

WIRE ROPE CUTTER

TYPE RCV75

P/N 980297

**INSTRUCTIONS, OPERATION &
MAINTENANCE MANUAL**

Issue Date 05 April 2005

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Installation:

Eight tapped holes are provided in the tool body, as shown in Fig 1, which can be used for any attachment necessary to mount the cutter.

Two hydraulic supplies are required, ported as shown in Fig 2. The maximum working pressures are shown in Table 1 below and pressure limiting valves should be incorporated into the supply sources to limit the pressures to the stated levels.

Table 1:

Function	Maximum Working Pressure		Swept Volume ML	Port Tapping BSP
	PSI	BAR		
Main Ram Closing Stroke	10000	690	800	1/4"
Main Ram Return Stroke	2750	190	520	1/4"
Auxiliary Cylinder Out Stroke (To Retract The Anvil)	2750	190	60	1/8"
Auxiliary Cylinder In Stroke (To Reset The Anvil)	2750	190	40	1/8"

Cutting Capacity:

The cutter is primarily intended for use on wire rope having an ultimate tensile strength of 1770 N/mm² (180 Grade) and will cut wire ropes up to a maximum 75mm (3") diameter.

Attempts to cut wire rope of greater tensile strength may damage the blade or reduce its operating life.

It may also be used on alternative materials, such as electrical power cables, electrical communications cables, hydraulic umbilicals or a combination of these, again up to a maximum 75mm (3") diameter.

Where diameters smaller than 75mm (3") are to be cut, every effort should be made to place the material to be cut centrally along the anvil to minimise offset loadings.

If the cutter is required to cut solid bar members of steel or steel tubing, please refer to the manufacturer first with full details of size, material and tensile strength, failure to do so may result in damage to the blade and anvil.

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Operation:

Prior to use the auxiliary cylinder out stroke should be operated to withdraw the anvil, this clears access for the cutter to be placed over the wire rope.

Place the cutter over the wire rope. Ensure the wire rope is as far into the cutter as possible so that the anvil does not foul as it is reset.

Operate the auxiliary cylinder in stroke to position the anvil fully home under the wire rope.

Operate the main ram down stroke to sever the wire rope, when the cut is complete; retract the main ram until it is fully home.

If further cuts are required, the above procedure should be repeated.

NB. Do not operate the auxiliary cylinders when the main ram is fully extended since this would damage the anvil.

After Use Care:

When the cutter is retrieved, it should be hosed off with clean fresh water, allowed to drain and sprayed externally with a de-watering fluid.

Before storage, inspect the general condition of the cutter paying particular attention to the anvil and blade. The anvil should be clean and free from any damage or bruising on the outside diameter which would prevent it from retracting properly, the blade edge should be smooth and free from any serration's, a slight ripple to the blade edge is acceptable and will not cause any problems. Any minor damage can be smoothed off with an oilstone if necessary.

General Maintenance & Service:

Since the cutters are manufactured with care from high quality materials, little maintenance is necessary, other than to keep the tool clean and free from debris.

It is unlikely that any service would be required on the hydraulic components of the cutter under normal circumstances but a seal kit is available if required. The only other parts that would require intermittent replacement, depending on the frequency of use and materials being cut, would be the anvil and blade.

All spares can be ordered using the following part numbers.

Anvil P/N SSC6452

Blade P/N 705009

Seal Kit P/N 995296

If required, the cutter can be returned to the manufacturer/supplier at any time for servicing and testing. If the user undertakes servicing, please refer to the paragraph on Proof Testing under the section **Safety** below.

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Safety General:

Whilst the cutter is intended for remote operation subsea, there is no reason why it should not be used on surface and be operated using a suitable hand pump.

In all cases where an operator is present, the safety aspects must be reviewed before any cutting operations commence.

Ensure that the cutter, hoses and pressure source are in good condition, all rated to the maximum working pressure of the cutter and all connected correctly.

No attempt should be made to cut wire ropes or other material, which is under tension.

Ensure the operator is shielded from the cutting blade during the cutting operation. When cutting near the very end of the wire rope, individual strands of cut wire may be expelled from the cutter at force, so ensure the operator is shielded from these also.

Safety Proof Testing:

If at any time it is necessary to carry out proof tests on the cutter, e.g. after service on the hydraulic cylinder the following applies.

The maximum proof test pressure must not exceed 125% of the maximum working pressure.

The cutter must be guarded during the proof testing operation.

The proof pressure must be applied gradually, by means of a hand pump, until the maximum pressure is reached.

Anvil & Blade Renewal: (Numbers in brackets refer to Table 2 and Figure 3)

To change the anvil or blade the following procedure should be adopted.

Disconnect the anvil (9) from the lever frame (11) by removing the M4 screw (22), using a 2mm A/F hex wrench, and the pivot pin (13). The anvil should be passed through the body and removed.

To remove the blade, pump out the main ram (5) until the two 1/4" diameter blade-retaining pins (29) can be seen. Remove the pins using a pin punch and slide the blade out of the cutter.

To replace the anvil or blade, reverse the above operations. When finally replacing the M4 screw, smear Loctite Screwlock on the last couple of threads, screw down until the point engages with the groove in the pivot pin (13), and then back off a 1/4 turn. (The screw provides axial retention but the pivot pin should be free to rotate.)

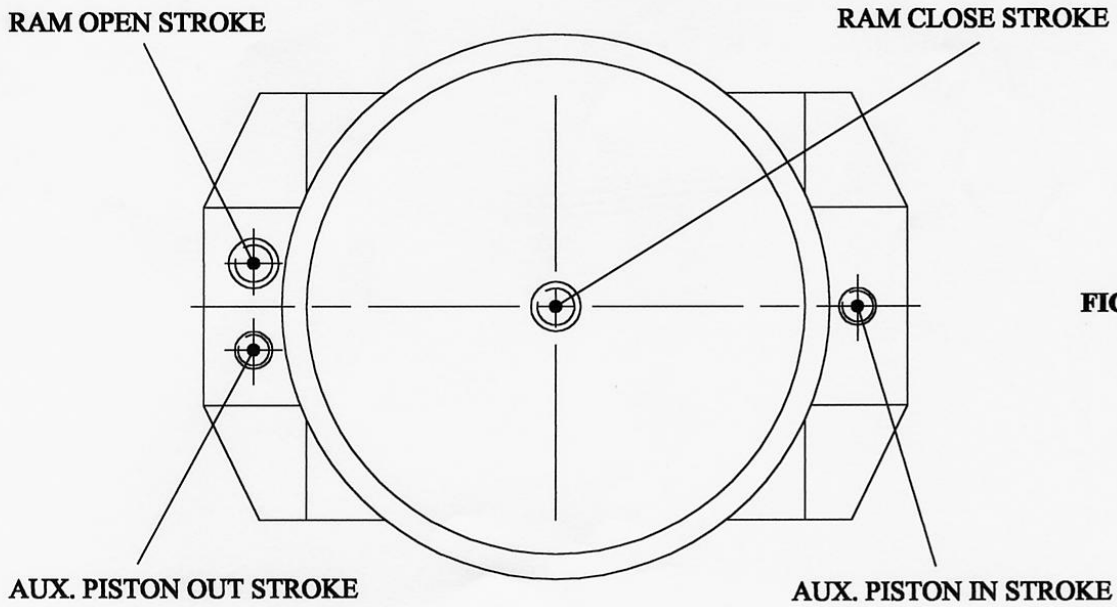
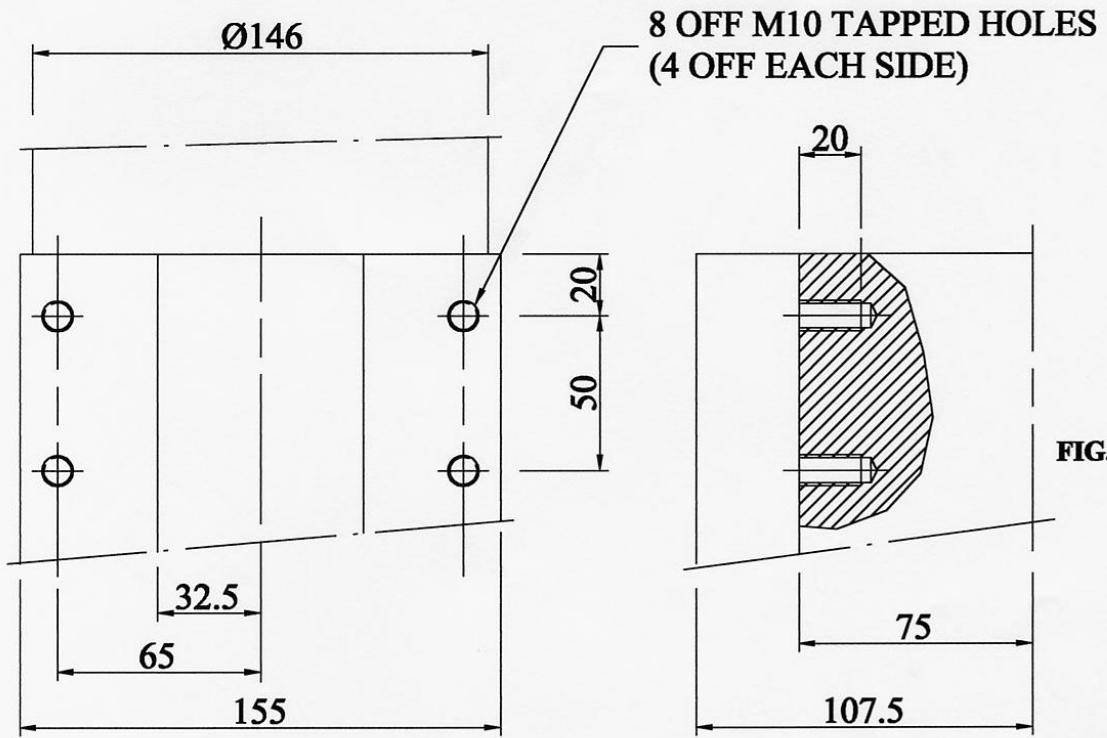
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Table 2:

Item	Part No.	DESCRIPTION	QTY
1	710236	Main Body	1
2	778011	Cylinder Cap	1
3	713255	Lever Frame Bracket	1
4	774030	Ram Bearing Ring	1
5	764090	Main Ram	1
6	705009	Blade	1
7	715321	Anvil Bush	1
8	715322	Anvil Guide Bush	1
9	SSC6452	Anvil	1
10	765161	Wear Plate	2
11	713256	Lever Frame	1
12	713257	Lever Frame Axle	1
13	761225	Lever Frame Pivot Pin	3
14	764089	Auxiliary Piston	2
15	742014	Piston End Fork	2
16	778010	Auxiliary Cylinder Cap	2
17	715323	Axle Bushes	2
18	035078	Screw M5 x 20 St/St	8
19	035076	Screw M6 x 16 St/St	14
20	041330	Screw M5 x 30 St/St	4
21	035079	Screw M6 x 25 St/St	8
22	035074	Screw M4 x 8 St/St	5
23	025799	Piston Seal – Main Ram	1*
24	025804	Rod Seal – Main Ram	1*
25	025570	Wiper – Main Ram	1*
26	025801	Piston Seal – Auxiliary Piston	2*
27	025802	Rod Seal – Auxiliary Piston	2*
28	025569	Wiper – Auxiliary Piston	2*
29	030632	Blade Retaining Pin	2
30	025817	O-Ring	1*
31	025818	O-Ring	1*
32	025819	O-Ring	2*

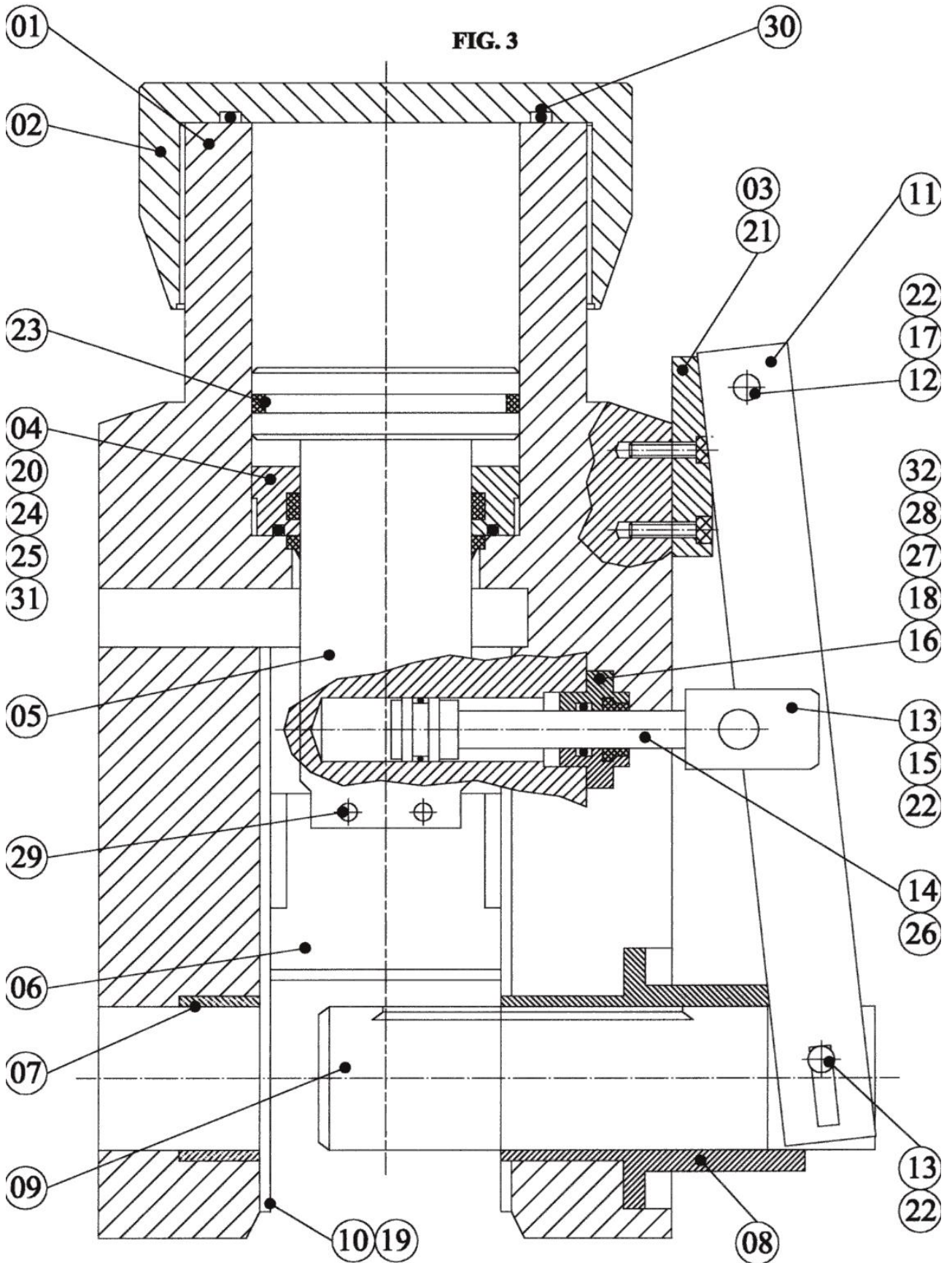
NB. Parts marked * are contained in the seal kit.

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FIG. 3

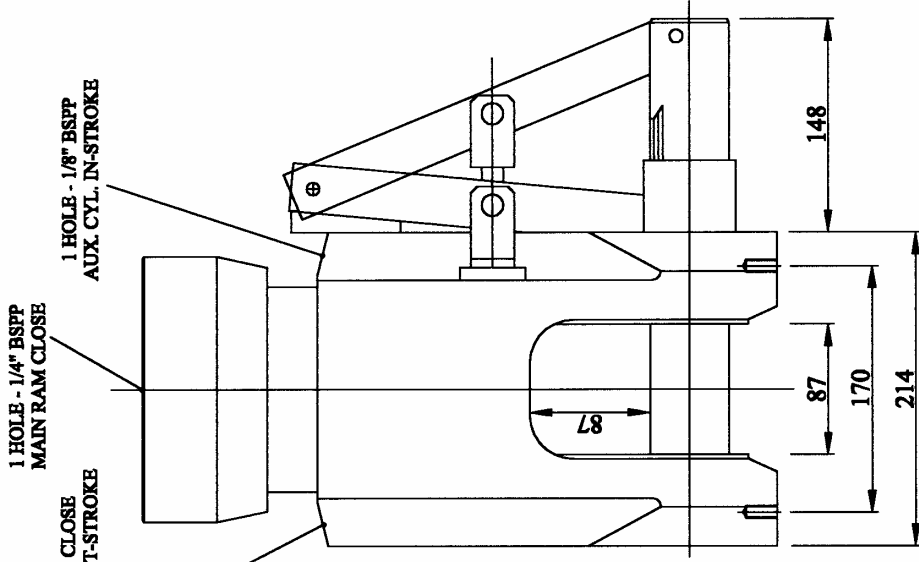


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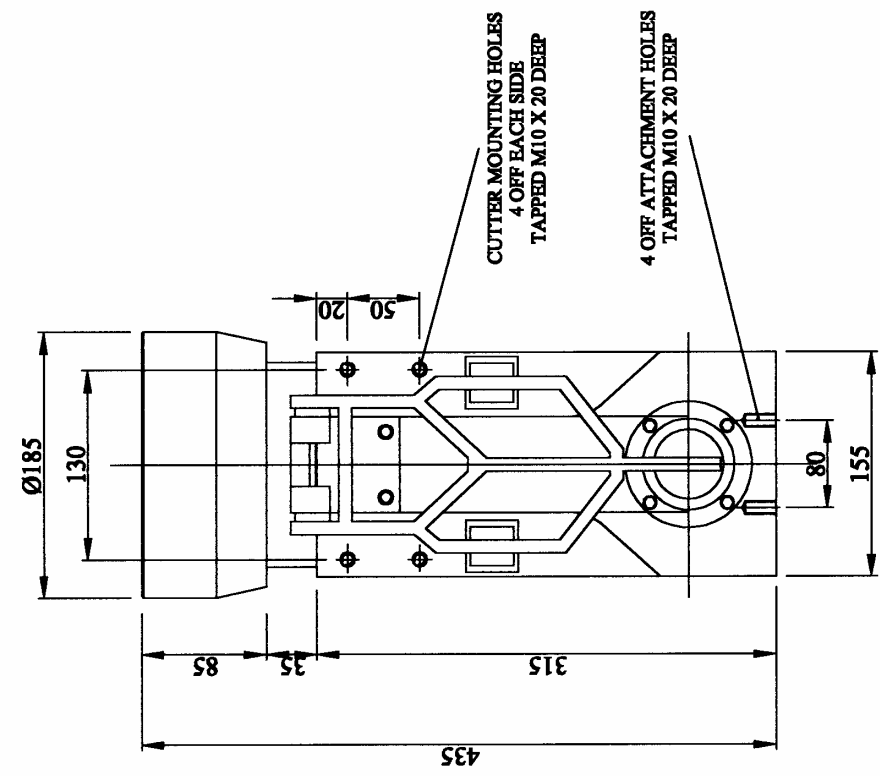
ALL DIMENSIONS ARE IN MILLIMETRES.


WEIGHT IN AIR 35 KG.

- 2 HOLES
1/4" BSPP - MAIN RAM CLOSE
- 1 HOLE - 1/4" BSPP
MAIN RAM CLOSE
- 1 HOLE - 1/8" BSPP
AUX. CYL. IN-STROKE



CUTTER NORMALLY SUPPLIED C/W HP MALE Q/D ON CUTTER CLOSE PORT,
LP MALE Q/D ON CUTTER OPEN PORT & TWO OFF 8 FOOT LONG AUXILIARY
CYLINDER OPERATING HOSES TERMINATED IN NO 4 JIC FEMALE FITTINGS.



Designed by P.J. THORNTON	Checked by J. HOWAT	Approved by - date PJT-21/06/00	Filename 980297	Date 21/06/00	Scale NTS
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