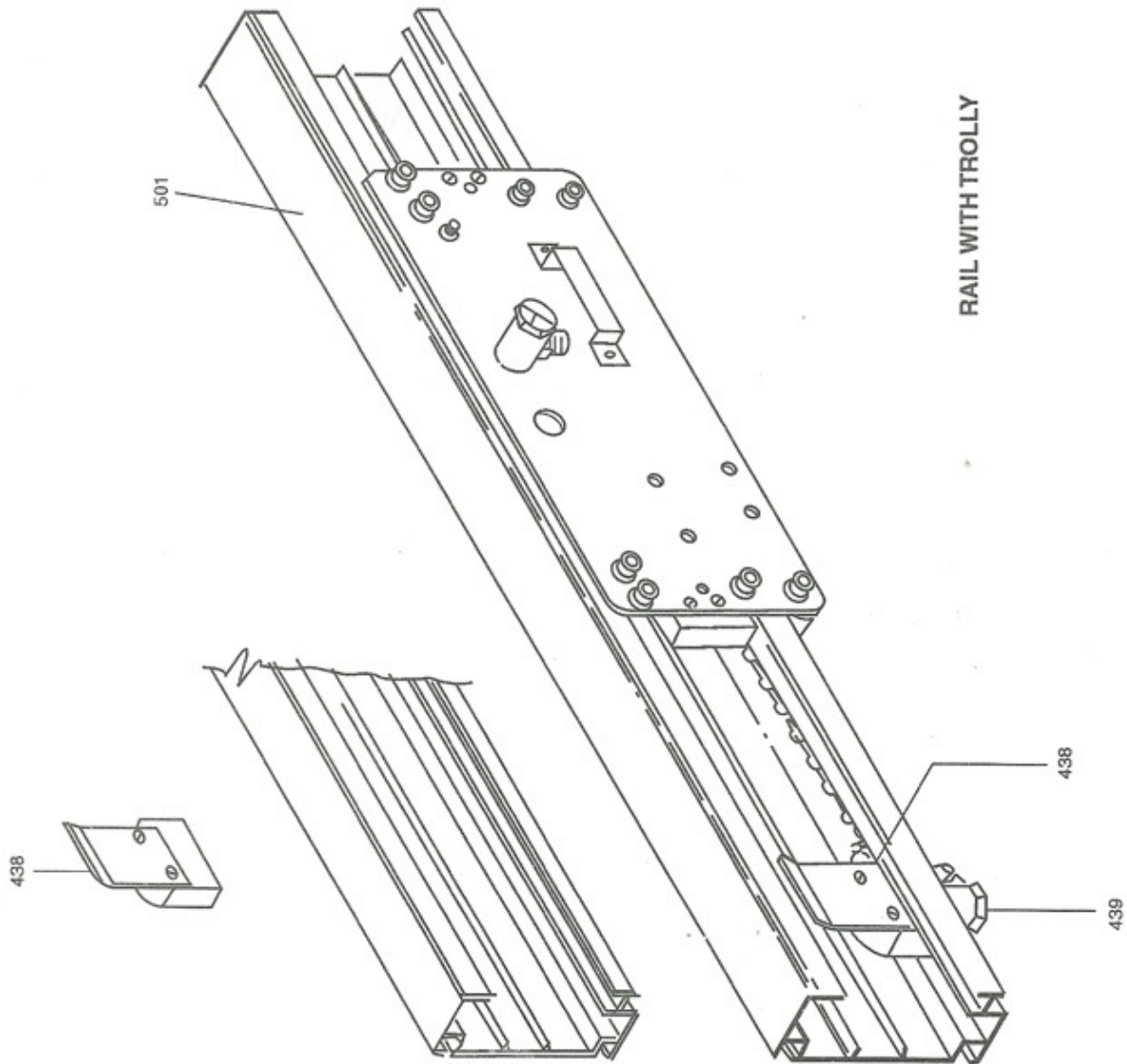
The principal components of ATS as illustrated on page are as follows.

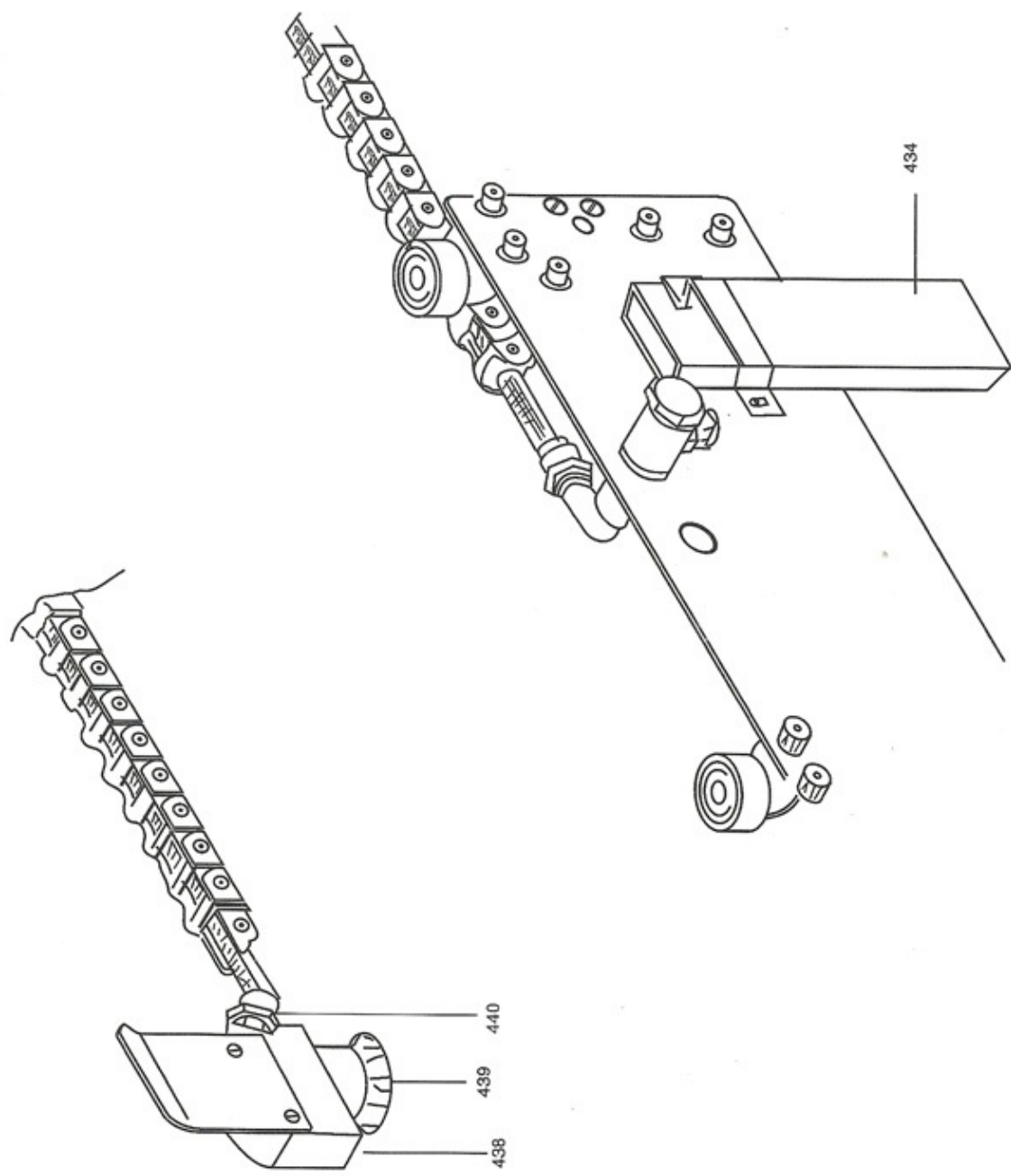
Rails supplied in Modules of 2.5 meter. Rails in fraction of a meter are not available.

Trolley — Enables the Splicer to be moved to any desired position.



RJK





TROLLEY WITH CHAIN AND HOSE

Note : The maximum length that can be serviced by one trolley is 17.5 meters. Should the rail exceed 17.5 meters, then it is necessary to install additional trolleys.

Air Supply Kit — The air kit is composed of the following components. Manometer / filter, fixed and mobile air supply hoses and miscellaneous couplings.

The connection between the fixed and mobile supply hoses is located at the central point of the trolley traverse.

Fixing Brackets — Different Brackets, illustrated on Page are available to accomodate the rail in its selected position. Alternative brackets for special application are available on request.

Brackets can be attached to machine fixing posts having a diameter of 25mm to mm.

- Insert Air House into the caterpillar and secure it to the guide/connector PT No. 438 with the coupling PT No. 440 as illustrated in drawing No. F-13.

Important!

Always ensure that "RJK" logo engraved on caterpillar links is always positioned on the inside.

- Insert the free end of the Air hose through bracket No. 407 and connect the last link of the Caterpillar the Existing link already fixed to the bracket PT No. 407. Attach Hose to Coupling PT No. 402.

Fitting Instructions

Fix Brackets to machine using a line and check alignment both vertically and horizontally.

Set the rails together using the special joining plates PT No. 502 and Screws PT No. 504.

Insert into the back of the rail the appropriate number of screws for fixing to the brackets.

Lift the complete rail assembly with care (This will require a minimum of two persons or more depending on rail length), Fix rail to brackets, check alignment and secure. Insert the trolley into the rail and check its free movement along the entire length.

Fit the Terminal Brackets Pt. No. 503 to the Rail Extremities.

Attention : Move the trolley to the right and secure the limit stop Pt. No. 410 to the rail so that the distance between the terminal bracket PT. No. 503 and the Caterpillar is at least 1 CM (See drawing No. F-6)

Remove any excess of air hose or caterpillar links and avoid any twisting of the air hose during connection to couplings PT No. 402 and 439. Application of little grease to the Hose Extremities will help to avoid twisting. (Seeing Drawing No. F-13)

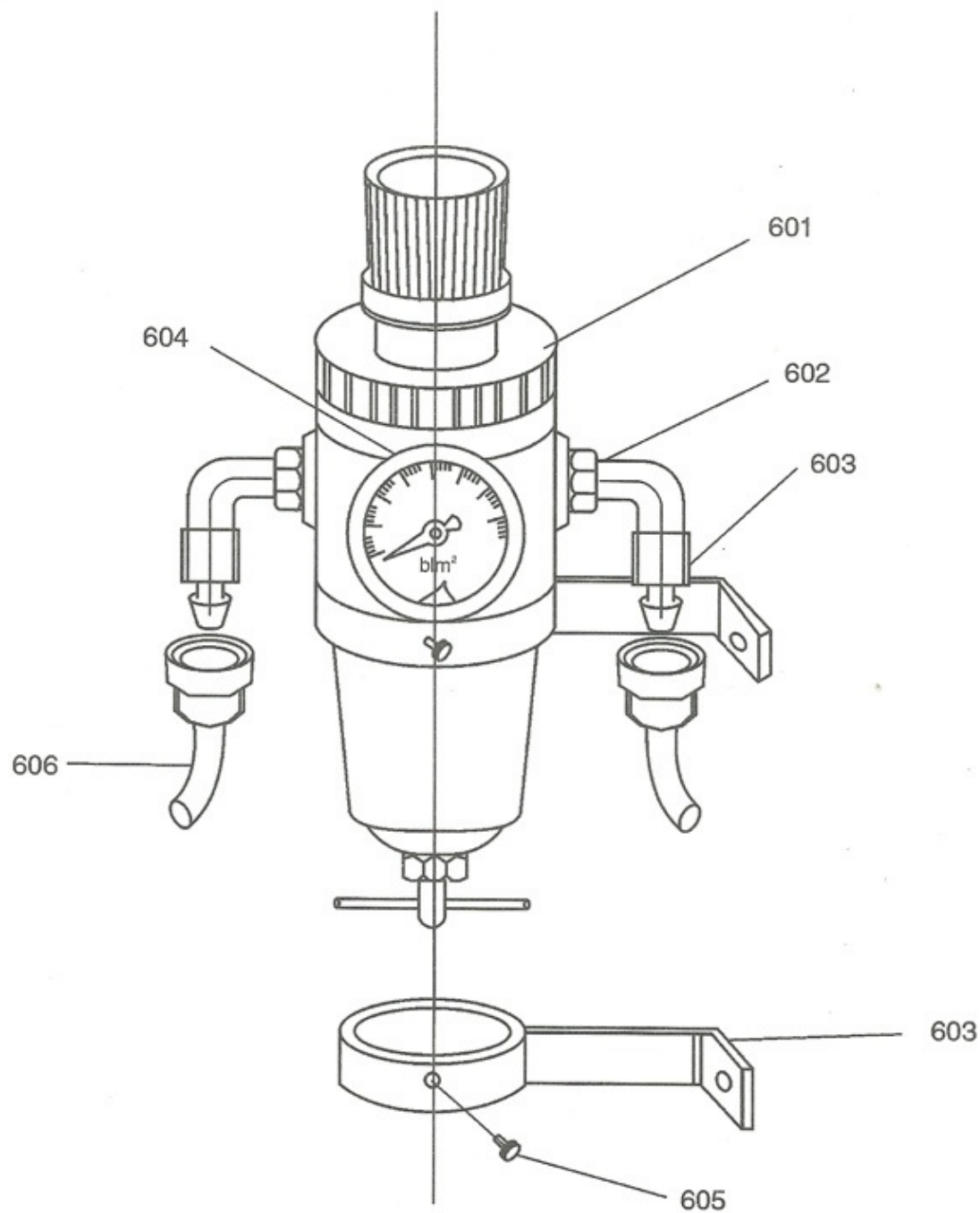
Fit the joint air support bar and secure it with the hexagonal head screws PT. No. 413 insert air supply hose through support bar connect to join air and to trolley coupling Pt. No. 439.

Insert Caterpillar Assembly to Trolley into rail, connecting guide / connector PT No. 438 to air coupling Pt. No. 439 illustrated in Drawing No. F-13.

Ensure that the trolley move freely along the entire length of the rail.

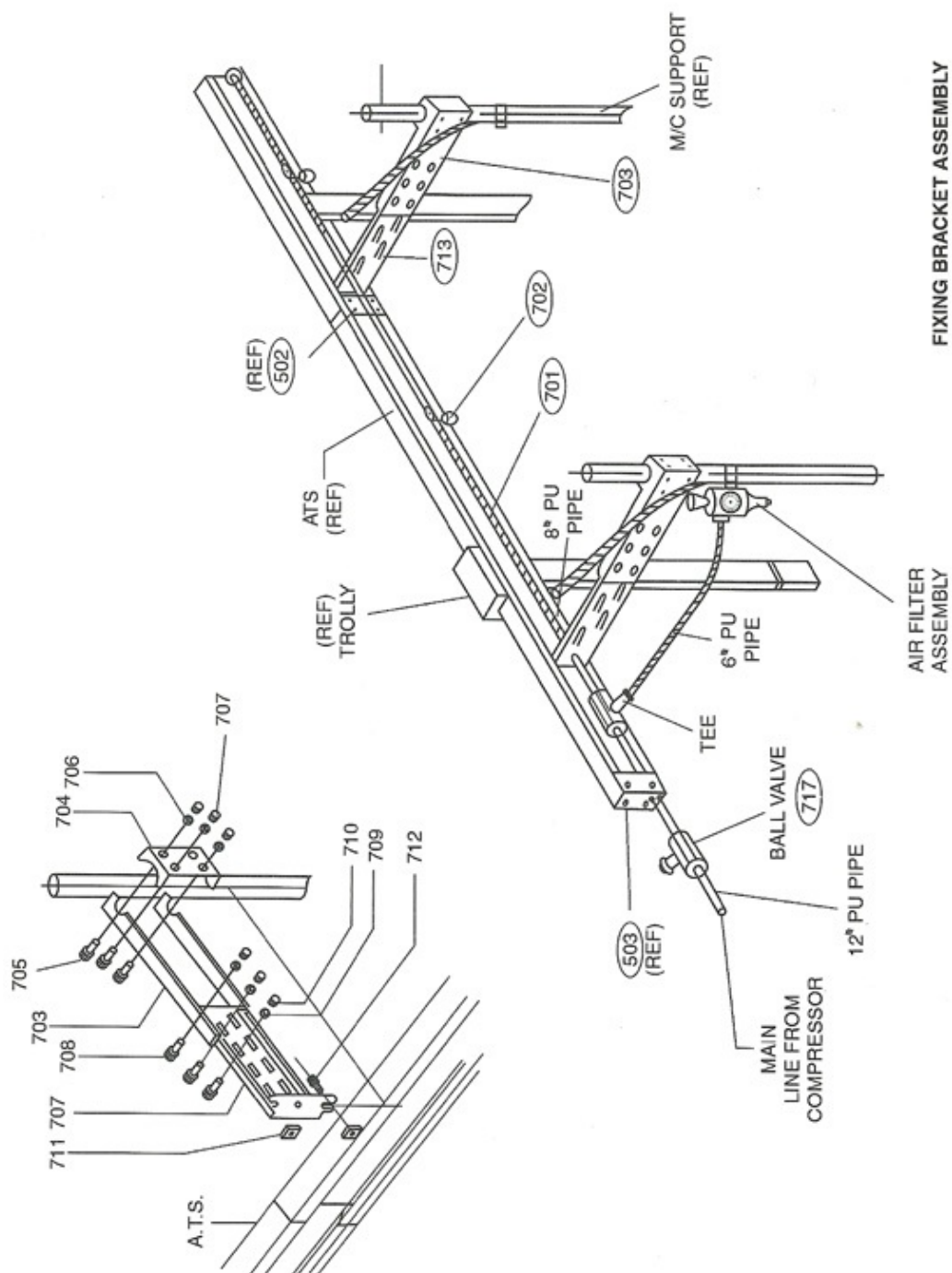
Position Limit Stop Pt. No. 410 at the right hand end of the rail but do not secure.

When caterpillar length is in excess of 5 meters, it is necessary to fit the additional guiding block Pt. No. 438 to the Center rail section in the hole provided to the left of the air coupling Pt. No. 439.



Part No.	Description
HS-601	Filter Regulator
HS-602	Elbow
HS-603	Filter Holding Clamp
HS-604	Dial
HS-605	Screw
HS-606	Nut

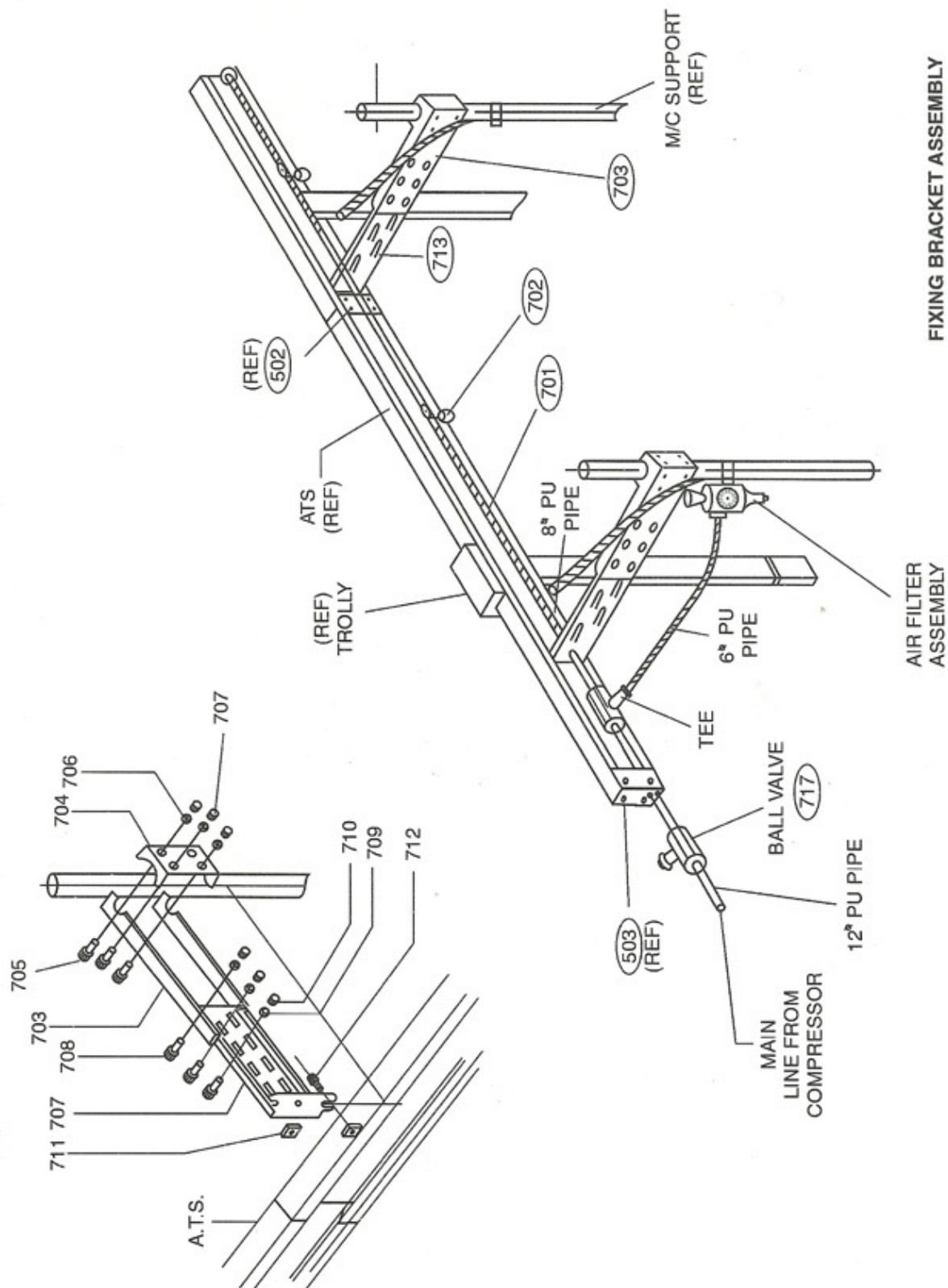
FIXING BRACKET ASSEMBLY

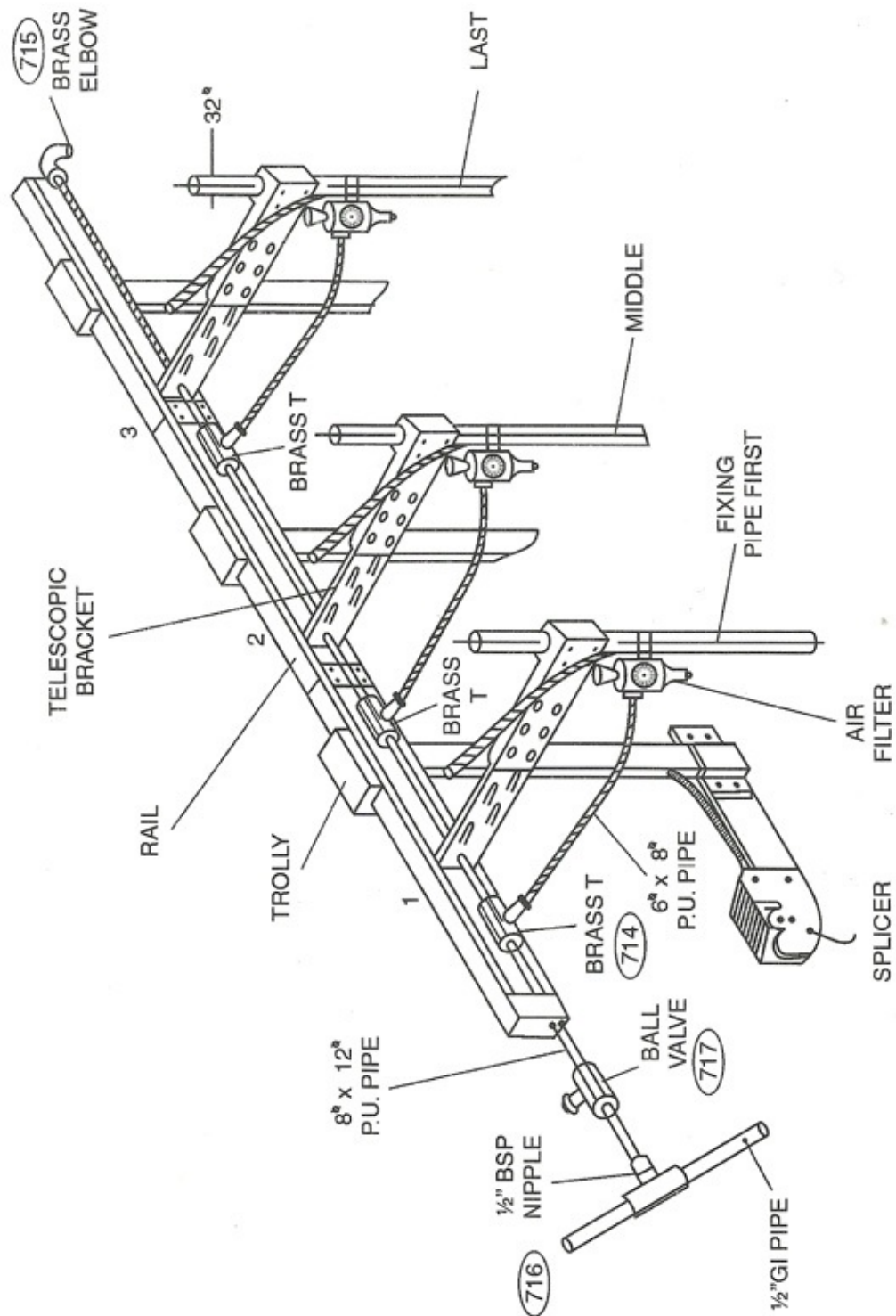


Part No.	Description
HS-701	PU Pipe dia 8 x dia 12mm
HS-702	Clamp
HS-703	Fixing Bracket
HS-704	Clamp
HS-705	Bolt

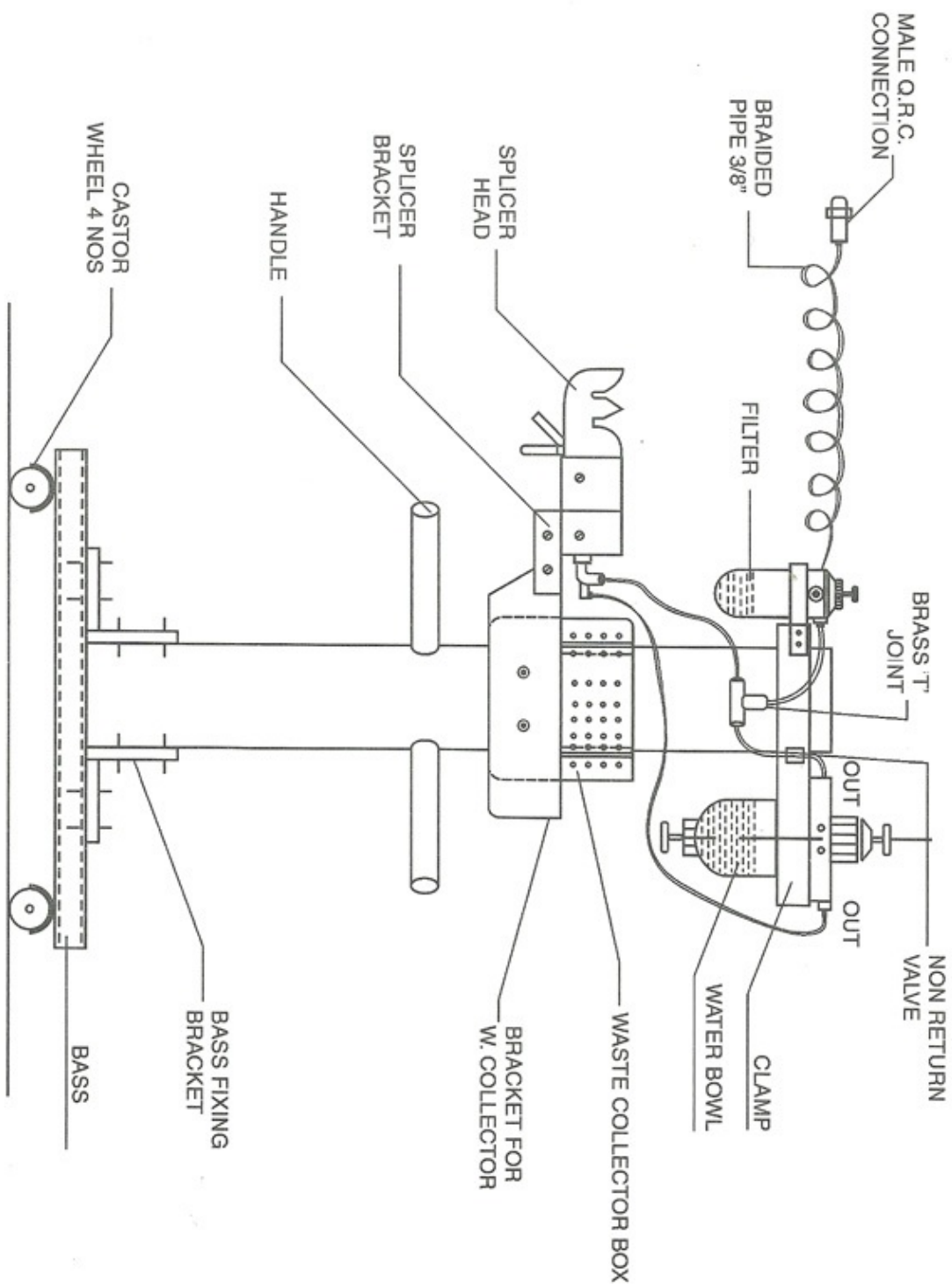
HS-706	Washer
HS-707	Nut
HS-708	Allen Bolt
HS-709	Washer
HS-710	Nut
HS-711	Nut
HS-712	Allen

HS-713	Telescopic Bracket
HS-714	Brass 'T' for dia 8 x dia 12 P U pipe
HS-715	Elbow for dia 8 x dia 12 P U pipe
HS-716	1/2" BSP Nipple for dia 8 x dia 12 P U pipe
HS-717	Ball Valve



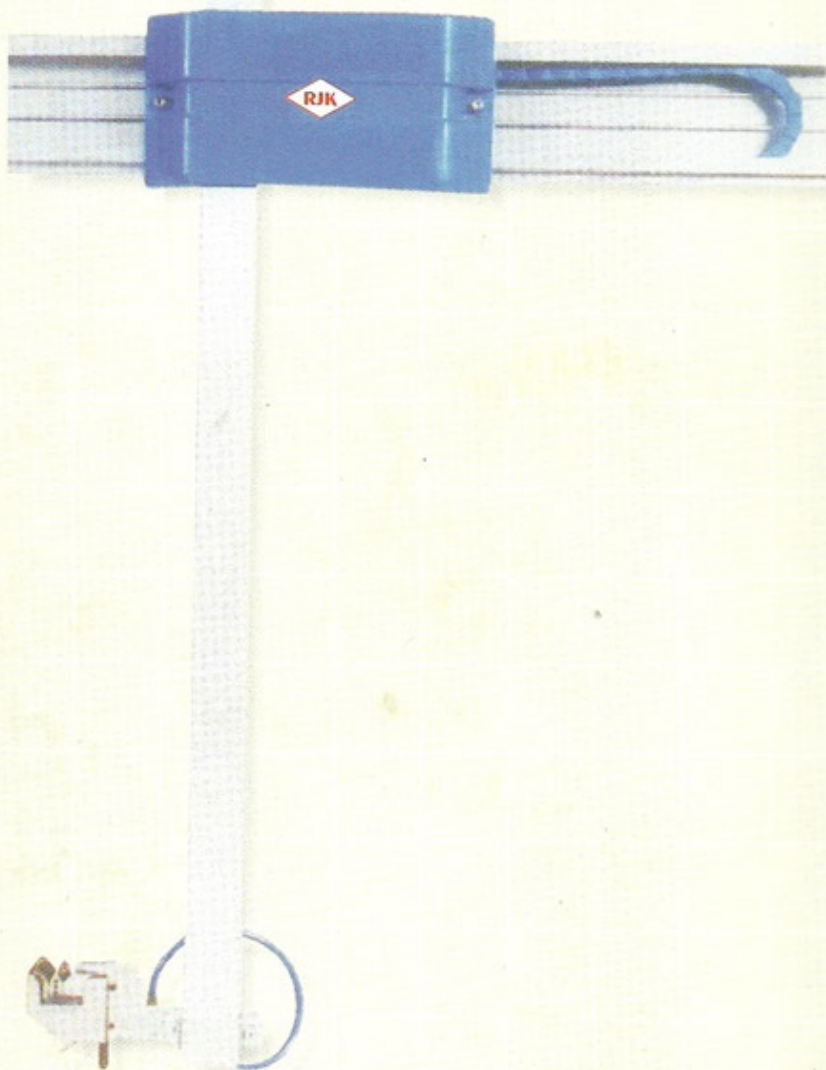
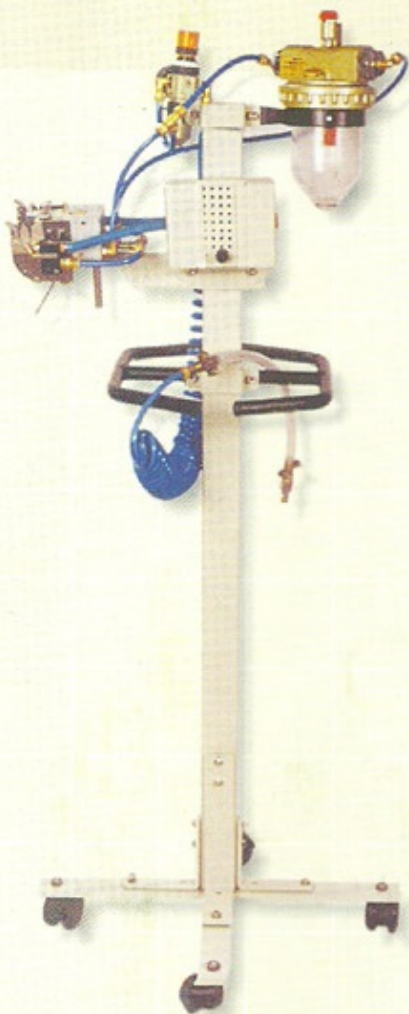


AIR PIPE ARRANGEMENT



T.F.O. TROLLY FOR WET SPLICER UNIT ASSEMBLY

RJK



Selling Agent :

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AJANTA ART