

## MD Two Speed Hand Pump Index for drawings What do we offer?

316 Stainless Steel Hydraulic Hand Pump. Our Micropac® MD is a component hand pump which can be configured to suit your exact requirement. Single acting operation up to 1000 bar, multi-fluid compatible with easy change seal kits.

The Two speed design allows rapid pre-filling at 47 or 32cc to 50 bar, followed by high pressure operation up to 450, 700 or 1000 bar, depending on the model. Switch between lowpressure and high-pressure operation with a rugged manual changeover valve.

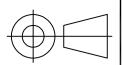
These pumps can be fitted to a range of reservoirs 4-14 litre capacity. It can also be fitted to a sub-plate to adapt the mounting face to suit 89mm legacy reservoirs See pages 5-8.

ATEX / IECEx certified options for uses in potentially explosive atmospheres. See page 9.



Page	<b>Drawing Number</b>	Description Available Pump Models:
2	MD 6 45	•
2	MD-6-45	LP 47cc / HP 5.2cc / Double stroke up to 450 Bar max. pressure
3	MD-6-70	LP 47cc / HP 4.0cc / Double stroke up to 700 Bar max. pressure
4	MD-6-10	LP 32cc / HP 2.6cc / Double stroke up to 1000 Bar max. pressure
		Available range of Reservoirs:
5	MD-6-XX-5E	5 Litre Portable Reservoir (includes mounting holes for fixed mounting)
6	MD-6-XX-1E	14 Litre Portable Reservoir (includes mounting holes for fixed mounting)
7	MD-6-XX-4E	4 Litre Fixed Reservoir
8	439013400	Sub-plate for retrofit mounting this pump to 89mm centre legacy mounting interfaces: Tangye Hydrapak, Enerpac MP range, HiForce HMP/MHP range (Trademarks acknowledged)
9	MD-6-XX-AX	ATEX / IECEx certified units:  Just add "-AX" to the end of the ordering code to receive all the necessary upgrades to make the pump suitable for uses in Potentially Explosive atmospheres

IN DOUBT, ASK THIRD ANGLE PROJECTION

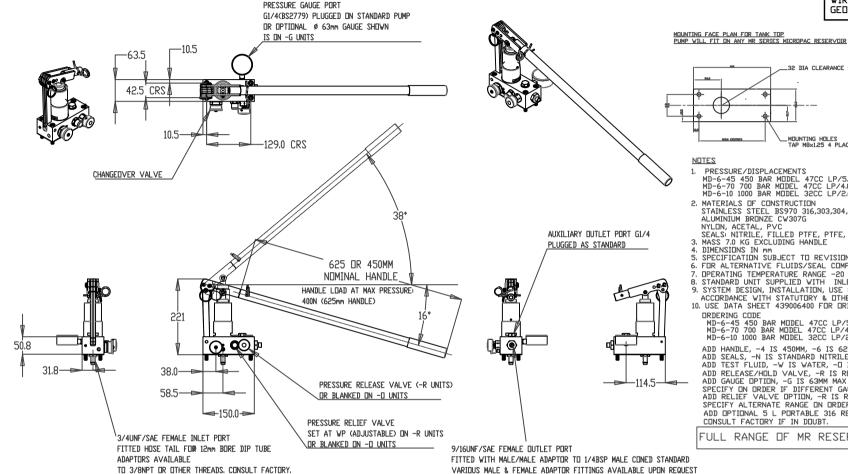


TOLERANCES UNLESS OTHERWISE STATED GENERAL TOLERANCES RIGHT ANGLE BENDS & NO DEC. PLACE +/-1.0mm OTHER ANGLES +/-1°

ONE DEC. PLACE +/-0.3mm MACHINED DIAMETERS TWO DEC. PLACE +/-0.1mm CONCENTRIC WITHIN +/-0.1mm T.I.R.

HYDRAULIC CIRCUIT
P CAUX GAUGE

SCREW THREADS ARE ISO METRIC COARSE PITCH TDL. 69/6H (MED. FIT) TO BS3643 WIRE DIA./PLATE THICKNESS TO COMMERCIAL LIMITS GEOMETRICAL TOLERANCING TO BS308 PART 3



NOTES

PRESSURE/DISPLACEMENTS
MD-6-45 450 BAR MODEL 47CC LP/5.2CC HP TO 700 BAR
MD-6-70 700 BAR MODEL 47CC LP/4.0CC HP TO 700 BAR
MD-6-10 1000 BAR MODEL 32CC LP/2.6CC HP TO 1000 BAR

MULINITING HULES

\_32 DIA CLEARANCE FOR TAIL

2. MATERIALS OF CONSTRUCTION STAINLESS STEEL BS970 316,303,304,302,431,420 ALUMINIUM BRONZE CW307G

NYLDID, ACETAL, PVC SEALS: NITRILE, FILLED PTFE, PTFE, UHMVP, POLYURETHANE 3. MASS 7.0 KG EXCLUDING HANDLE

4. DIMENSIONS IN mm
5. SPECIFICATION SUBJECT TO REVISION

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6. FOR ALTERNATIVE FLUIDS/SEAL COMPOUNDS -CONSULT FACTORY
7. OPERATING TEMPERATURE RANGE -20 TO +80 DEG C SUBJECT TO FLUID
8. STANDARD UNIT SUPPLIED WITH INLET FILTER/DIP TUBE, GASKET & MOUNTING SCREWS.
9. SYSTEM DESIGN, INSTALLATION, USE & MAINTENANCE TO BE IN
ACCORDANCE WITH STATUTORY & OTHER REQUIREMENTS
10. USE DATA SHEET 439006400 FOR ORDERING CODES

ORDERING CODE MD-6-45 450 BAR MODEL 47CC LP/5.2CC HP TO 450 BAR MD-6-70 700 BAR MODEL 47CC LP/4.0CC HP TO 700 BAR MD-6-10 1000 BAR MODEL 32CC LP/2.6CC HP TO 1000 BAR

ADD HANDLE, -4 IS 450MM, -6 IS 625MM ADD SEALS, -N IS STANDARD NITRILE/UHMWP/PTFE, -V IS FLUOROCARBON, -E IS EPDM

ADD TEST FLUID, -W IS WATER, -D IS MINERAL DIL ADD RELEASE/HOLD VALVE, -R IS RELEASE/ HOLD VALVE FITTED, -O IS PLUGGED

ADD GAUGE OPTION, -G IS 63MM MAX RANGE PUMP BAR, -O IS PLUGGED. SPECIFY ON ORDER IF DIFFERENT GAUGE RANGE

ADD RELIEF VALVE OPTION, -R IS RELIEF VALVE FITTED, SET MAX RANGE PUMP, -O PLUGGED SPECIFY ALTERNATE RANGE ON ORDER.

ADD OPTIONAL 5 L PORTABLE 316 RESERVOIR, -5 ADDS OPTION. CONSULT FACTORY IF IN DOUBT.

FULL RANGE OF MR RESERVOIRS CAN BE ORDERED SEPARATELY

UNLESS OTHERWISE STATED: DIMENSIONS IN MILLIMETRES SURFACE FINISH IN MICROMETRES DEMUNE SHADD EDGES

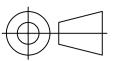
REML	EMUVE SHARP EDGES			COPYRIGHT 2022 SARUM HYDRAULICS LTD.		
				SARUM HYDRAULICS LTD.	DRA	
				SALISBURY, SP4 6EB, UK		
				HYDRAULICS www.sarum-hydraulics.co.uk	CAD	
				TITLE INCTALLATION DOAWING, NO CEDIEC O COFED DUND AFODAD	DRA	
2	2303221	PU SEALS, AND WEIGHT WAS 6KG	N.D 03/23	INSTALLATION DRAWING: MD SERIES 2 SPEED PUMP, 450BAR	] <b>\</b>	
1		FIRST ISSUE	06/22	MATERIAL PER NOTES	$\mathbb{N}$	
ISSUE	D.C.N.	CHANGE DESCRIPTION & DATE	DATE IMPLEMENTED	FINISH PER NOTES	<b>]∥</b> ₩	

CONSULT FACTORY

DRAWNN□		APP		
		CHKD		
SCALE F	SIZE	SHEET	ΟF	
CVD 3-D	MD-6-	15		

RAWING NO.

IN DOUBT, ASK THIRD ANGLE PROJECTION

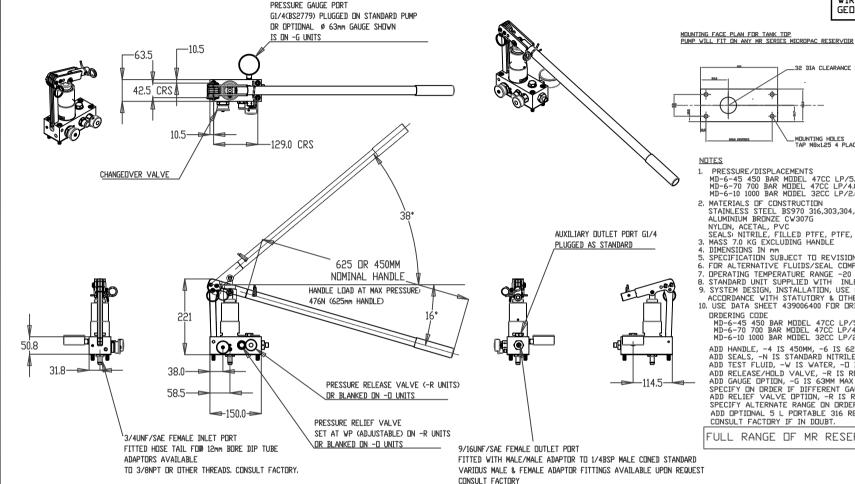


TOLERANCES UNLESS OTHERWISE STATED GENERAL TOLERANCES RIGHT ANGLE BENDS & NO DEC. PLACE +/-1.0mm OTHER ANGLES +/-1° ONE DEC. PLACE +/-0.3mm MACHINED DIAMETERS TWO DEC. PLACE +/-0.1mm CONCENTRIC WITHIN

+/-0.1mm T.I.R. SCREW THREADS ARE ISO METRIC COARSE PITCH

TOL. 6g/6H (MED. FIT) TO BS3643 WIRE DIA./PLATE THICKNESS TO COMMERCIAL LIMITS GEOMETRICAL TOLERANCING TO BS308 PART 3

HYDRAULIC CIRCUIT
P CAUX GAUGE



PRESSURE/DISPLACEMENTS MD-6-45 450 BAR MDDEL 47CC LP/5.2CC HP TO 450 BAR MD-6-70 700 BAR MDDEL 47CC LP/4.0CC HP TO 700 BAR MD-6-10 1000 BAR MDDEL 32CC LP/2.6CC HP TO 1000 BAR

MULINITING HULES

M8x1.25 4 PLACES

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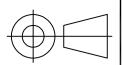
UNLESS OTHERWISE STATED: DIMENSIONS IN MILLIMETRES SURFACE FINISH IN MICROMETRES

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				SALISBURY, SP4 6EB, UK  www.sarum-hydraulics.co.uk	SCA	
				HYDRAULICS www.sarum-hydraulics.co.uk	CAD	
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ISSUE	D.C.N.	CHANGE DESCRIPTION & DATE	DATE IMPLEMENTED	FINISH PER NOTES	$\exists \mathbb{IV}$	
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RAWNN□ APP CHKD ALE F SIZE SHEET ΠF AD 2-D MD-6-70

RAWING NO.

IN DOUBT, ASK THIRD ANGLE PROJECTION

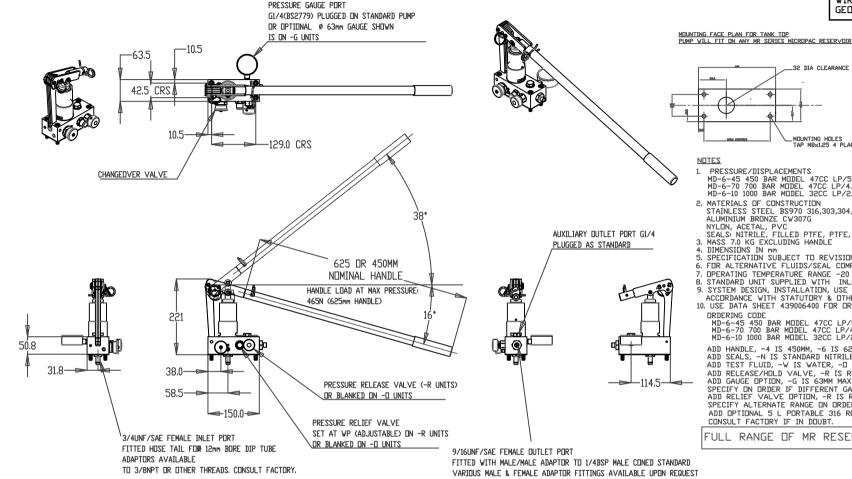


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MACHINED DIAMETERS TWO DEC. PLACE +/-0.1mm CONCENTRIC WITHIN +/-0.1mm T.I.R.

SCREW THREADS ARE ISO METRIC COARSE PITCH TOL. 6g/6H (MED. FIT) TO BS3643 WIRE DIA./PLATE THICKNESS TO COMMERCIAL LIMITS GEOMETRICAL TOLERANCING TO BS308 PART 3

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UNLESS OTHERWISE STATED: DIMENSIONS IN MILLIMETRES SURFACE FINISH IN MICROMETRES REMOVE SHARP EDGES

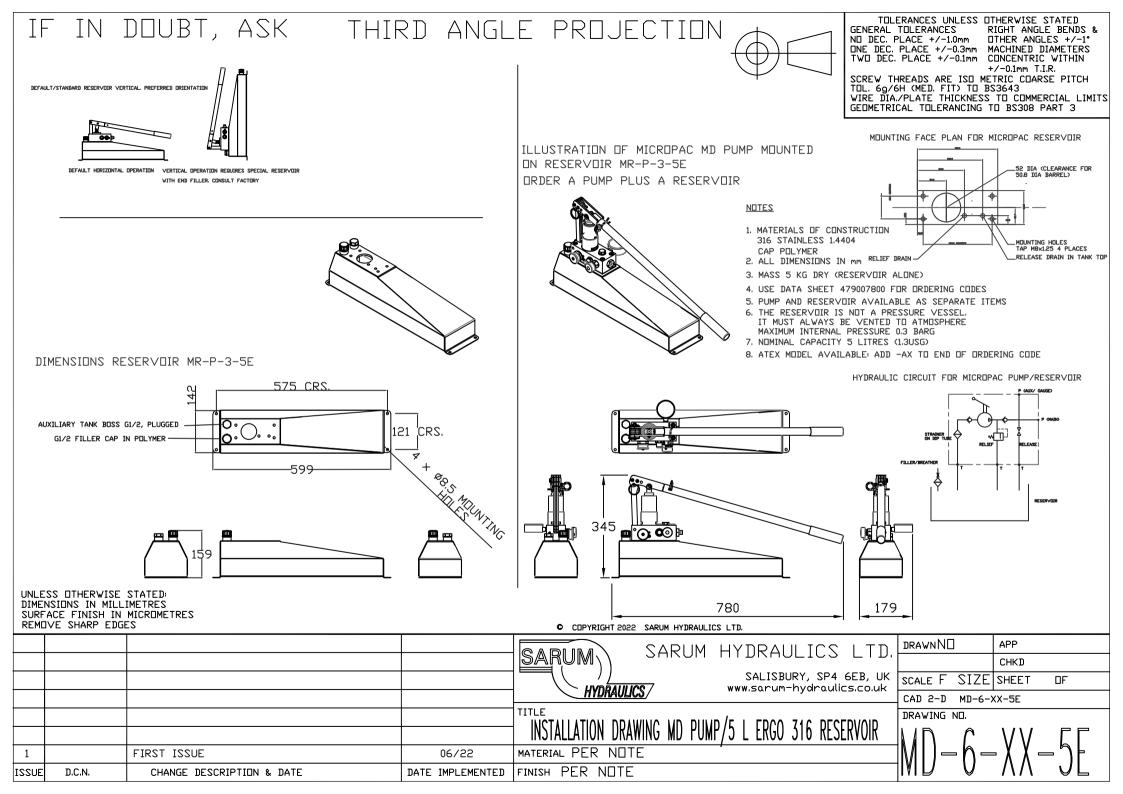
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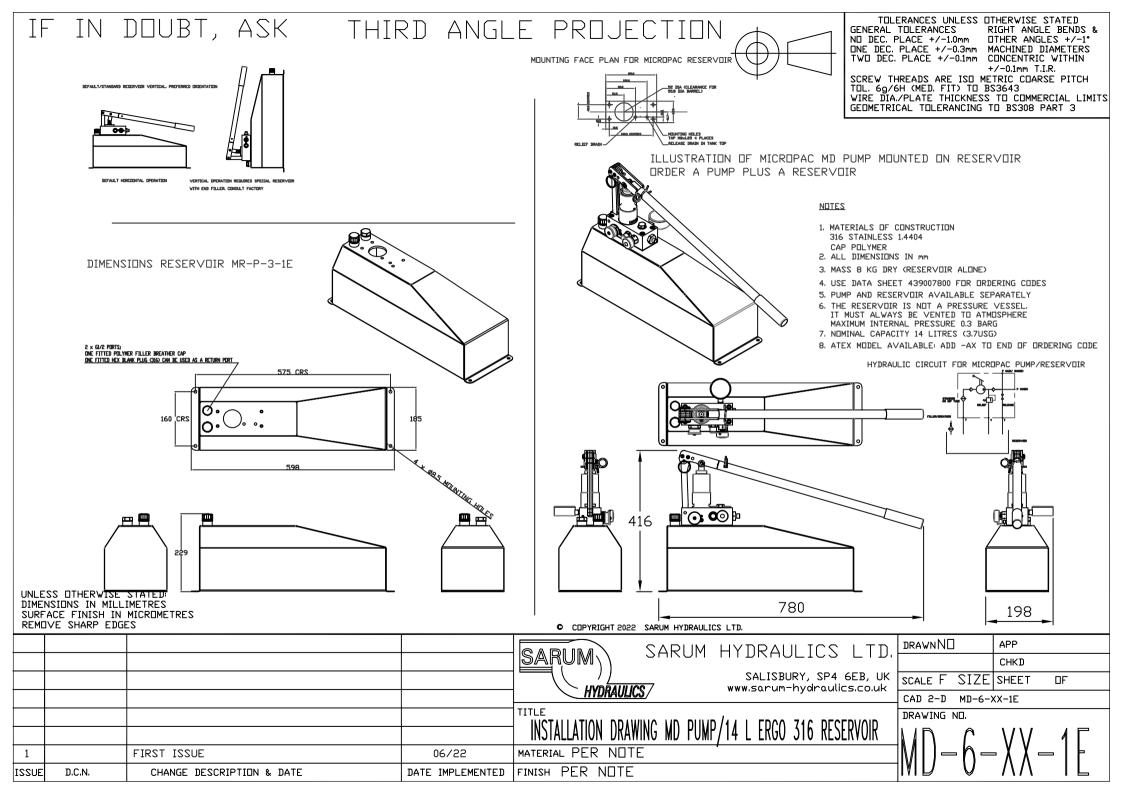
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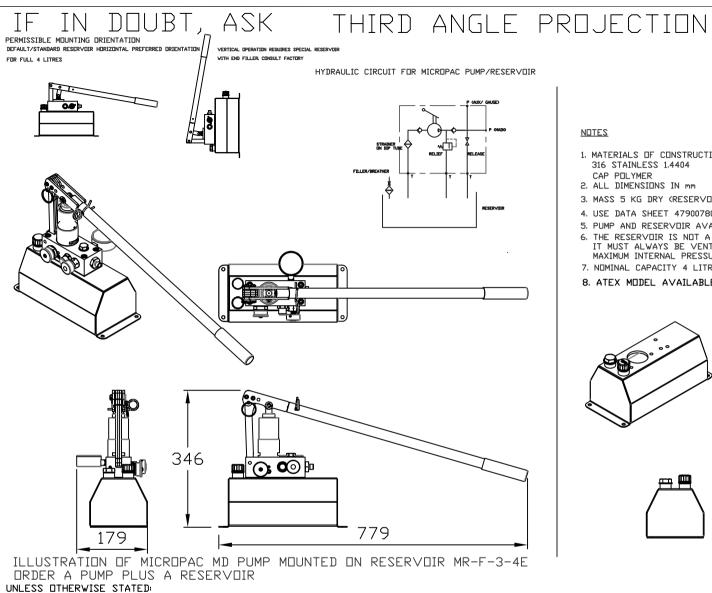
DRAWNNO APP CHKD SCALE F SIZE SHEET ΠF

CAD 2-D MD-6-10

DRAWING NO.







TOLERANCES UNLESS OTHERWISE STATED GENERAL TOLERANCES RIGHT ANGLE BENDS & NO DEC. PLACE +/-1.0mm OTHER ANGLES +/-1°

DNE DEC. PLACE +/-0.3mm MACHINED DIAMETERS
TWO DEC. PLACE +/-0.1mm CONCENTRIC WITHIN +/-0.1mm T.I.R.

MOUNTING FACE PLAN FOR MICROPAC RESERVOIR

RELEASE DRAIN IN TANK TOP

122.0

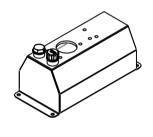
88.0

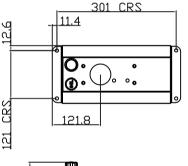
54.0

SCREW THREADS ARE ISO METRIC COARSE PITCH TOL. 69/6H (MED. FIT) TO BS3643 WIRE DIA./PLATE THICKNESS TO COMMERCIAL LIMITS GEOMETRICAL TOLERANCING TO BS308 PART 3

## NOTES

- 1. MATERIALS OF CONSTRUCTION 316 STAINLESS 1.4404 CAP POLYMER
- 2. ALL DIMENSIONS IN mm
- 3. MASS 5 KG DRY (RESERVOIR ALONE)
- 4. USE DATA SHEET 479007800 FOR ORDERING CODES
- 5. PUMP AND RESERVOIR AVAILABLE AS SEPARATE ITEMS
- 6. THE RESERVOIR IS NOT A PRESSURE VESSEL. IT MUST ALWAYS BE VENTED TO ATMOSPHERE MAXIMUM INTERNAL PRESSURE 0.3 BARG
- 7. NOMINAL CAPACITY 4 LITRES (1 USG)
- 8. ATEX MODEL AVAILABLE: ADD -AX TO END OF ORDERING CODE









DIMENSIONS RESERVOIR MR-F-3-4F

DIMENSIONS IN MILLIMETRES SURFACE FINISH IN MICROMETRES

	REMUVE SHARP EUGES			COPYRIGHT 2022 SARUM HYDRAULICS LTD.		
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					SALISBURY, SP4 6EB, UK www.sarum-hydraulics.co.uk	SCA
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Ī					INSTALLATION DRAWING MD PUMP/4L 316 ERGO RESERVOIR	1 1
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		CHKD		
SCALE F	SIZE	SHEET	ΟF	
CAD 2-D	MD-6->	⟨X−4E		

RAWING NO.

