



**MK5 UNDERWATER ORDNANCE RECOVERY SYSTEM (THE SMART BAG)**

JW AUTOMARINE SPECIALISES IN THE DESIGN AND MANUFACTURE OF UNDERWATER RECOVERY SYSTEMS AND HAS DEVELOPED A COMPACT SELF-CONTAINED SYSTEM FOR REMOTE RETRIEVAL. THE MK5 SYSTEM IS THE LATEST OF A FAMILY OF MINE RECOVERY SYSTEMS DESIGNED AND MANUFACTURED SINCE THE MID-1970'S. IN RECOVERY DIVING OPERATIONS, IT IS NOT ALWAYS POSSIBLE TO DISPOSE OF UNEXPLODED ORDNANCE IN THE POSITION WHERE IT IS FOUND. FOR SAFETY REASONS A MEANS OF REMOTE REMOVAL TO A SAFE AREA AND A MEANS OF LOWERING IN A CONTROLLED MANNER FOR DISPOSAL IS THEREFORE ESSENTIAL.

THE ENCLOSED MINE LIFTING BAG (EMLB), WILL PROVIDE A SAFE AND RELIABLE MEANS OF REMOTELY LIFTING ORDNANCE OF UP TO 1,000Kg MASS, FROM DEPTHS DOWN TO 80M, BY PROVIDING A TIME DELAY FACILITY AND CONTROLLING THE RATE OF ASCENT. THIS IS ACHIEVED BY ENABLING THE USER TO SET THE TIME DELAY FOR UP TO 90 MINUTES IN 5 MINUTE INCREMENTS, OR BY COMPUTER FOR UP TO 45 DAYS FOR INFLATION OF THE LIFTING BAGS IN A CONTROLLED MANNER. THIS ENSURES THE RATE OF ASCENT IS CONTROLLED AT NO MORE THAN 2M/S.

THERE ARE TWO VERSIONS OF EMLB, ONE WITH A LIFTING BAG OF 500Kg CAPACITY AND ONE WITH A LIFTING BAG OF 1,000Kg. EACH CONSISTS OF TWO MAIN ASSEMBLIES:

- LIFTING BAG ASSEMBLY WITH INTEGRAL VALISE.
- TRANSPORT/STORAGE CASE CONTAINING DELAYED INFLATION UNIT (SPEDIU-MK5) I) - CYLINDER PACK, II) TIME CONTROL UNIT.

OPERATION OF THE EMLB REQUIRES THE CYLINDER PACK (SUITABLY CONFIGURED FOR THE PROPOSED LIFT) AND THE TIMER/CONTROLLER UNIT TO BE ATTACHED TO THE LIFTING BAG ASSEMBLY. ONCE THE ACTUATION DELAY PERIOD HAS BEEN SET ON THE SURFACE, USING THE REMOTE SETTING CONTROL BOX, THE ASSEMBLY IS READY FOR DEPLOYMENT IN WATER. WHEN THE EMLB HAS BEEN ATTACHED, THE ASCENT ACTIVATION PIN IS REMOVED AND TIME DELAY STARTS. SIMILARLY, WHEN THE EMLB IS ON THE SURFACE, IT MAY BE USED TO LOWER AN ITEM AT A CONTROLLED RATE OF DESCENT. THIS IS ACHIEVED BY REMOVING THE DESCENT-ARMING PIN, FITTED AT THE TOP OF THE LIFTING BAG.

THE 500Kg AND 1,000Kg VERSIONS OF THE EMLB ARE ESSENTIALLY THE SAME, THE DIFFERENCES BEING IN THE SIZE OF THE LIFTING BAG AND THE NUMBER OF CYLINDERS IN THE CYLINDER PACK ARE AS FOLLOWS:1,000Kg

- LIFTING BAG MODEL TARB1MK5 - (N.S.N. 1386-99-198-5106)
- 500Kg LIFTING BAG MODEL TARBT10CMK5 - (N.S.N. 1386-99-772-0045)
- CONTROLLER, 2 CYLINDER PACK (500Kg LIFT BAG) MODEL SPED1UMK5(2C) - (N.S.N. 4220-99-695-2761)
- CONTROLLER, 4 CYLINDER PACK (1,000Kg LIFT BAG) MODEL SPED1UMK5 - (N.S.N. 1386-99-869-5423)

OUR OPTIONAL KIT IS AVAILABLE FOR ORDNANCE DISPOSAL FROM A BEACH TIDAL LIFT. THIS IS ACHIEVED BY SEPARATING THE CONTROLLER PACK FROM THE LIFT BAG BY A DISTANCE OF 5 METRES, THIS ENSURES THAT, WITH AN INCOMING TIDE, MAKING CONTACT WITH THE LIVE ORDNANCE BY THE INFLATION SET IS MINIMAL. THE CONTROLLER PACK IS MADE BUOYANT BY ADDITIONAL SOLID BUOYANCY AND IS CURRENTLY ONLY FITTED TO THE TWO CYLINDER PACK.

**TECHNICAL DETAILS**

Lift Bag Model	Lift Capacity	Dia (mm)	Length (mm)	Packed Dims (L x W x H mm)	Packed Weight
TARB1MK5	1000Kg	1000	1900	700 x 700 x 400	40Kg
TARBT10CMK5	500Kg	725	1600	600 x 600 x 300	35Kg

Time Delay Unit Model	Cylinders	Packed Dims (L x W x H mm)	Packed Weight
SPEDIUMK5(2C)	2	967 x 596 x 626	72Kg
SPEDIUMK5	4	967 x 596 x 766	121Kg

**STANDARD FEATURES**

- 500Kg OR 1,000Kg LIFT CAPACITY LIFTING BAGS.
- 4 OR 2 X 10.4 LTR CYLINDER 232 BAR PACK OPTIONS.
- INFLATION TIME DELAY USING THE MANUAL ELECTRONIC TIMER SET-UP CONTROLLER UNIT (0-90 MINUTES).
- INFLATION TIME DELAY USING THE PC COMPUTER SOFTWARE PROVIDED TO CONTROL TIMER SET-UP (0-45 DAYS)
- CONTROLLED BUOYANCY ASCENT AND DESCENT (2M/S).
- 1M ACOUSTIC CONNECTION CABLE.
- OPERATIONAL DEPTH TO 80M.
- LOW MAGNETIC SIGNATURE 1.005T.
- SAFETY PULL PIN SINGLE DIVER ACTIVATION.
- NON MAGNETIC SHACKLES.
- AUTOMATIC AIR INFLATION SHUT OFF.
- INTEGRAL VALISE.
- RIGID AND PROTECTIVE TRANSPORT CASE.

**OPTIONAL FEATURES**

- TIDAL OPTION KIT:
  - 2 X BUOYANCY BLOCKS
  - 2 X BUOYANCY BLOCK STRAPS.
  - 5M CONNECTING STRAP:
    - 6M ELECTRICAL CABLE.
    - 6M DUMP VALVE HOSE.
    - 6M INFLATE AIR HOSE
- ACOUSTIC ACTIVATION SYSTEM.
- 200M ACOUSTIC CONNECTION CABLE.

#### ADDITIONAL MILITARY AND DEFENCE PRODUCTS

- PORTABLE UNEVEN GROUND FASCINES
- MISSILE AND TORPEDO COVERS
- RESCUE SUBMARINE BUOYANCY SYSTEMS
- COUNTER LUNGS FOR DIVING RE-BREATHERS
- MAN OVERBOARD PADS
- 100LTR WATER TIGHT EQUIPMENT BAGS

#### QUALITY ASSURANCE GUARANTEED



ALL OF JW AUTOMARINE'S PRODUCTS CONFORM TO THE INTERNATIONAL TRADING STANDARD:  
EN ISO 9001:2000

#### QUALITY CERTIFICATIONS

- EN ISO 9001:2000 CERTIFICATE NUMBER GB93/1901
- CE REGISTRATION REFERENCE 415/01D016

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CONTACT JW AUTOMARINE FOR ALL YOUR TECHNICAL SUPPORT REQUIREMENTS. JW AUTOMARINE ALSO PROVIDES PERSONAL ON-SITE INSTALLATION AND OPERATIONAL ADVICE. FOR ORDERING ASSISTANCE PLEASE CALL + 44 (0) 1328 852300. ALTERNATIVELY, YOU CAN USE OUR ONLINE CONTACT FORM. WE LOOK FORWARD TO HEARING FROM YOU.

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