

OPERATION & MAINTENANCE MANUAL

Enerpac MDWS620, MDWS1638, MDWS1642, MDWS3660 Diamond Wire Saw Machines

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To reduce the risk of injury, user must read and understand the document before use.

Version History

All Enerpac documentation is quality controlled and audited in accordance with **BS EN ISO 9001:2008**; the scope of which covers design, manufacture and repair of in-situ machine tools.

Version No.	Implemented By	Revision Date	Approved By	Approval Date	Comments
16	STH	04/2021	-	-	Enerpac Rebrand
A	STH	12/05/2022	DMS	22/06/2022	Hose connections information added to section 6 and other general updates
B	STH	26/07/2022	DMS	26/07/2022	Updated maintenance to remove salt water.
C	SV	31/07/2023	DC	31/07/2023	Updated Gas
D	SV	22/12/2023	DC	15/12/2024	Added GA MDWS1642
E	SV	06/03/2024	DC	06/03/2024	Updated GAs MDWS1638-2, MDWS1638-5, MDWS1638-15
F	SV	28/07/2026			Updated for changes made to MDWS3660, new design MK2

Operation & Maintenance Manual Approval

The undersigned acknowledge they have reviewed this Machine Operation & Maintenance Manual and agree with the approach it presents. Changes to this Operation & Maintenance Manual will be coordinated with, and approved by, the undersigned or their designated representatives.

Approver 1

Signature:



Date:

09/09/2014

Print Name:

Richard Barlow

Title:

Operations Manager

Approver 2

Signature:



Date:

09/09/2014

Print Name:

David Cochrane

Title:

Design Manager

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1. Introduction

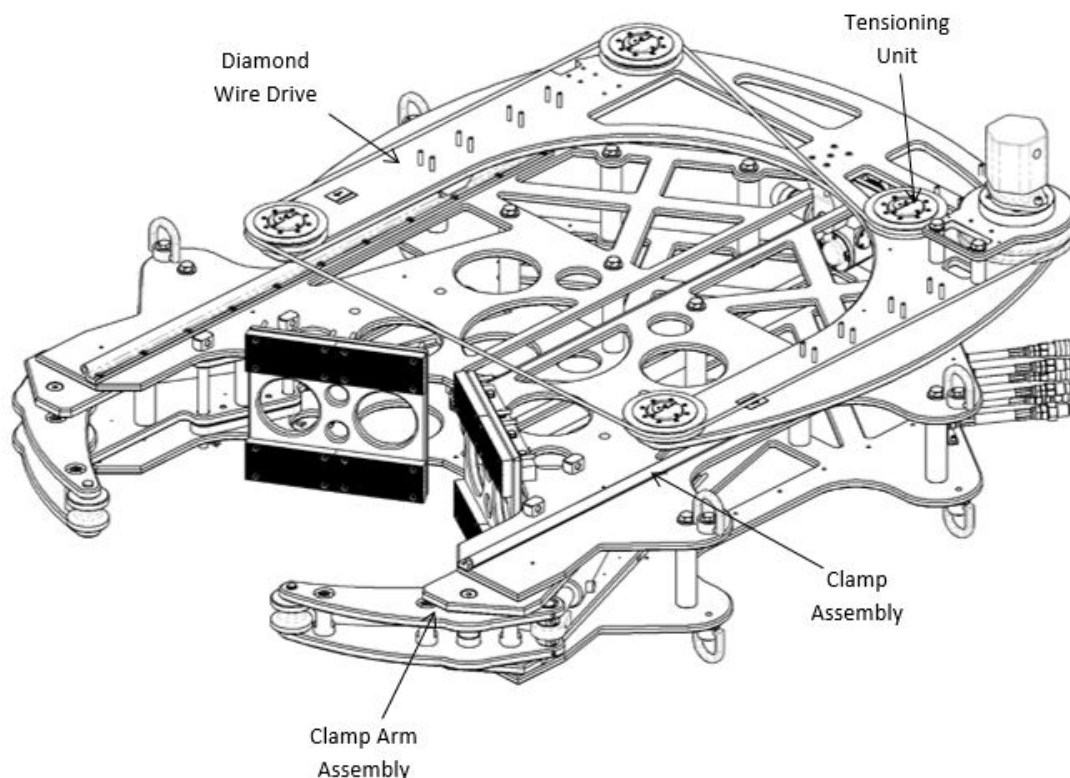
1.1. Overall Equipment Description

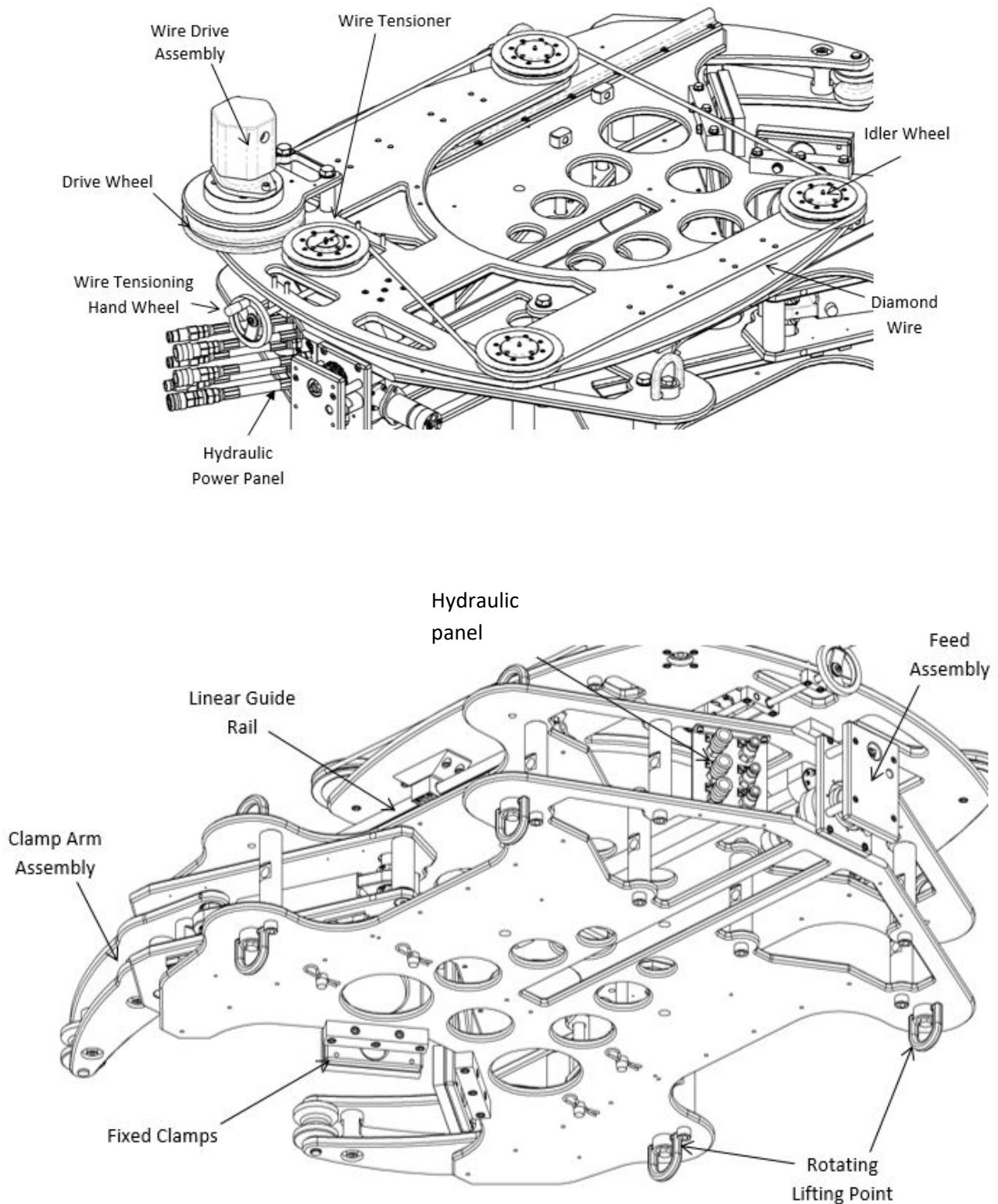
The MDWS range has been specifically designed for 'Subsea' pipe cutting operations of varying materials & thicknesses.

The saw uses a continuous loop, diamond cutting wire together with a hydraulic drive & feed system to advance the wire into the work piece.

The advantage of using a cutting wire instead of a blade is that a work piece made up of differing materials & thicknesses has little effect on cutting performance when compared to using a conventional bandsaw blade. The wire is also less likely to bind if the work piece bends or pinches the cutting wire.

The MDWS range has been specifically designed for subsea cutting applications where wire cooling is not an issue however it can be used for non- subsea applications if an adequate coolant supply & additional machine support is available.





2. Machine Warranty

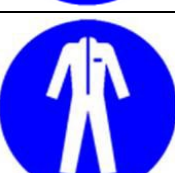
Refer to the Enerpac Global Warranty document for terms and conditions of the product warranty. Such warranty information can be found at www.enerpac.com.

3. Health and Safety

Enerpac has made every effort to ensure that the Information given in this Operation & Maintenance manual, and other publications relating to this machine is correct and understandable. However it is acknowledged that there may be errors or omissions in this publication.

The company also reserves the right not to provide updates, corrections or amendments to this publication but will endeavour to keep its customers up to date with all changes that may affect the machine operation or safety.

3.1. Mandatory Safety Signs (for the purpose of trials at Enerpac)

ISO 7010 SYMBOL	SAFETY DESCRIPTION
	WEAR EYE PROTECTION
	EAR PROTECTION MUST BE WORN
	HARD HATS MUST BE WORN
	PROTECTIVE GLOVES MUST BE WORN
	PROTECTIVE FOOTWEAR MUST BE WORN
	OVERALLS MUST BE WORN
	MACHINE GUARDS MUST BE USED

3.2. Machine Hazards Signs

ISO 7010 SYMBOL	HAZARD DESCRIPTION
	DANGER HIGH VOLTAGE
	WARNING MOVING MACHINERY
	CAUTION MOVING MACHINERY
	WARNING KEEP HANDS CLEAR

3.3. Safety Procedures

Detailed in this chapter is a list of good Health and Safety practices that Enerpac advise users to adhere to. Due to the nature of portable machine tools, not every eventuality can be catered for and the following is not exhaustive, as such Enerpac strongly advise that the user carries out their own risk assessments based on the machining and environment in which they intend to use the machinery.

3.3.1. Pre-Operational Safety Checks

1. Always read safety signs / labels
2. Ensure no slip / trip hazards are present in workspaces and walkways
3. Locate and ensure you are familiar with the operation of the ON / OFF starter and E-Stop (*if fitted*)
4. Do not leave equipment on top of the machine
5. Ensure each tool is in good condition and securely mounted
6. Secure / Remove loose items
7. Faulty equipment must not be used. **Immediately report any suspect machinery**

3.4. Operational Safety Checks

1. Operator is fully conversant and trained in use of equipment
2. Keep clear of moving machine parts
3. Never leave the machine running unattended
4. Follow correct clamping procedures - keep overhangs as small as possible and check work piece is secure
5. Set the correct speed to suit the tool, the depth of cut and the material
6. Before making adjustments and measurements or before cleaning swarf accumulations, switch off and bring the machine to a complete standstill

3.4.1. Housekeeping

1. Switch off the machine
2. Remove milling cutters, drill attachments and tap attachments and store them safely (if applicable)
3. Leave the machine and work area in a safe, clean and tidy state

3.4.2. Potential Hazards

1. Sharp cutters
2. Moving components – hair / clothing entanglement
3. Eye injury
4. Skin irritation
5. Metal splinters and burrs
6. Flying debris

4. Handling

Customers, users and operators of the machines must be aware of the nature of the equipment supplied.

Although inherently robust, the machine is a precision tool and may be damaged by poor handling, tipping and falling, inadequate transport arrangements over e.g. rough terrain, misuse by operators and use outside its design specification.

Such poor handling may result in either broken or damaged parts or disturbance to fine settings resulting in an inability to meet the specified machining tolerances and capabilities.

5. Machine Specification

The Enerpac MDWS Diamond Wire Saw has been modularly designed for accurate in-situ machining of work surfaces, to this end the constituent parts are easily manipulated by hand or crane.

Pipe Cutting Capacity		
Machine	Min Pipe Diameter	Max Pipe Diameter
MDWS620	6" (152mm)	20" (508mm)
MDWS1638	16" (406mm)	38" (965mm)
MDWS1642	16" (406mm)	42" (1067mm)
MDWS3660	36" (914mm)	60" (1524mm)

Basic Dimensions							
Machine	Max Length	Min Length	Width	Width when split.	Height	Net Machine Weight (all components)	Packing Weight (Net machine weight + box weight).
MDWS620	2273mm (89.5")	1851mm (72.9")	1520mm (59.8")	N/A	800mm (31.5")	440kg (970lb)	643kg (1418lb)
MDWS1638	2582mm (101.7")	2291mm (90.2")	1910mm (75.2")	N/A	800mm (31.5")	550kg (1213lb)	790kg (1742lb)
MDWS1642	2631mm (103.6")	2340mm (92.1")	1910mm (75.2")	N/A	877mm (34.5")	580kg (1279lb)	840kg (1852lb)
MDWS3660	3912mm (154")	3330mm (131.1")	2670mm (105.1")	1585mm (62.4")	824mm (32.4")	1200kg (2646 lbs)	910kg & 1030kg (2006lb & 2271lb)
<i>Note: Larger versions are supplied in two halves; 'split width' dimension quoted is for one half only. Net machine weights quoted are subject to specific customer requirement therefore are a guideline only.</i>							

Drive Motor Information (Cutting)			
Motor Series	Series F12, SAE version		
SAE Ports and Mounting	4-Bolt Flange		
Theoretical Displacement	40 cm ³ / rev		2.44 In ³ / rev
Pressure (PSI)	Cont: 138 bar (2000 psi)	Max Inter: 165 bar (2400 psi)	Max Trans: 210 bar (3000 psi)
Speed (rpm)*	Min: 50		Max: 3000
Port Type	SAE 12 Straight Thread		
Shaft Type	Short, Single End, Key shaft		
Case Drain	Required back to Hydraulic Power Unit		
Shaft Seal Material	Nitrile		

*Minimum speeds indicated are based upon constant load

Drive Motor Information (feed)	
Motor Series	Orbitmotor OMM50
Mounting	3-Bolt mounting
Flow	Max: 10 L/min
Pressure	Max: 70 bar (1015 psi)
Speed (rpm)*	Min: 3, Max: 200
Port Type	3/8 BSP
Shaft Type	Ø 16 mm with DIN6885 key (A5×5×16)
Drain port	1/8 BSP
*Minimum speeds indicated are based upon constant load	

Hydraulic Requirements	
MDWS620	Cutting: 100L @ 200bar, Feed: 10L @ 70bar
MDWS1638	
MDWS1642	
MDWS3660	

5.1. Motor Specifications

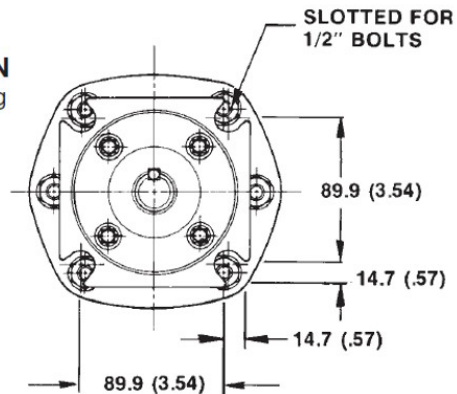
Thermal Shock Warning: If the motor is operated by fluid which is 80°F higher or more above the operating environment temperature, consult Enerpac.

5.1.1. SAE101-4 Motor

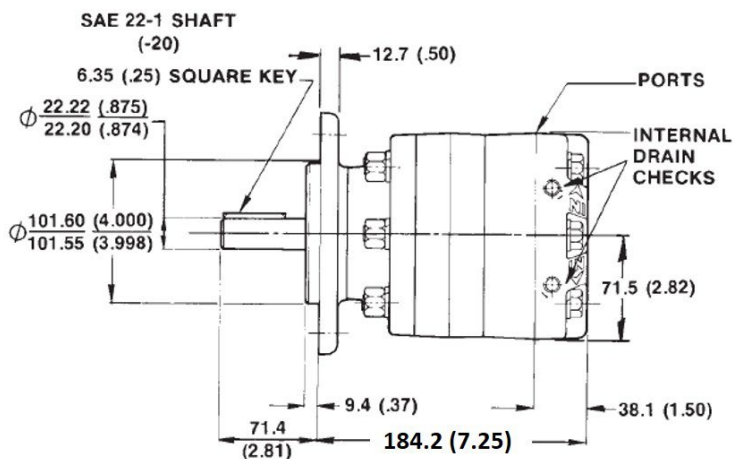
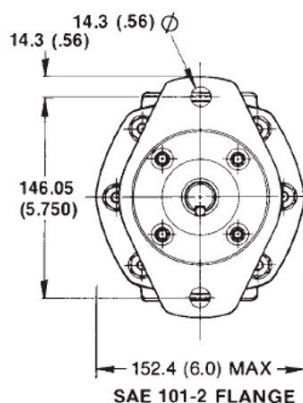
Mounting Data

Dimensions are shown in millimeters.
Dimensions within () are in inches.

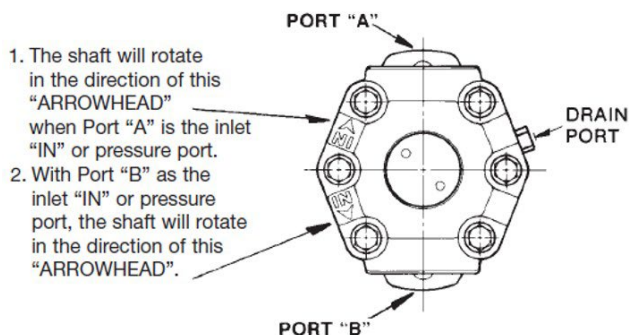
FLANGE OPTION SAE 101-4 Mounting



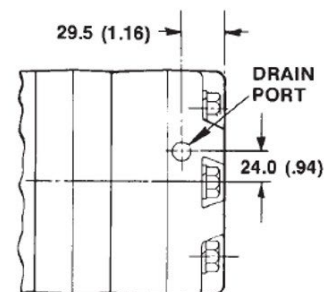
DIMENSIONS



PORT LOCATION

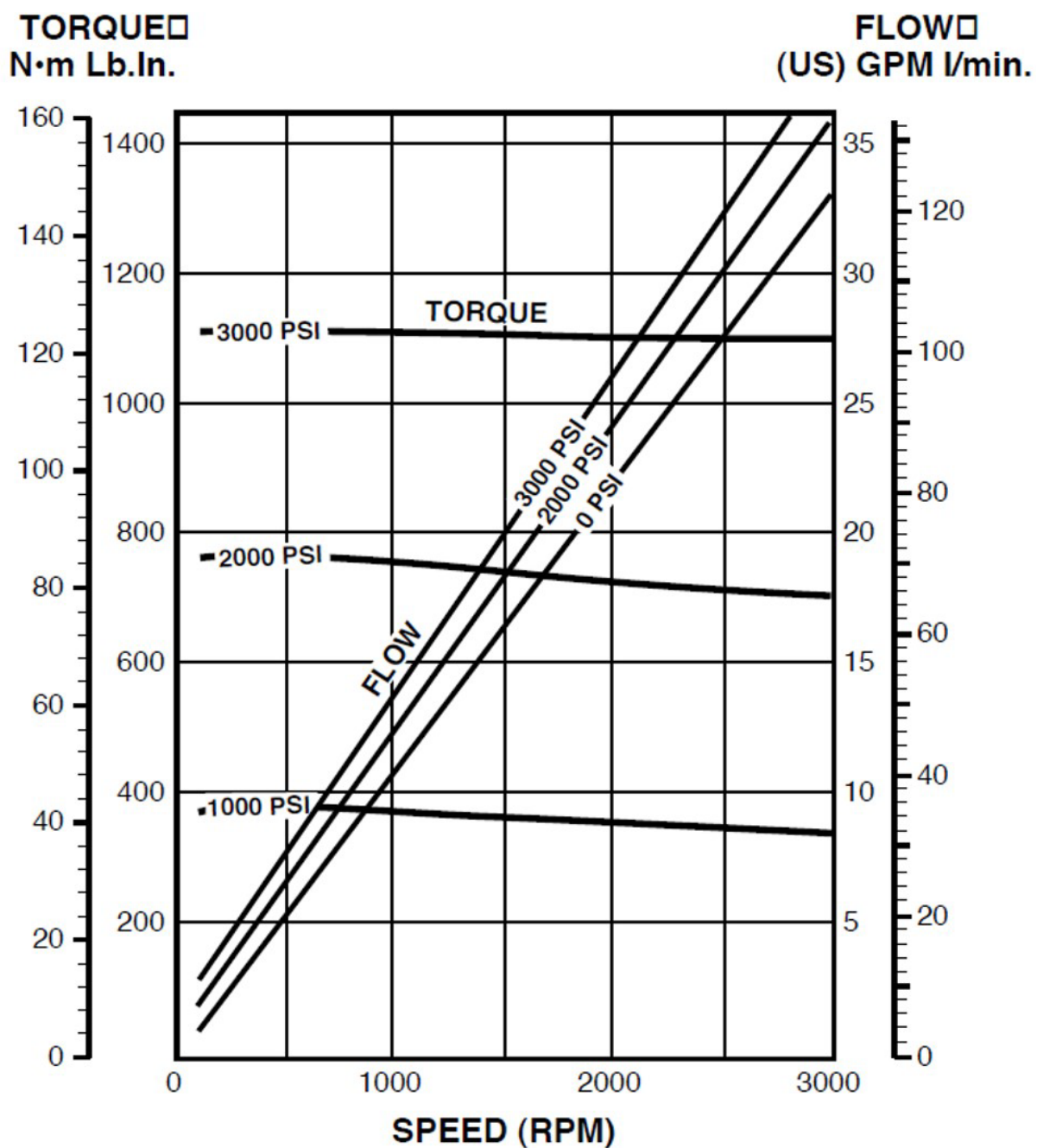


DRAIN PORT



Drain Port Will Be:

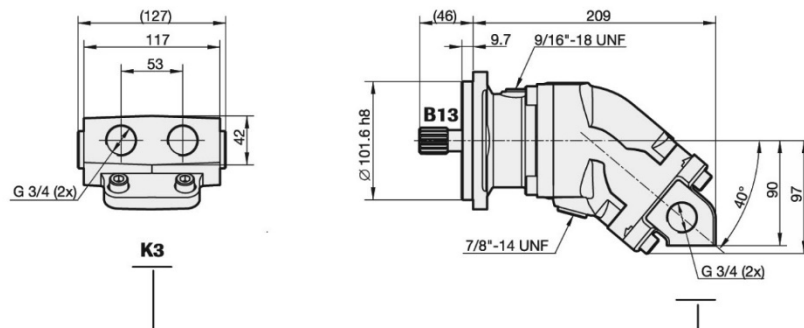
1. No. 6-SAE for the SAE ported motors.



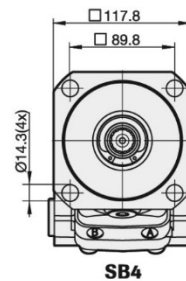
5.1.2. SCM 034 Motor

Mounting Data

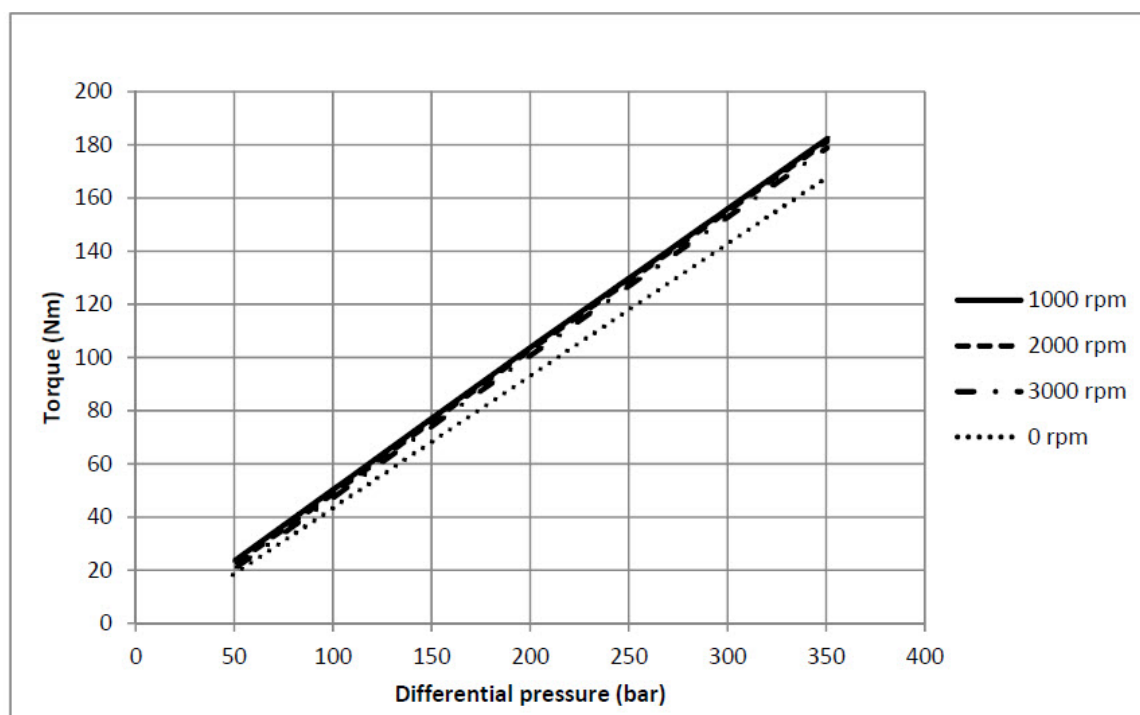
DIMENSIONS



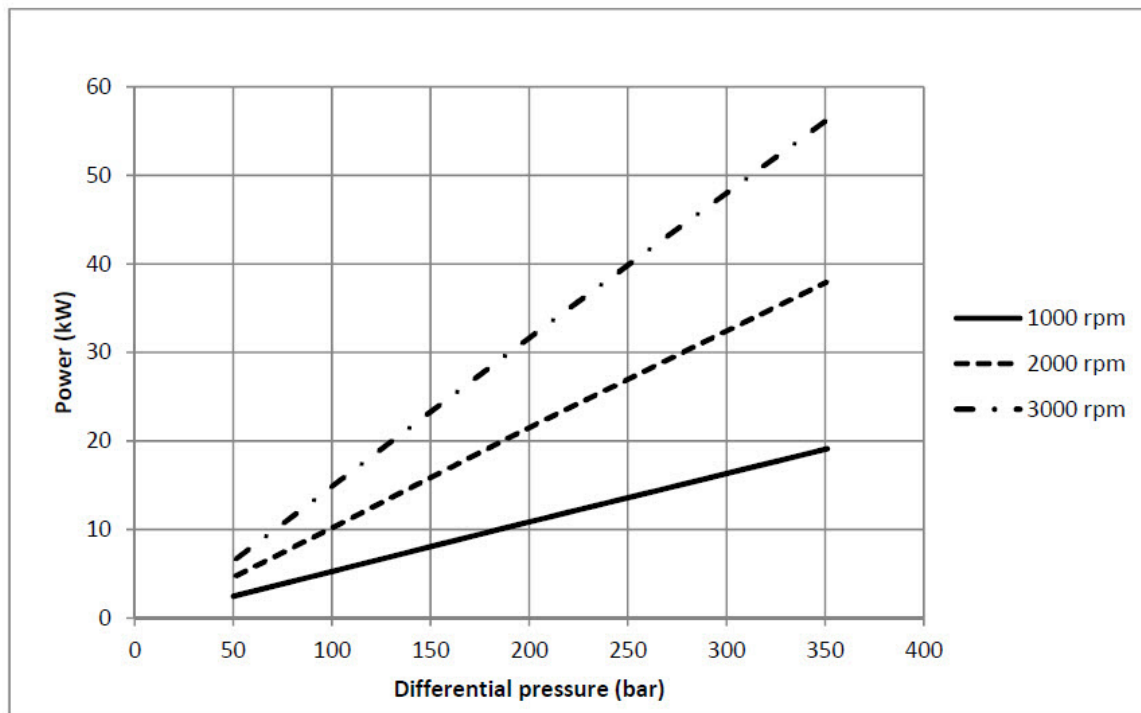
FLANGE OPTION



SCM 034 Torque

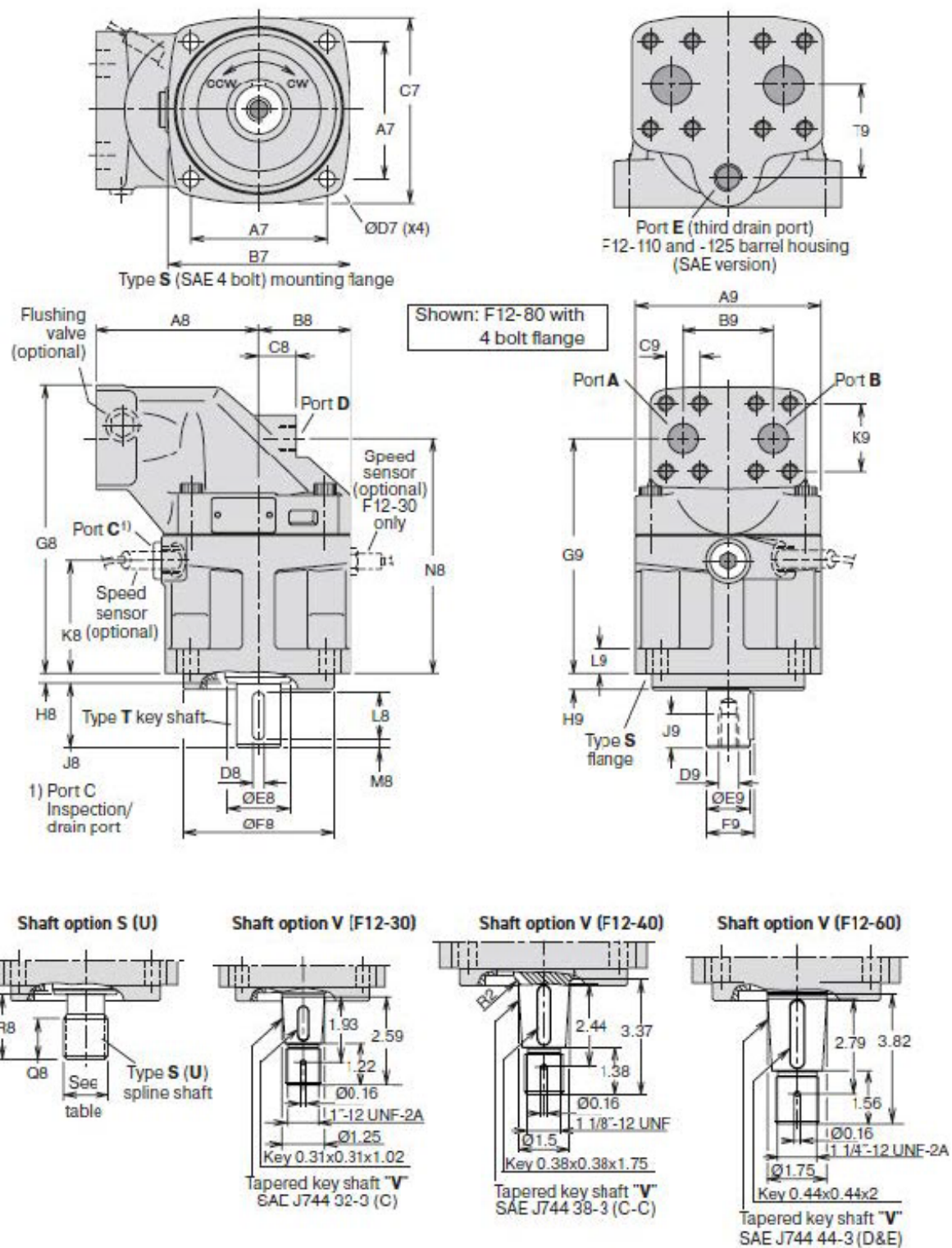


SCM 034 Power



5.1.3. Bent Axis Piston Pump

Mounting Data



Frame size F12	-030	-040	-060	-080	-090	-110	-125	-152	-162	-182	-250
Displacement [cm ³ /rev]	30.0	40.0	59.8	80.4	93.0	110.1	125.0	149.8	163.1	179.8	242
[cu in/rev]	1.83	2.44	3.65	4.91	5.68	6.72	7.63	9.14	9.95	10.97	14.8
Operating pressure ³⁾											
max intermittent ¹⁾ [bar]	500	500	500	500	420	480	480	480	480	480	420
[psi]	7252	7252	7252	7252	7252	6092	6962	6962	6962	6962	6962
max continuous [bar]	450	450	450	450	350	420	420	420	420	420	350
[psi]	6527	6527	6527	6527	5076	6092	6092	6092	6092	6092	5076
Motor operating speed ³⁾ [rpm]											
max intermittent ¹⁾	8600	6900	6400	5500	5100	4800	4600	4000	4000	4000	3000
max continuous	7300	6300	5800	5100	4600	4400	4200	3700	3700	3700	2700
min continuous	50	50	50	50	50	50	50	50	50	50	50
Max pump selfpriming speed ²⁾											
L or R function; max [rpm]	3100	2800	2400	2200	2200	2000	2000	1700	1600	1500	1500
Motor input flow											
max intermittent ¹⁾ [l/min]	258	276	383	440	474	528	575	608	648	728	726
[gpm]	68.2	72.9	101.2	116.2	125.2	139.5	151.9	160.6	171.2	192.3	191.8
max continuous [l/min]	219	252	347	408	428	484	525	547	583	655	653
[gpm]	57.9	66.6	91.7	107.8	113.1	127.9	138.7	144.5	154.0	173.0	172.5
Drain temperature ³⁾ , max [°C]	115	115	115	115	115	115	115	115	115	115	115
min [°C]	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40
Theoretical torque at 100 bar [Nm]	47.6	63.5	94.9	127.6	147.6	174.8	198.4	241	257	289	384.1
[lbf ft]	35.1	46.9	70.0	94.2	108.9	129.0	146.4	177.8	189.6	213.2	283.5
Mass moment of inertia											
(x10 ⁻³) [kg m ²]	1.7	2.9	5	8.4	8.4	11.2	11.2	21	21	21	46
(x10 ⁻²) [lbf ft ²]	4.03	6.88	11.86	19.93	19.93	26.58	26.58	79.83	79.83	79.83	109.16
Weight [kg]	11.5	15.7	18.6	25.7	25.7	33	33	40	40	40	77
[lb]	25.3	34.6	41	56.7	56.7	72.6	72.6	88	88	88	170

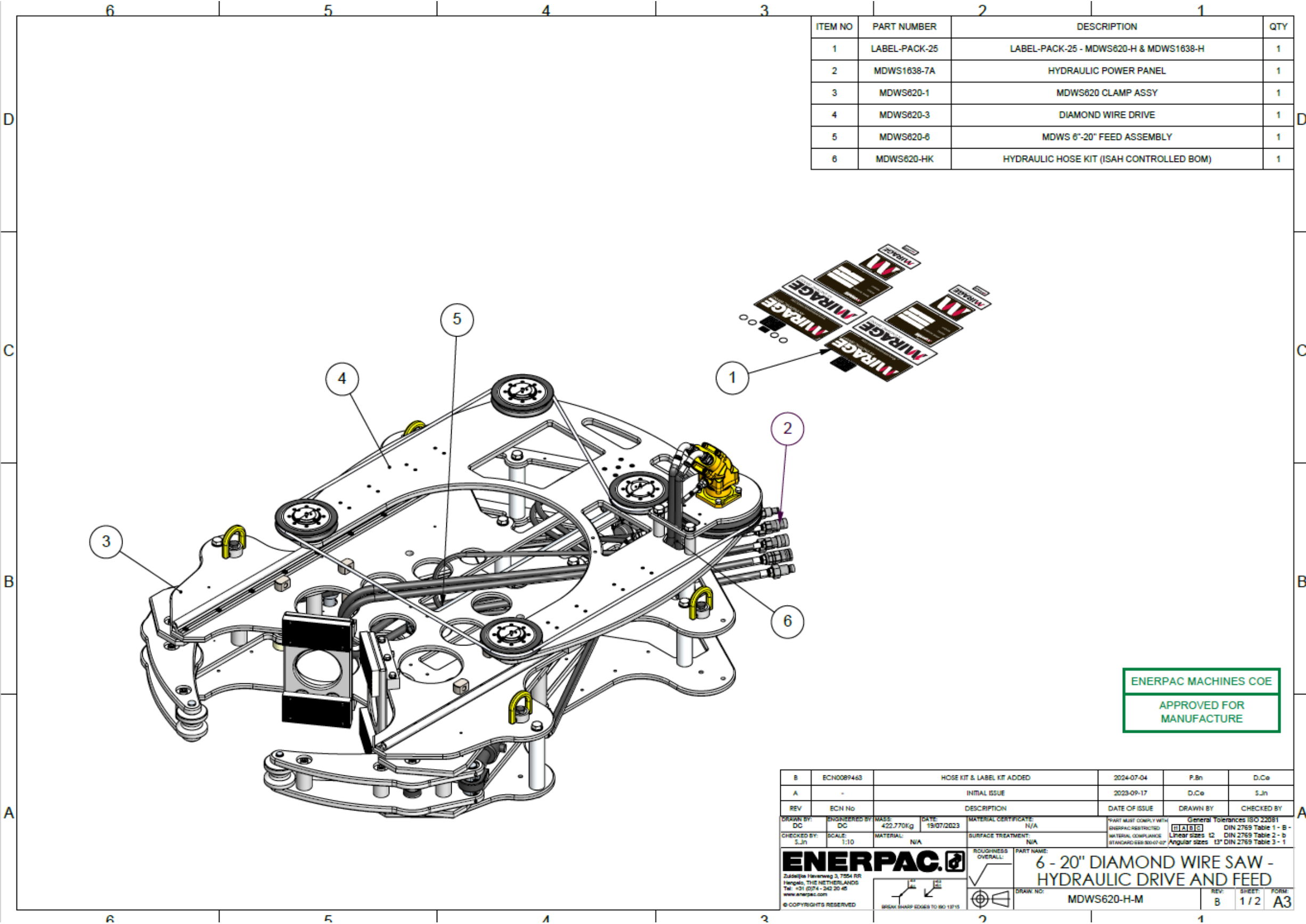
1) Intermittent: max 6 seconds in any one minute.

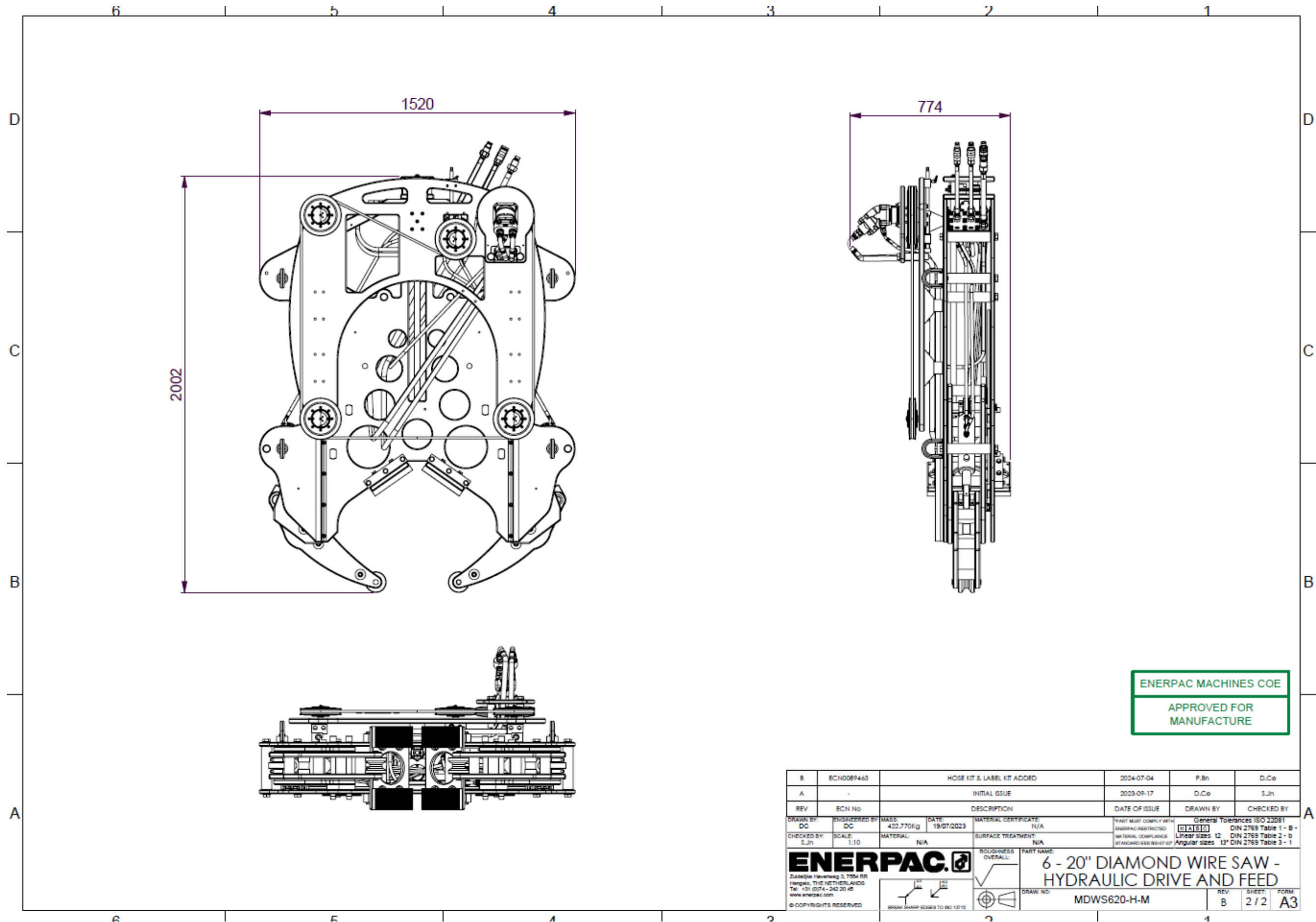
2) Selfpriming speed valid at sea level. Find more info on page 58 *

3) See also installation information. Page 85 – 87 *

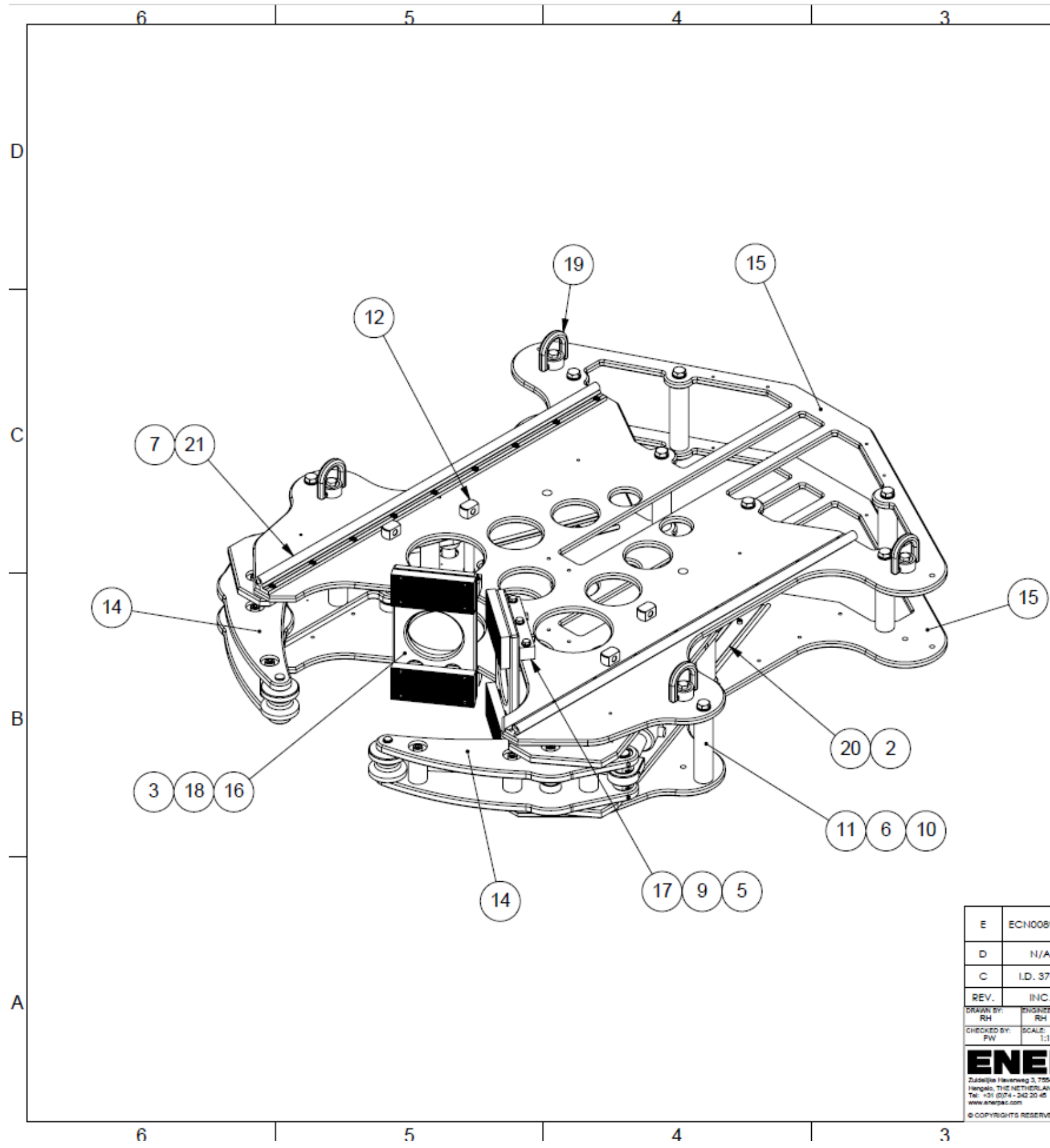
*See Parker manual MSG30-8249-US.

5.2.General Assembly Drawings





B	ECN0089463	HOSE KIT & LABEL KIT ADDED	2024-07-04	P.Bn	D.Ce
A	-	INITIAL ISSUE	2023-09-17	D.Ce	S.Jn
REV	ECN No	DESCRIPTION	DATE OF ISSUE	DRAWN BY	CHECKED BY
DRAWN BY: DC	ENGINEERED BY: DC	MASS: 422.770kg	DATE: 19/07/2023	MATERIAL CERTIFICATE: N/A	General Tolerances ISO 22081
CHECKED BY: S.Jn	SCALE: 1:10	MATERIAL: N/A	SURFACE TREATMENT: N/A	ROUGHNESS OVERALL:	Linear sizes 12 DIN 2769 Table 1 - B - Angular sizes 13 DIN 2769 Table 3 - 1
ENERPAC			PART NAME: 6 - 20" DIAMOND WIRE SAW - HYDRAULIC DRIVE AND FEED		
Zuidelijke Havenweg 3, 7594 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com			DRAW NO: MDWS620-H-M		
© COPYRIGHTS RESERVED			REV: B SHEET: 2 / 2 FORM: A3		

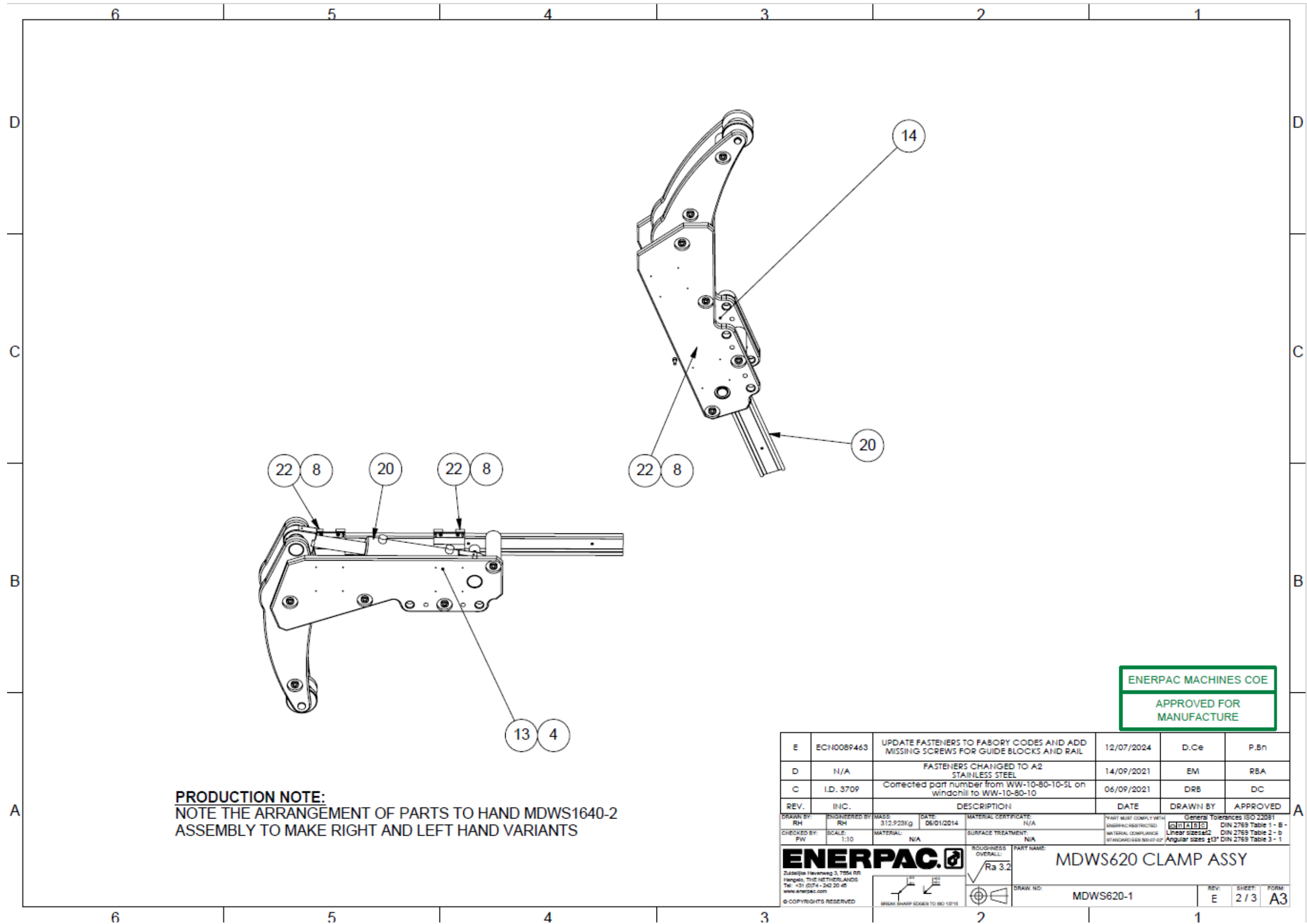


2		1	
ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	B51970.050.001	SPRING COILER PIN, DIN #11024 STAINLESS STEEL A2	4
2	B53570.080.020	M8X20 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
3	B53570.120.035	M12X35 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	16
4	B53570.160.030	M16X30 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	4
5	B55000.120.040	M12X60 A4-70 HEX HEAD BOLT ISO 4014 (SS)	20
6	B55000.200.050	M20X50 A4-70 HEX HEAD BOLT ISO 4014 (SS)	16
7	B55030.100.025	M10X25 A4SS BUTTON HEAD CAP SCREW COARSE ISO 7380-1 (SS)	18
8	B55040.040.030	M4X30 A4SS SOCKET LOW HEAD CAP SCREW COARSE ISO 4762 (SS)	16
9	B55420.120.001	M12 A4 140HV PLAIN WASHER DIN 125-1A (SS)	20
10	B55420.200.001	M20 A4 140HV PLAIN WASHER DIN 125-1A (SS)	16
11	MDWS1638-1-004	CLAMP SUPPORT	8
12	MDWS1638-1-005	CLAMP ASSEMBLY LOCATING PIN	4
13	MDWS1638-1-006	CLAMP ARM SUPPORT BLOCK	2
14	MDWS1638-2	CLAMP ARM ASSEMBLY	2
15	MDWS620-1-001	MAIN MACHINE PLATE	2
16	MDWS620-1-002	FIXED CLAMP BACKPLATE	2
17	MDWS620-1-003	FIXED FOOT MOUNT	4
18	CB3665	JAW PLATE	4
19	RLP-M16-10	ROTATING LIFTING POINT M16	8
20	WS-10-80-SL-1000	DRYLIN LINEAR GUIDE SYSTEM	2
21	WS-25-1250-RAIL	DRYLIN WS-25 SINGLE RAIL 1250mm LG (STD BOLT PATTERN)	2
22	WW-10-80-10	DRYLIN W GUIDE BLOCK	4

ENERPAC MACHINES COE

APPROVED FOR
MANUFACTURE

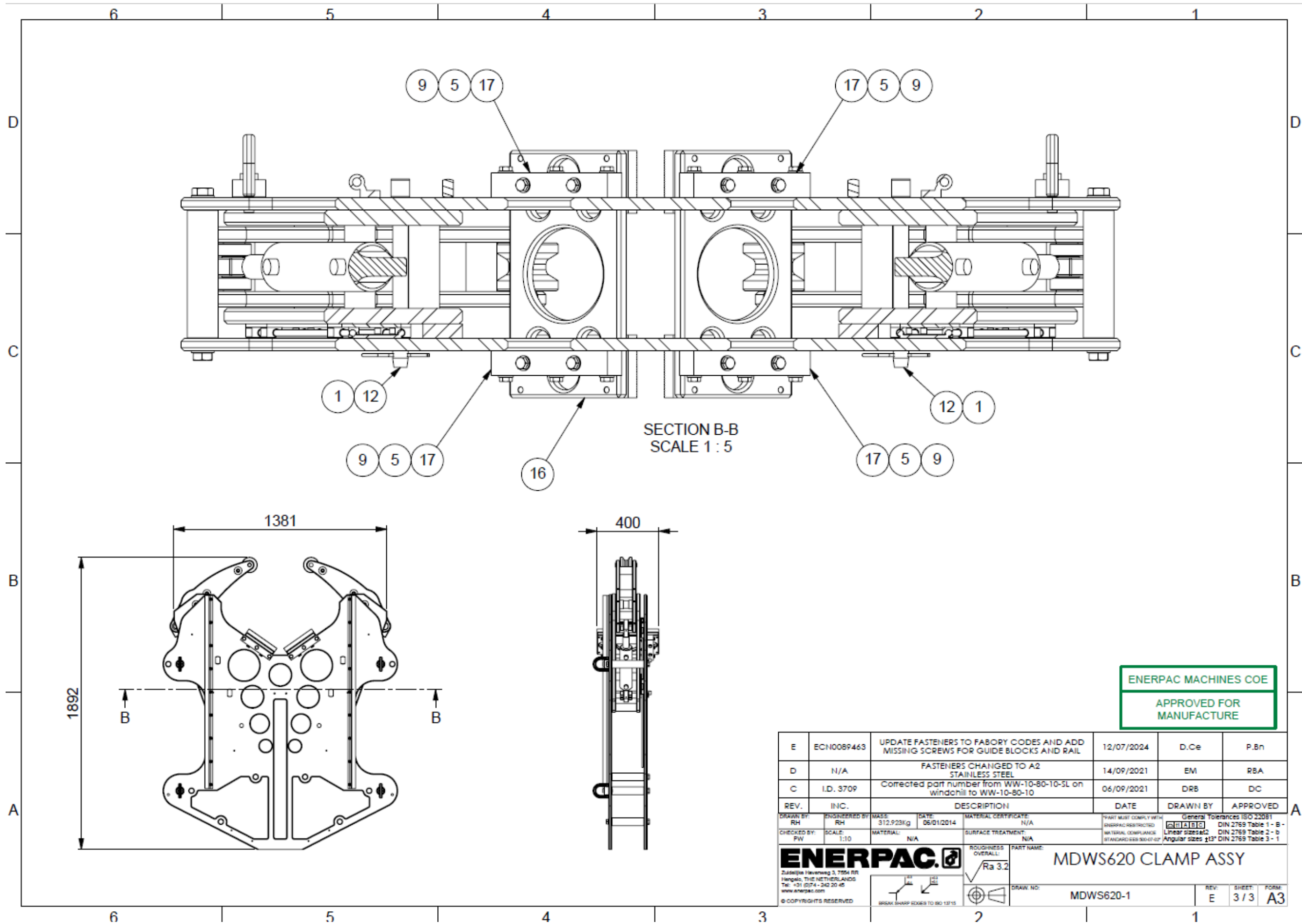
E	ECN0089463	UPDATE FASTENERS TO FABORY CODES AND ADD MISSING SCREWS FOR GUIDE BLOCKS AND RAIL	12/07/2024	D.Ce	P.Bn
D	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	14/09/2021	EM	RBA
C	I.D. 3709	Corrected part number from WW-10-80-10-SL on windchill to WW-10-80-10	06/09/2021	DRB	DC
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED
DRAWN BY:	ENG'NED BY:	MASS:	DATE:	MATERIAL CERTIFICATE:	PART MUST COMPLY WITH:
RH	RH	312.923Kg	05/01/2014	N/A	General Tolerances ISO 22061
CHECKED BY:	SCALE:	MATERIAL:	SURFACE TREATMENT:	WATERMARK COMPLIANCE:	ENERPAC RESTRICTED
PW	1:10	N/A	N/A	N/A	Linear sizes > 160mm
ENERPAC		ROUGHNESS OVERALL:	PART NAME:	MDWS620 CLAMP ASSY	
Zuidelijke Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com		✓ Ra 3.2	DRAW NO:	MDWS620-1	
© COPYRIGHTS RESERVED		BREAK SHARP EDGES TO R60-13115	REV:	SHEET:	FORM:
			E	1 / 3	A3



PRODUCTION NOTE:
NOTE THE ARRANGEMENT OF PARTS TO HAND MDWS1640-2
ASSEMBLY TO MAKE RIGHT AND LEFT HAND VARIANTS

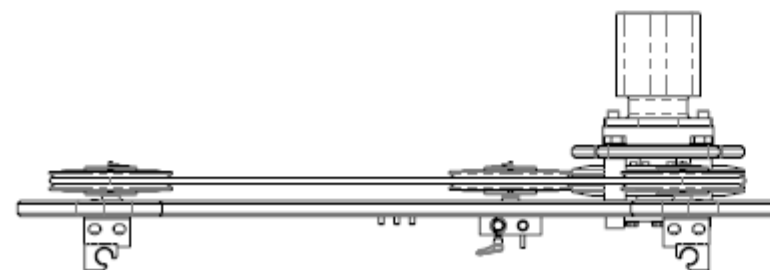
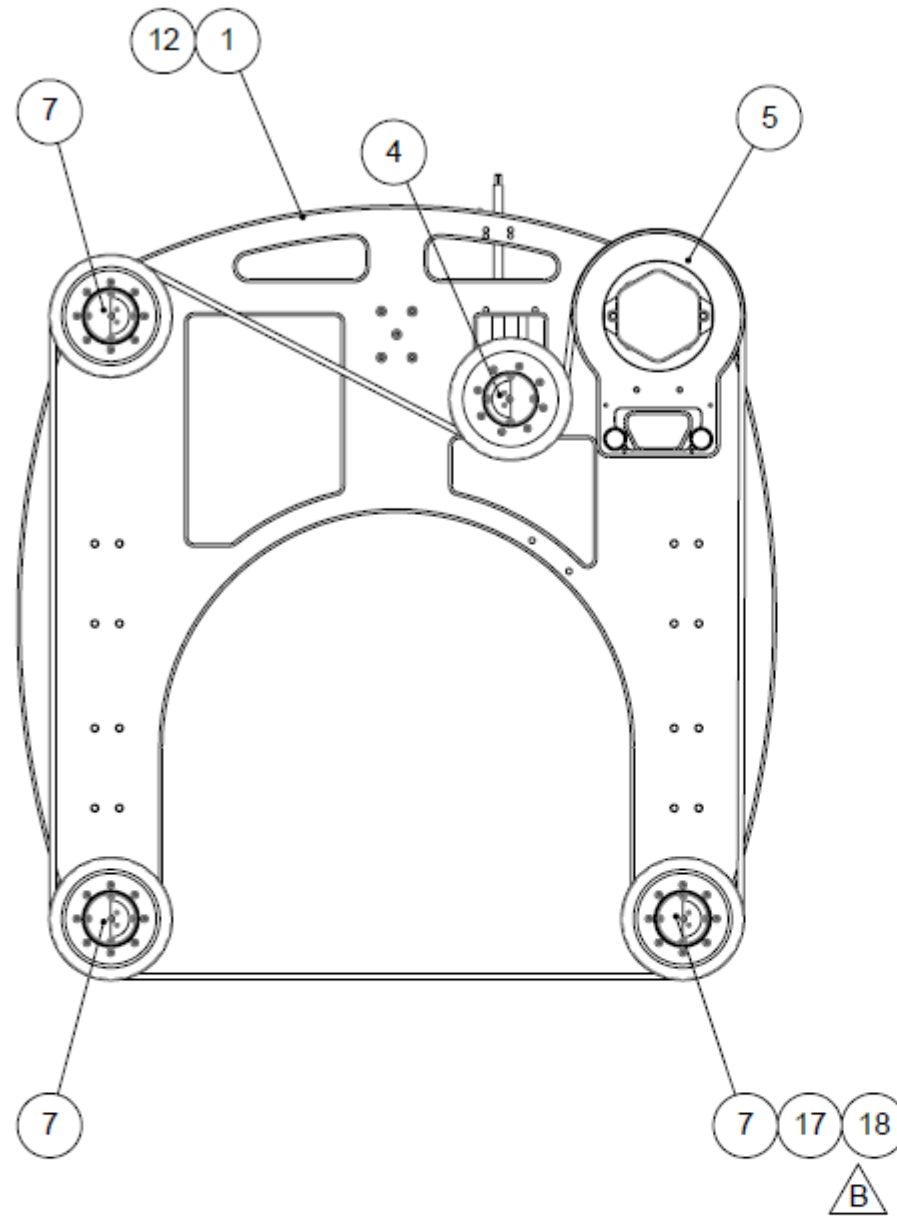
ENERPAC MACHINES COE
APPROVED FOR
MANUFACTURE

E	ECN0089463	UPDATE FASTENERS TO FABORY CODES AND ADD MISSING SCREWS FOR GUIDE BLOCKS AND RAIL	12/07/2024	D.Ce	P.Bn
D	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	14/09/2021	EM	RBA
C	I.D. 3709	Corrected part number from WW-10-80-10-SL on Windchill to WW-10-80-10	06/09/2021	DRB	DC
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED
DRAWN BY: RH	ENGINEERED BY: RH	MASS: 312.923Kg	DATE: 06/01/2014	MATERIAL CERTIFICATE: N/A	PART MUST COMPLY WITH: General Tolerances (ISO 22081)
CHECKED BY: PW	SCALE: 1:10	MATERIAL: N/A	SURFACE TREATMENT: N/A	NATURAL COMPLIANCE STANDARD: 688.980.07.02	General Tolerances (ISO 22081) DIN 2769 Table 1 - B - Linear sizes < 40 Angular sizes < 13° DIN 2769 Table 3 - 1
ENERPAC 		ROUGHNESS OVERALL: Ra 3.2	PART NAME: MDWS620 CLAMP ASSY		
Zuidse Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74-242 20 45 www.enerpac.com		© COPYRIGHTS RESERVED	DRAW NO: MDWS620-1	REV: E	SHEET: 2 / 3



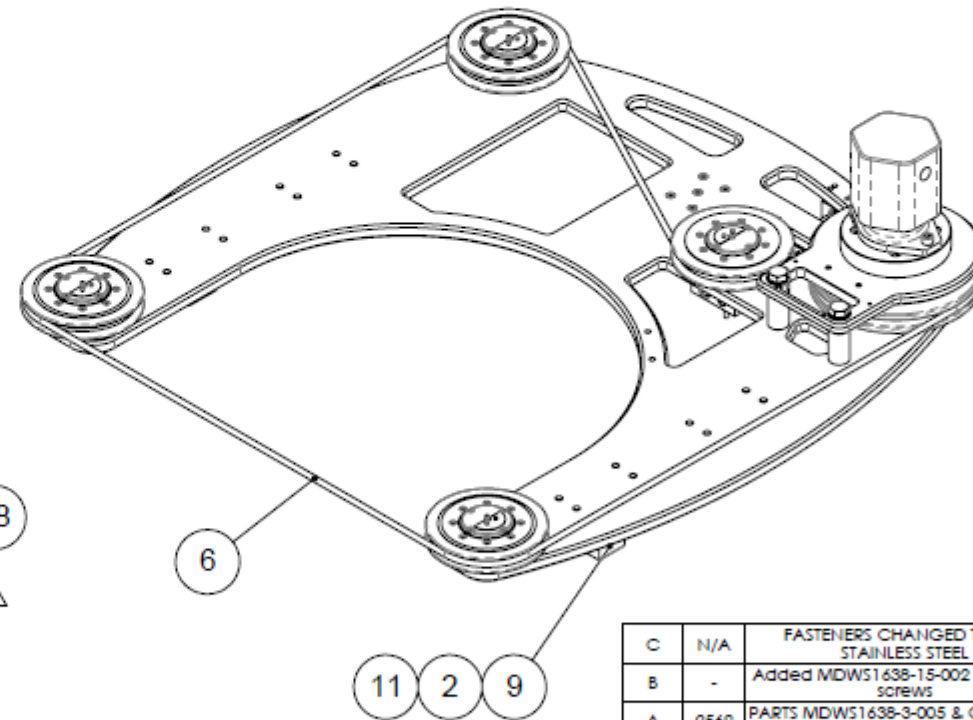
Printed on 14/09/2021

DO NOT SCALE

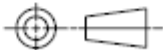


IF IN DOUBT ASK

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MDWS620-3-001	MAIN DRIVE PLATE	1
2	MDWS1638-3-002	MOUNTING BLOCK	4
3	MDWS1638-3-005	DRIVE MOTOR BEARING PLUG	1
4	MDWS1638-4	MDWS TENSIONING UNIT 5" STROKE	1
5	MDWS1638-5	MDWS WIRE DRIVE ASSY	1
6	MDWS620-3-003	DWM-S ELECTROPLATED WIRE	1
7	MDWS1638-15	IDLER PULLEY	3
8	WJ200UM-01-25-LL	DRYLIN W CARRIAGE FLOATING	2
9	WJ200UM-01-25	DRYLIN W CARRIAGE FIXED	2
10	OR4505000	O-RING	1
11	M12X1.75X40SHCSA2SS	M12X40 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	19
12	M8X1.25X30SHCSA2SS	M8X30 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	5
13	M20X2.5X40SHCSA2SS	M20X40 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
14	M8X1.25X50BHCSA2SS	M8X50 A2SS BUTTON HEAD CAP SCREW COARSE ISO 7380 (SS)	8
15	M10-WASHER-SS	M10 FLAT WASHER FORM A BS 4320 (SS)	4
16	M10X1.5X35HSSA2SS	M10X35 A2SS HEX HEAD SCREW COARSE ISO 4014 (SS)	4
17	MDWS1638-15-002	Traffolyte label	3
18	M3X0.5X6SHCSA2SS	M3X6 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6



REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED
C	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	14/09/2021	EM	RBA
B	-	Added MDWS1638-15-002 and M3x5 screws	17-Oct-17	DRB	AMC
A	2569	PARTS MDWS1638-3-005 & OR4505000 ADDED	24/11/2014	SR	BC

		THIRD ANGLE PROJECTION		 MIRAGE PORTABLE PERFORMANCE	
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WEIGHT		95.265kg		10 ENTERPRISE WAY, JUBILEE PARKWAY, STORES ROAD, DERBY DE21 4BB TEL (01332) 291787 FAX (01332) 370356 E MAIL info@mirage-machines.co.uk	
DRAWN BY		RH			
CHECKED BY		PW			
APPROVED BY		---			
TITLE		DIAMOND WIRE DRIVE		DWG No	
				MDWS620-3	
SCALE: 1:1				SHEET 1 OF 2	
				A3	

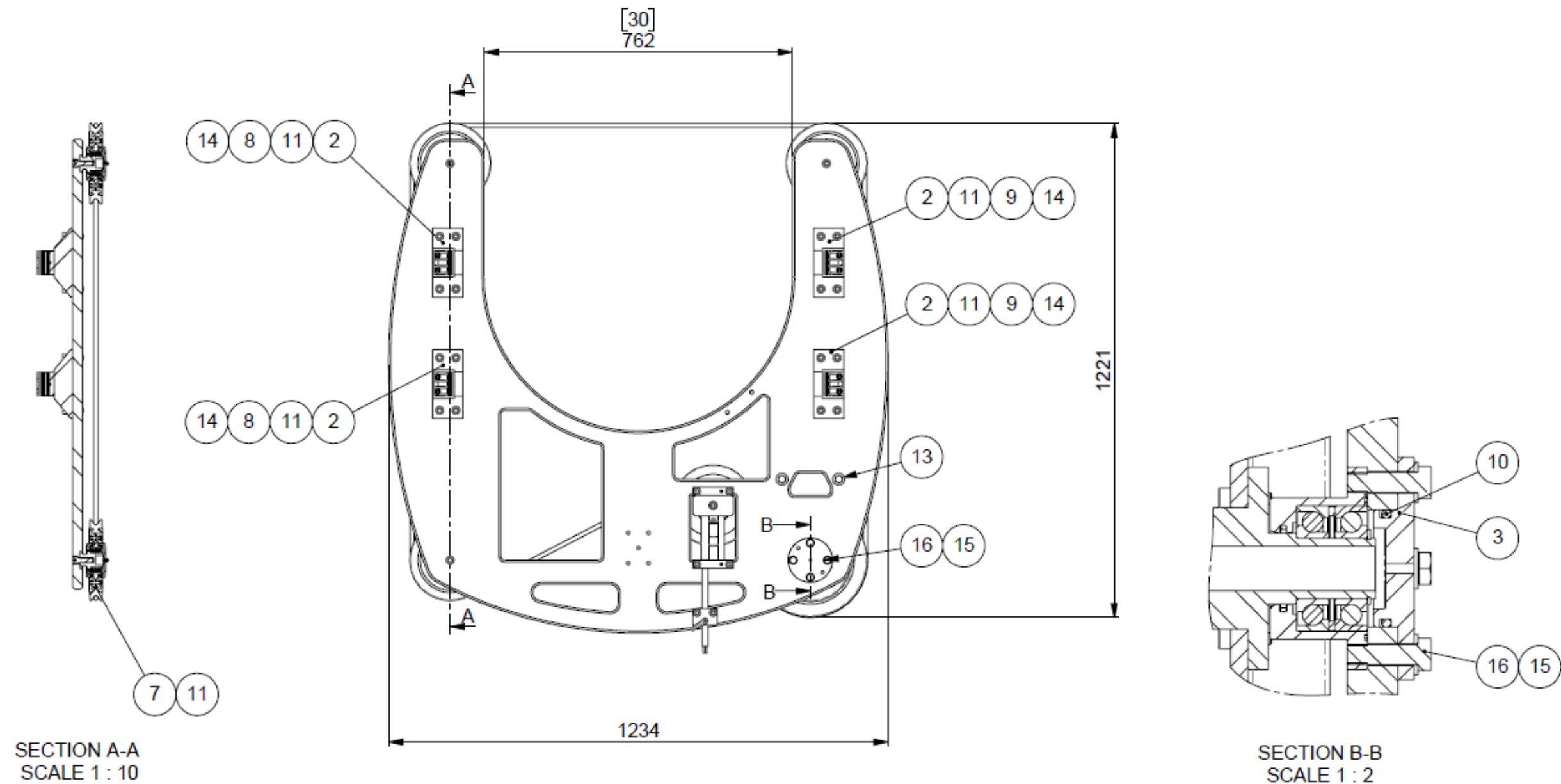
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MANUFACTURE

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Printed on 14/08/2021

DO NOT SCALE

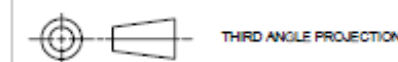
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SECTION A-A
SCALE 1 : 10

SECTION B-B
SCALE 1 : 2

C	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	14/09/2021	EM	RBA
B	-	Added MDWS1638-15-002 and M3x5 screws	17-Oct-17	DRB	AMC
A	2569	PARTS MDWS1638-3-005 & OR4505000 ADDED.	24/11/2014	SR	BC
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED



THIRD ANGLE PROJECTION

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WEIGHT 95.265kg
DRAWN BY RH 02/01/2014
CHECKED BY PW 04/01/2014
APPROVED BY --
TITLE

DIAMOND WIRE DRIVE
SCALE: 1:1

MIRAGE
PORTABLE PERFORMANCE

10 ENTERPRISE WAY, JUBILEE PARKWAY,
STORES ROAD, DERBY DE21 4BB
TEL (01332) 291767 FAX (01332) 370356
E MAIL info@mirage-machines.co.uk

DWG No MDWS620-3
SHEET 2 OF 2

A3

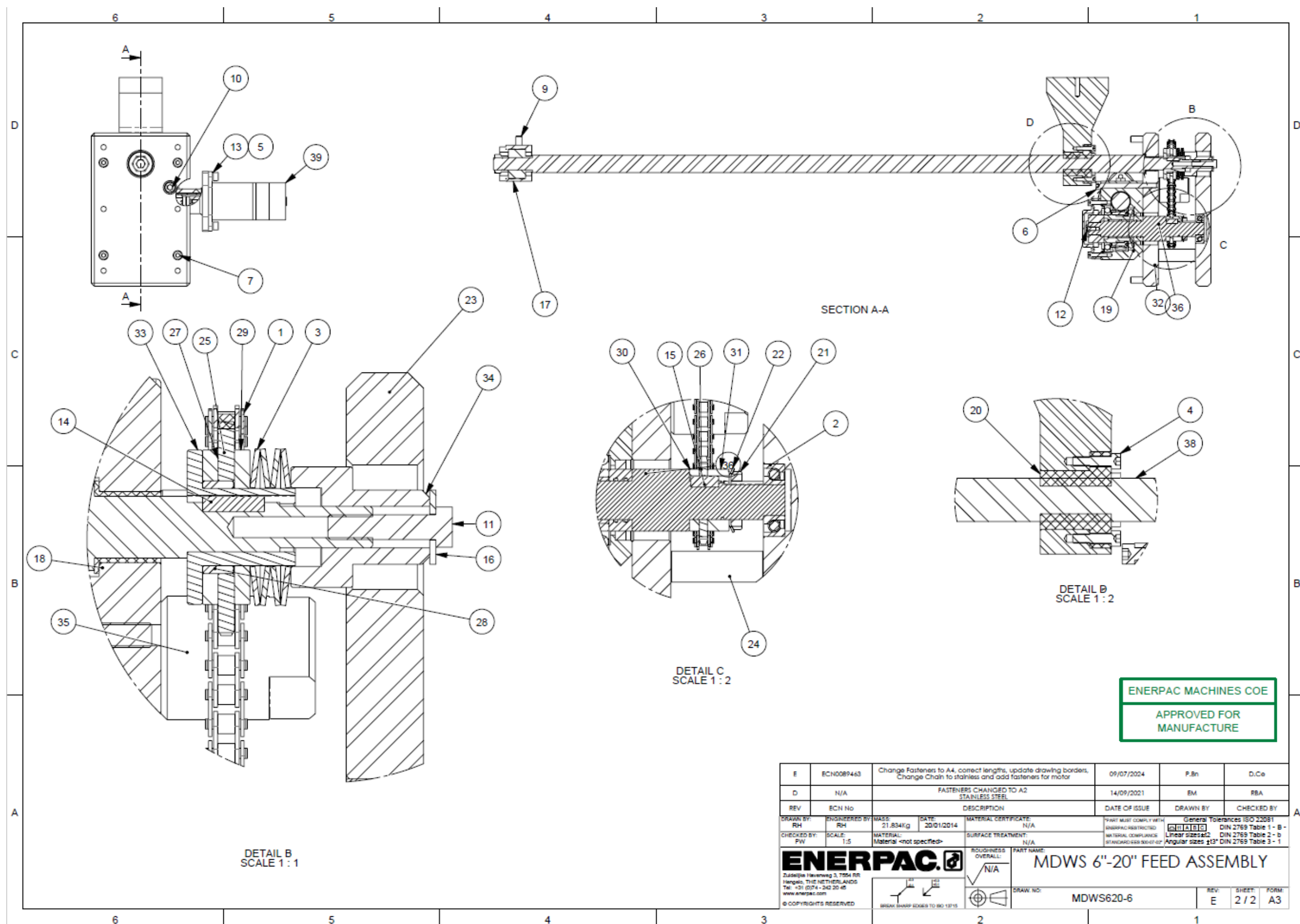
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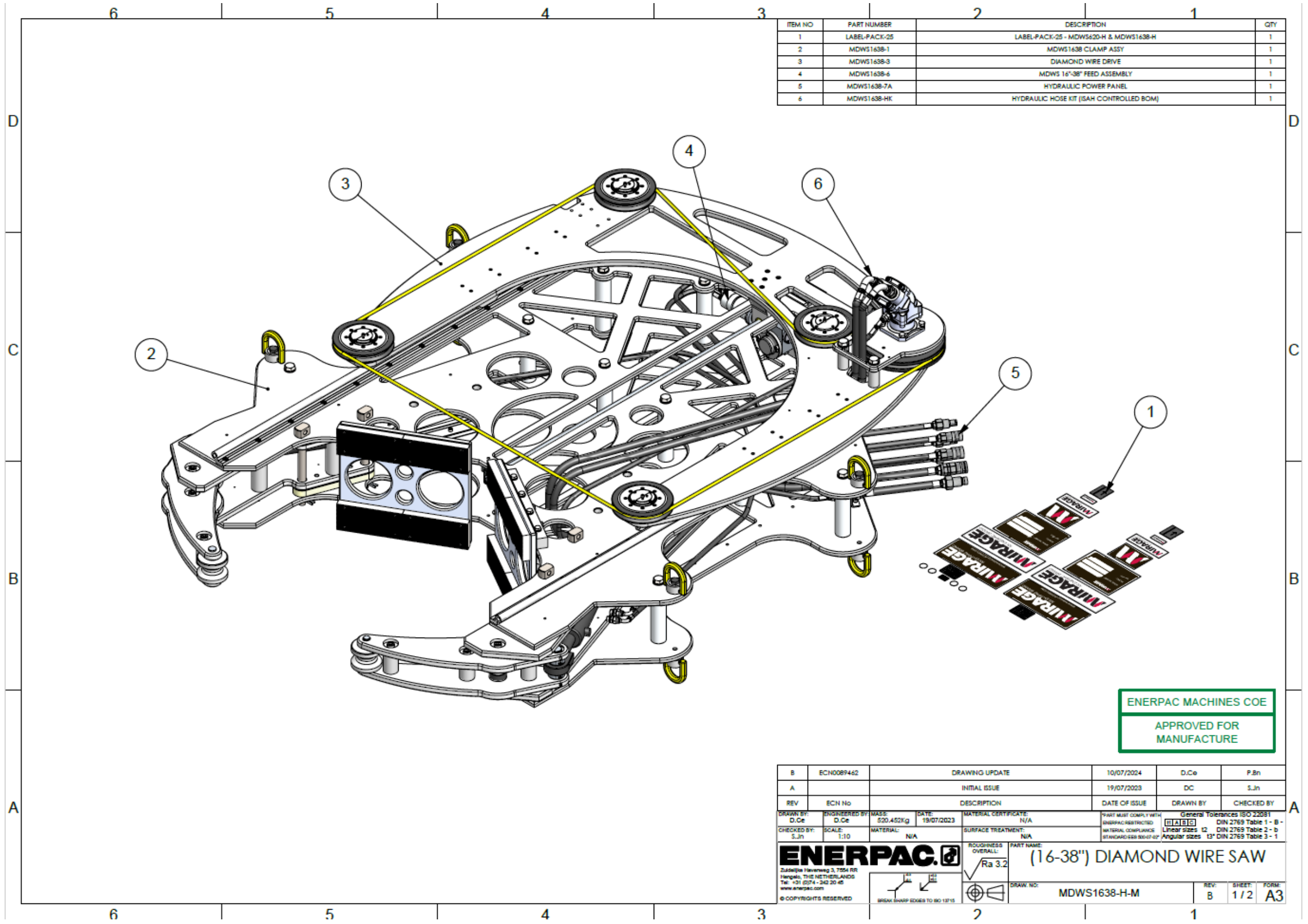
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6		5	4	3	2	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY			
1	06B1SS	SIMPLEX ROLLER CHAIN 42 LINKS (SS)	1			
2	7204B	SINGLE ROW ANGULAR CONTACT BEARING	1			
3	B51448.520.015	50X25.4X1.5MM A2 DISC SPRING DIN 2093-A (SS)	4			
4	B53570.080.025	M6X25 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6			
5	B53570.080.016	M8X16 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2			
6	B53570.080.090	M8X90 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1			
7	B53570.080.100	M8X100 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6			
8	B53570.100.035	M10X35 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	4			
9	B53570.100.040	M10X40 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2			
10	B53570.100.080	M10X80 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1			
11	B55000.080.035	M8X35 A4-70 HEX HEAD BOLT ISO 4014 (SS)	1			
12	B55080.080.016	M6X16 A4 SOCKET HEAD CSK SCREW COARSE ISO 10842 (SS)	1			
13	B55450.080.001	M8 A4 SPRING WASHER DIN 127 B (SS)	2			
14	B55510.055.020	PARALLEL KEY DIN 6885 A STAINLESS STEEL A5 5X5X20XMM	1			
15	B55510.087.018	PARALLEL KEY DIN 6885 A STAINLESS STEEL A5 8X7X18XMM	1			
16	B55530.080.001	M8 A4 140HV FLAT WASHER 3XD, DIN 9021 (SS)	1			
17	EK20	FIXED SUPPORT UNIT - MATERIAL & GRADE C7N	1			
18	H370FM-2023-21	IGUS IGLIDUR FLANGED BEARING (OD=23 ID=20 L=21.5MM)	1			
19	HYM0200-6	30:1 SUBSEA REDUCTION GEARBOX	1			
20	JFRM-3846TR28X5	IGLIDUR J LEAD NUT RH	1			
21	KM5	LOCK NUT	1			
22	MB5-OU	LOCKING WASHER	1			
23	MDWS1638-6-002	FEED GEARBOX SUPPORT PLATE	1			
24	MDWS1638-6-005	FEED PLATE SPACER	4			
25	MDWS1638-6-008	22T LEADSCREW DRIVER	1			
26	MDWS1638-6-009	17T MOTOR SPROCKET	1			
27	MDWS1638-6-010	PRESSURE PAD TYPE 1	1			
28	MDWS1638-6-011	SPROCKET MOUNTING BUSH	1			
29	MDWS1638-6-012	PRESSURE PAD TYPE 2	1			
30	MDWS1638-6-013	DRIVE GEAR SPACER 1	1			
31	MDWS1638-6-014	DRIVE GEAR SPACER 2	1			
32	MDWS1638-6-017	FEED GEARBOX MOUNT PLATE	1			
33	MDWS1638-6-019	CLUTCH MECH MOUNT	1			
34	MDWS1638-6-020	RETAINING WASHER	1			
35	MDWS1638-6-021	FEED CHAIN TENSIONER	1			
36	MDWS1638-6-022	FEED DRIVE OUTPUT SHAFT	1			
37	MDWS620-6-003	BALLNUT CARRIER	1			
38	MDWS620-6-004	MDWS620 LEADSCREW	1			
39	MDWS620-6-005	MDWS FEED MOTOR W. FLANGE	1			

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E	ECN0089463	Change Fasteners to A4, correct lengths, update drawing borders, Change Chain to stainless and add fasteners for motor	09/07/2024	P.Bn	D.Ce
D	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	14/09/2021	EM	RBA
REV	ECN No	DESCRIPTION	DATE OF ISSUE	DRAWN BY	CHECKED BY
DRAWN BY:	RH	ENGINEERED BY: RH	MASS: 21.834Kg	DATE: 20/01/2014	MATERIAL CERTIFICATE: N/A
CHECKED BY:	PW	SCALE: 1:1	MATERIAL: Material <not specified>	SURFACE TREATMENT: N/A	ROUGHNESS OVERALL: N/A
ENERPAC		PART NAME: MDWS 6'-20" FEED ASSEMBLY			
Zuidelijke Havenweg 3, 7554 RR Veenendaal, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com		DRAWN NO: MDWS620-6			
© COPYRIGHTS RESERVED		REV: E			
		SHEET: 1 / 2			
		FORM: A3			



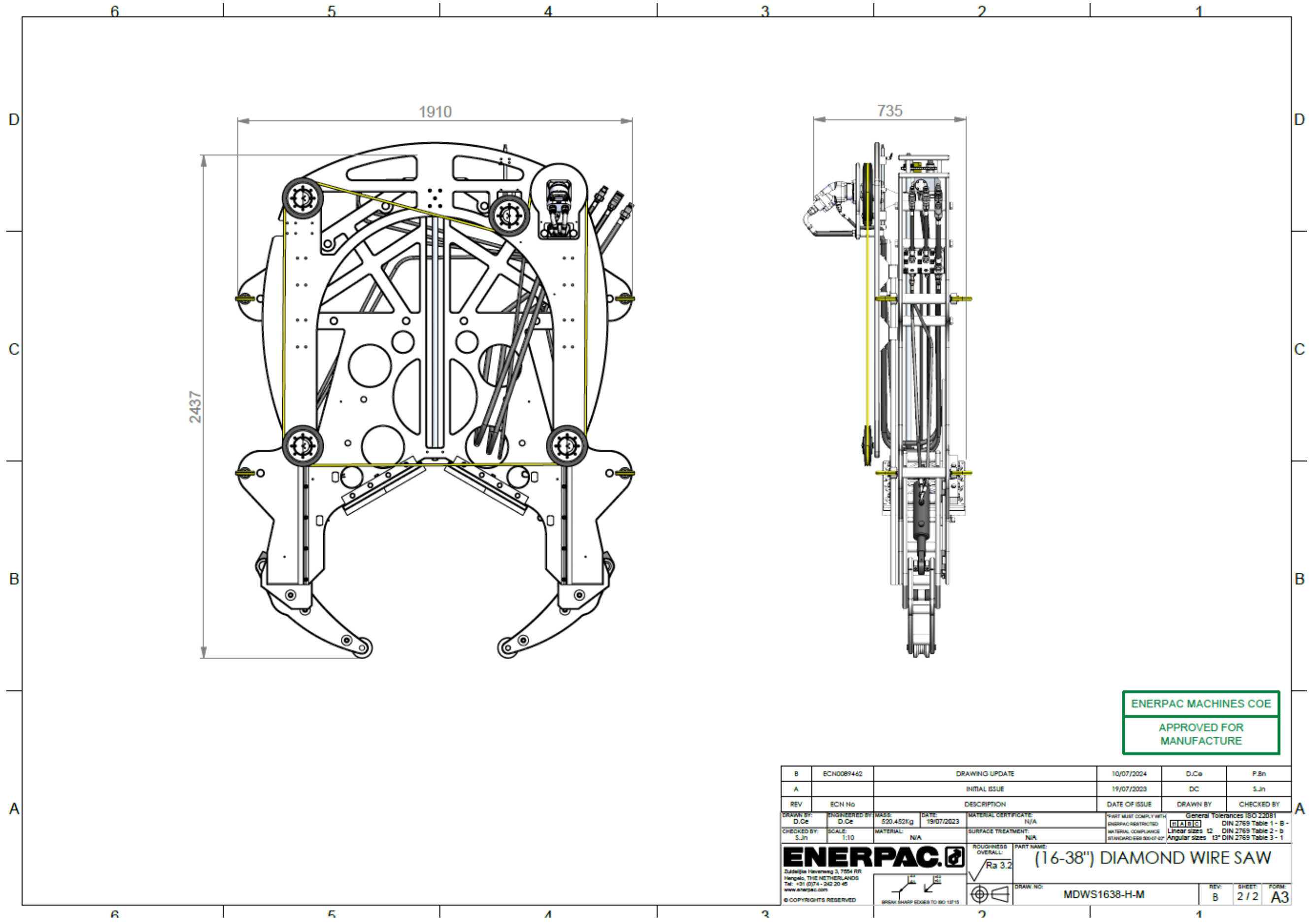


ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	LABEL-PACK-25	LABEL-PACK-25 - MDWS620-H & MDWS1638-H	1
2	MDWS1638-1	MDWS1638 CLAMP ASSY	1
3	MDWS1638-3	DIAMOND WIRE DRIVE	1
4	MDWS1638-6	MDWS 16"-38" FEED ASSEMBLY	1
5	MDWS1638-7A	HYDRAULIC POWER PANEL	1
6	MDWS1638-HK	HYDRAULIC HOSE KIT (ISAH CONTROLLED BOM)	1

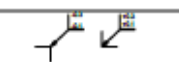
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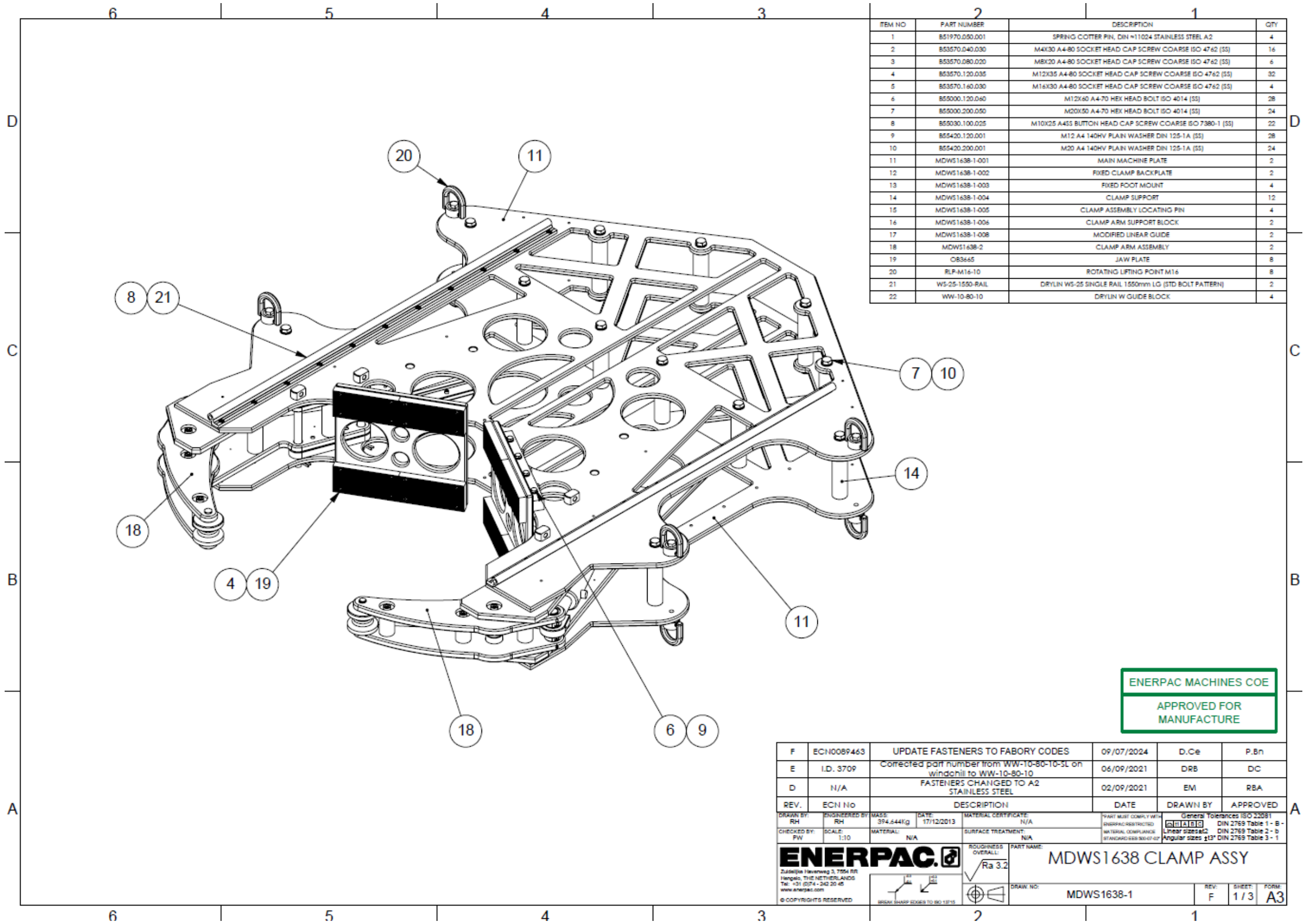
APPROVED FOR
MANUFACTURE

B	ECN0089462	DRAWING UPDATE	10/07/2024	D.Ce	P.Bn
A		INITIAL ISSUE	19/07/2023	DC	S.Jn
REV	ECN No	DESCRIPTION	DATE OF ISSUE	DRAWN BY	CHECKED BY
DRAWN BY: D.Ce	ENGINEERED BY: D.Ce	MASS: 520.452kg	DATE: 19/07/2023	MATERIAL CERTIFICATE: N/A	PART MUST COMPLY WITH ENERPAC RESTRICTED
CHECKED BY: S.Jn	SCALE: 1:10	MATERIAL: N/A	SURFACE TREATMENT: N/A	MATERIAL COMPLIANCE STANDARD ENR 300-07-02	General Tolerances ISO 22081 DIN 2768 Table 1 - B - Linear sizes 12 DIN 2768 Table 2 - b Angular sizes 13° DIN 2768 Table 3 - 1
ENERPAC		ROUGHNESS OVERALL: Ra 3.2		PART NAME: (16-38") DIAMOND WIRE SAW	
Zuidelijke Havenweg 3, 7554 RR Vierpolder, THE NETHERLANDS Tel: +31 (0)74 - 342 20 45 www.enerpac.com		DRAW NO: MDWS1638-H-M		REV: B	SHEET: 1 / 2
© COPYRIGHTS RESERVED		BROKEN SHARP EDGES TO ISO 13715		FORM: A3	



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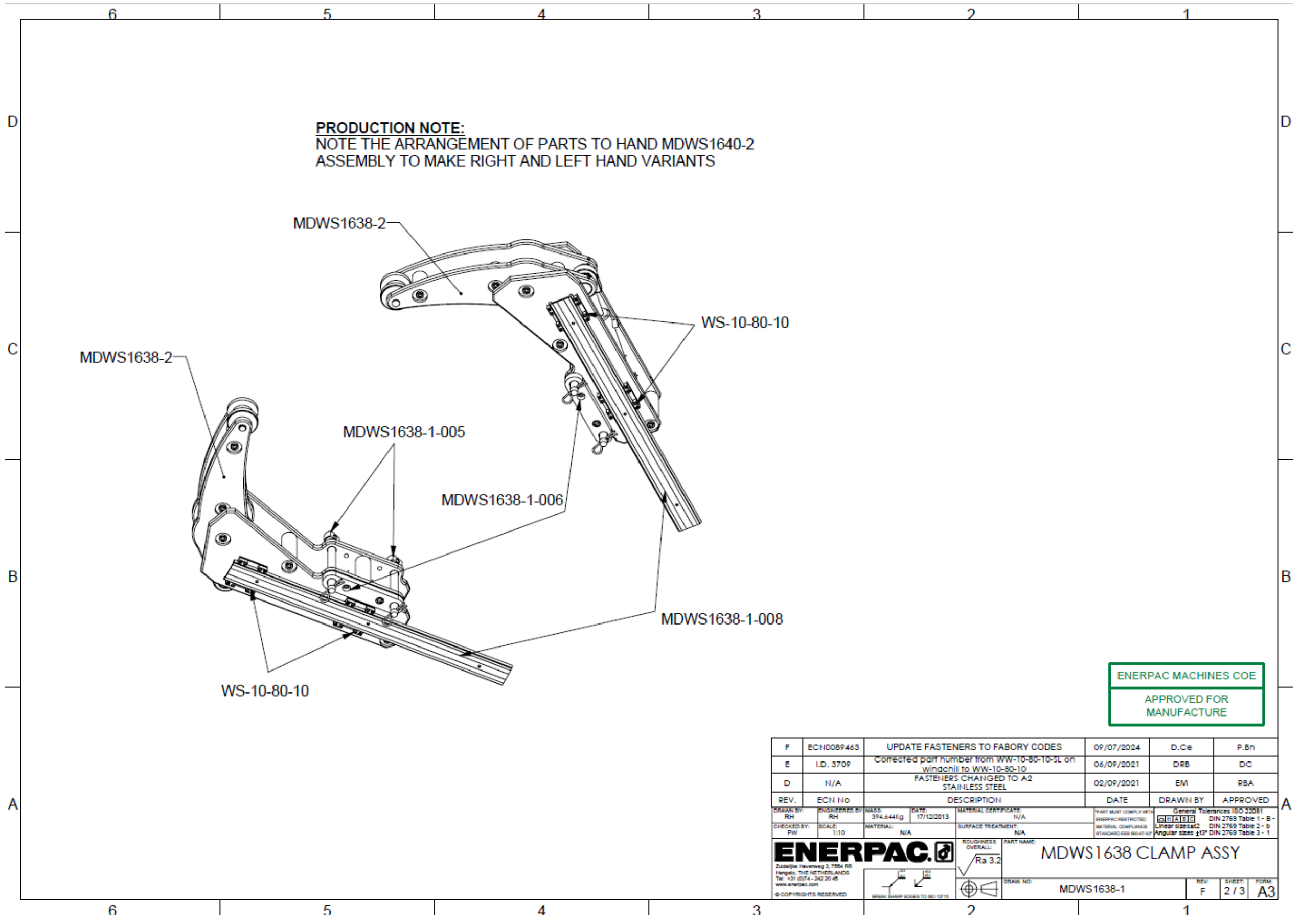
B	ECN0089462		DRAWING UPDATE		10/07/2024	D.Ce	P.Bn			
A			INITIAL ISSUE		19/07/2023	DC	S.Jn			
REV	ECN No		DESCRIPTION		DATE OF ISSUE	DRAWN BY	CHECKED BY			
DRAWN BY: D.Ce	ENGINEERED BY: D.Ce	MASS: 520.452kg	DATE: 19/07/2023	MATERIAL CERTIFICATE: N/A	PART MUST COMPLY WITH ENERPAC RESTRICTED MATERIAL COMPLIANCE STANDARD-ENR 900-07-02					
CHECKED BY: S.Jn	SCALE: 1:10	MATERIAL: N/A	SURFACE TREATMENT: N/A		General Tolerances ISO 22081 [A][B][C] DIN 2768 Table 1 - B - Linear sizes 12 DIN 2768 Table 2 - b Angular sizes 13° DIN 2768 Table 3 - 1					
ENERPAC. 				ROUGHNESS OVERALL: Ra 3.2	(16-38") DIAMOND WIRE SAW					
Zuidwijk Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com © COPYRIGHTS RESERVED					BREAK SHARP EDGES TO R0.13/15		DRAW NO: MDWS1638-H-M	REV: B	SHEET: 2 / 2	FORM: A3



ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	B51970.050.001	SPRING COTTER PIN, DIN #11024 STAINLESS STEEL A2	4
2	B53570.040.030	M4X30 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	16
3	B53570.080.020	M8X20 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
4	B53570.120.035	M12X35 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	32
5	B53570.160.030	M16X30 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	4
6	B55000.120.040	M12X60 A4-70 HEX HEAD BOLT ISO 4014 (SS)	28
7	B55000.200.050	M20X50 A4-70 HEX HEAD BOLT ISO 4014 (SS)	24
8	B55030.100.025	M10X25 A4SS BUTTON HEAD CAP SCREW COARSE ISO 7380-1 (SS)	22
9	B55420.120.001	M12 A4 140HV PLAIN WASHER DIN 125-1A (SS)	28
10	B55420.200.001	M20 A4 140HV PLAIN WASHER DIN 125-1A (SS)	24
11	MDWS1638-1-001	MAIN MACHINE PLATE	2
12	MDWS1638-1-002	FIXED CLAMP BACKPLATE	2
13	MDWS1638-1-003	FIXED FOOT MOUNT	4
14	MDWS1638-1-004	CLAMP SUPPORT	12
15	MDWS1638-1-005	CLAMP ASSEMBLY LOCATING PIN	4
16	MDWS1638-1-006	CLAMP ARM SUPPORT BLOCK	2
17	MDWS1638-1-008	MODIFIED LINEAR GUIDE	2
18	MDWS1638-2	CLAMP ARM ASSEMBLY	2
19	OB3665	JAW PLATE	8
20	RLP-M16-10	ROTATING LIFTING POINT M16	8
21	WS-25-1550-RAIL	DRYLIN WS-25 SINGLE RAIL 1550mm LG (STD BOLT PATTERN)	2
22	WW-10-80-10	DRYLIN W GUIDE BLOCK	4

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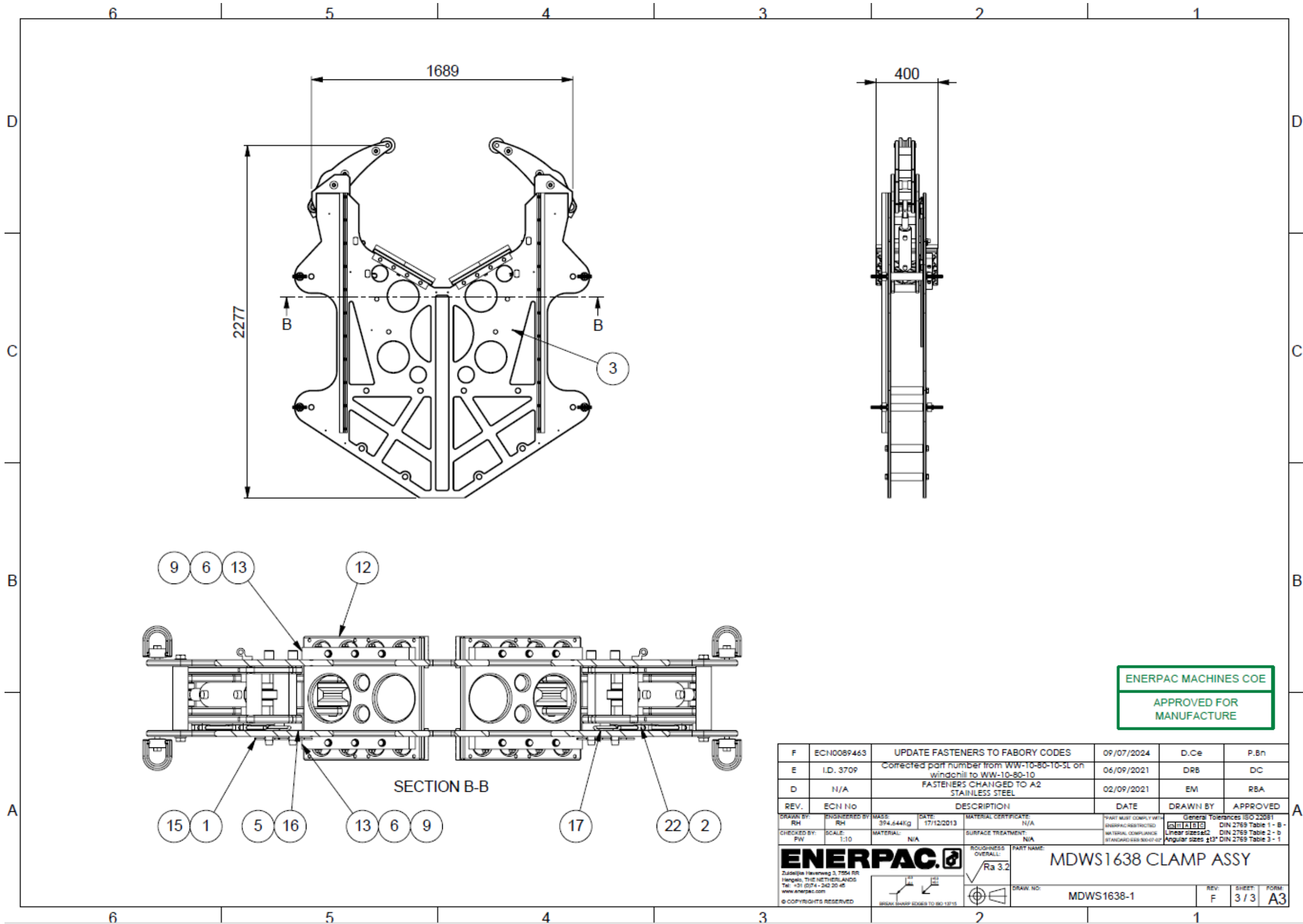
F	ECN0089463	UPDATE FASTENERS TO FABORY CODES	09/07/2024	D.Ce	P.Bn
E	I.D. 3709	Corrected part number from WW-10-80-10-3L on windchill to WW-10-80-10	06/09/2021	DRB	DC
D	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	02/09/2021	EM	RBA
REV.	ECN No	DESCRIPTION	DATE	DRAWN BY	APPROVED
DRAWN BY:	RH	ENGINEERED BY: RH	DATE: 17/12/2013	MATERIAL CERTIFICATE: N/A	PART MUST COMPLY WITH ENERPAC RESTRICTED MATERIAL COMPLIANCE STANDARD 688-30047-02
CHECKED BY:	PW	SCALE: 1:10	MATERIAL: N/A	SURFACE TREATMENT: N/A	General Tolerances ISO 22081 Linear sizes ± 0.1 mm Angular sizes $\pm 10'$ DIN 2768 Table 3 - 1
ENERPAC 		ROUGHNESS OVERALL: $\sqrt{Ra\ 3.2}$		PART NAME: MDWS1638 CLAMP ASSY	
Zuidelijke Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com		© COPYRIGHTS RESERVED		DRAW NO: MDWS1638-1	
				REV: F	SHEET: 1 / 3
				FORM: A3	



PRODUCTION NOTE:
NOTE THE ARRANGEMENT OF PARTS TO HAND MDWS1640-2
ASSEMBLY TO MAKE RIGHT AND LEFT HAND VARIANTS

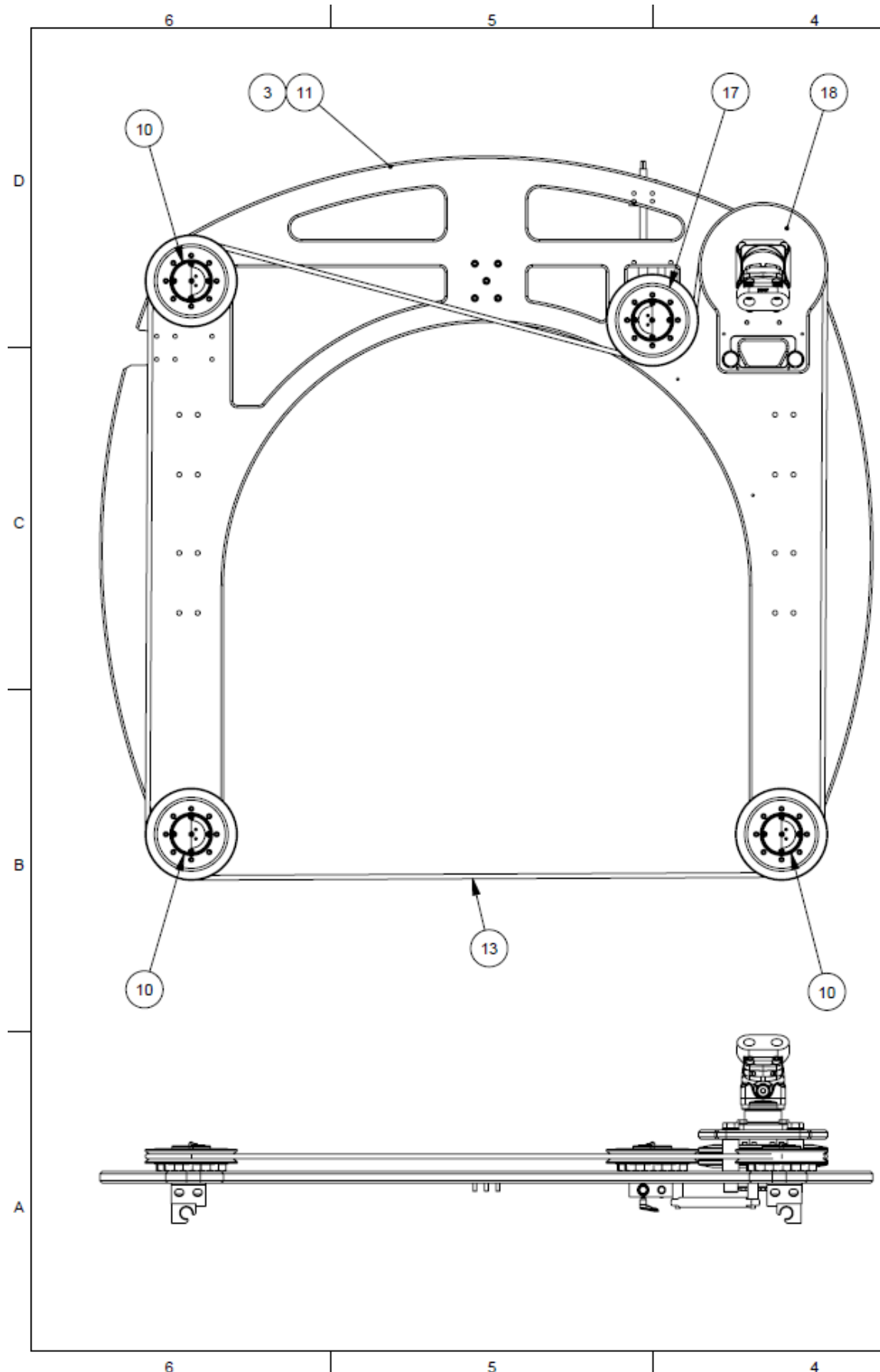
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MANUFACTURE

F	ECN0089463	UPDATE FASTENERS TO FABORY CODES	09/07/2024	D.Ce	P.Bn
E	I.D. 3709	Corrected part number from WW-10-80-10-3L on windchill to WW-10-80-10	06/09/2021	DRB	DC
D	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	02/09/2021	EM	RBA
REV.	ECN No	DESCRIPTION	DATE	DRAWN BY	APPROVED
DRAWN BY:	RH	ENGINEERED BY: RH	DATE: 17/12/2013	MATERIAL CERTIFICATE: N/A	PART MUST COMPLY WITH ENERPAC RESTRICTED
CHECKED BY:	PW	SCALE: 1:10	MATERIAL: N/A	SURFACE TREATMENT: N/A	General Tolerances ISO 22061
ENERPAC Zuidelijke Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com © COPYRIGHTS RESERVED		ROUGHNESS OVERALL: $\sqrt{Ra\ 3.2}$	PART NAME: MDWS1638 CLAMP ASSY		
		BREAK SHARP EDGES TO R0.125	DRAW NO: MDWS1638-1	REV: F	SHEET: 2 / 3
					FORM: A3

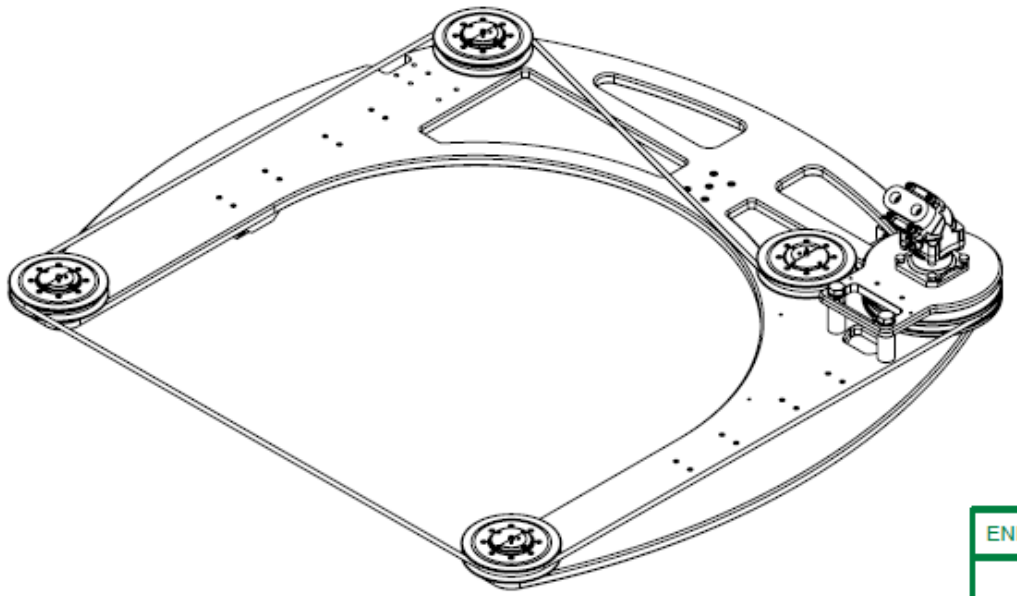


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APPROVED FOR
MANUFACTURE

F	ECN0089463	UPDATE FASTENERS TO FABORY CODES	09/07/2024	D.Ce	P.Bn
E	I.D. 3709	Corrected part number from WW-10-80-10-SL on windchill to WW-10-80-10	06/09/2021	DRB	DC
D	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	02/09/2021	EM	RBA
REV.	ECN No	DESCRIPTION	DATE	DRAWN BY	APPROVED
DRAWN BY:	RH	ENGINEERED BY: RH	DATE: 17/12/2013	MATERIAL CERTIFICATE: N/A	PART MUST COMPLY WITH ENERPAC RESTRICTED MATERIAL COMPLIANCE (STANDARD ENR 1001-01)
CHECKED BY:	FW	SCALE: 1:10	MATERIAL: N/A	SURFACE TREATMENT: N/A	General Tolerances ISO 22081 Linear sizes ± 0.13 DIN 2769 Table 1 - B - Angular sizes $\pm 13'$ DIN 2769 Table 3 - 1
ENERPAC		ROUGHNESS OVERALL: $\sqrt{Ra\ 3.2}$	PART NAME: MDWS1638 CLAMP ASSY		
Zuidelijke Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com		DRAW NO: MDWS1638-1		REV: F	SHEET: 3 / 3
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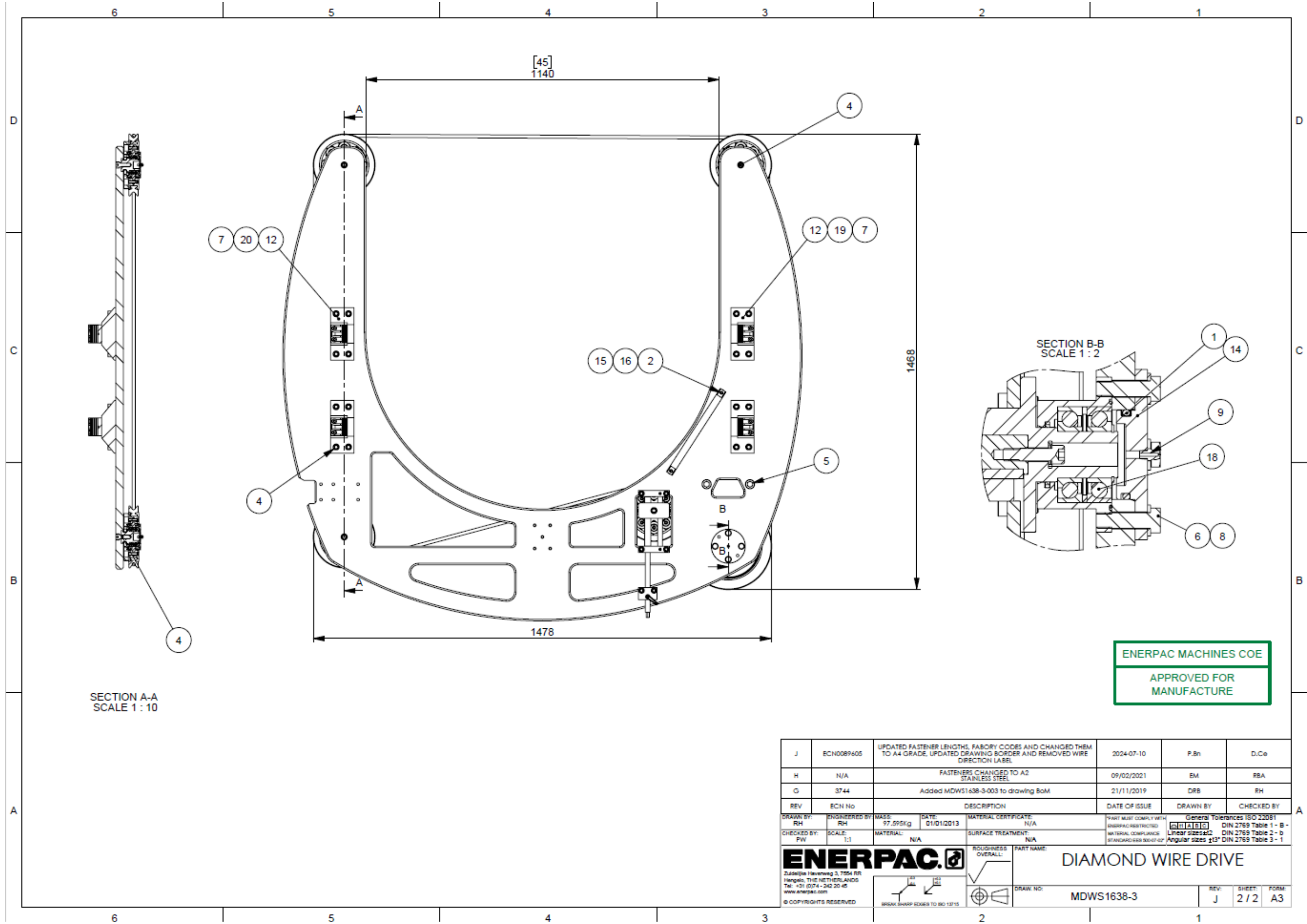


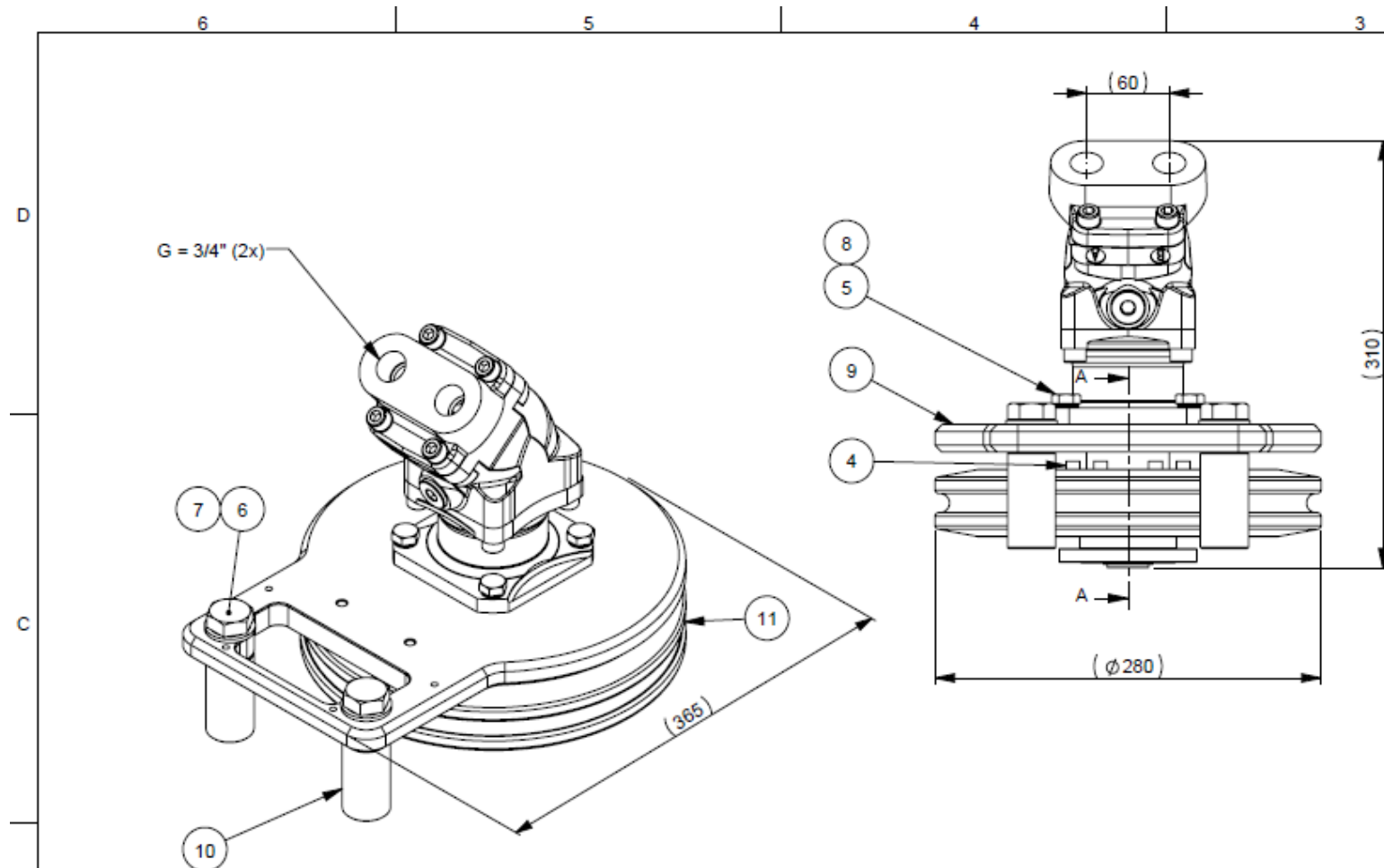
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	17005015V	O-RING 50MM X 4.5MM VITON (FKM)	1
2	B53570.080.060	M8X60 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
3	B53570.080.035	M8X35 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	5
4	B53570.120.035	M12X35 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	19
5	B53570.200.050	M20X50 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
6	B55000.100.035	M10X35 A4-70 HEX HEAD BOLT ISO 4014 (SS)	4
7	B55030.080.050	M8X50 A4SS BUTTON HEAD CAP SCREW COARSE ISO 7380-1 (SS)	8
8	B55420.100.001	M10 A4 140HV PLAIN WASHER DIN 125-1A (SS)	4
9	B72213.080.180	M8 GREASE NIPPLE DIN 71412 180° (SS)	1
10	MDWS1638-15	IDLER PULLEY	3
11	MDWS1638-3-001	MAIN DRIVE PLATE	1
12	MDWS1638-3-002	MOUNTING BLOCK	4
13	MDWS1638-3-003	DWM-S ELECTROPLATED WIRE	1
14	MDWS1638-3-005	DRIVE MOTOR BEARING PLUG	1
15	MDWS1638-3-006	HYDRAULIC SUPPORT	2
16	MDWS1638-3-007	HYDRAULIC SUPPORT	1
17	MDWS1638-4	MDWS TENSIONING UNIT 5" STROKE	1
18	MDWS1638-5	MDWS WIRE DRIVE ASSEMBLY	1
19	WJ200UM-01-25	IGUS DRYLIN W HOUSING BEARING	2
20	WJ200UM-01-25-LL	IGUS DRYLIN W CARRIAGE FLOATING	2



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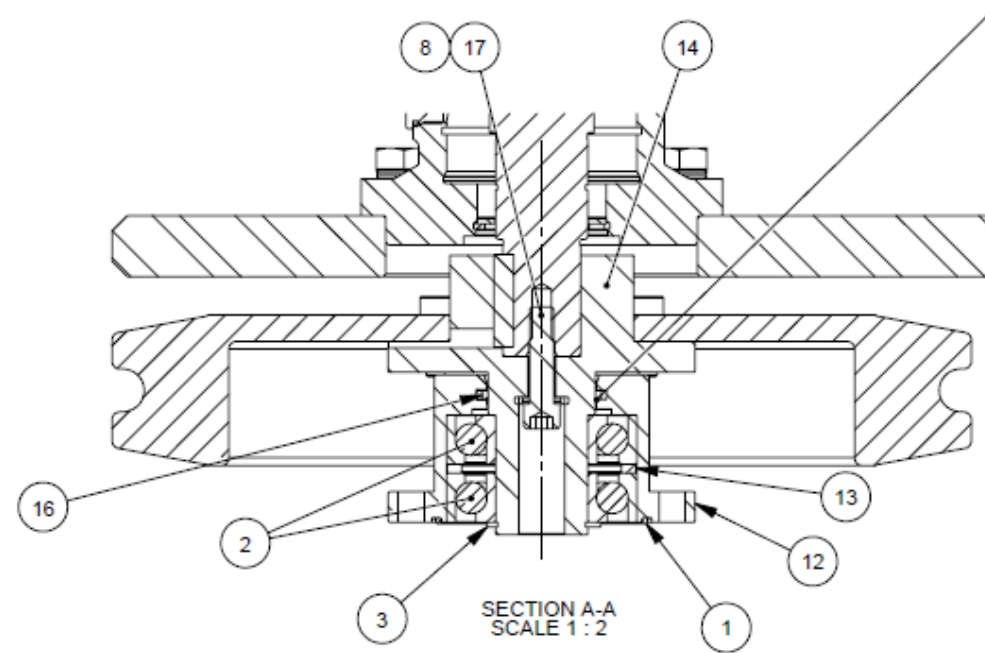
J	ECN0089605	UPDATED FASTENER LENGTHS, FABORY CODES AND CHANGED THEM TO A4 GRADE. UPDATED DRAWING BORDER AND REMOVED WIRE DIRECTION LABEL	2024-07-10	P.Bn	D.Ce
H	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	09/02/2021	EM	RBA
G	3744	Added MDWS1638-3-003 to drawing BoM.	21/11/2019	DRB	RH
REV	ECN No	DESCRIPTION	DATE OF ISSUE	DRAWN BY	CHECKED BY
DRAWN BY:	ENGINEERED BY:	DATE:	MATERIAL CERTIFICATE:	PART MUST COMPLY WITH ENERPAC RESTRICTED MATERIAL COMPLIANCE STANDARD 658-300-07-02	
RH	RH	01/01/2013	N/A		
CHECKED BY:	SCALE:	MATERIAL:	SURFACE TREATMENT:		
PW	1:1	N/A	N/A		
ENERPAC			ROUGHNESS OVERALL:	PART NAME: DIAMOND WIRE DRIVE	
Zuidelijke Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 342 20 45 www.enerpac.com © COPYRIGHTS RESERVED			DRAW NO: MDWS1638-3		REV: J
			SHEET: 1 / 2		FORM: A3





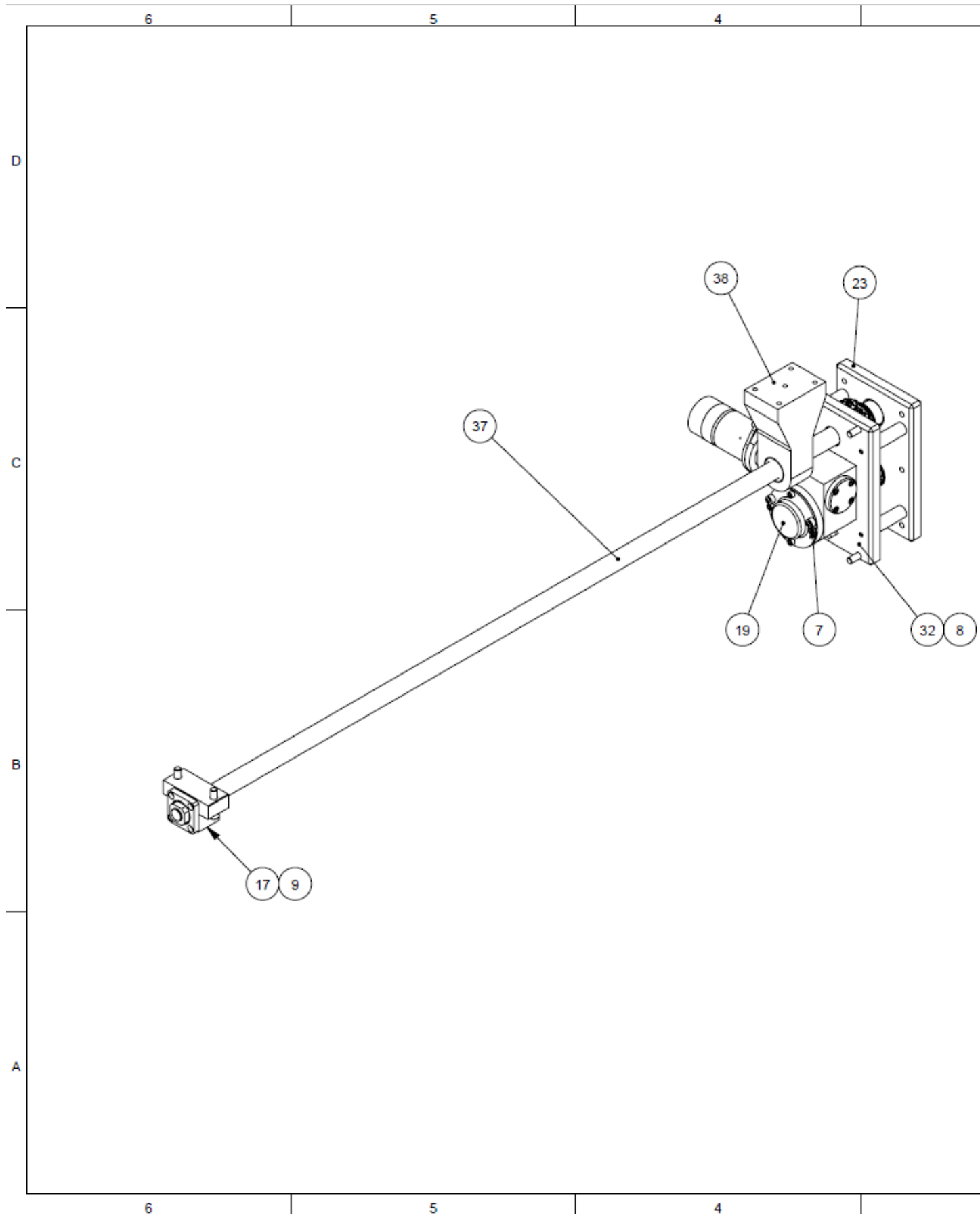
ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	17008502V	O-RING 85MM X 2MM VITON (FKM)	1
2	7206-BEP	ANGULAR CONTACT BALL BEARING	2
3	B51435.030.001	DIA30 STEEL EXTERNAL CIRCLIP, DIN 471 (SS)	1
4	B53570.060.020	M6X20 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
5	B55000.120.030	M12X30 A4-70 HEX HEAD BOLT ISO 4014 (SS)	4
6	B55000.200.050	M20X50 A4-70 HEX HEAD BOLT ISO 4014 (SS)	2
7	B55420.200.001	M20 A4 140HV PLAIN WASHER DIN 125-1A (SS)	2
8	B55450.120.001	M12 A4 SPRING WASHER DIN 127 B (SS)	5
9	MDWS1638-5-002	MOTOR MOUNT PLATE	1
10	MDWS1638-5-005	DRIVE UNIT SPACER	2
11	MDWS1638-5-006	MODIFIED DRIVE WHEEL	1
12	MDWS1638-5-010	DRIVE WHEEL BEARING HOUSING	1
13	MDWS1638-5-011	BEARING SPACER	1
14	MDWS1638-5-012	DRIVE SPIGOT	1
15	MDWS1638-5-016	SCM-034WHSB4-B25-K3-G-100 PAINTED	1
16	TG5100350-Z52N	ZURCON ROTO GLYD RING S	1
17	U55050.031.0125	5/16x1-1/4 F837 316CW/CW1 SOCKET HEAD CAP SCREW B18.3 (SS)	1

NOTE:
COMPRESS ZURCON ROTO GLYD RING INTO KIDNEY
SHAPE WITH NO SHARP BENDS, PLACE THE SEAL RING
IN COMPRESSED FORM INTO THE GROOVE AND RETURN
TO ORIGINAL SHAPE, IF SEAL IS DAMAGED ON
INSTALLATION FIT A NEW ONE.



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L	ECN008766P	FASTENER UPDATE, & UPDATED DRAWING BORDER	24/06/2024	P.Bn	D.Ce
K	ECN008766P	M2B25412530NB REPLACED WITH SCM-034WHSB4-B25-K3-G-100, MDWS1638-5-013 REPLACED WITH MDWS1638-5-012 MDWS1638-5-014 REMOVED	30/01/2024	D.Ce	D.Ss
J	N/A	UPDATED FASTENER PART NUMBERS	10/02/2023	DMS	J.Vk
REV	ECN No	DESCRIPTION	DATE OF ISSUE	DRAWN BY	CHECKED BY
DRAWN BY:	RH	ENGINEERED BY:	RH	MASS:	17.548Kg
CHECKED BY:	KB	SCALE:	1:4	MATERIAL:	N/A
ENERPAC		MATERIAL CERTIFICATE:		N/A	
Zuidelijke Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS		SURFACE TREATMENT:		N/A	
Tel: +31 (0)74 242 20 45		PART MUST COMPLY WITH:		ENERPAC RESTRICTED	
www.enerpac.com		STANDARD COMPLIANCE:		DIN 2769 Table 1 - B -	
© COPYRIGHTS RESERVED		ROUGHNESS OVERALL:		Linear sizes < 13" DIN 2769 Table 2 - b	
		PART NAME:		Angular sizes > 13" DIN 2769 Table 3 - 1	
		MDWS WIRE DRIVE ASSEMBLY			
		DRAW NO:		MDWS1638-5	
		REV:		L	
		SHEET:		1 / 1	
		FORM:		A3	

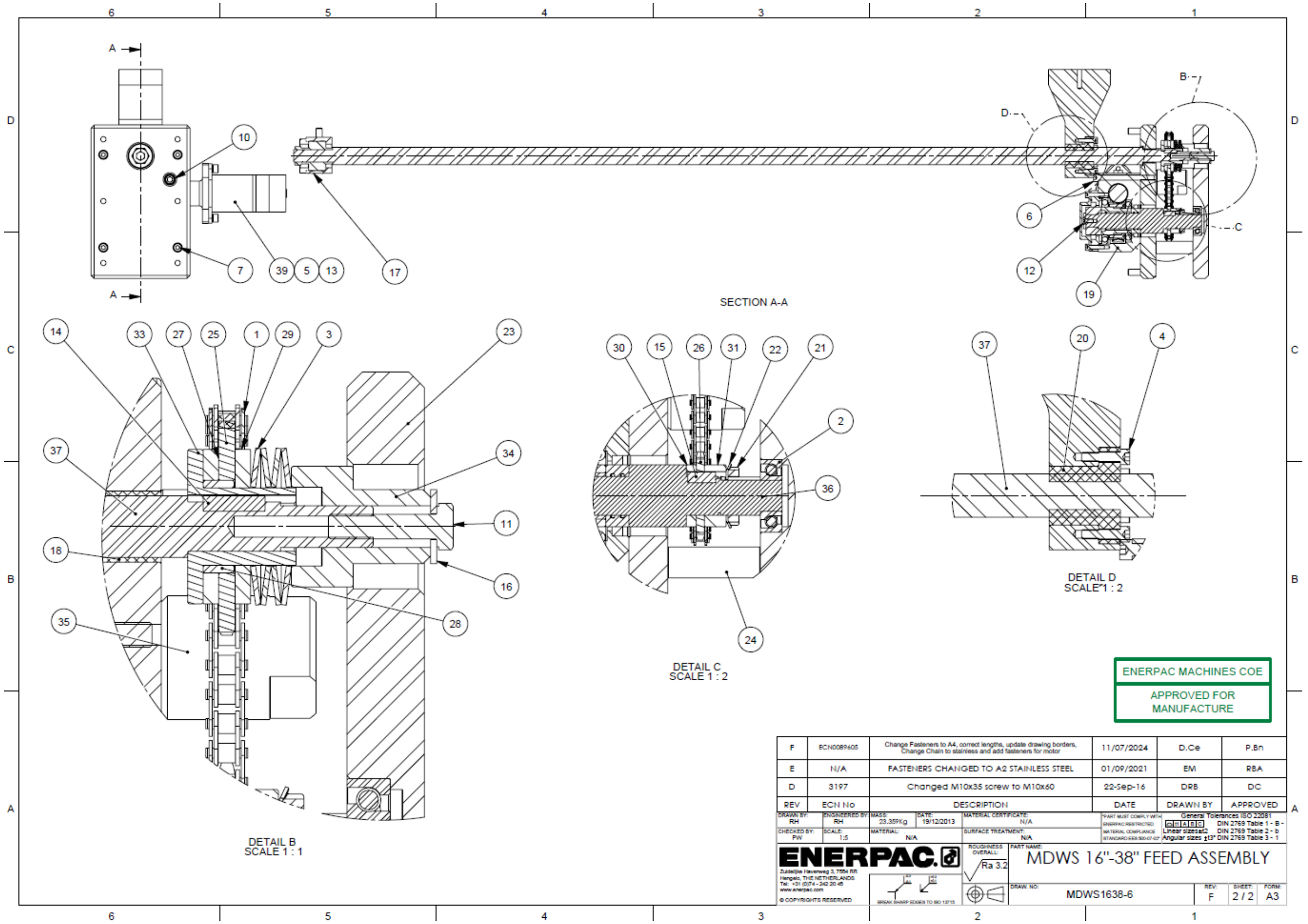


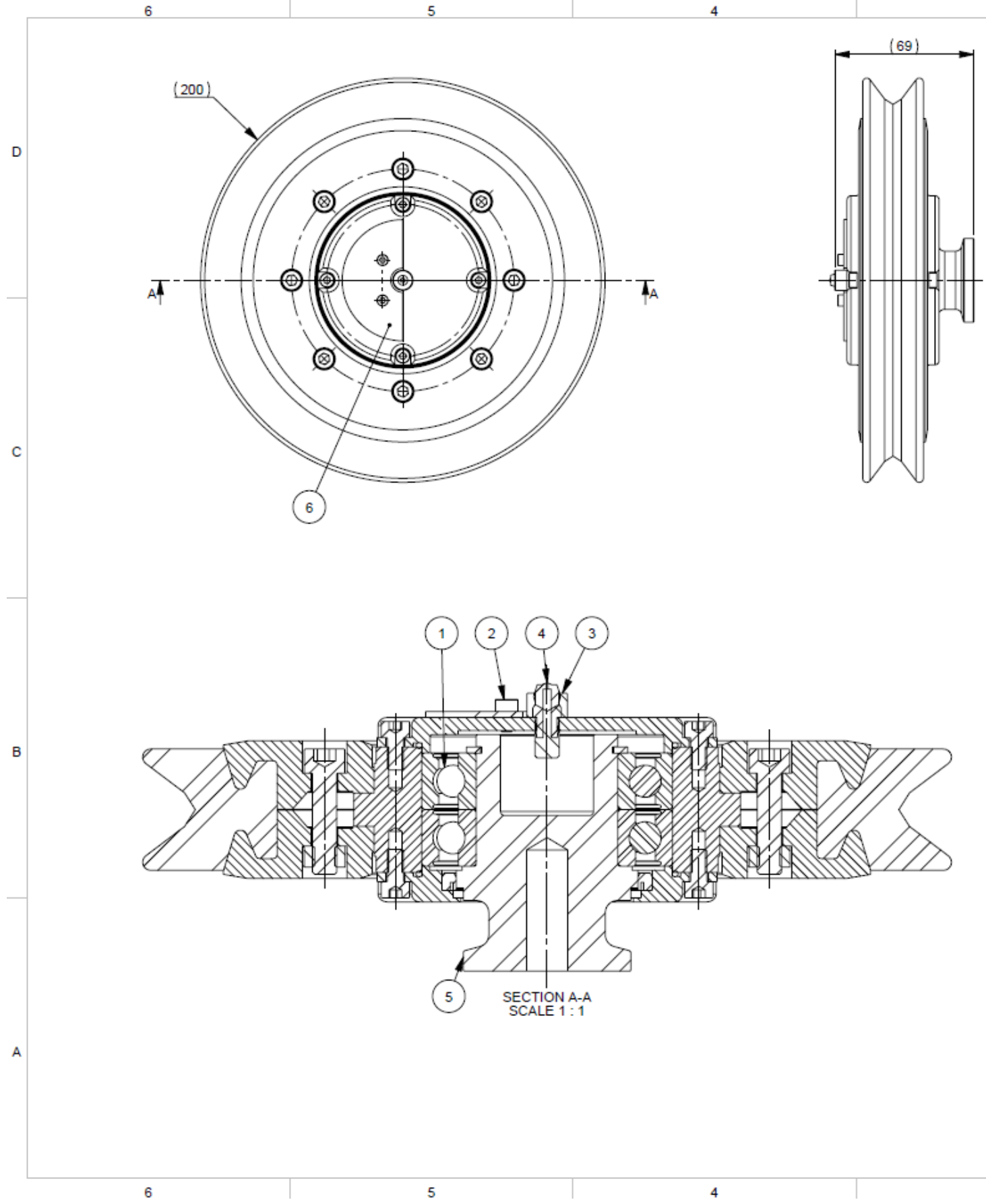
ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	0481HS	SIMPLEX ROLLER CHAIN 42 LINKS	1
2	7204B	SINGLE ROW ANGULAR CONTACT BEARING	1
3	B51448.520.015	50X25.4X1.5MM A2 DISC SPRING DIN 2093-A (SS)	4
4	B53570.060.025	M6X25 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
5	B53570.080.016	M8X16 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
6	B53570.080.090	M8X90 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1
7	B53570.080.100	M8X100 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
8	B53570.100.035	M10X35 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	4
9	B53570.100.040	M10X40 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
10	B53570.100.060	M10X60 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1
11	B55000.080.035	M8X35 A4-70 HEX HEAD BOLT ISO 4014 (SS)	1
12	B55040.060.016	M6X16 A4 SOCKET HEAD CSK SCREW COARSE ISO 10642 (SS)	1
13	B55450.080.001	M8 A4 SPRING WASHER DIN 127 B (SS)	2
14	B55510.055.020	5X5X20MM PARALLEL KEY DIN 6885 A STAINLESS STEEL A5	1
15	B55510.087.018	8X7X18MM PARALLEL KEY DIN 6885 A STAINLESS STEEL A5	1
16	B55530.080.001	M8 A4 140HV FLAT WASHER 3XD, DIN 9021 (SS)	1
17	EK20	SUPPORT UNIT	1
18	H370FM-2023-21	IGUS IGUDUR FLANGED BEARING (OD=23 ID=20 L=21.5MM)	1
19	HYM0200-6	30:1 SUBSEA REDUCTION GEARBOX	1
20	JFRM-3846TR28X5	IGUDUR J LEAD NUT RH	1
21	KM5	LOCK NUT	1
22	M85-OU	LOCKING WASHER	1
23	MDWS1638-6-002	FEED GEARBOX SUPPORT PLATE	1
24	MDWS1638-6-005	FEED PLATE SPACER	4
25	MDWS1638-6-008	22T LEADSCREW DRIVER	1
26	MDWS1638-6-009	17T MOTOR SPROCKET	1
27	MDWS1638-6-010	PRESSURE PAD TYPE 1	1
28	MDWS1638-6-011	SPROCKET MOUNTING BUSH	1
29	MDWS1638-6-012	PRESSURE PAD TYPE 2	1
30	MDWS1638-6-013	DRIVE GEAR SPACER 1	1
31	MDWS1638-6-014	DRIVE GEAR SPACER 2	1
32	MDWS1638-6-017	FEED GEARBOX MOUNT PLATE	1
33	MDWS1638-6-019	CLUTCH MECH MOUNT	1
34	MDWS1638-6-020	RETAINING WASHER	1
35	MDWS1638-6-021	FEED CHAIN TENSIONER	1
36	MDWS1638-6-022	FEED DRIVE OUTPUT SHAFT	1
37	MDWS1638-6-023	MDWS1638 LEADSCREW	1
38	MDWS620-6-003	BALLNUT CARRIER	1
39	MDWS620-6-005	MDWS FEED MOTOR W. FLANGE	1

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F	ECN0089405	Change Fasteners to A4, correct lengths, update drawing borders, Change Chain to stainless and add fasteners for motor	11/07/2024	D.Ce	P.Bn
E	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	01/09/2021	EM	RBA
D	3197	Changed M10x35 screw to M10x60	22-Sep-16	DRB	DC
REV	ECN No	DESCRIPTION	DATE	DRAWN BY	APPROVED
DRAWN BY:	ENGINEERED BY:	MADE:	DATE:	MATERIAL CERTIFICATE:	PART MUST COMPLY WITH:
RH	RH	23.359 Kg	19/12/2013	N/A	ENERPAC 988100760
CHECKED BY:	SCALE:	MATERIAL:	SURFACE TREATMENT:	ROUGHNESS OVERALL:	General Tolerances ISO 22081
PW	1:1	N/A	N/A	✓ Ra 3.2	DIN 2768 Table 1 - B -
ENERPAC 		PART NAME: MDWS 16"-38" FEED ASSEMBLY			
Zuidelijke Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com		DRAW NO: MDWS1638-6			
© COPYRIGHTS RESERVED		REV: F SHEET: 1 / 2 FORM: A3			





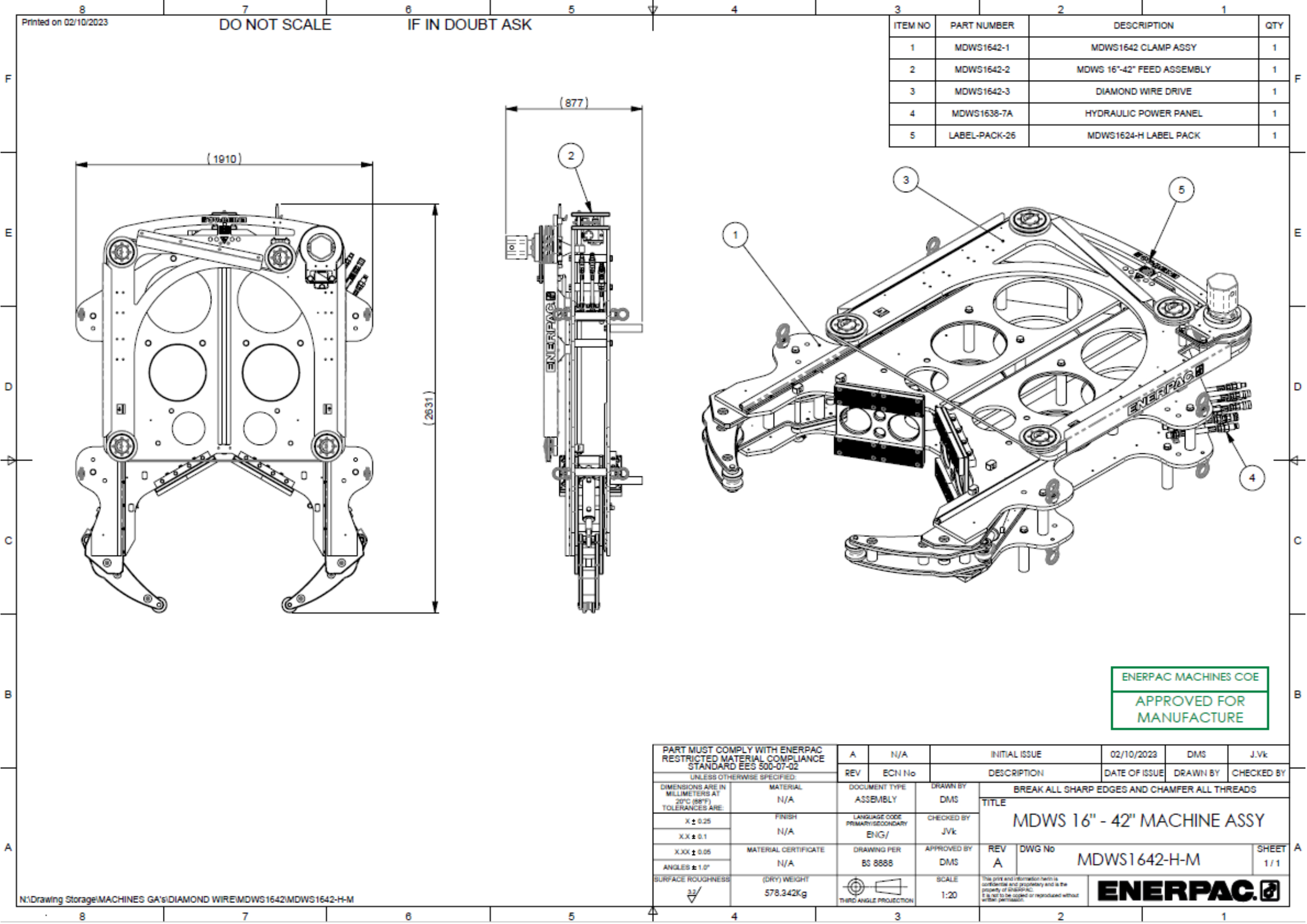
ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	6007	SINGLE ROW DEEP GROOVE BALL BEARING	2
2	B53570.030.005	M3X5 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
3	B53570.060.010	M6X10 A4-80 SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1
4	B72213.060.180	M6 GREASE NIPPLE DIN 71412 180° (SS)	1
5	MDWS1638-15-001	MOD FRONT COVER + WHEEL	1
6	MDWS1638-15-002	TRAFFOLITE LABEL	1

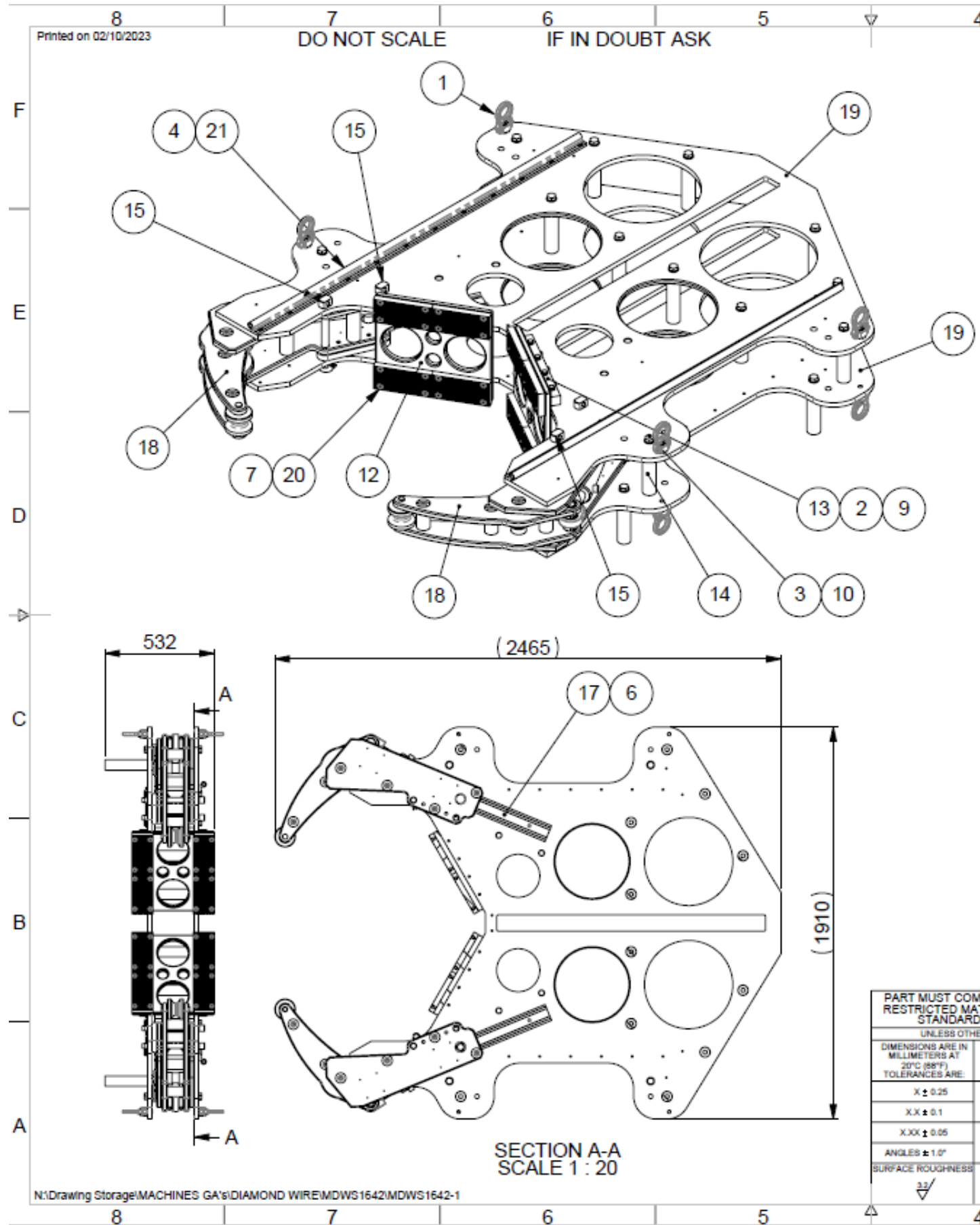
- NOTES:
1. STRIP WHEEL (4) ON ARRIVAL AND REMOVE BOTH BEARINGS (6007-2RS)
 2. MODIFY FRONT COVER ACC. TO MDWS1638-15-001 IF NOT SUBCONTRACTED
 3. ASSEMBLE 6007 BEARINGS (NO SEALS) (1)
 4. ASSEMBLE FRONT COVER AND THE GREASE NIPPLE (3)
 5. USE GREASE NIPPLE TO FILL THE CAVITY WITH SHELL GADUS S3 V220C GREASE
 6. ONCE GREASED, REPLACE GREASE NIPPLE (3) WITH BOLT (2)

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C	ECN0088607	UPDATE BOM STRUCTURE TO FIT WITH WHICH PARTS ARE NEEDED & ADD STICKER AND SCREWS FROM MDWS1638-4	20-06-2024	P.Bn	D.Ce
B	-	UPDATE FASTENERS, ADDED NOTE TO REPLACE GREASE NIPPLE WITH BOLT	02-10-2023	DMS	J.Vk
A	-	CHANGED NOTE FOR REBUILD	02-02-2017	DRB	DC
REV	ECN No	DESCRIPTION	DATE OF ISSUE	DRAWN BY	CHECKED BY
DRAWN BY: DC	ENGINEERED BY: DC	MASS: 2.340kg	DATE: 02/10/2013	MATERIAL CERTIFICATE: N/A	General Tolerances ISO 22061
CHECKED BY: RS	SCALE: 1:2	MATERIAL: N/A	SURFACE TREATMENT: N/A	ROUGHNESS OVERALL: Ra 3.2	Linear sizes 12 DIN 2519 Table 1 - B -
ENERPAC				PART NAME: IDLER PULLEY	
Zuidelijke Havenweg 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com				DRAW NO: MDWS1638-15	
© COPYRIGHTS RESERVED				REV: C	
				SHEET: 1 / 1	
				FORM: A3	



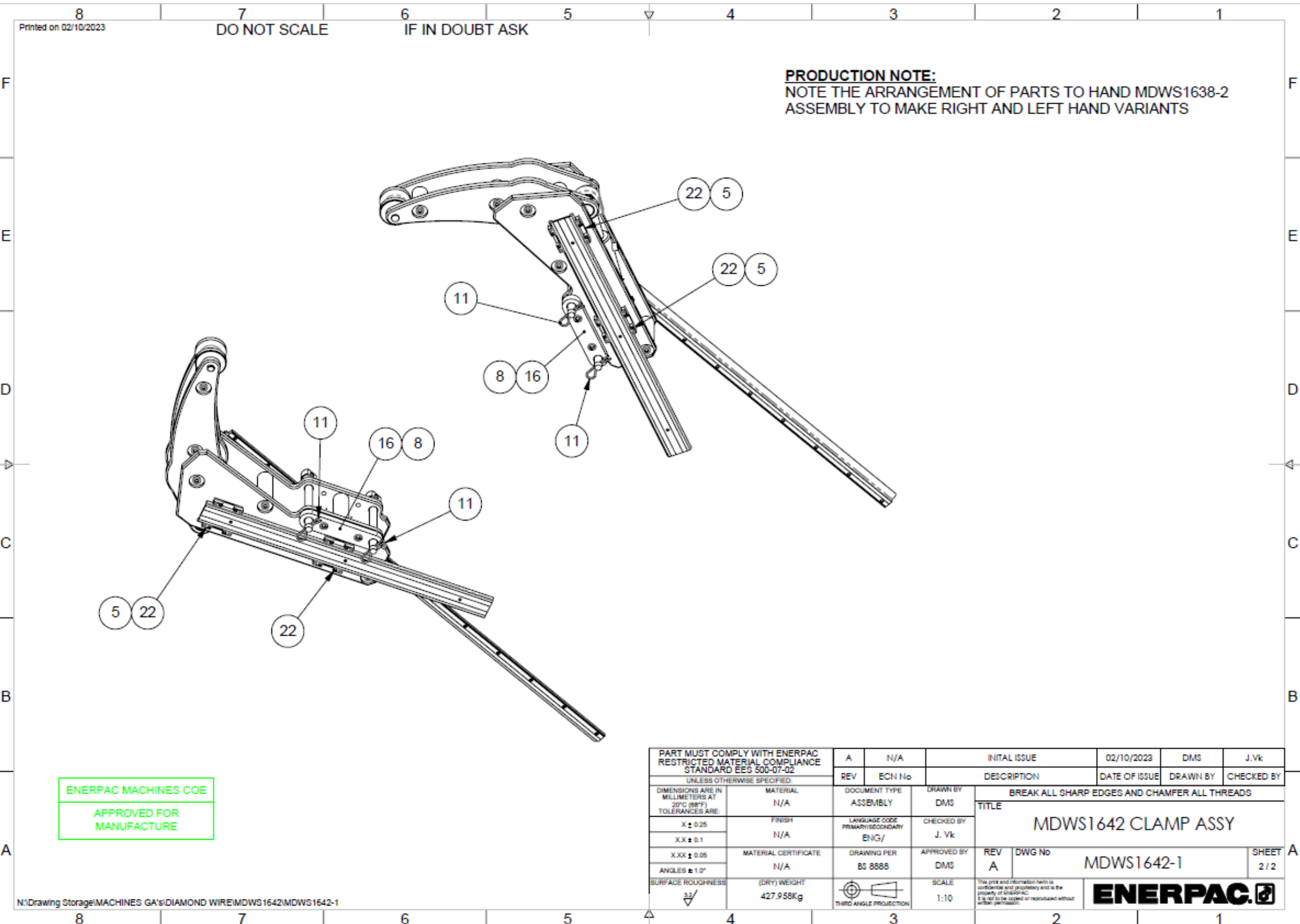


ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	7909316	RUD RLP ACP TURNADO 2.5t M16	8
2	B51010.120.060	M12X60 A2SS HEX HEAD SCREW COARSE ISO 4014 (SS)	28
3	B51010.200.060	M20X50 A2SS HEX HEAD SCREW COARSE ISO 4014 (SS)	28
4	B51030.100.025	M10X25 A2SS BUTTON HEAD CAP SCREW COARSE ISO 7380 (SS)	22
5	B51050.040.030	M4X30 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	16
6	B51050.080.025	M8X25 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
7	B51050.120.035	M12X35 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	32
8	B51050.160.030	M16X30 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	4
9	B51420.120.001	M12 FLAT WASHER FORM A BS 4320 (SS)	28
10	B51420.200.001	M20 FLAT WASHER FORM A BS 4320 (SS)	28
11	B51970.050.001	SPRING COTTER PIN, DIN =11024 STAINLESS STEEL A2	4
12	MDWS1638-1-002	FIXED CLAMP BACKPLATE	2
13	MDWS1638-1-003	FIXED FOOT MOUNT	4
14	MDWS1638-1-004	CLAMP SUPPORT	16
15	MDWS1638-1-005	CLAMP ASSY LOCATING PIN	4
16	MDWS1638-1-006	CLAMP ARM SUPPORT BLOCK	2
17	MDWS1638-1-008	MODIFIED LINEAR GUIDE	2
18	MDWS1638-2	CLAMP ARM ASSEMBLY	2
19	MDWS1642-1-001	MAIN MACHINE PLATE	2
20	OB3665	Jaw plate	8
21	WS-25-1700-RAIL	DRYLIN WS-25 SINGLE RAIL 1700mm LG (STD BOLT PATTERN)	2
22	WW-10-80-10	DRYLIN W GUIDE BLOCK	4

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PART MUST COMPLY WITH ENERPAC RESTRICTED MATERIAL COMPLIANCE STANDARD EES 500-07-02		A	N/A	INITIAL ISSUE		02/10/2023	DMS	J.Vk
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DIMENSIONS ARE IN MILLIMETERS AT 20°C (68°F) TOLERANCES ARE:	MATERIAL	DOCUMENT TYPE	DRAWN BY	BREAK ALL SHARP EDGES AND CHAMFER ALL THREADS				
X ± 0.25	N/A	ASSEMBLY	DMS	TITLE MDWS1642 CLAMP ASSY				
X.X ± 0.1	FINISH	LANGUAGE CODE PRIMARY/SECONDARY	CHECKED BY					
X.XX ± 0.05	N/A	ENG/	J. Vk	REV A DWG No MDWS1642-1 SHEET 1 / 2				
ANGLES ± 1.0°	MATERIAL CERTIFICATE	DRAWING PER	APPROVED BY					
SURFACE ROUGHNESS	N/A	BS 8888	DMS	ENERPAC® This print and information herein is confidential and proprietary and is the property of ENERPAC. It is not to be copied or reproduced without written permission.				
3.2/√	(DRY) WEIGHT		SCALE					
	427.958kg	THIRD ANGLE PROJECTION	1:15					



	8	7	6	5	4	3	2	1
	ITEM NO	PART NUMBER	DESCRIPTION	QTY				
F	1	06B1HS	SIMPLEX ROLLER CHAIN 42 LINKS	1				
	2	151G0211	OMM 50 MOTOR FLANGE	1				
	3	7204BEP	SINGLE ROW ANGULAR CONTACT BEARING	1				
E	4	B51018.080.025	M8X25 A2SS HEX FLANGE BOLT COARSE ISO 4162 (SS)	1				
	5	B51050.060.025	M6X25 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6				
	6	B51050.080.016	M8X16 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2				
	7	B51050.080.090	M8X90 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1				
	8	B51050.080.100	M8X100 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6				
	9	B51050.100.035	M10X35 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	4				
D	10	B51050.100.045	M10X45 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2				
	11	B51050.100.060	M10X60 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1				
	12	B51060.060.016	M6X16 A2SS SOCKET HEAD CSK SCREW COARSE ISO 10642 (SS)	4				
	13	B51448.520.030	DISC SPRING TYPE A DIN2093 STAINLESS STEEL 50X25,4X3,0MM	4				
	14	B55510.055.020	PARALLEL KEY DIN 6885 A STAINLESS STEEL A5 5X5X20XMM	1				
	15	B55510.087.018	PARALLEL KEY DIN 6885 A STAINLESS STEEL A5 8X7X18XMM	1				
C	16	EK20	SUPPORT UNIT	1				
	17	H370FM-2023-21	'Igilur' H370 Flanged Bearing	1				
	18	HYM0200-6	30:1 SUBSEA REDUCTION GEARBOX	1				
	19	JFRM-3846TR28X5	IGLIDUR J LEAD NUT RH	1				
	20	KM5	LOCK NUT	1				
	21	MB5	LOCKING WASHER	1				
B	22	MDWS620-6-003	BALLNUT CARRIER	1				
	23	MDWS1638-6-002	FEED GEARBOX SUPPORT PLATE	1				
	24	MDWS1638-6-005	FEED PLATE SPACER	4				
	25	MDWS1638-6-008	22T LEADSCREW DRIVER	1				
	26	MDWS1638-6-009	17T MOTOR SPROCKET	1				
	27	MDWS1638-6-010	PRESSURE PAD TYPE 1	1				
A	28	MDWS1638-6-011	SPROCKET MOUNTING BUSH	1				
	29	MDWS1638-6-012	PRESSURE PAD TYPE 2	1				
	30	MDWS1638-6-013	DRIVE GEAR SPACER 1	1				
	31	MDWS1638-6-014	DRIVE GEAR SPACER 2	1				
	32	MDWS1638-6-017	FEED GEARBOX MOUNT PLATE	1				
	33	MDWS1638-6-019	CLUTCH MECH MOUNT	1				
	34	MDWS1638-6-020	RETAINING WASHER	1				
	35	MDWS1638-6-021	FEED CHAIN TENSIONER	1				
	36	MDWS1638-6-022	FEED DRIVE OUTPUT SHAFT	1				
	37	MDWS1642-2-001	MDWS1642 LEADSCREW	1				
	38	OMM50E	HYDRAULIC MOTOR (151G0037) END PORT - 200RPM @ 10 LPM	1				

N:\Drawing Storage\MACHINES GA's\DIAMOND WIRE\MDWS1642\MDWS1642-2

Printed on 02/10/2023

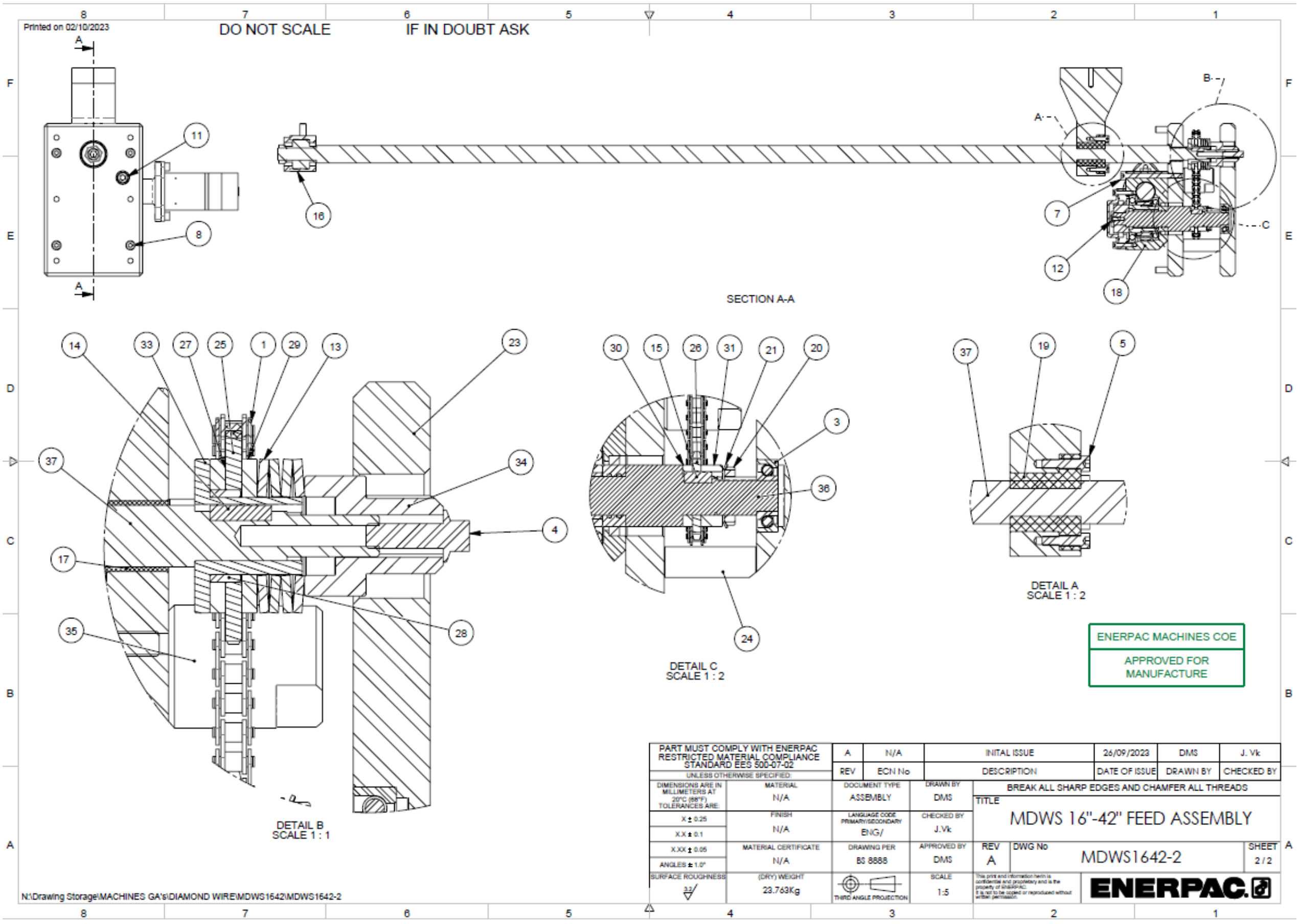
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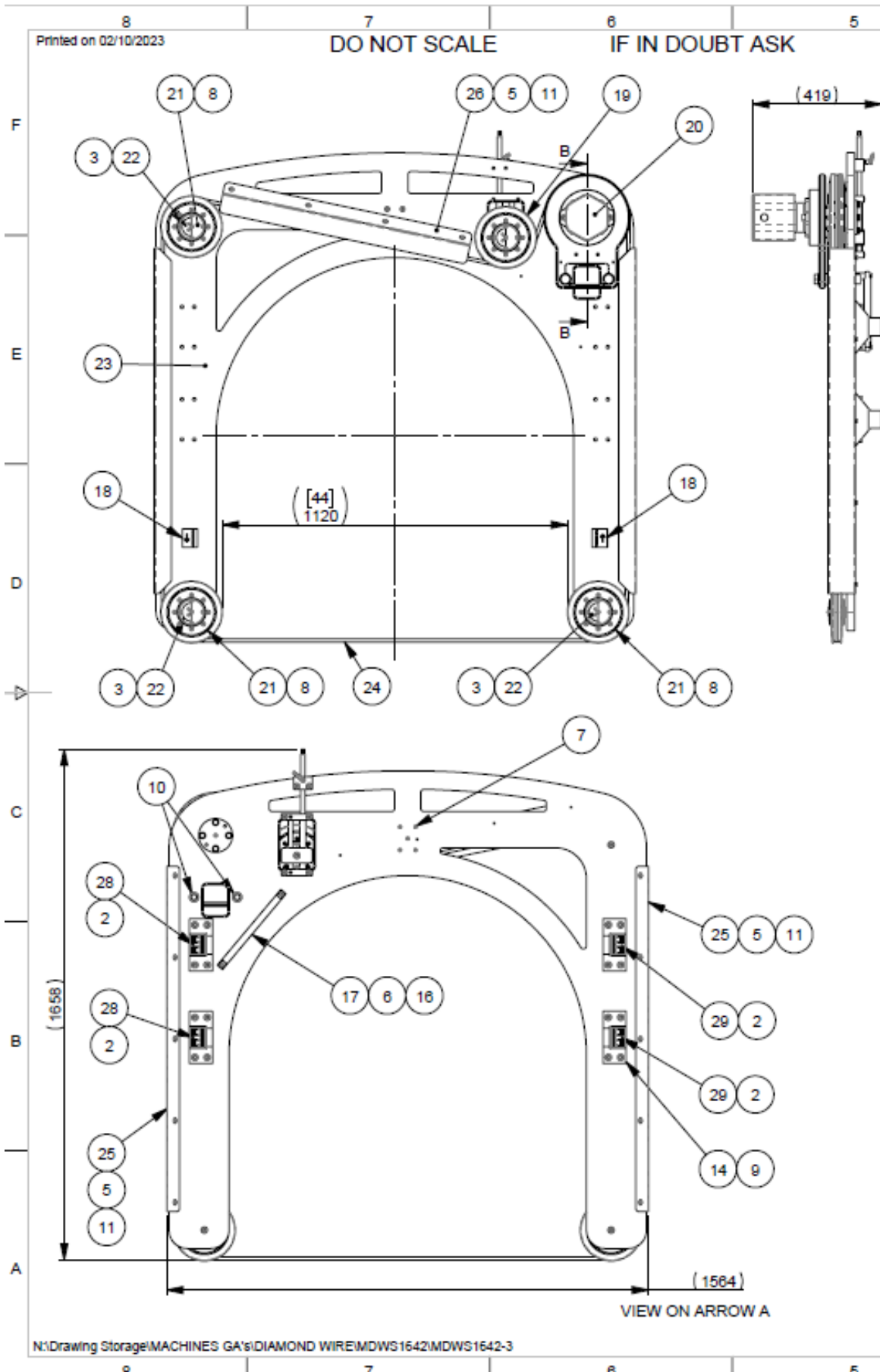
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PART MUST COMPLY WITH ENERPAC RESTRICTED MATERIAL COMPLIANCE STANDARD EES 500-07-02		A	N/A	INITIAL ISSUE	26/09/2023	DMS	J. Vlk
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X.X ± 0.1	N/A	LANGUAGE CODE PRIMARY/SECONDARY	J.Vlk	MDWS 16"-42" FEED ASSEMBLY			
X.XX ± 0.05	MATERIAL CERTIFICATE	DRAWING PER	APPROVED BY	REV	DWG No	SHEET	
ANGLES ± 1.0°	N/A	BS 8888	DMS	A	MDWS1642-2	1 / 2	
SURFACE ROUGHNESS	(DRY) WEIGHT	THIRD ANGLE PROJECTION	SCALE	ENERPAC			
3.2	23.763Kg		1:1				

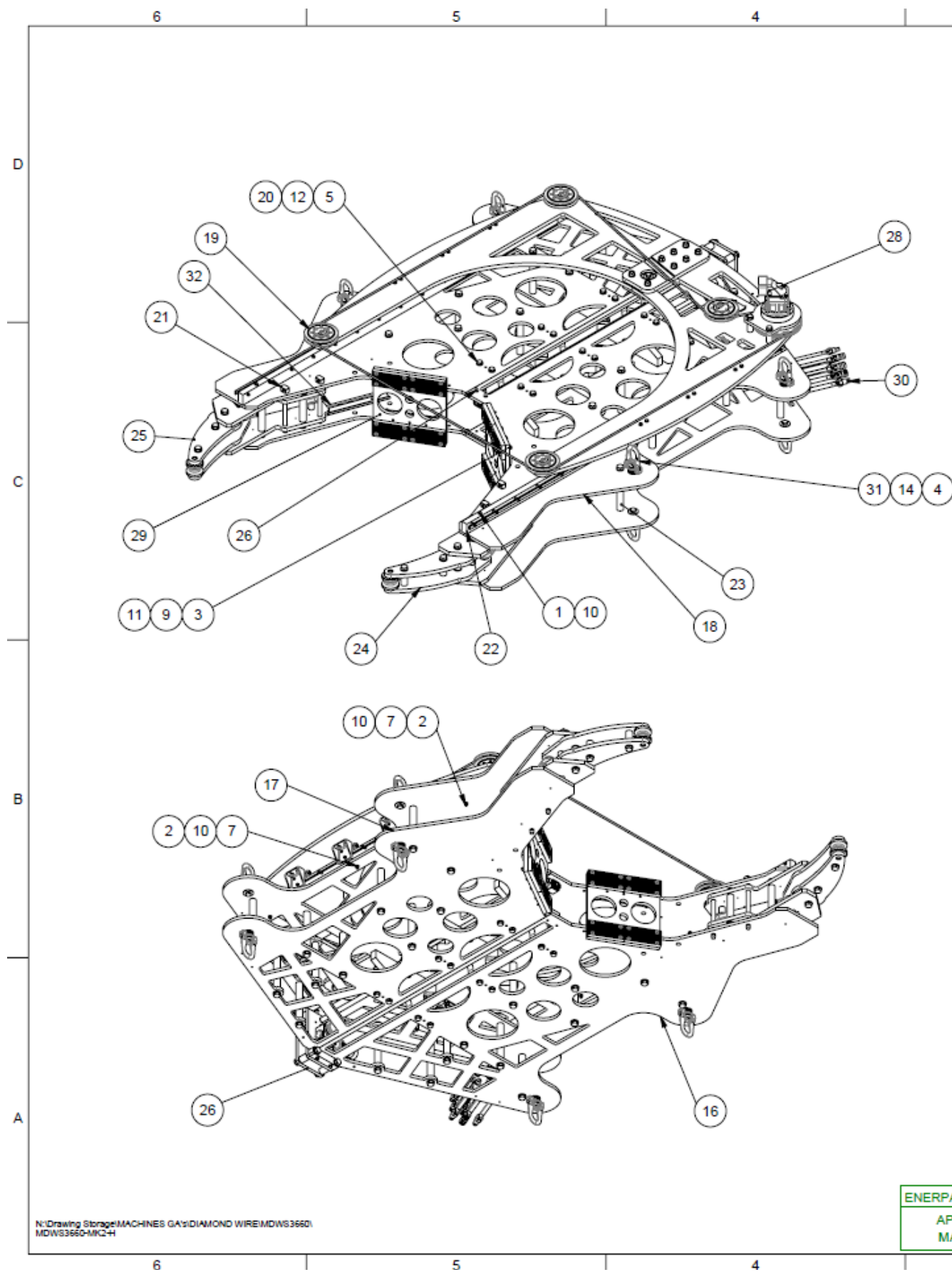




- NOTE:
1. MODULE TO BE PACKED WITH SHELL GADUS S3 V220C GREASE.
 2. ONCE GREASED, REPLACE GREASE NIPPLE WITH BOLT

PART MUST COMPLY WITH ENERPAC RESTRICTED MATERIAL COMPLIANCE STANDARD RES 500-07-02		A	N/A	INITIAL ISSUE	02/10/2023	DMS	J. Vlk
UNLESS OTHERWISE SPECIFIED:		REV	ECN No	DESCRIPTION	DATE OF ISSUE	DRAWN BY	CHECKED BY
DIMENSIONS ARE IN MILLIMETERS AT 20°C (68°F) TOLERANCES ARE:		DOCUMENT TYPE	ASSEMBLY	DRAWN BY	BREAK ALL SHARP EDGES AND CHAMFER ALL THREADS		
X ± 0.25		LANGUAGE CODE	ENG/	CHECKED BY	TITLE		
X.X ± 0.1		PRIMARY/SECONDARY	ENG/	J. Vlk			
X.XX ± 0.05		DRAWING PER	BS 8888	APPROVED BY	REV	DWG No	SHEET
ANGLES ± 1.0°				DMS	A	MDWS1642-3	1 / 1
SURFACE ROUGHNESS		(DRY) WEIGHT	121.853Kg	SCALE	1:15		
		THIRD ANGLE PROJECTION					

ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	B51000.100.035	M10X35 A2SS HEX HEAD SCREW COARSE ISO 4014 (SS)	4
2	B51030.080.050	M8X50 A2SS BUTTON HEAD CAP SCREW COARSE ISO 7380 (SS)	8
3	B51050.030.006	M3X6 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
4	B51050.060.010	M6X10 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1
5	B51050.060.025	M6X25 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	14
6	B51050.060.060	M6X60 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
7	B51050.080.035	M8X35 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	5
8	B51050.100.035	M10X35 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	3
9	B51050.120.035	M12X35 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	16
10	B51050.200.040	M20X40 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
11	B51420.060.001	M6 FLAT WASHER FORM A BS 4320 (SS)	14
12	B51420.100.001	M10 FLAT WASHER FORM A BS 4320 (SS)	4
13	B72210.060.180	M6 GREASE NIPPLE	1
14	MDWS1638-3-002	MOUNTING BLOCK	4
15	MDWS1638-3-005	DRIVE MOTOR BEARING PLUG	1
16	MDWS1638-3-006	HYDRAULIC SUPPORT	2
17	MDWS1638-3-007	HYDRAULIC SUPPORT	1
18	MDWS1638-3-008	WIRE DIRECTION TRAFFOLYTE LABEL	2
19	MDWS1638-4	MDWS TENSIONING UNIT 5" STROKE	1
20	MDWS1638-5	MDWS WIRE DRIVE ASSY	1
21	MDWS1638-15	IDLER PULLEY	3
22	MDWS1638-15-002	TRAFFOLYTE LABEL	3
23	MDWS1642-3-001	MAIN DRIVE PLATE	1
24	MDWS1642-3-002	DWM-S ELECTROPLATED WIRE	1
25	MDWS1642-3-003	MDWS WIRE GUARD	2
26	MDWS1642-3-004	MDWS WIRE GUARD	1
27	OR4505000	O-RING	1
28	WJ200UM-01-25	DRYLIN W CARRIAGE FIXED	2
29	WJ200UM-01-25-LL	DRYLIN W CARRIAGE FLOATING	2



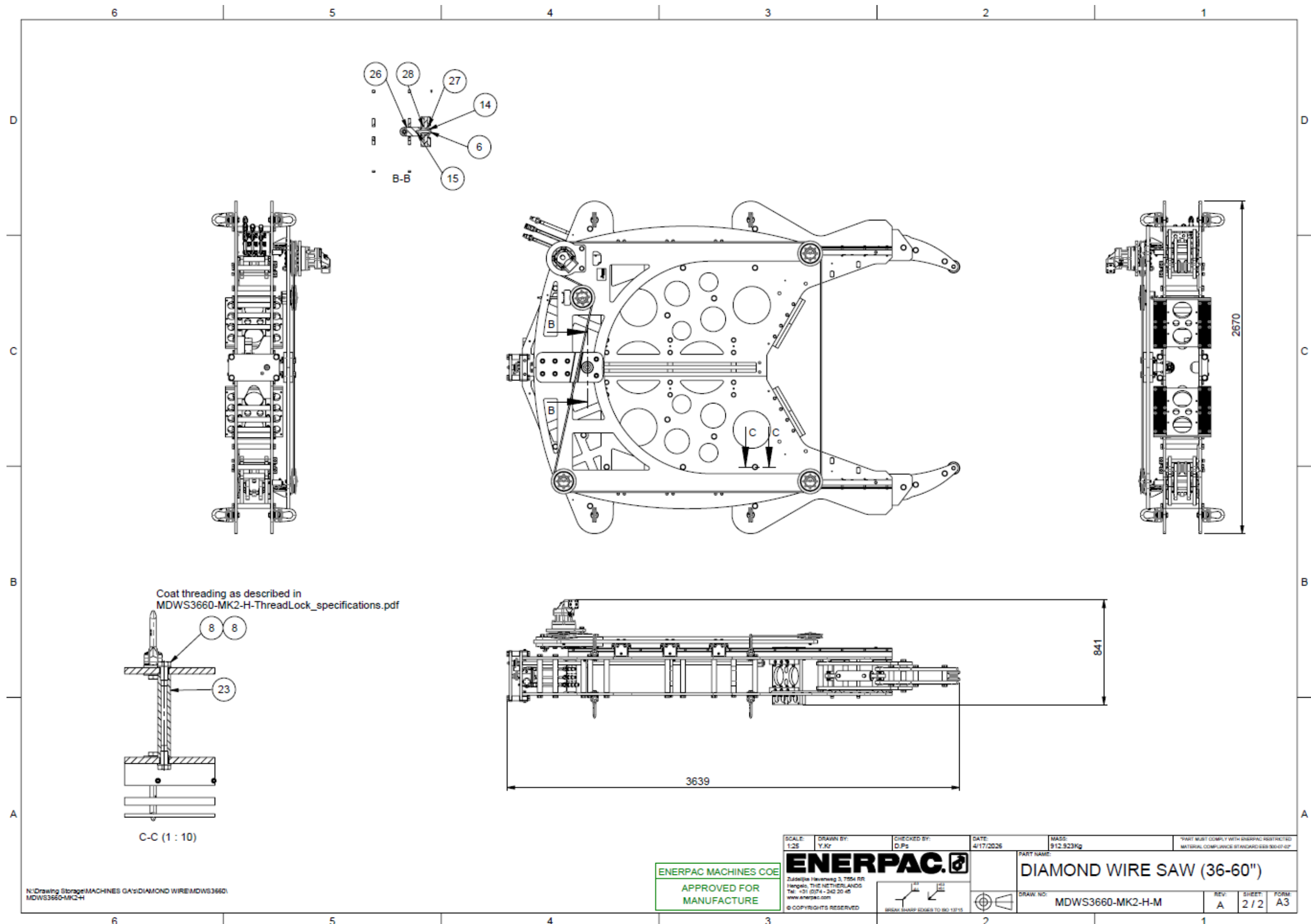
ITEM NO	PART NUMBER	DESCRIPTION	QTY.
1	B01200.100.090	M10X90 GR8-8 HEX HEAD BOLT ISO 4014 (BZF)	2
2	B01200.100.110	M10X110 GR8-8 HEX HEAD BOLT ISO 4014 (BZF)	6
3	B01200.120.080	M12X80 GR8-8 HEX HEAD BOLT ISO 4014 (BZF)	16
4	B55000.200.050	M20X50 A4-70 HEX HEAD BOLT ISO 4014 (SS)	8
5	B55000.200.070	M20X70 A4-70 HEX HEAD BOLT ISO 4014 (SS)	24
6	B01200.200.090	M20X90 GR8-8 HEX HEAD BOLT ISO 4014 (BZF)	1
7	B01300.100.001	M10X1.5 NUT, STYLE 1 COARSE DIN 934 (BZF)	6
8	B55000.240.045	M24X45 A4-80 HEX HEAD BOLT ISO 4017 (SS)	44
9	B55080.120.001	M12X1.75 A4-70 NUT DIN 934 (SS)	16
10	B55420.100.001	M10 flat washer DIN125-A, A4	14
11	B55420.120.001	M12 flat washer DIN125-A, A4	32
12	B55420.200.001	M20 flat washer DIN125-A, A4	24
13	B55420.240.001	M24 flat washer DIN125-A, A4	44
14	B55530.200.001	M20 flat washer DIN6021 A4	9
15	B71110.200.030	Helicoll M20x30	1
16	MDWS3660-T-001	MAIN MACHINE PLATE	1
17	MDWS3660-T-002	MAIN MACHINE PLATE	1
18	MDWS3660-T-003	MAIN MACHINE PLATE	1
19	MDWS3660-T-004	MAIN MACHINE PLATE	1
20	MDWS3660-T-005	CROSS BRACE	3
21	MDWS3660-T-007	CLAMP ASSEMBLY LOCATING PIN	4
22	MDWS3660-T-011	GUIDE RAIL	2
23	MDWS3660-T-013	CLAMP ARM PIVOT	22
24	MDWS3660-8	CLAMP ARM ASSEMBLY	1
25	MDWS3660-9	CLAMP ARM ASSEMBLY	1
26	MDWS3660-10	MDWS3660 FEED ASSEMBLY	1
27	MDWS3660-10-007	DRIVE RING	1
28	MDWS3660-11	DIAMOND WIRE DRIVE	1
29	MDWS3660-12	CLAMP PLATE	2
30	MDWS3660-13	HYDRAULIC POWER PANEL	1
31	SSFED6RM20	SSFED6RM20	8
32	WS-10-80-SL-1000	DRYLIN LINEAR GUIDE SYSTEM	2
33			1

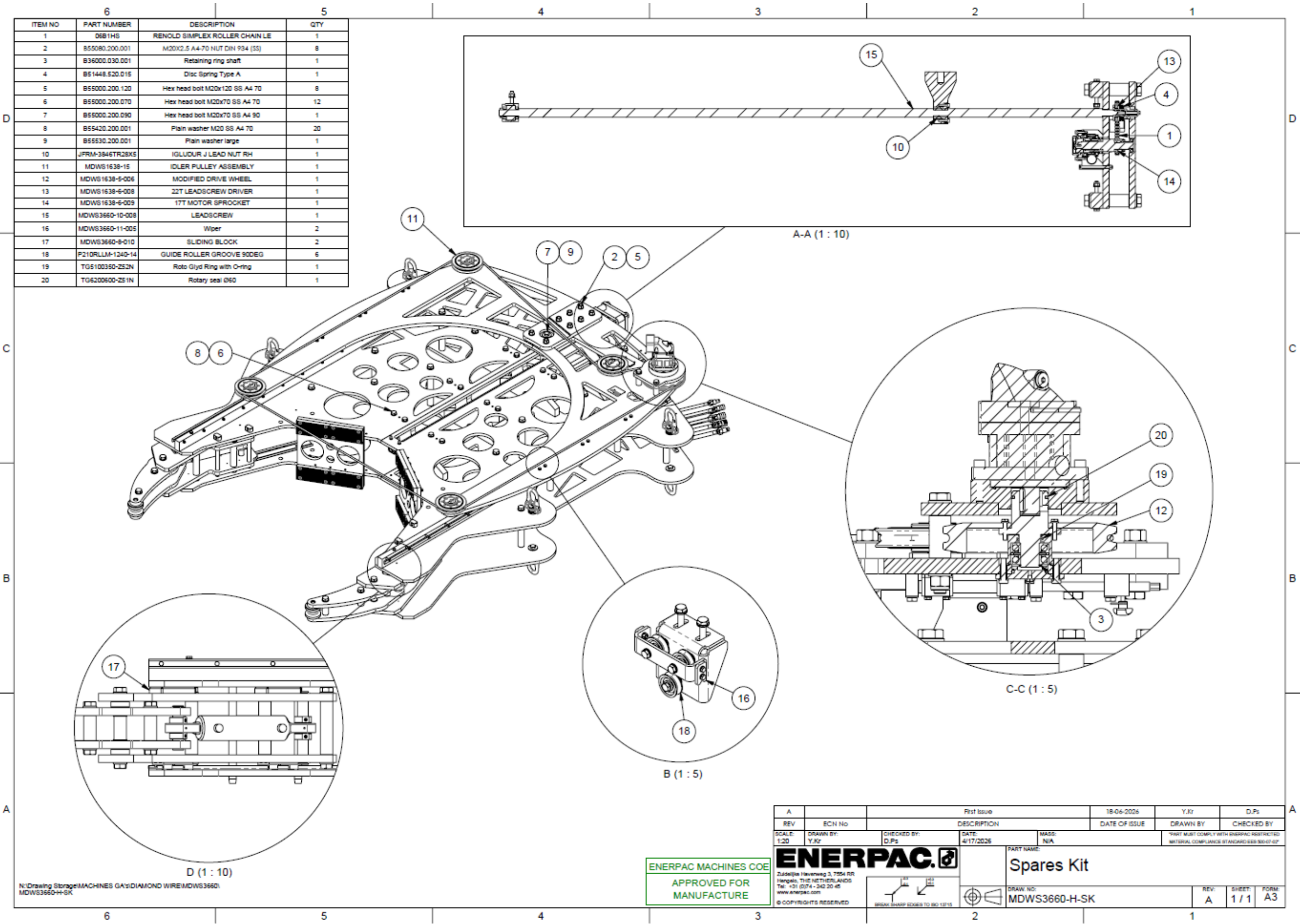
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ENERPAC MACHINES COE
APPROVED FOR
MANUFACTURE

REV	ECN No	DESCRIPTION	DATE OF ISSUE	DRAWN BY	CHECKED BY
SCALE: 1:50	DRAWN BY: Y.Kz	CHECKED BY: D.Ps	DATE: 4/17/2025	MASS: 912.923Kg	PART NAME: DIAMOND WIRE SAW (36-60")
ENERPAC		PART NAME: DIAMOND WIRE SAW (36-60")			
Zuidrijn 18avenue 3, 7554 RR Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com		DRAW NO: MDWS3660-MK2-H-M			
© COPYRIGHTS RESERVED		REV: A SHEET: 1/2 FORM: A3			

NOTE: MDWS3660, see MDWS3660-H-SK for a list of MDWS spare parts. Items listed in MDWS3660-H-SK are not available for purchase separately, only as part of the MDWS3660 spare kit.





ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	06B1HS	RENOLD SIMPLEX ROLLER CHAIN LE	1
2	B55080.200.001	M20X2.5 A4-70 NUT DIN 934 (SS)	8
3	B36000.030.001	Retaining ring shaft	1
4	B51448.520.015	Disc Spring Type A	1
5	B55000.200.120	Hex head bolt M20x120 SS A4 70	8
6	B55000.200.070	Hex head bolt M20x70 SS A4 70	12
7	B55000.200.090	Hex head bolt M20x90 SS A4 90	1
8	B55420.200.001	Plain washer M20 SS A4 70	20
9	B55530.200.001	Plain washer large	1
10	JFRM-3846TR28X5	IGLUDUR J LEAD NUT RH	1
11	MDWS1638-15	IDLER PULLEY ASSEMBLY	1
12	MDWS1638-5-006	MODIFIED DRIVE WHEEL	1
13	MDWS1638-6-008	22T LEADSCREW DRIVER	1
14	MDWS1638-6-009	17T MOTOR SPROCKET	1
15	MDWS3660-10-008	LEADSCREW	1
16	MDWS3660-11-005	Wiper	2
17	MDWS3660-8-010	SLIDING BLOCK	2
18	P210RLLM-1240-14	GUIDE ROLLER GROOVE 90DEG	6
19	TG5100350-252N	Roto Glyd Ring with O-ring	1
20	TG6200600-251N	Rotary seal Ø60	1

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MANUFACTURE

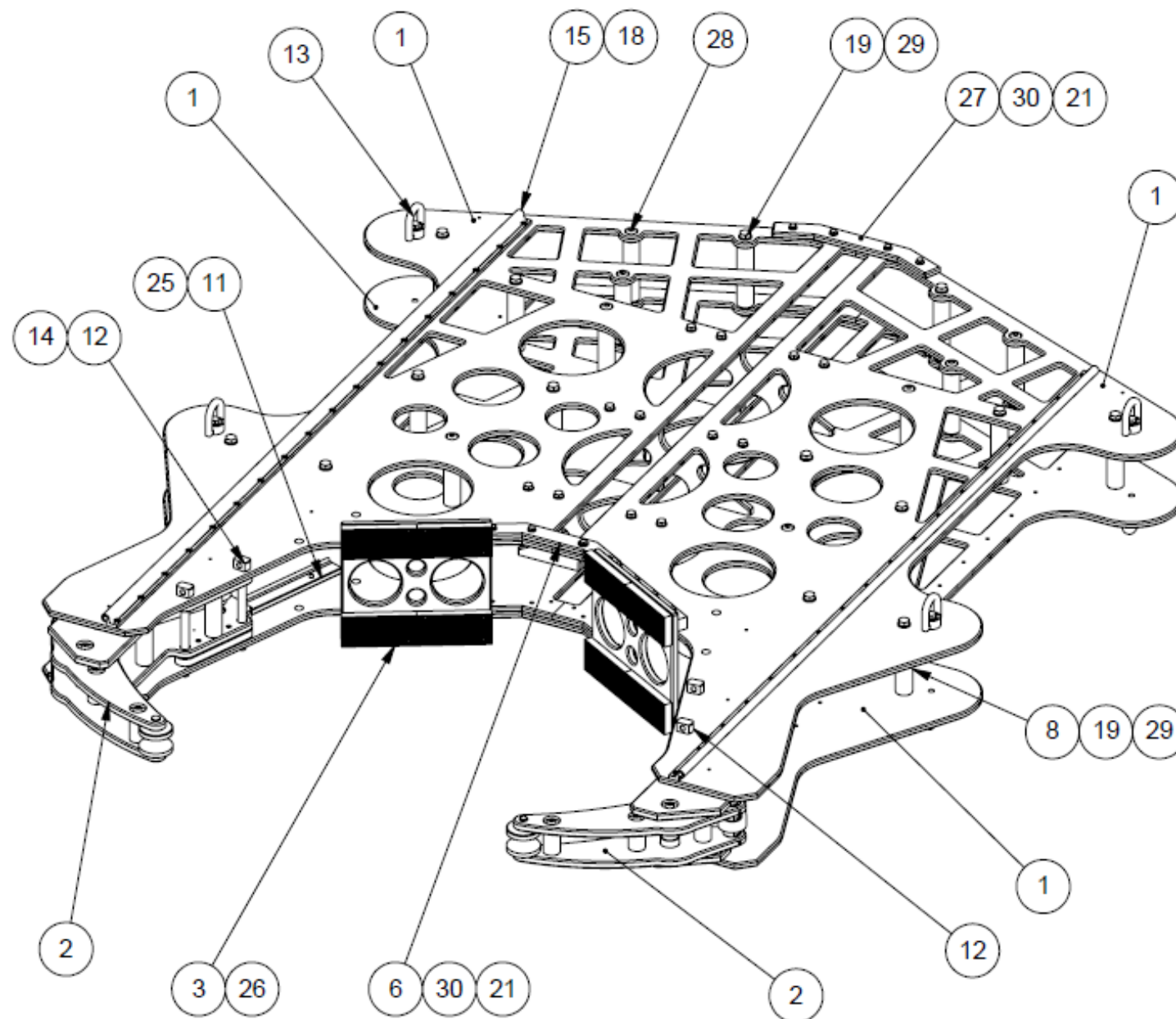
A	REV	ECN No	First Issue	18-06-2026	Y.Jr	D.Ps
SCALE: 1:20	DRAWN BY: Y.Jr	CHECKED BY: D.Ps	DATE: 4/17/2026	MASS: N/A	PART MUST COMPLY WITH ENERPAC RESTRICTED MATERIAL COMPLIANCE STANDARD 668-930-07-02	
ENERPAC			PART NAME: Spares Kit			
Zuidelijke Havenweg 3, 7054 RB Hengelo, THE NETHERLANDS Tel: +31 (0)74 - 242 20 45 www.enerpac.com © COPYRIGHTS RESERVED			DRAW NO: MDWS3660-H-SK			REV: A
			SHEET: 1 / 1			FORM: A3

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IF IN DOUBT ASK

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MDWS3660-1-001	MAIN MACHINE PLATE	4
2	MDWS1638-2	CLAMP ARM ASSEMBLY	2
3	OB3665	jaw plate	8
4	MDWS1638-1-002	FIXED CLAMP BACKPLATE	2
5	MDWS1638-1-003	FIXED FOOT MOUNT	4
6	MDWS3660-1-002	JOINING STRIP	2
7	MDWS3660-1-003	CROSS BRACE	3
8	MDWS1638-1-004	CLAMP SUPPORT	22
9	MDWS1638-1-006	CLAMP ARM SUPPORT BLOCK	2
10	WW-10-80-10	DRYLIN W GUIDE BLOCK	4
11	WS-10-80-SL-1000	DRYLIN LINEAR GUIDE SYSTEM	2
12	MDWS1638-1-005	CLAMP ASSY LOCATING PIN	4
13	RLP-M16-10	ROTATING LIFTING POINT	8
14	89104	Ø5 RETAINING PIN S/STEEL	4
15	WS-25-2600	DRYLIN W ROUND RAIL	2
16	M16X2X30SHCSA2SS	M16X30 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	4
17	M4X0.7X35SHCSA2SS	M4X35 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	16
18	M10X1.5X25BHCSA2SS	M10X25 A2SS BUTTON HEAD CAP SCREW COARSE ISO 7380 (SS)	36
19	M20X2.5X50HCSA2SS	M20X50 A2SS HEX HEAD SCREW COARSE ISO 4014 (SS)	28
20	M20-WASHER-E-SS	M20 FLAT WASHER FORM E BS 4320 (SS)	4
21	M12-WASHER-SS	M12 FLAT WASHER FORM A BS 4320 (SS)	38
22	M16X2X40HCSA2SS	M16X40 A2SS HEX HEAD SCREW COARSE ISO 4014 (SS)	24
23	M16-WASHER-SS	M16 FLAT WASHER FORM A BS 4320 (SS)	30
24	M12X1.75X60HCSA2SS	M12X60 A2SS HEX HEAD SCREW COARSE ISO 4014 (SS)	28
25	M8X1.25X25SHCSA2SS	M8X25 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
26	M12X1.75X35SHCSA2SS	M12X35 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	32
27	MDWS3660-1-004	JOINING STRIP - MOTOR END	2
28	M20X2.5X60SLHCSA2SS	M20X60 A2SS SOCKET LOW HEAD CAP SCREW COARSE DIN 7984 (SS)	16
29	M20-WASHER-SS	M20 FLAT WASHER FORM A BS 4320 (SS)	24
30	M12X1.75X40HCSA2SS	M12X40 A2SS HEX HEAD SCREW COARSE ISO 4014 (SS)	16



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MANUFACTURE

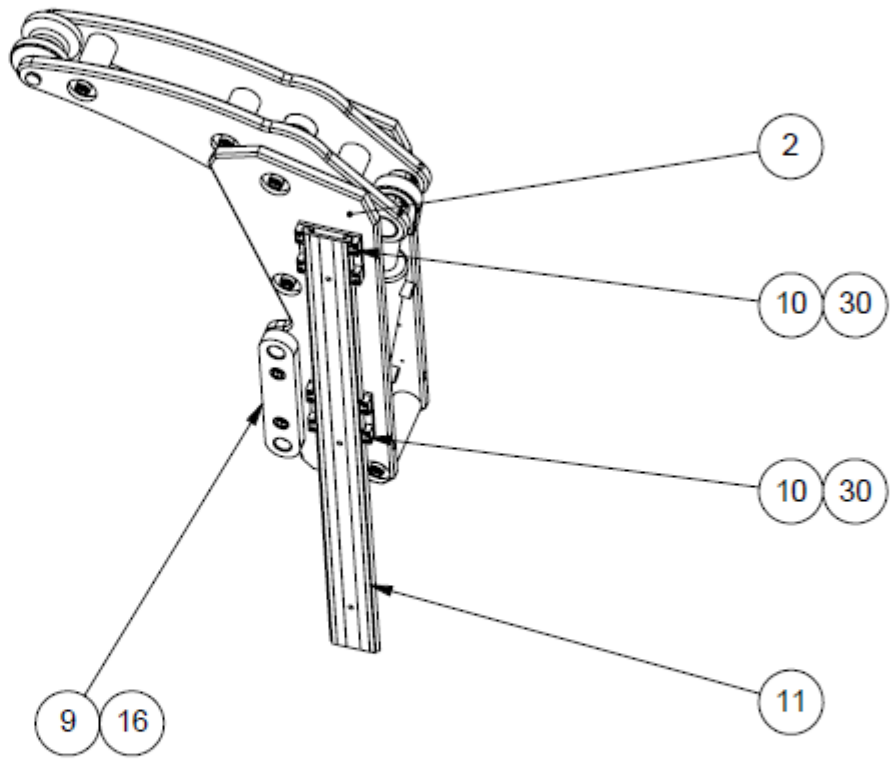
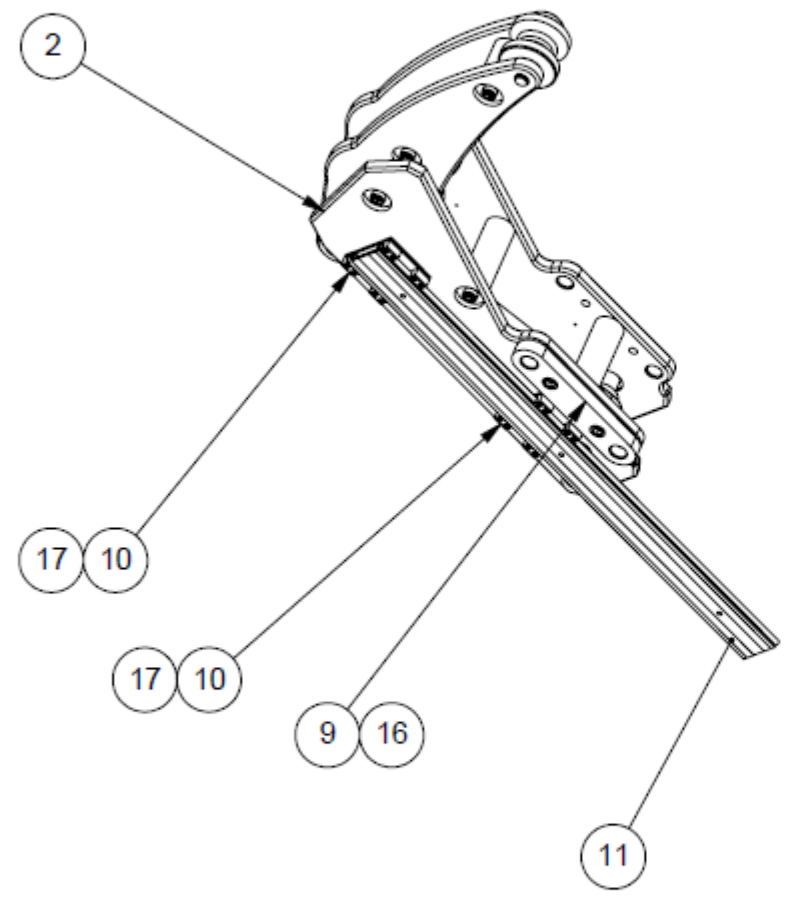
C	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	13/09/2021	EM	RBA
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED
THIRD ANGLE PROJECTION © MIRAGE MACHINES LTD 2014 ALL RIGHTS RESERVED UNDER COPYRIGHT, DESIGN AND PATENT LAW. NO COPY OF THIS DOCUMENT OR THE ARTICLE SHOWN MAY BE MADE WITHOUT PRIOR WRITTEN PERMISSION WEIGHT 656.739Kg DRAWN BY BC 29/04/2014 CHECKED BY RH 30/04/2014 APPROVED BY TITLE MDWS3660 CLAMP ASSY SCALE: 1:20					
PORTABLE PERFORMANCE 10 ENTERPRISE WAY, JUBILEE PARKWAY, STORES ROAD, DERBY DE21 4BB TEL (01332) 291787 FAX (01332) 370358 E MAIL info@mirage-machines.co.uk			DWG No MDWS3660-1 SHEET 1 OF 3		
					A3

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DO NOT SCALE

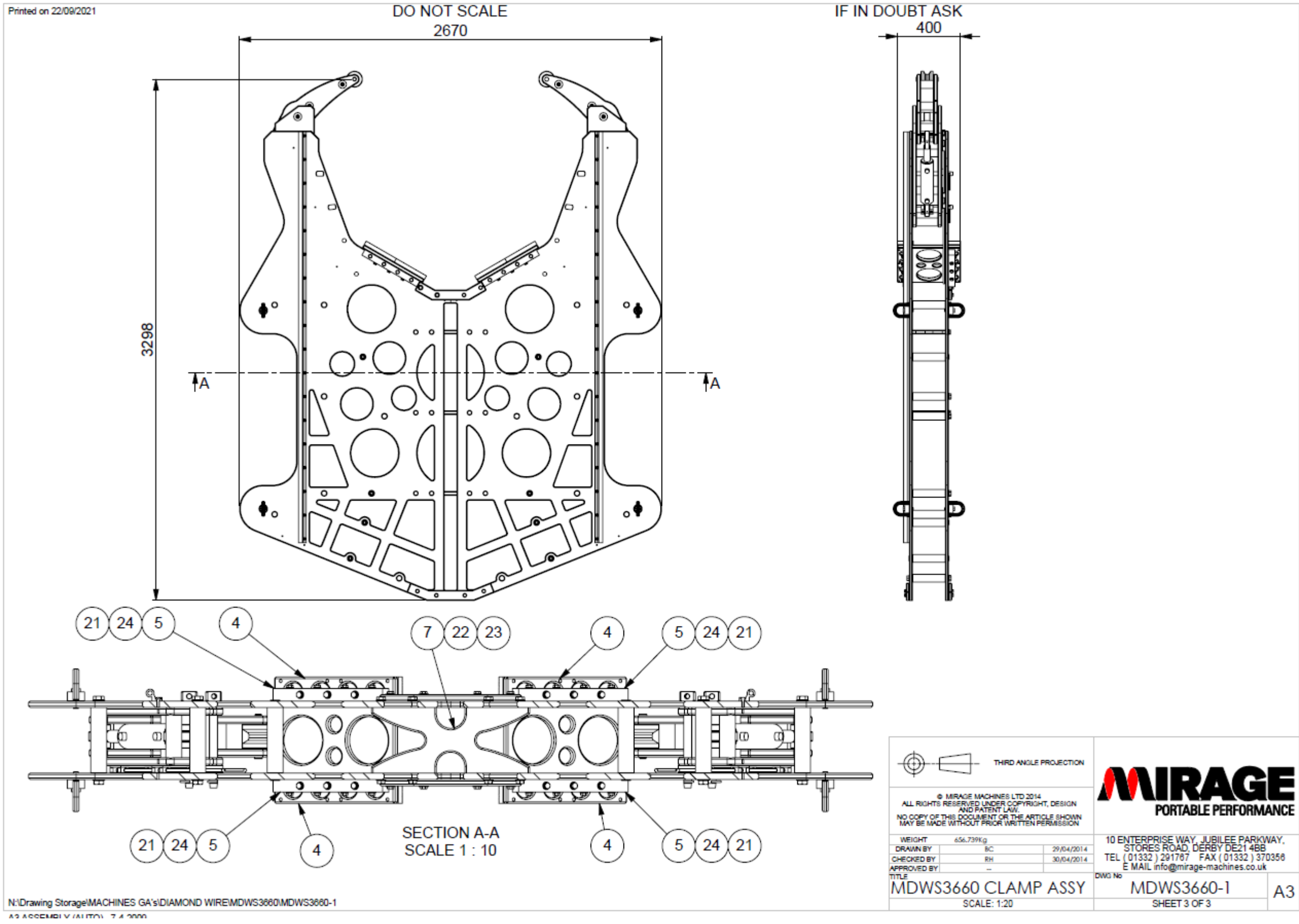
IF IN DOUBT ASK



NOTES:
NOTE THE ARRANGEMENT OF PARTS TO HAND MDWS1638-2
ASSEMBLY TO MAKE RIGHT AND LEFT HAND VARIANTS

 THIRD ANGLE PROJECTION		 MIRAGE PORTABLE PERFORMANCE		
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WEIGHT	656.739kg			
DRAWN BY	BC 29/04/2014			
CHECKED BY	RH 30/04/2014	10 ENTERPRISE WAY, JUBILEE PARKWAY, STORES ROAD, DERBY DE21 4BB TEL (01332) 291787 FAX (01332) 370356 E MAIL info@mirage-machines.co.uk		
APPROVED BY	--			
TITLE				
MDWS3660 CLAMP ASSY		DWG No	MDWS3660-1	A3
SCALE: 1:20		SHEET 2 OF 3		

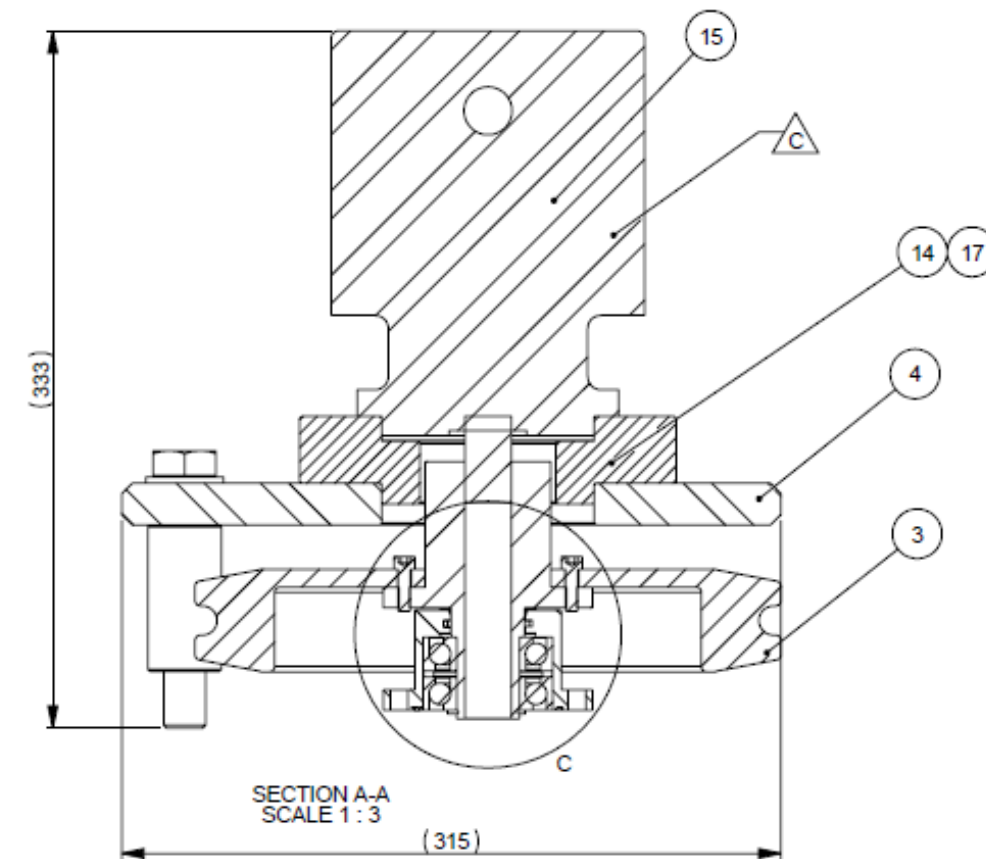
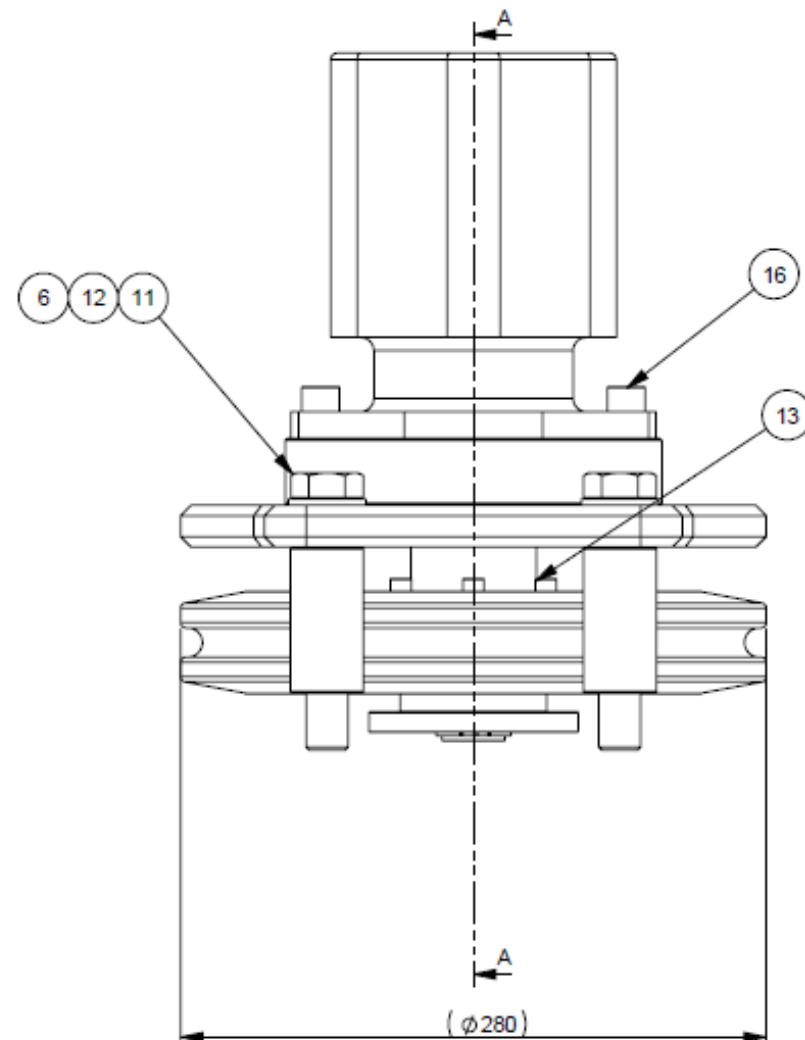
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Printed on 06-Feb-17

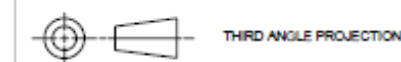
DO NOT SCALE

IF IN DOUBT ASK



ITEM NO.	REV.	PART NUMBER	DESCRIPTION	QTY.
1	B	MDWS1638-5-010	DRIVE WHEEL BEARING HOUSING	1
2		MDWS1638-5-013	DRIVE SPIGOT	1
3		MDWS1638-5-008	MODIFIED DRIVE WHEEL	1
4		MDWS3660-5-002	MOTOR MOUNT PLATE	1
5		MDWS1638-5-011	BEARING SPACER	1
6		MDWS3660-5-001	DRIVE PLATE SPACER	2
7		7208	ANGULAR CONTACT BALL BEARING	2
8		D1400 - 30	EXTERNAL CIRCLIP	1
9		65x2	NITRILE O-RING	1
10		TG5100350-Z52N	ZURCON ROTO GLYD RING S	1
11		M20 x 120	Hex Screw Grade AB - BS EN 24017	2
12		M20	WASHER (FORM A)	2
13		M6 x 20	Hex Socket Head - BS EN ISO 4762	6
14		MDWS1638-5-014	PARKER MOTOR SPACER	1
15		M2B25412S30NB	HYDRAULIC MOTOR	1
16		M12 x 40	Hex Socket Head - BS EN ISO 4762	2
17		M12 x 35	Hex Socket Head - BS EN ISO 4762	4

C	-	Replaced Sunfab motor with Parker M2 motor, MDWS1638-5-012 with MDWS1638-5-013, and added MDWS1638-5-014 at request of RB	03-Feb-17	DRB	SR
B	2569	PARTS TRQ1D0350-4V012 & D1300-0520 REMOVED, TG5100350-Z52N & OR2006500 ADDED.	28/11/2014	SR	KB
A	2569	PARTS MDWS1638-5-010, MDWS1638-5-011 & MDWS1638-5-012 WERE MDWS1638-5-001, MDWS1638-5-003 & MDWS1638-5-004, PARTS TRQ1D0350-4V012 & D1300-0520 ADDED.	25/11/2014	SR	BC
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED



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WEIGHT	31.458kg
DRAWN BY	BC
CHECKED BY	KB
APPROVED BY	-
TITLE	MDWS WIRE DRIVE ASSY

SCALE: 1:10

MIRAGE
PORTABLE PERFORMANCE

10 ENTERPRISE WAY, JUBILEE PARKWAY,
STORES ROAD, DERBY DE21 4BB
TEL (01332) 291787 FAX (01332) 370356
E MAIL info@mirage-machines.co.uk

DWG No

MDWS3660-5

A3

SHEET 1 OF 2

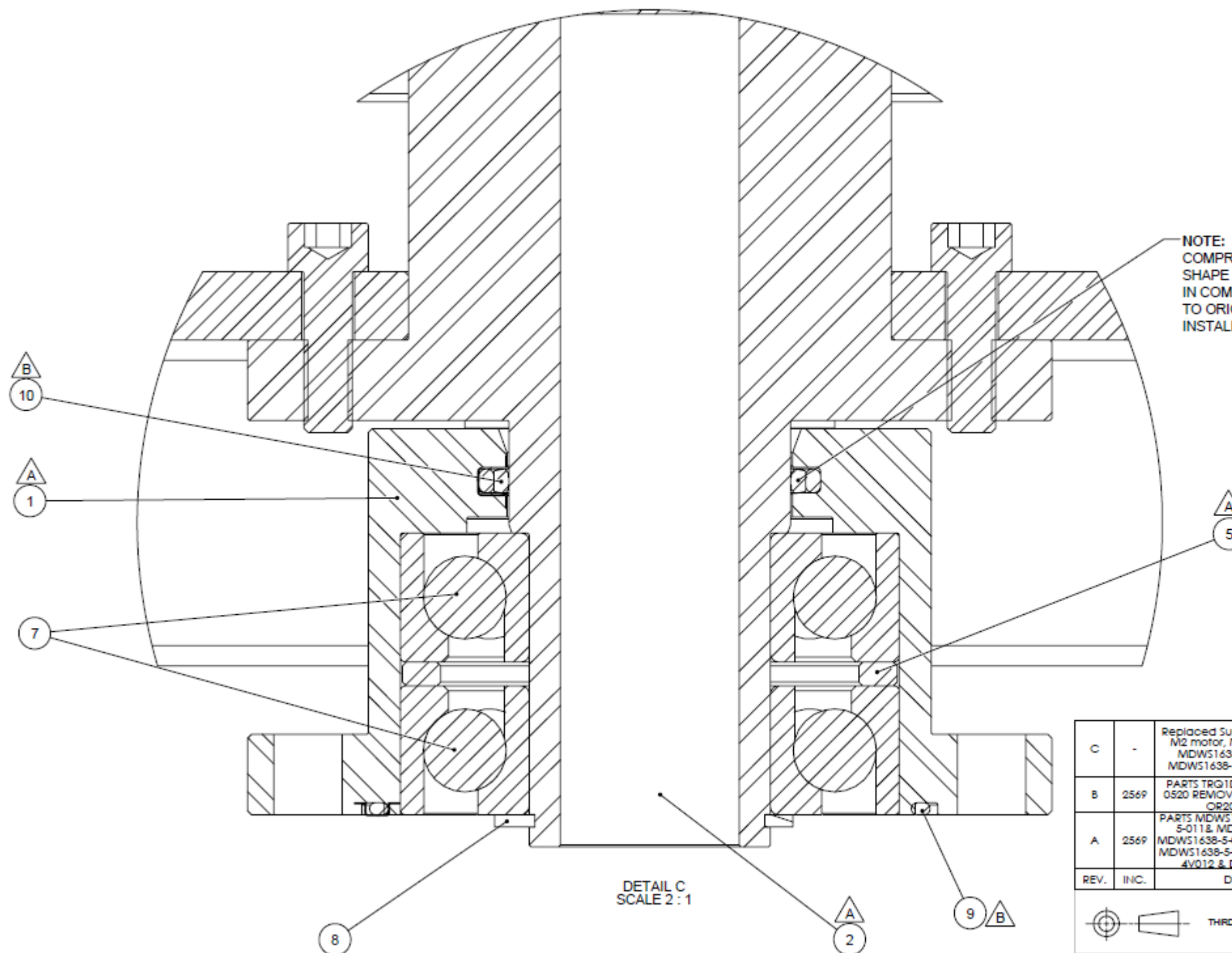
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MANUFACTURE

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Printed on 06-Feb-17

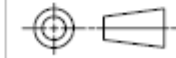
DO NOT SCALE

IF IN DOUBT ASK



DETAIL C
SCALE 2:1

REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED
C	-	Replaced Sunfab motor with Parker M2 motor, MDWS1638-5-012 with MDWS1638-5-013, and added MDWS1638-5-014 at request of RB	03-Feb-17	DRB	SR
B	2569	PARTS TRG1D0350-4V012 & D1300-0520 REMOVED, TG5100350-Z52N & OR2006500 ADDED.	28/11/2014	SR	KB
A	2569	PARTS MDWS1638-5-010, MDWS1638-5-011, MDWS1638-5-012 WERE MDWS1638-5-001, MDWS1638-5-003 & MDWS1638-5-004. PARTS TRG1D0350-4V012 & D1300-0520 ADDED.	25/11/2014	SR	BC

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WEIGHT	31.458kg	DRAWN BY	BC	01-May-14	10 ENTERPRISE WAY, JUBILEE PARKWAY, STORES ROAD, DERBY DE21 4BB TEL (01332) 291787 FAX (01332) 370358 E MAIL info@mirage-machines.co.uk
CHECKED BY	KB	APPROVED BY	--	05-Jan-14	
TITLE			DWG No		
MDWS WIRE DRIVE ASSY			MDWS3660-5		A3
SCALE: 1:10			SHEET 2 OF 2		

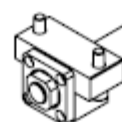
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Printed on 22/09/2021

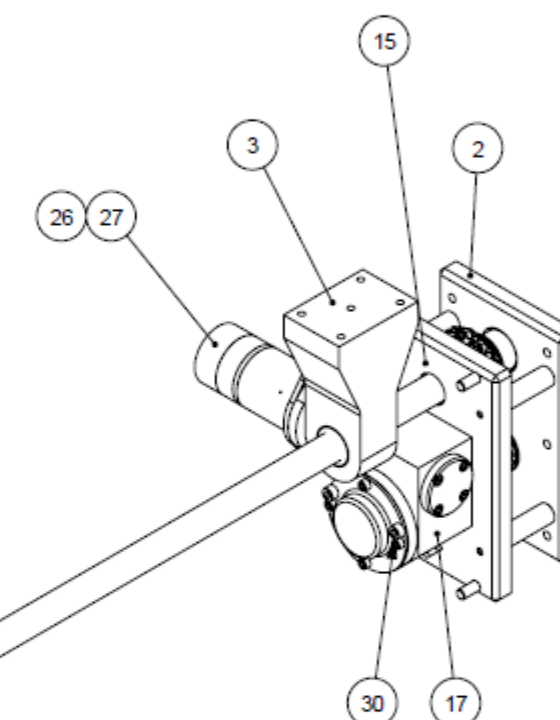
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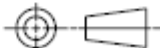
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	MDWS3660-6-001	MDWS3660 LEADSCREW	1
2	MDWS1638-6-002	FEED GEARBOX SUPPORT PLATE	1
3	MDWS620-6-003	BALLNUT CARRIER	1
4	MDWS1638-6-005	FEED PLATE SPACER	4
5	MDWS1638-6-022	FEED DRIVE OUTPUT SHAFT	1
6	MDWS1638-6-021	FEED CHAIN TENSIONER	1
7	MDWS1638-6-008	22T LEADSCREW DRIVER	1
8	MDWS1638-6-009	17T MOTOR SPROCKET	1
9	MDWS1638-6-010	PRESSURE PAD TYPE 1	1
10	MDWS1638-6-011	SPROCKET MOUNTING BUSH	1
11	MDWS1638-6-012	PRESSURE PAD TYPE 2	1
12	MDWS1638-6-013	DRIVE GEAR SPACER 1	1
13	MDWS1638-6-014	DRIVE GEAR SPACER 2	1
14	MDWS1638-6-019	CLUTCH MECH MOUNT	1
15	MDWS1638-6-017	FEED GEARBOX MOUNT PLATE	1
16	MDWS1638-6-020	RETAINING WASHER	1
17	HYM0200-6	30:1 Subsea reduction box	1
18	H370FM-2023-21	'Iglidur' H370 Flanged Bearing	1
19	1000-065-2000	BELLEVILLE DISC SPRINGS	4
20	JFRM-3846TR28X5	IGLIDUR J LEAD NUT RH	1
21	EK20-C7N	SUPPORT UNIT	1
22	06B1HS	SIMPLEX ROLLER CHAIN 42 LINKS	1
23	KM5	LOCK NUT	1
24	MB5	LOCKING WASHER	1
25	7204 BEP	SINGLE ROW ANGULAR CONTACT BEARING	1
26	151 G 0211	OMM 50 MOTOR FLANGE	1
27	151 G 0037	OMM 50 MOTOR END PORT	1
28	M6X1X25SHCSA2SS	M6X25 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
29	M10X1.5X35SHCSA2SS	M10X35 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	5
30	M8X1.25X100SHCSA2SS	M8X100 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	6
31	M8X1.25X35HHFBA2SS	M8X35 A2SS HEX FLANGE BOLT COARSE ISO 4162 (SS)	1
32	M10X1.5X40SHCSA2SS	M10X40 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	2
33	M8X1.25X90SHCSA2SS	M8X90 A2SS SOCKET HEAD CAP SCREW COARSE ISO 4762 (SS)	1
34	M6X1X16CSKA2SS	M6X16 A2SS SOCKET HEAD CSK SCREW COARSE ISO 10642 (SS)	1
35	KK8-7-18A	TYPE A KEY	1
36	KK5-20SSA	TYPE A KEY	1



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C	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	13/09/2021	EM	RBA
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED BY



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PORTABLE PERFORMANCE

WEIGHT		26.038kg			
DRAWN BY	BC	19/12/2013			
CHECKED BY	RH	30/04/2014			
APPROVED BY	--				

TITLE

MDWS3660 FEED ASSEMBLY

SCALE: 1:1

DWG No

MDWS3660-6

SHEET 1 OF 2

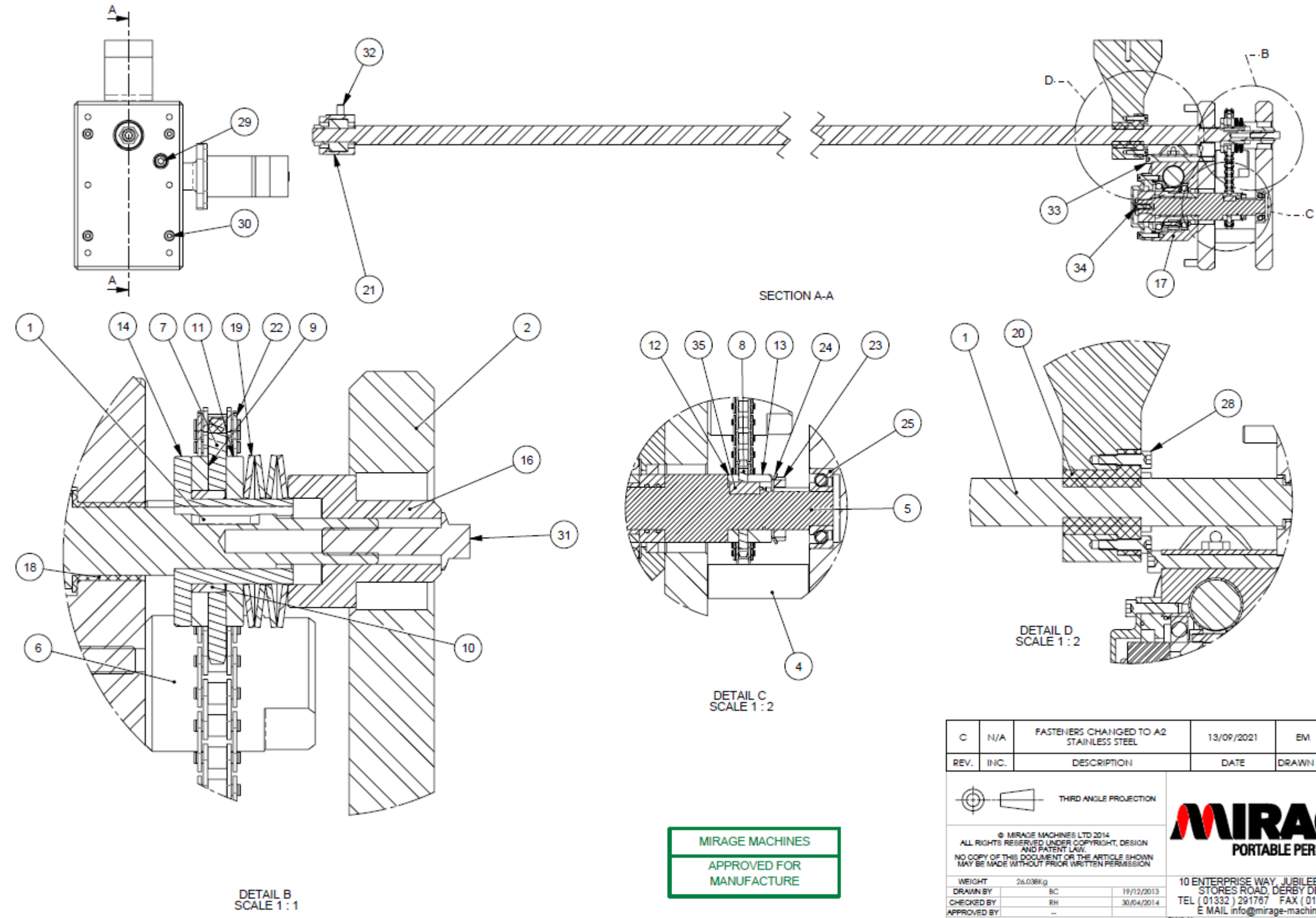
10 ENTERPRISE WAY JUBILEE PARKWAY,
STORES ROAD, DERBY DE21 4BB
TEL (01332) 291787 FAX (01332) 370358
E MAIL info@mirage-machines.co.uk

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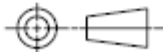
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IF IN DOUBT ASK



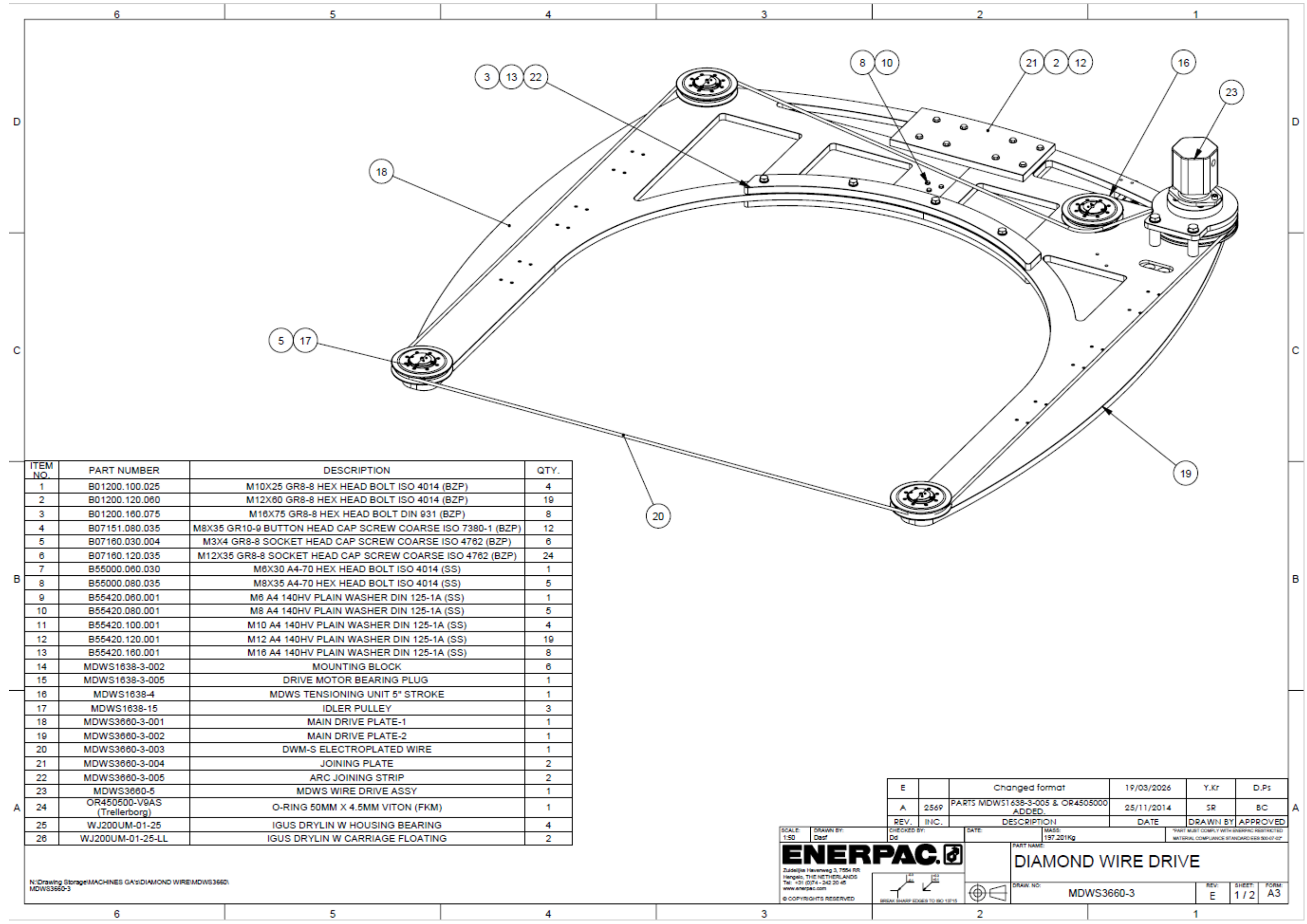
MIRAGE MACHINES
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MANUFACTURE

C	N/A	FASTENERS CHANGED TO A2 STAINLESS STEEL	13/09/2021	EM	RBA
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED

		THIRD ANGLE PROJECTION
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WEIGHT	26.038kg	
DRAWN BY	BC	19/12/2013
CHECKED BY	RH	30/04/2014
APPROVED BY	—	
TITLE		
MDWS3660 FEED ASSEMBLY		
SCALE: 1:5		

 MIRAGE PORTABLE PERFORMANCE	
10 ENTERPRISE WAY, JUBILEE PARKWAY, STORES ROAD, DERBY DE21 4BB TEL (01332) 291787 FAX (01332) 370358 E MAIL info@mirage-machines.co.uk	
DWG No	
MDWS3660-6	A3
SHEET 2 OF 2	

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	B01200.100.025	M10X25 GR8-8 HEX HEAD BOLT ISO 4014 (BZP)	4
2	B01200.120.060	M12X80 GR8-8 HEX HEAD BOLT ISO 4014 (BZP)	19
3	B01200.160.075	M16X75 GR8-8 HEX HEAD BOLT DIN 931 (BZP)	8
4	B07151.080.035	M8X35 GR10-9 BUTTON HEAD CAP SCREW COARSE ISO 7380-1 (BZP)	12
5	B07160.030.004	M3X4 GR8-8 SOCKET HEAD CAP SCREW COARSE ISO 4762 (BZP)	6
6	B07160.120.035	M12X35 GR8-8 SOCKET HEAD CAP SCREW COARSE ISO 4762 (BZP)	24
7	B55000.080.030	M8X30 A4-70 HEX HEAD BOLT ISO 4014 (SS)	1
8	B55000.080.035	M8X35 A4-70 HEX HEAD BOLT ISO 4014 (SS)	5
9	B55420.060.001	M6 A4 140HV PLAIN WASHER DIN 125-1A (SS)	1
10	B55420.080.001	M8 A4 140HV PLAIN WASHER DIN 125-1A (SS)	5
11	B55420.100.001	M10 A4 140HV PLAIN WASHER DIN 125-1A (SS)	4
12	B55420.120.001	M12 A4 140HV PLAIN WASHER DIN 125-1A (SS)	19
13	B55420.160.001	M16 A4 140HV PLAIN WASHER DIN 125-1A (SS)	8
14	MDWS1638-3-002	MOUNTING BLOCK	6
15	MDWS1638-3-005	DRIVE MOTOR BEARING PLUG	1
16	MDWS1638-4	MDWS TENSIONING UNIT 5" STROKE	1
17	MDWS1638-15	IDLER PULLEY	3
18	MDWS3660-3-001	MAIN DRIVE PLATE-1	1
19	MDWS3660-3-002	MAIN DRIVE PLATE-2	1
20	MDWS3660-3-003	DWM-S ELECTROPLATED WIRE	1
21	MDWS3660-3-004	JOINING PLATE	2
22	MDWS3660-3-005	ARC JOINING STRIP	2
23	MDWS3660-5	MDWS WIRE DRIVE ASSY	1
24	OR450500-V9AS (Trellerborg)	O-RING 50MM X 4.5MM VITON (FKM)	1
25	WJ200UM-01-25	IGUS DRYLIN W HOUSING BEARING	4
26	WJ200UM-01-25-LL	IGUS DRYLIN W CARRIAGE FLOATING	2

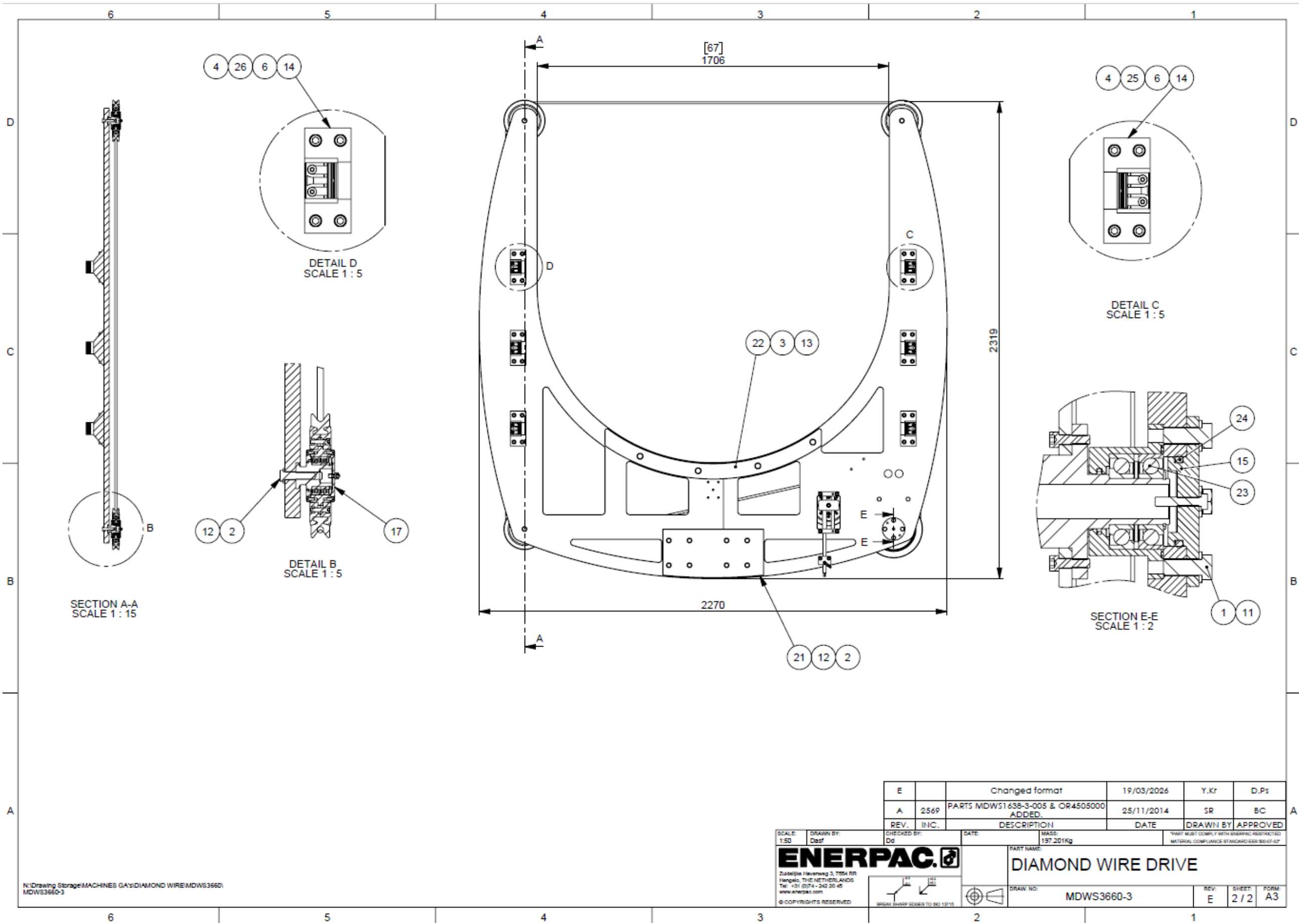
N:\Drawing Storage\MACHINES GA\DIAMOND WIRE\MDWS3660-3
MDWS3660-3

E	Changed format	19/03/2026	Y.Kr	D.Ps
A	2569 PARTS MDWS1638-3-005 & OR4505000 ADDED	25/11/2014	SR	BC
REV.	INC.	DESCRIPTION	DATE	DRAWN BY APPROVED
1	1	197.201Kg		

SCALE: 1:50
DRAWN BY: Dast
CHECKED BY: Dast
DATE: 19/03/2026
PART NAME: DIAMOND WIRE DRIVE
DRAW NO: MDWS3660-3
REV: E
SHEET: 1/2
FORM: A3

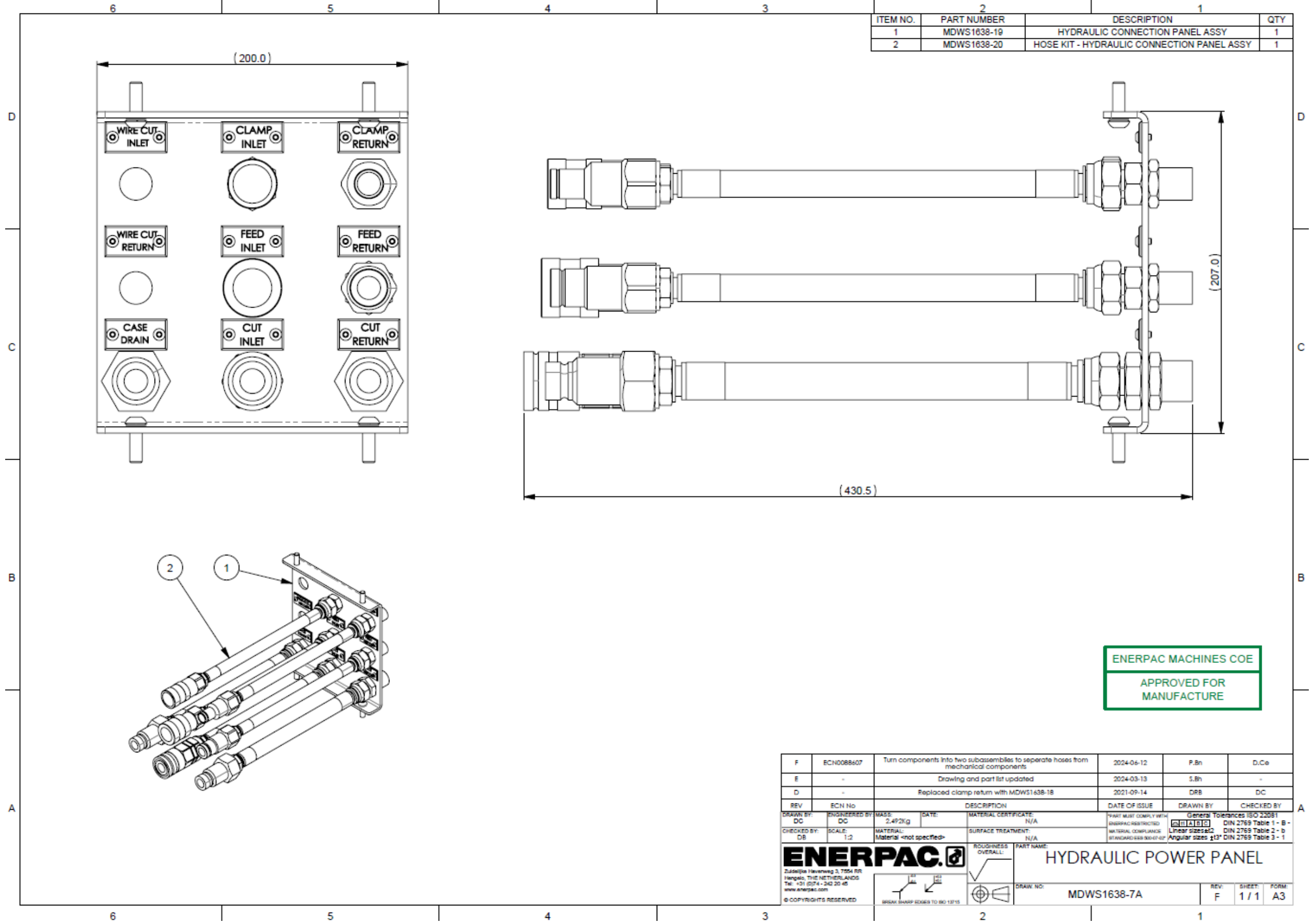
ENERPAC
Zuidelijke Heuweg 3, 7554 RB Hengelo, THE NETHERLANDS
Tel: +31 (0)74 - 242 20 45
www.enerpac.com
© COPYRIGHTS RESERVED

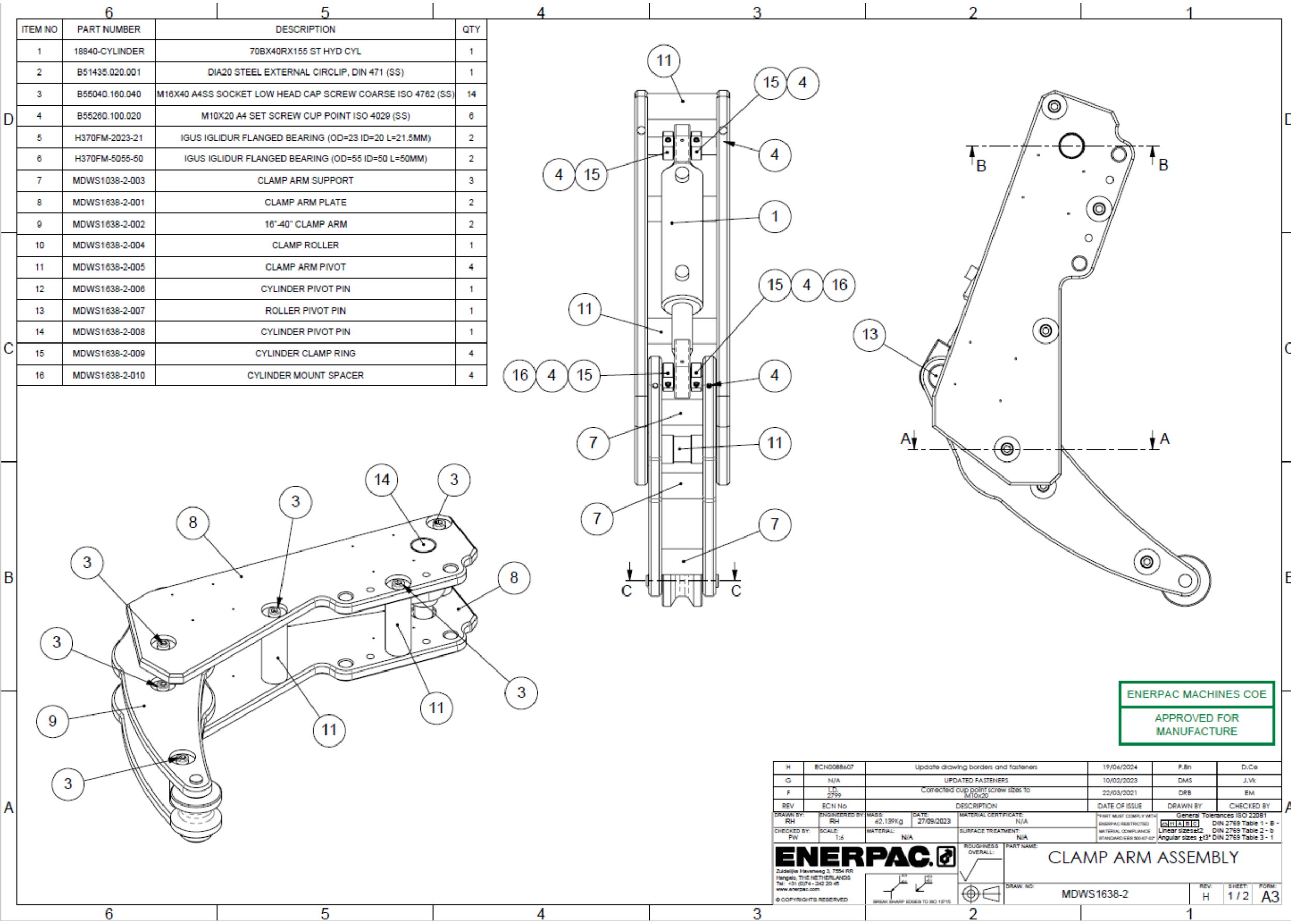
BRISK SHARP EDGES TO R90 13°15'

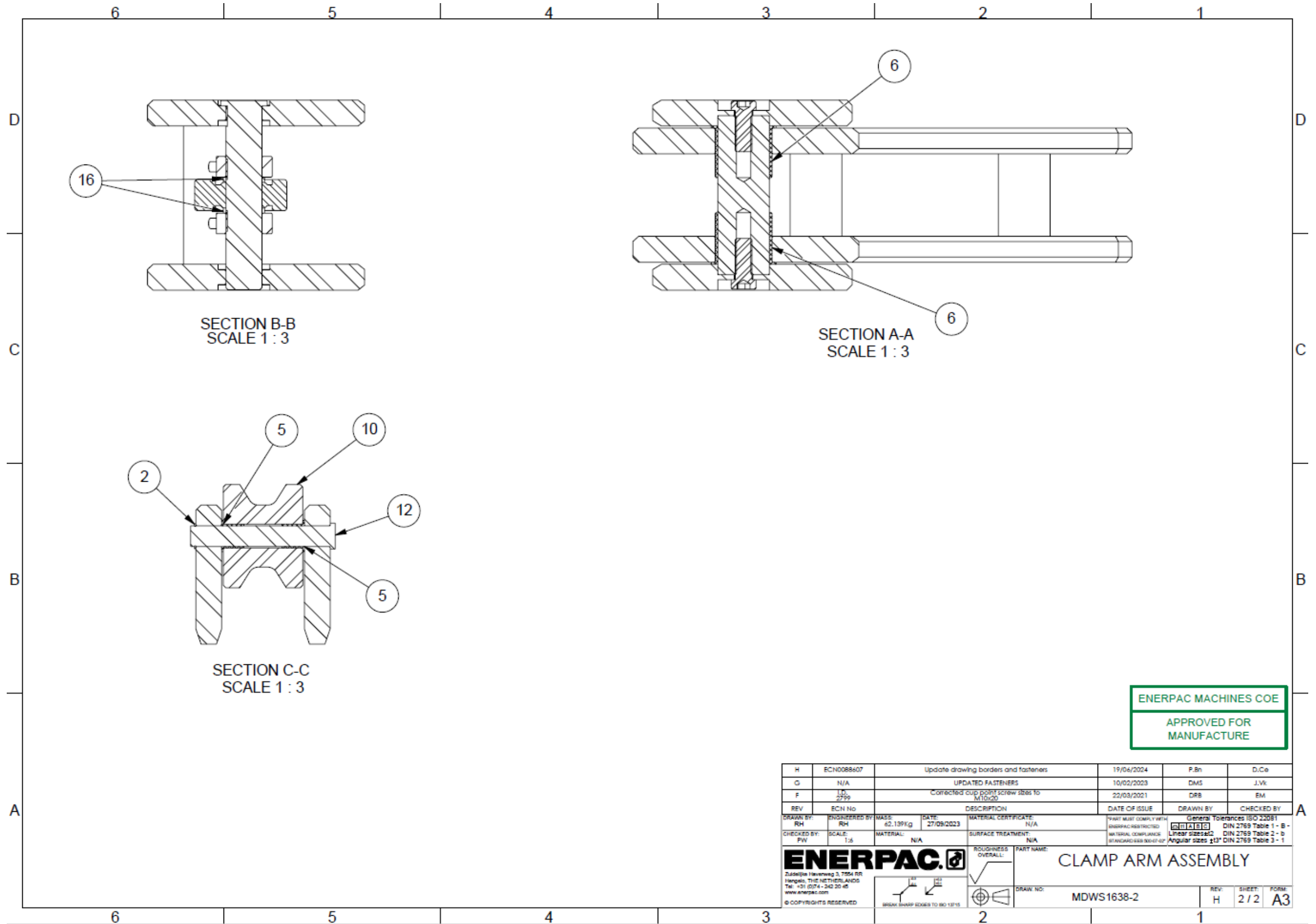


N:\Drawing Storage\MACHINES GA's\DIAMOND WIRE\MDWS3660-3
MDWS3660-3

E		Changed format	19/03/2026	Y.Kr	D.Ps
A	256P	PARTS MDWS1638-3-005 & OR4505000 ADDED.	25/11/2014	SR	BC
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED
SCALE:	DRAWN BY:	CHECKED BY:	DATE:	MASS:	PART NAME:
1:50	Dad	Dd		197.201kg	DIAMOND WIRE DRIVE
ENERPAC					
Zuidelijke Havenweg 3, 1954 RR Vierlingsloot, THE NETHERLANDS Tel: +31 (0)74 - 242 20 40 www.enerpac.com					
© COPYRIGHTS RESERVED					
DRAW NO:		MDWS3660-3		REV:	SHEET:
				E	2 / 2
					A3







6. Installation

6.1. Connecting the Power Pack to the Hydraulic Control Panel

It is recommended that the MDWS's are purchased with the Enerpac approved hydraulic power pack & control panel which have been specifically designed for this range of machines, their specifications can be found in their product specific manual.

Enerpac hose and fittings detail (if supplied)

Hose specification between power pack and hydraulic control panel					
Hose line	Hose size	Hose length	Bar rating	End connection 1	End connection 2
(P) Pressure	3/4"	10m	210	Female 1" Quick release	Female 1" Quick release
(T) Tank	1"	10m	210	Female 1 1/4" Quick release	Female 1 1/4" Quick release
(Y) Case Drain	3/4"	10m	210	Female 3/4" Quick release	Female 3/4" Quick release

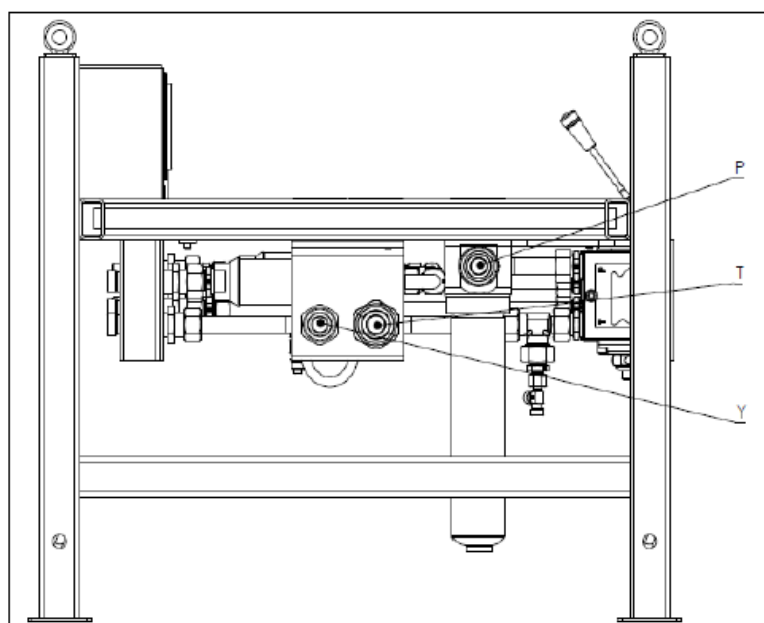


Image of connections on Enerpac supplied Control Panel (from Power pack)

Further information on the control panel can be found in the supplied control panel manual. Refer to the supplied powerpack manual for details regarding the Power pack.

6.2.Connecting hydraulic Control Panel to the MDWS machine

All MDWS machines have three separate hydraulic circuits, each requiring their own hydraulic supply; these are 'Cut', 'Feed' & 'Clamp'.

Enerpac supplied hose and fittings detail

Hose specification between hydraulic control panel and machine					
Hose line	Hose size	Hose length	Bar rating	End connection 1	End connection 2
Feed inlet	1/2"	Optional*	210	Female 1/2" Quick release	Male 1/2" Quick release
Feed outlet	1/2"	Optional*	210	Female 1/2" Quick release	Male 1/2" Quick release
Cut inlet	3/4"	Optional*	210	Female 3/4" Quick release	Male 3/4" Quick release
Cut outlet	3/4"	Optional*	210	Female 3/4" Quick release	Male 3/4" Quick release
Clamp inlet	3/8"	Optional*	210	Female 1/2" Quick release	Male 1/2" Quick release
Clamp outlet	3/8"	Optional*	210	Female 1/2" Quick release	Male 1/2" Quick release
Case drain	3/4"	Optional*	210	Female 3/4" Quick Release	Male 3/4" Quick release

Hose lengths available from 5m to 30m in increments of 5m

Control Panel connection detail

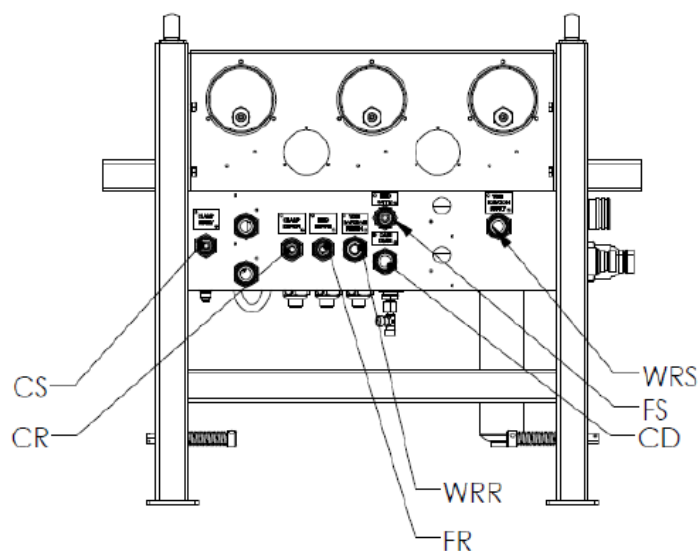
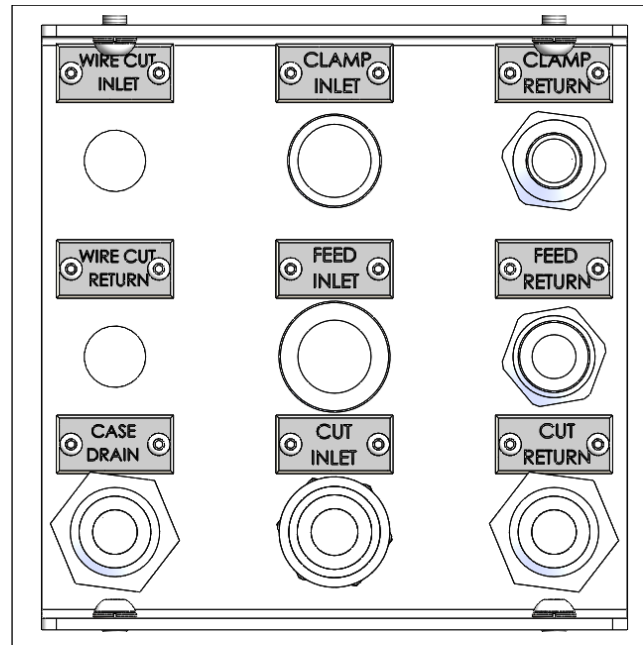


Image of machine connections on Enerpac supplied Control Panel

Table showing hydraulic control panel connections				
Designation	Port for	Standard	Quick Release Coupling Size /type	Maximum Pressure [Bar]
WRS	Cutter Motor Supply	ISO 16028	3/4" Male	210
WRR	Cutter Motor Return	ISO 16028	3/4" Female	210
CD	Cutter Motor Case Drain	ISO 16028	3/4" Female	210
FS	Feed Motor Supply	ISO 16028	1/2" Male	210
FR	Feed Motor Return	ISO 16028	1/2" Female	210
CS	Clamp Cylinder Supply	ISO 16028	1/2" Male	210
CR	Clamp Cylinder Return	ISO 16028	1/2" Female	210

Machine connection detail

The machine hydraulic panel is located at the rear of all the MDWS machines. Note that the panel incorporates fly leads with Quick Release fittings for easy pipe connections, further details are given on drawing MDWS1636-7A.



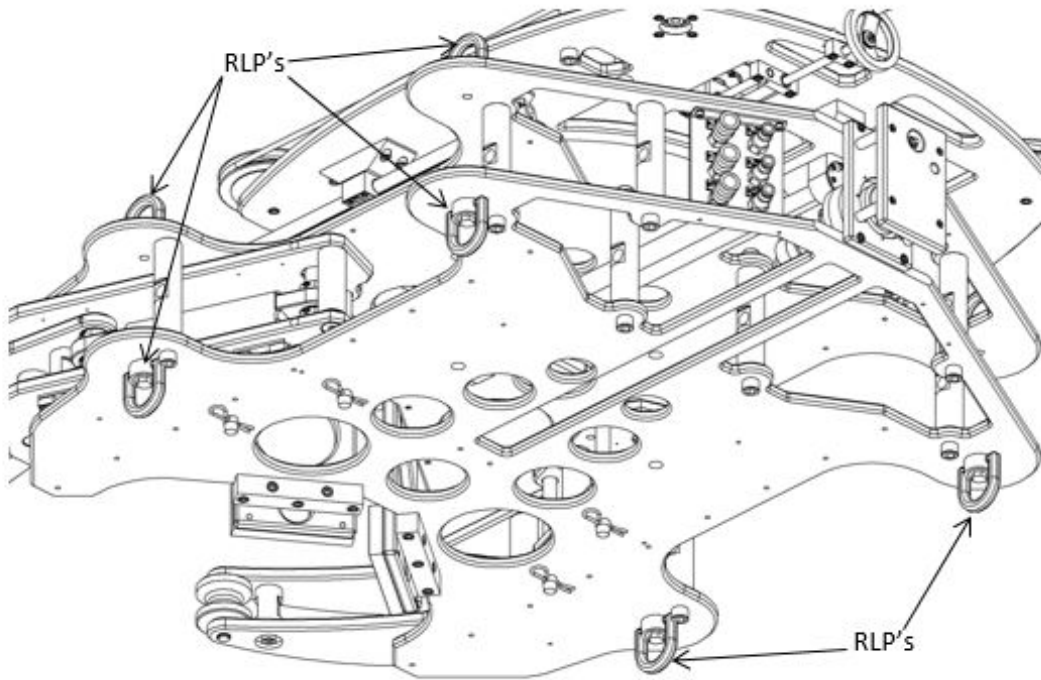
Port For	Part Description	QTY
FEED RETURN	1/2" MALE QRC HOSE ASSEMBLY	1
FEED INLET	1/2" FEMALE QRC HOSE ASSEMBLY	1
CUT RETURN & CASE DRAIN	3/4" MALE QRC HOSE ASSEMBLY	2
CUT INLET	3/4" FEMALE QRC HOSE ASSEMBLY	1
CLAMP RETURN	1/2" MALE QRC HOSE ASSEMBLY	1
CLAMP INLET	1/2" FEMALE QRC HOSE ASSEMBLY	1

1. Connect the three hoses from the power pack to the control panel.
2. Connect the seven hoses from the control panel to the 'Hydraulic Power Panel' on the machine. Refer to the labels on the
3. control panel & the hydraulic power panel to ensure the correct hose is connected to its respective fitting on the power panel.
4. If back pressure is a concern, for example if long lengths of hoses are used, then connect the motor case drain directly to the drain port in the HPU, bypassing the control.

6.3. Machine Lifting

Due to the relatively large size of the MDWS range they must be lifted with suitable lifting equipment. All machine weights are listed in 'Section 5' of this machine manual.

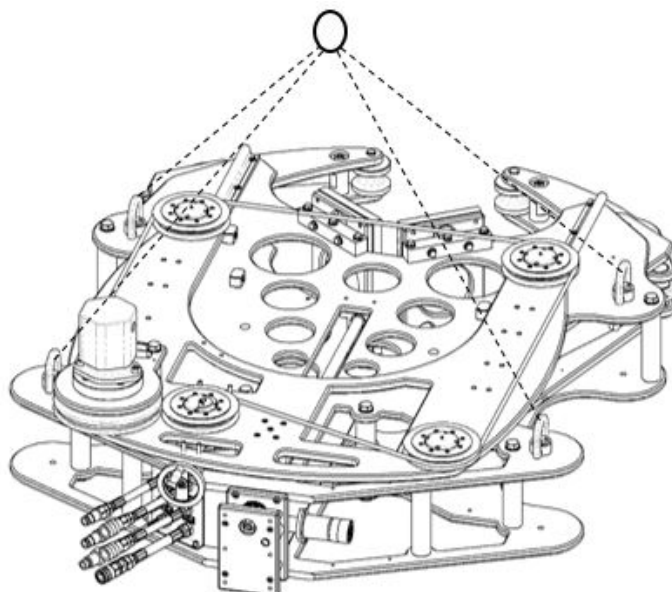
All MDWS machines are supplied with 8 rotating lifting points (RLP's), 4 on each side of the machine.



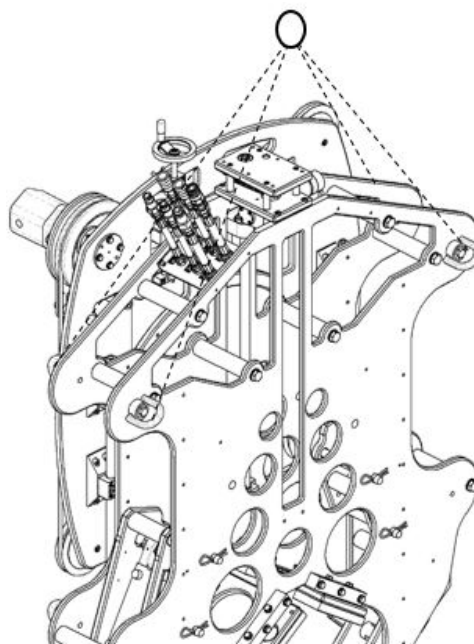
Points to consider before lifting the machine

- Are all RLP's fastened securely?
- Are the correct RLP's being used for the desired lift & machine orientation?
- Is all lifting equipment suitable for the desired lift?
- Is all lifting equipment in good working order?
- Are there any obstructions in close proximity to the machine that could become an issue when the machine is lifted?
- Are any hydraulic hoses orientated so that they do not become entangled with the machine when it is lifted?

When lifting the machine in a horizontal orientation, use all four RLP's on one side of the machine. The machine can be used as shown below or upside down.



When lifting the machine in a vertical orientation, use 4 RLP's at the rear end of the machine as shown below.



Minimum Sling lengths		
Machine	Horizontal orientation	Vertical orientation
MDWS620	1325mm	1325mm
MDWS1638	1900mm	1900mm
MDWS1642	1900mm	1900mm
MDWS3660	2400mm	2400mm

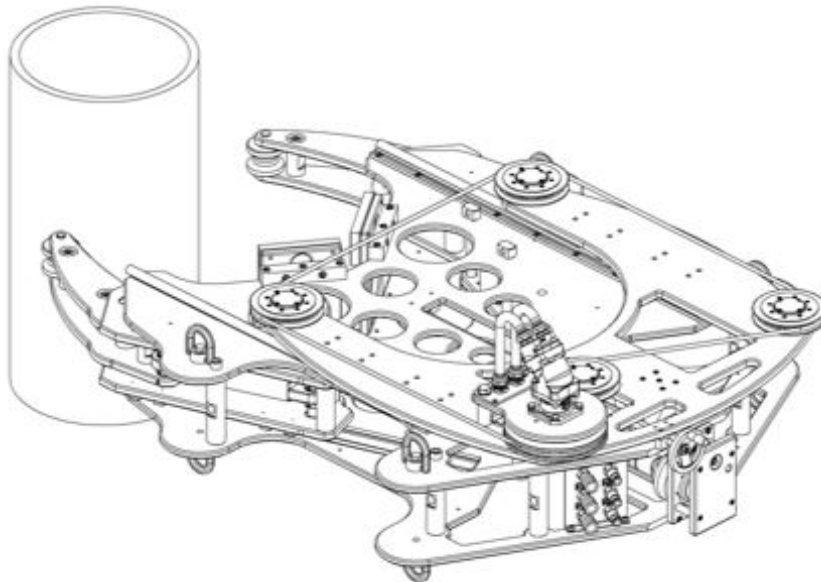
6.4. Clamping to Work Piece

The MDWS range use hydraulically operated 'Clamp Arm Assemblies' to clamp onto work pieces. This allows each machine to be used on a range of different diameter work pieces within their operating range. These assemblies are controlled by hydraulic rams mounted within their frames; these rams are powered via the 'Hydraulic Power Pack' & controlled at the 'Control Panel'.

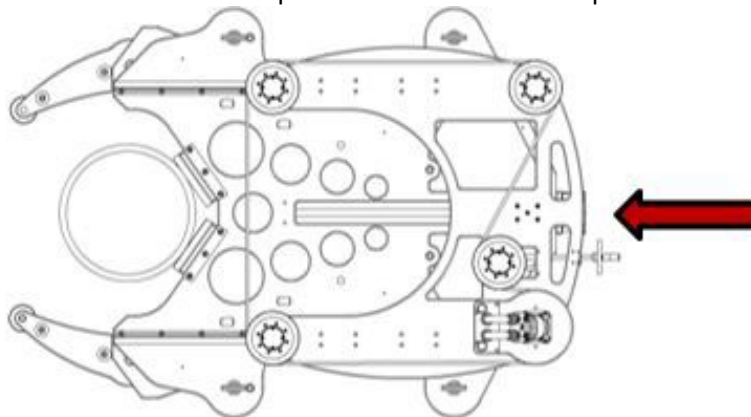
Note: When operating 'subsea' no additional support for the machine is required once the 'Clamp Arm Assemblies' are fully engaged. However if operating 'topside' (not submerged in water) it is recommended that the MDWS3660 is supported via the two rear RLP's & suitable lifting equipment.

It is assumed that at this stage the machine has all its hydraulic hoses connected correctly & the machine is supported by suitable lifting equipment, ready to be installed onto the work piece.

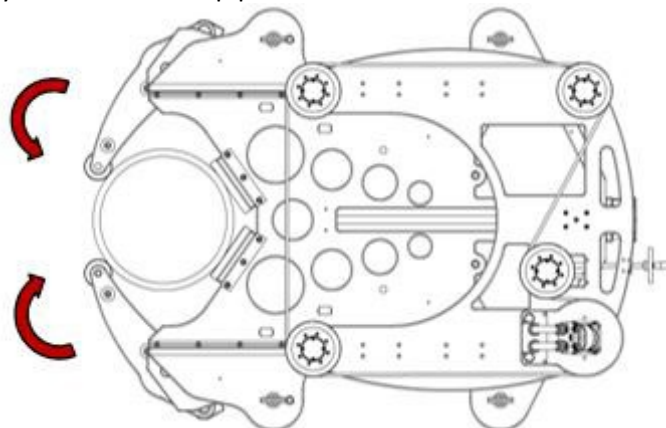
1. Open the 'Clamp Arm Assemblies' by adjusting the appropriate control lever on the 'Control Panel'.



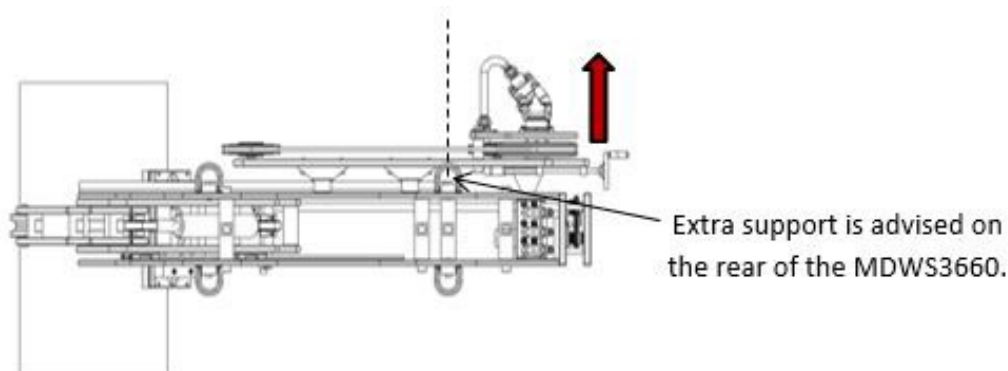
2. Move the machine towards the work piece until the 'Fixed Clamps' touch the work piece.



3. Close the 'Clamp Arm Assemblies' until the hydraulic pressure within the rams builds & the machine is securely mounted to the pipe.



If the machine is being mounted 'Topside' then it is advised that lifting equipment is retained via the two, rear RLP's to provide further support during the cutting process.



The pressure within the hydraulic clamping rams should be monitored periodically during the time when the machine is secured to the work piece; if the pressure reading drops then re-engage the clamping cylinders to re-establish pressure.

6.5. Personnel

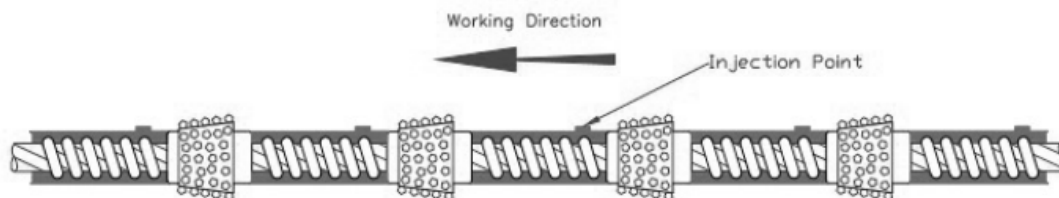
As a specialist portable machine the minimum standard for an operator is to be:

- The operator must be trained and conversant with the Enerpac MDWS's
- The operator to be able to identify the correct and incorrect use of static or portable machines.
- Comply with all local and internationally recognised safe use of powered machines.

7. Setting

All our Enerpac supplied e plated ropes are TAPERED and the loops must rotate in the direction of the smaller diameter of the beads.

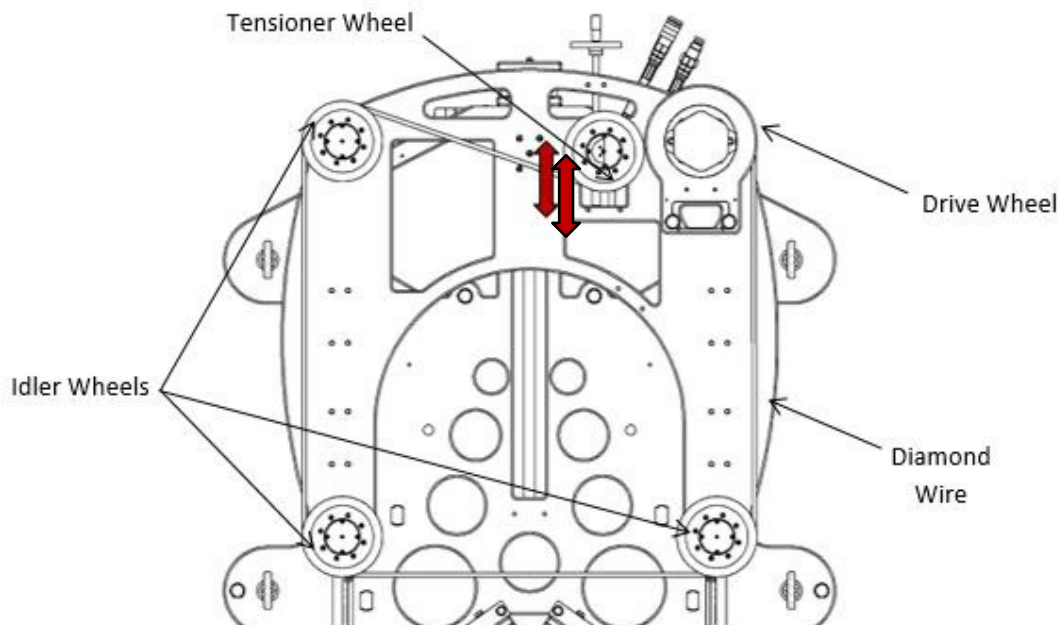
Directional arrows are always stuck on ALL wires / loops at point of supply.



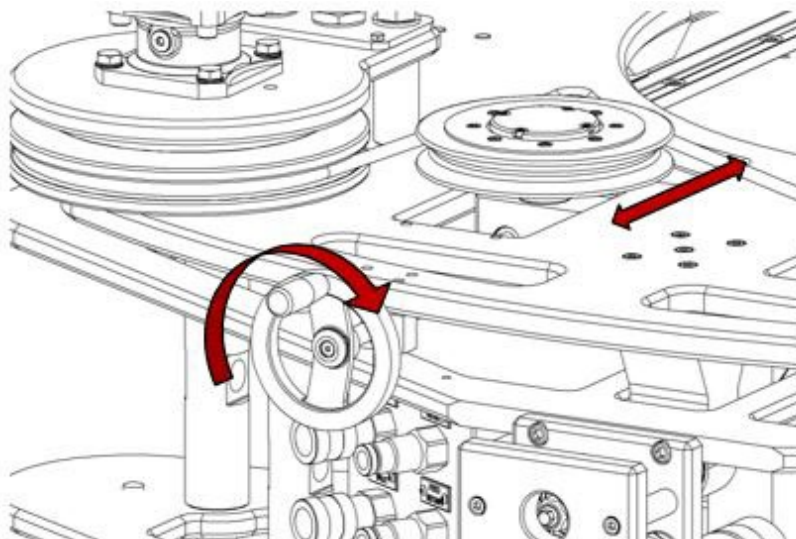
7.1. Setting & Fitting the Diamond Wire

Start by ensuring that the wire is correctly installed in its groove on all 3 idler wheels, the tension adjusting wheel & the drive wheel. Ensure the wire is routed as per the image below. If fitting a brand new wire, retract the tension adjusting wheel before fitting the new wire by turning the hand wheel clockwise as far as it will go & then adjust to the correct tension.

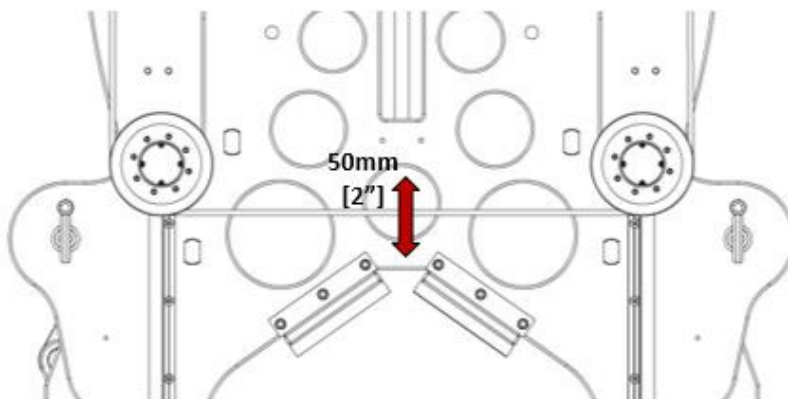
Note: When fitting a new diamond wire check for its correct direction of rotation. Different brands of wire have different markings to indicate the cutting direction. Look at the new wire closely to determine its correct direction & fit it to ensure that the arrows point in the direction of travel.



To adjust the tension of the diamond wire, simply turn the 'Hand Wheel' clockwise to make the wire slack or counter-clockwise to make the wire tight.



The correct tension is achieved when the wire has 50mm [2"] of movement backwards & forwards between the two forward idler wheels.

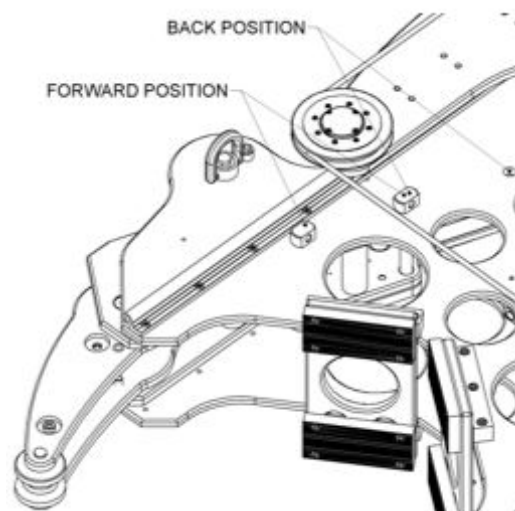
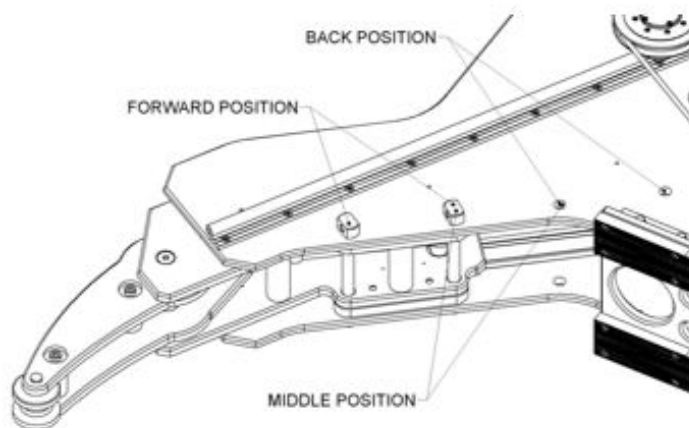


7.2. Setting the Clamp Arm Assemblies

The MDWS's cannot be clamped to all work pieces within their range without adjusting the position of the 'Clamp Arm Assemblies'.

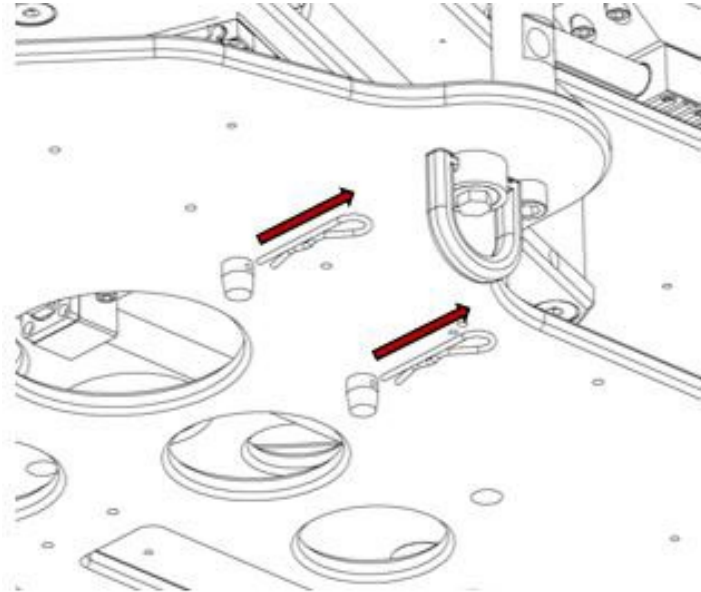
The positions of the 'Clamp Arm Assemblies' are shown below alongside their corresponding work piece diameters.

Machine	Mounting Position		
	Forward	Middle	Back
MDWS620	16"-20"	N/A	6"-20"
MDWS1638	30"-38"	N/A	16"-28"
MDWS1642	30"-42"	N/A	16"-28"
MDWS3660	54"-60"	48"-60"	36"-48"
	Work Piece ø		

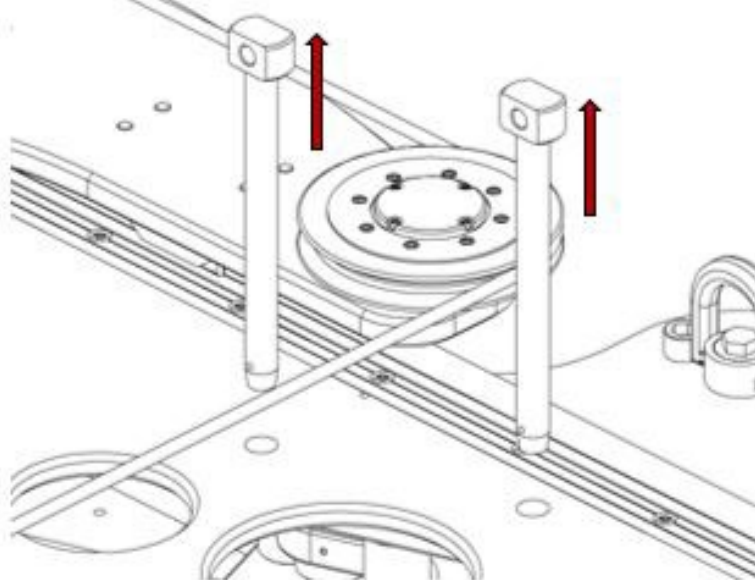


Before attempting to change the position of the 'Clamp Arm Assemblies' ensure that the machine is well supported the correct way up & that the R-Clips underneath the 'Clamp Assembly Locating Pins' are accessible.

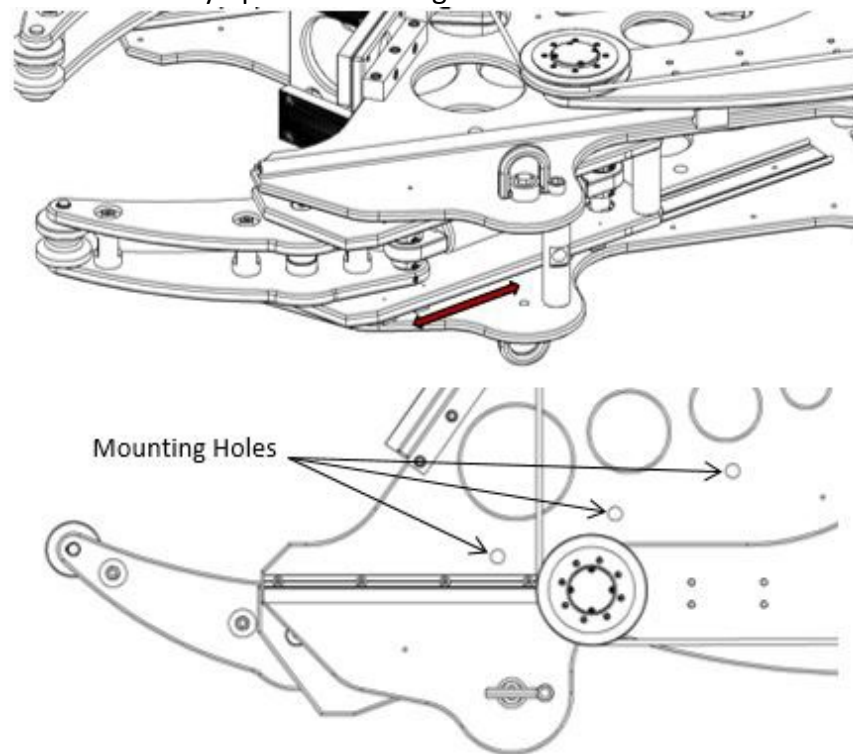
1. To change the position of the 'Clamp Arm Assemblies' start by removing the R-Clips from the 'Clamp Assembly Locating Pins'.



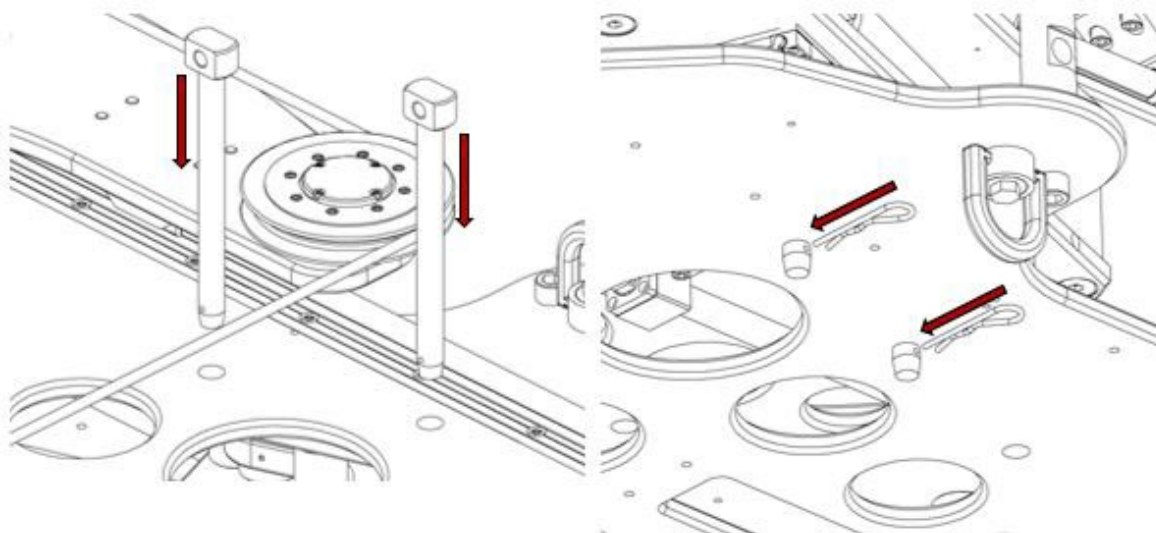
2. Remove the 'Clamp Assembly Locating Pins' from the top of the machine.



3. Move the entire assembly up or down the guide rail until the desired set of holes line up.

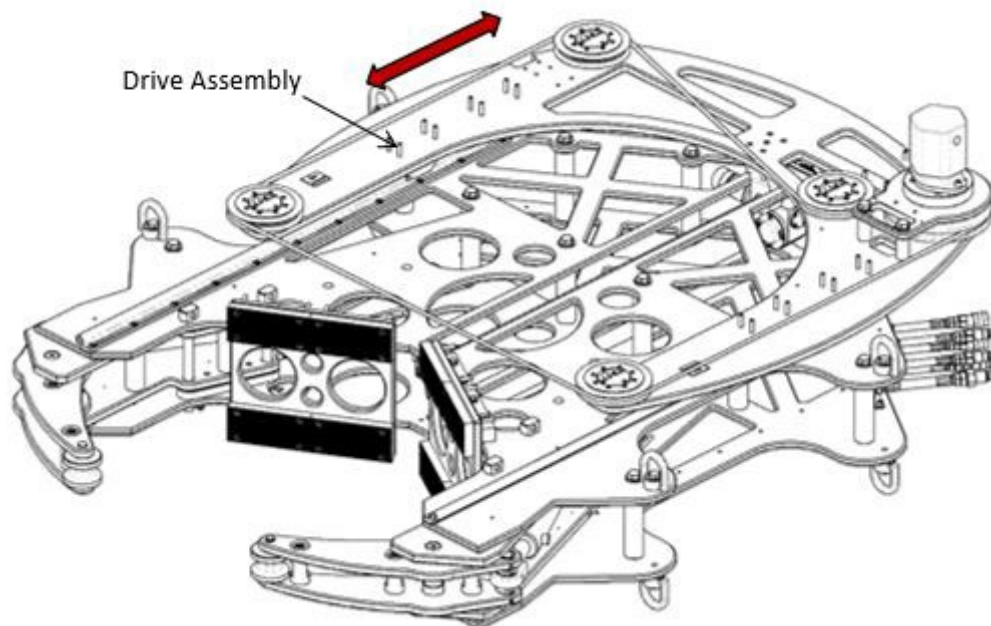


4. Re-install the 'Clamp Assembly Locating Pins' & R-Clips.



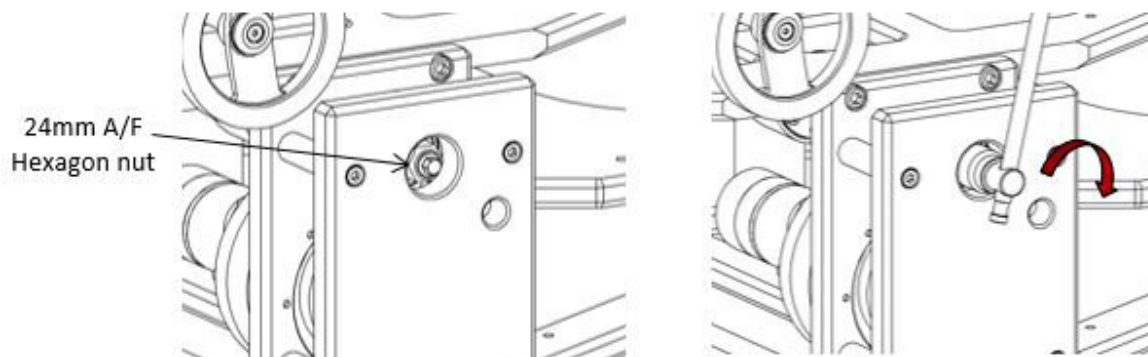
Note: Always install the pair of 'Clamp Arm Assemblies' in the same position on both sides of the machine.

7.3. Setting the Drive Assembly



To adjust the 'Drive Assembly's' position on the machine simply turn the 24mm A/F hexagon nut located on the 'Feed Assembly' gearbox with a 24mm socket & socket wrench.

Turn the hexagon clockwise to retract the 'Diamond Wire Drive' or counter-clockwise to advance it.



Alternatively, use the automatic feed function by engaging the hydraulic feed control on the 'Control Panel'.

Move the drive assembly to within 150mm [6"] of the work piece/pipe in preparation for its cut.

8. Machine Operation

Warning: The cutting wire spins at a very high velocity. If the wire breaks during operation, segments can fragment & be thrown from the machine at dangerous speeds. Make sure all personnel are at a safe distance before starting the cutting drive. Serious injury or death could result from contact with the wire or as a result of the wire breaking.

1. Ensure that the machine is securely clamped to the work piece / pipe, and is supported by appropriate lifting equipment if it is required before beginning machine operation. If the machine is being used for 'Topside' operations, ensure that an effective cooling system is in place before cutting.
2. Engage hydraulic flow to the feed motor and gearbox to start feeding the Diamond Wire Drive towards the work piece / pipe.
3. Feed the Diamond Wire Drive forwards until the cutting wire is within 10mm of the work piece / pipe, and then stop the hydraulic motor.
4. Engage hydraulic flow to the Drive motor to start rotating the diamond wire to cutting speed.
5. Re-engage the feed motor to start feeding the Diamond Wire Drive into the work piece / pipe.
6. Visually monitor the progression of the cutting wire as it feeds into the pipe.
7. During cutting, the Diamond Wire Drive should not be overfed into the pipe or the wire will become over-stressed.
8. Continue to feed the Diamond Wire Drive until the wire has completely cut through the work piece / pipe.
9. Disengage hydraulic flow to the Drive and Feed motors.

9. Machine Maintenance

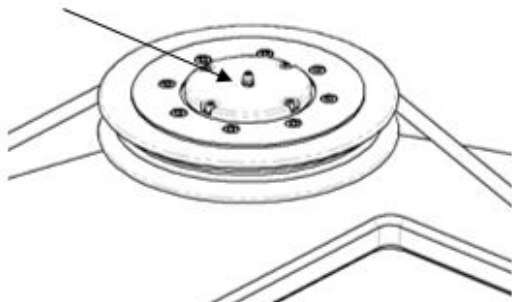
General wear and tear items should be replaced with like for like components as per the machine general assembly drawings detailed in this manual. Failure to do so may result in a machine that is not fit for purpose and is outside the design intent it was supplied for. Items that require specific maintenance regimes and products will be detailed here in.

General Maintenance Schedule		
Time Period	Action	Recommended Lubricant
After Every use	Wash down machine with Clean water to protect the machine from oxidation. Ensure there is no salt water remaining on the machine.	Clean water
	Clean all cutting debris from machine. Pay particular attention to lead screws, pivots, sealing, sliding & rotating faces.	General water displacing, cleaning oil.
As required	Replace cutting wire.	N/A
Every 10 hours	Check all securing nuts & bolts are tight.	N/A
Before long term storage (12 months minimum)	Protect machine, components & accessories from corrosion. Store all machine components securely in original packing box.	General, oil based, rust inhibitor.

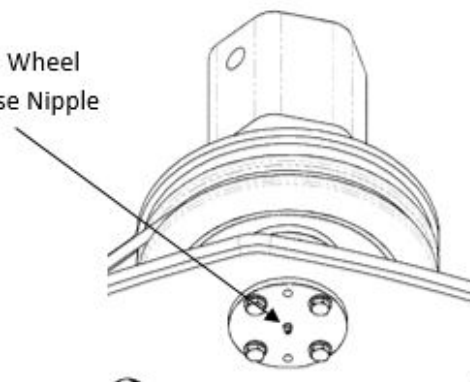
9.1. Grease Points

The drive and idler wheels on the machine feature grease points, an M6 grease nipple on the top of the idler wheels provides access, whilst the drive wheel has a grease nipple on the underside as shown.

Idler Wheel
Grease Nipple

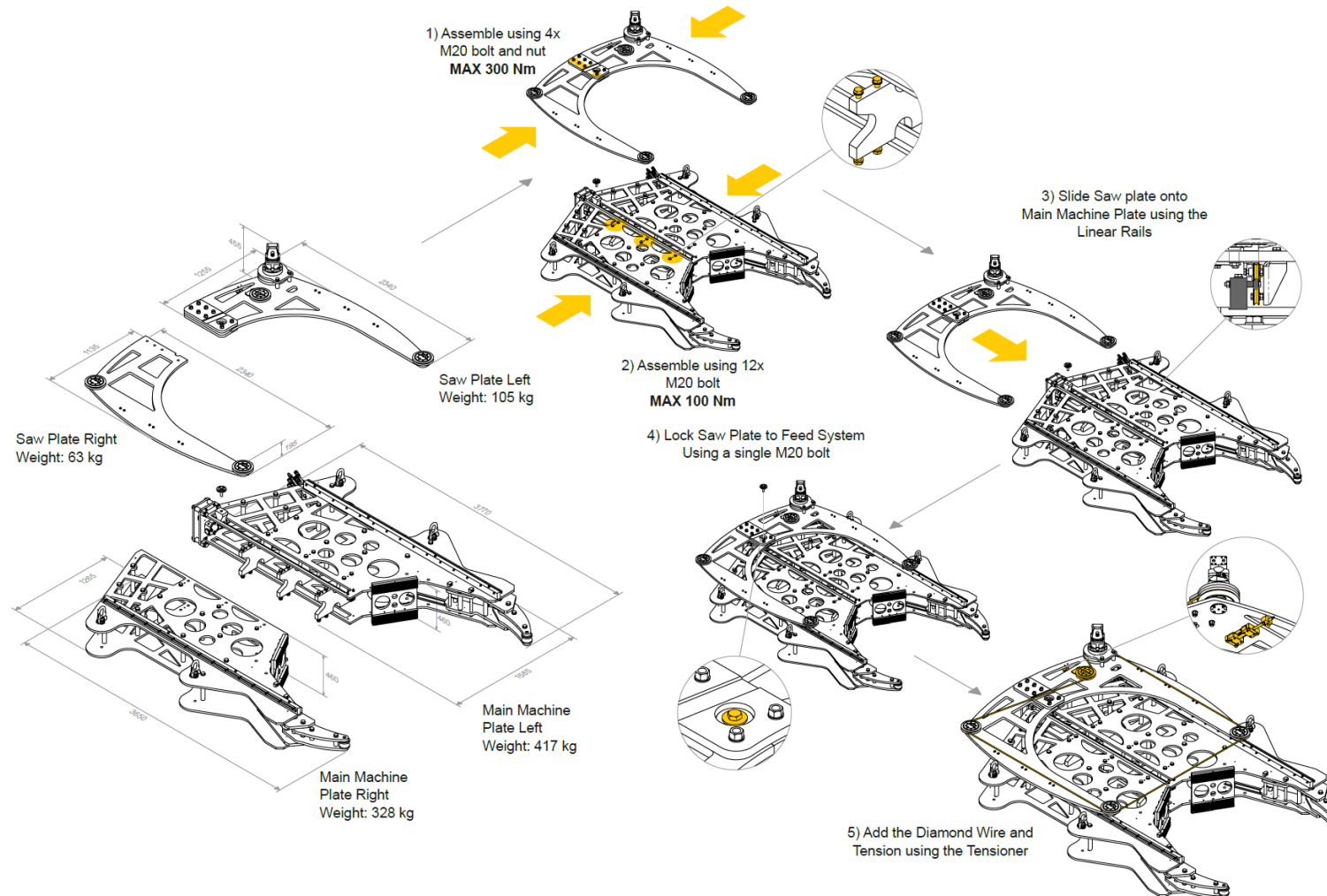


Drive Wheel
Grease Nipple



10. Assembly and Disassembly for Transport

10.1. MDWS3660



11. Troubleshooting Guide

Symptom	Possible cause	Action
The machine will not rotate	1. Hydraulic/Pneumatic supply not available	Check supply
	2. Hydraulic/Pneumatic supply is below the minimum required to operate the machine	Check supply
	3. Drive motor faulty	Remove motor and check operation
	4. Faulty valve or emergency shut off operational	Check supply to motor

12. Appendices

12.1. Recommended torque settings for fasteners

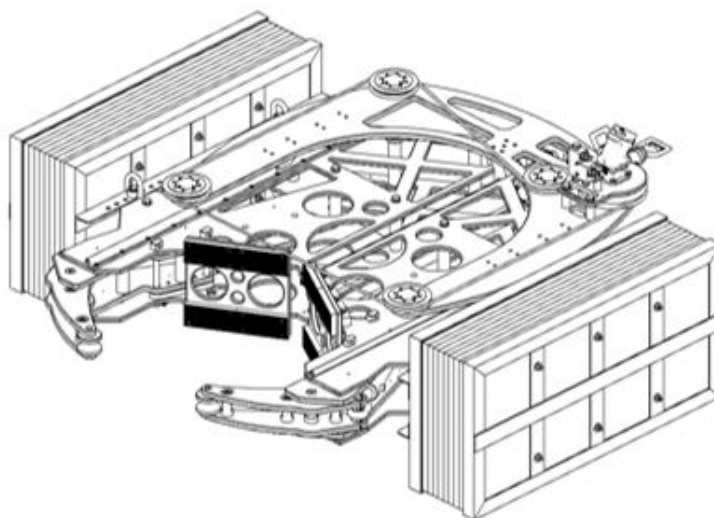
Thread Ø	Tensile Strength		Torque Setting	
	kN	lbs	Nm	in - lbs
M3	6.54	1470	2.1	19
M4	11.4	2560	4.6	41
M5	18.5	4160	9.5	85
M6	26.1	5870	16	140
M8	47.6	10700	39	350
M10	75.4	17000	77	680
M12	110	24700	135	1200
M14	150	33700	215	1900
M16	204	45900	330	2900
M20	306	68800	650	5750
M22	374	83950	875	7725
M24	441	99100	1100	9700
M30	701	158000	2250	19900
M32	860	193500	3050	27000
M36	1020	229000	3850	34100

12.2. *Optional Extras*

There are modules available for the MDWS range as optional extras. These are not necessary to operate the machine, but are useful during certain machining operations.

MDWS1638-30 / MDWS620-30

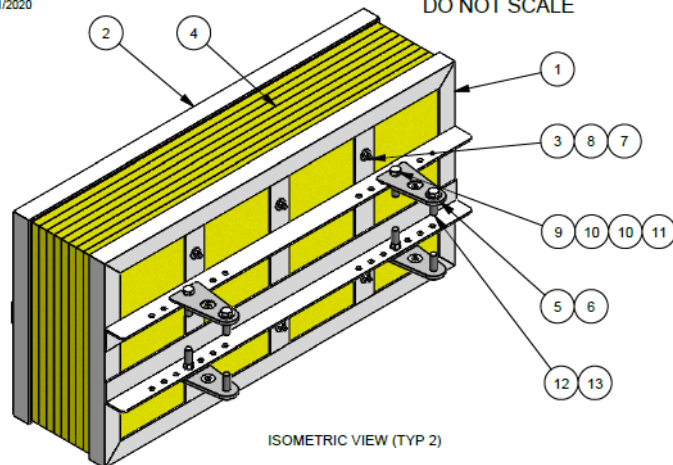
The MDWS1638-30 and MDWS620-30 are floatation modules designed to be compatible with the MDWS1638 and MDWS620 machines respectively, and must be installed as a pair in order to operate correctly. The floats are installed by unscrewing the M16 RLPs and then fitting them back in place through the float mount holes into the machine plate.



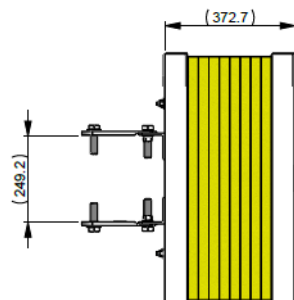
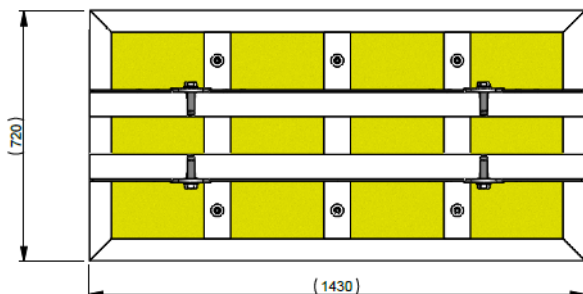
An MDWS1638 with a pair of MDWS1638-30 floatation modules installed

Printed on 27/11/2020

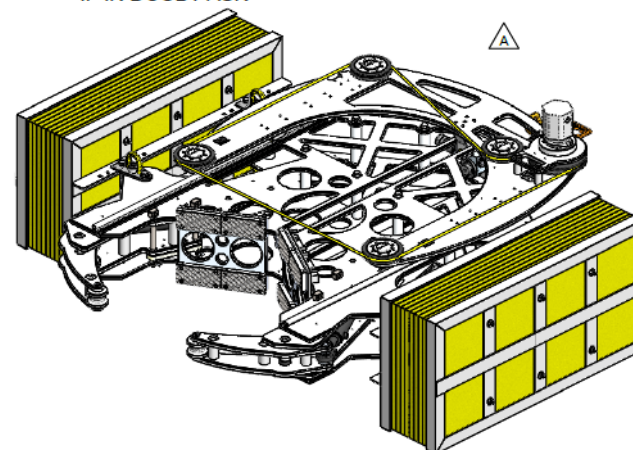
DO NOT SCALE



ISOMETRIC VIEW (TYP 2)



IF IN DOUBT ASK



NOTE: ABOVE SHOWN FOR REF ONLY.
THIS GA INSTRUCTS 2 OFF FLOAT ASSEMBLIES,
REQUIRED FOR EACH MACHINE.

△ GLUE FLOATATION BLOCKS TOGETHER USING
1099 SCOTCHGUARD ADHESIVE

△ PAINT WITH WATERPROOF YELLOW PAINT,
QUICK DRYING MACHINERY ENAMEL BS 4800,
BS 381C, R.A.L

△ STENCIL "450 MSW 715KG/M3" ONTO THE FLOATS

MIRAGE MACHINES

APPROVED FOR
MANUFACTURE

N:\Drawing Storage\MACHINES GA's\DIAMOND WIRE\FLOATATION\MDWS1638-30

A3 ASSEMBLY (AUTO) - 7-4-2009

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MDWS1638-30-001	FLOATATION MOUNT FRAME	2
2	MDWS1638-30-002	FLOATATION LOCK FRAME	2
3	MDWS1638-30-003	FLOATATION LOCK STUD	12
4	MDWS1638-30-004	FLOATATION BLOCK	24
5	MDWS1638-30-007	MDWS1638 FLOAT FRAME MOUNTS	8
6	MDWS1638-30-008	MDWS1638 LIFTING EYE SPACER FOR FLOAT FRAME MOUNTING	8
7	M12	FORM G WASHER	24
8	M12	Hex Nut Style 2 - BS EN 24033	24
9	M20 X 80	Hex Screw Grade AB - BS EN 24014	8
10	M16	WASHER (FORM A)	16
11	M16	Hex Nut Style 1 - BS EN 24403	8
12	M20 x 70	Hex Screw Grade AB - BS EN 24017	8
13	M24	WASHER (FORM A)	8

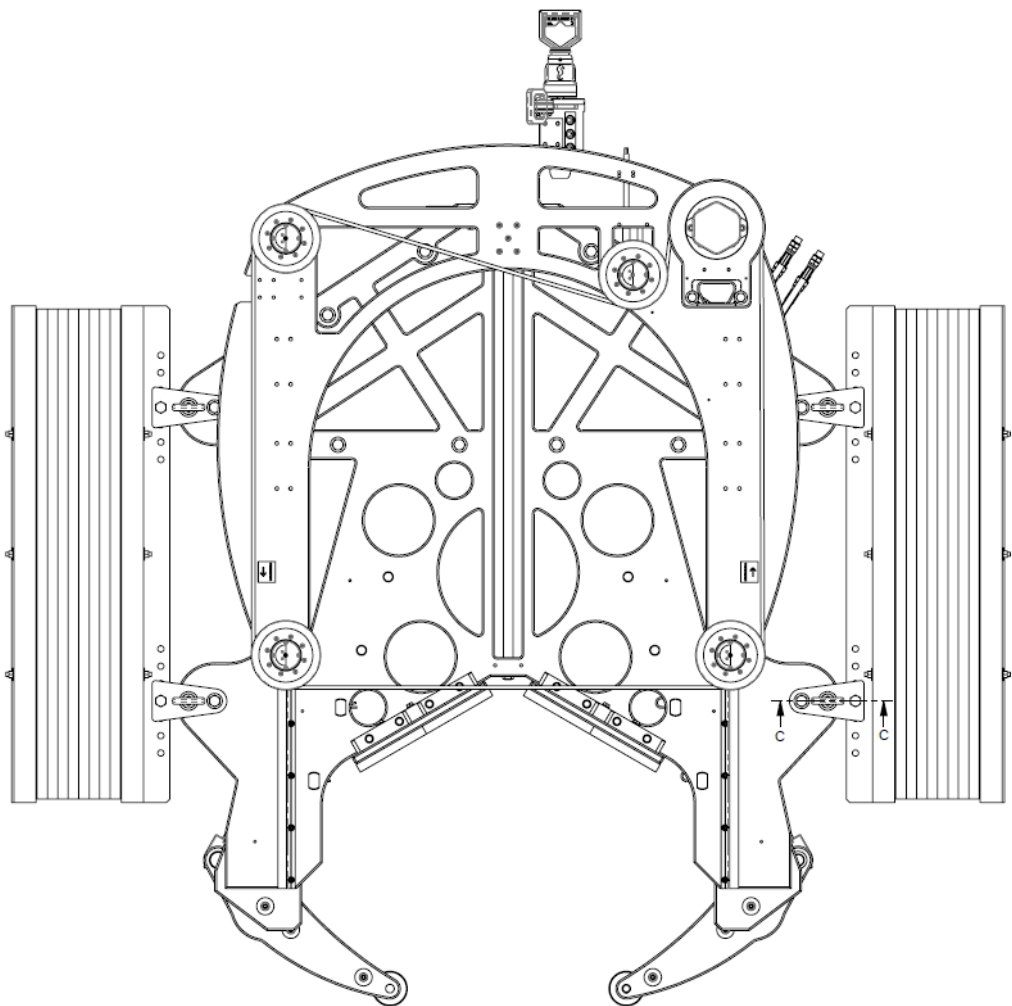
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED
C	2073	STATEMENTS ADDED TO NOTE TO SPECIFY GLUE & PAINT SPEC	26/11/2020	EM	DRB
B	-	UPDATE TO LIFTING POINT ATTACHMENT (SEE SH2). ITEMS 5, 6 AND 9 THRU 13 ADDED	25/05/2018	DMS	DRB
A	-	Added ref only image at request of RB. Doubled BoM Quantities	18/04/2018	DRB	SM

		THIRD ANGLE PROJECTION
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WEIGHT 294.640KG DRAWN BY DC 12/08/2016 CHECKED BY SR 15/08/2016 APPROVED BY	10 ENTERPRISE WAY, JUBILEE PARKWAY, STORES ROAD, DERBY DE21 4BB TEL (01332) 291767 FAX (01332) 370356 E MAIL info@mirage-machines.co.uk	DWG NO MDWS1638-30 SHEET 1 OF 2
MDWS1638 FLOATATION MODULE SCALE: 1:12		A3

Printed on 27/11/2020

DO NOT SCALE

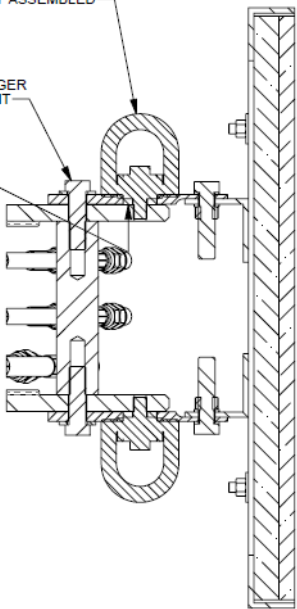
IF IN DOUBT ASK



A MANUAL CHECK IS TO BE CARRIED OUT TO VERIFY D-RING CAN SWIVEL FREELY ONCE FULLY ASSEMBLED

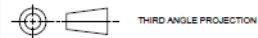
REPLACE BOLTS WITH LONGER BOLTS PROVIDED IN THIS KIT

ITEM 6 (MDWS1638-30-008) IS TO BE FITTED UNDER LIFTING EYES



SECTION C-C
SCALE 1:5

C	2073	STATEMENTS ADDED TO NOTE TO SPECIFY GLUE & PAINT SPEC	26/11/2020	EM	DRB
B	-	UPDATE TO LIFTING POINT ATTACHMENT (SEE SH2), ITEMS 5, 6 AND 9 THRU 13 ADDED	25/05/2018	DMS	DRB
A	-	Added ref only image at request of RB. Doubled BoM Quantities	18/04/2018	DRB	SM
REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED



THIRD ANGLE PROJECTION

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WEIGHT	294.60KG	
DRAWN BY	DC	12/08/2016
CHECKED BY	SR	15/08/2016
APPROVED BY		

TITLE
MDWS1638 FLOATATION MODULE
SCALE: 1:12

MIRAGE
PORTABLE PERFORMANCE

10 ENTERPRISE WAY, JUBILEE PARKWAY,
STORES ROAD, DERBY DE21 4BB
TEL (01332) 291767 FAX (01332) 370356
E MAIL info@mirage-machines.co.uk

DWG NO
MDWS1638-30
SHEET 2 OF 2

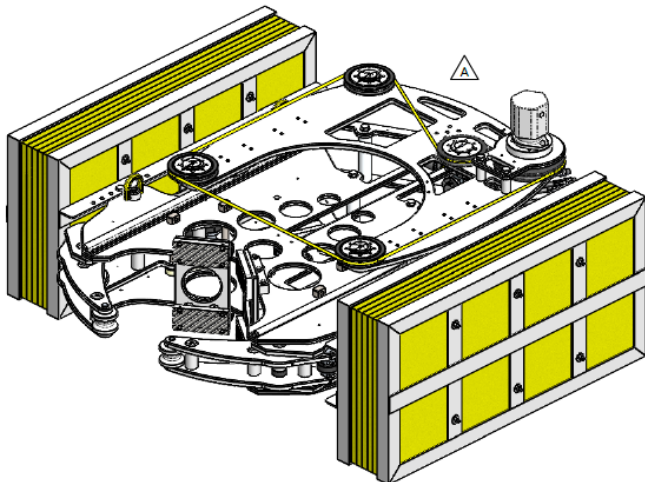
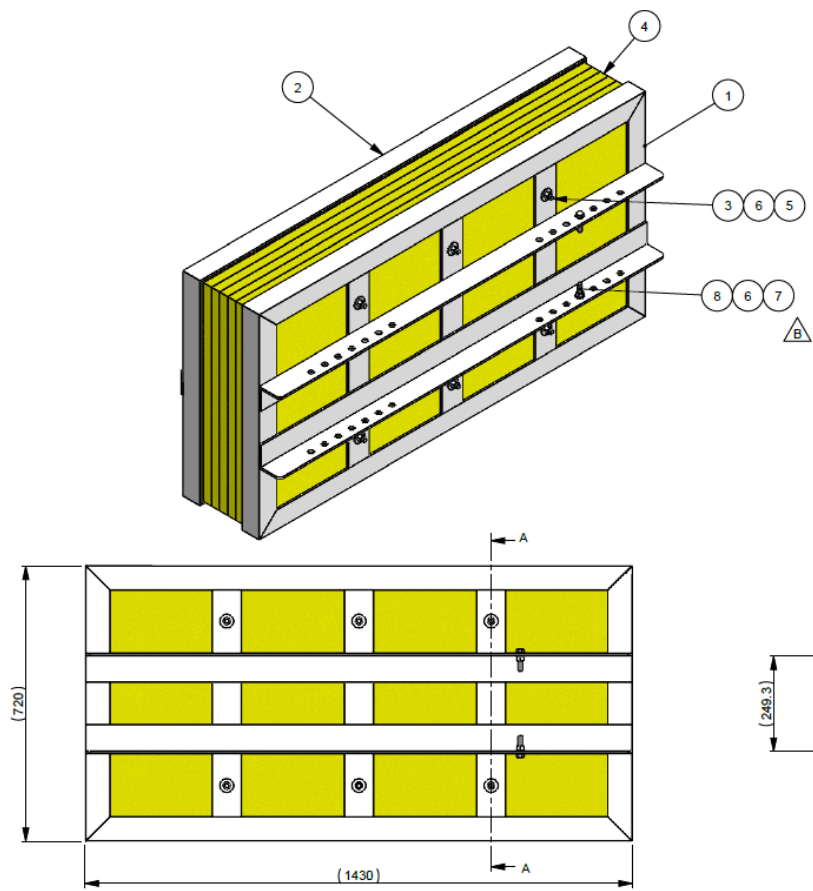
A3

N:\Drawing Storage\MACHINES GA's\DIAMOND WIRE\FLOATATION\MDWS1638-30
A3 ASSEMBLY (AUTO) - 7-4-2009

Printed on 27/11/2020

DO NOT SCALE

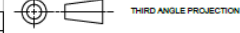
IF IN DOUBT ASK



NOTE: ABOVE SHOWN FOR REF ONLY

- △ GLUE FLOATATION BLOCKS TOGETHER USING 1099 SCOTCHGUARD ADHESIVE
- △ PAINT WITH WATERPROOF YELLOW PAINT, QUICK DRYING MACHINERY ENAMEL BS 4800, BS 381C, R.A.L
- △ STENCIL "450 MSW 715KG/M3" ONTO THE FLOATS

REV.	INC.	DESCRIPTION	DATE	DRAWN BY	APPROVED
C	2073	STATEMENTS ADDED TO NOTE TO SPECIFY GLUE & PAINT SPEC	26/11/2020	EM	DRB
B	-	Added bolts, washers, and nuts	24/04/2018	DRB	DMS
A	-	Added ref only image at request of RB. Doubled BoM quantities	18/04/2018	DRB	SM



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WEIGHT 112.971Kg
DRAWN BY DC 18/04/2018
CHECKED BY SJ 18/04/2018
APPROVED BY RB 18/04/2018

MDWS620 FLOATATION MODULE
SCALE: 1:10

MIRAGE
PORTABLE PERFORMANCE

10 ENTERPRISE WAY, JUBILEE PARKWAY,
STORES ROAD, DERBY DE21 4BB
TEL (01332) 291787 FAX (01332) 370356
E MAIL info@mirage-machines.co.uk

DWG NO: MDWS620-30
SHEET 1 OF 1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	MDWS1638-30-001	FLOATATION MOUNT FRAME	2
2	MDWS1638-30-002	FLOATATION LOCK FRAME	2
3	MDWS620-30-001	FLOATATION LOCK STUD	12
4	MDWS1638-30-004	FLOATATION BLOCK	18
5	M12	FORM G WASHER	24
6	M12	Hex Nut Style 2 - BS EN 24033	28
7	Bright washer BS 4320 - M12	WASHER (FORM A)	8
8	M12 x 50	Hex Screw Grade A8 - BS EN 24014	4

MIRAGE MACHINES
APPROVED FOR
MANUFACTURE

N:\Drawing Storage\MACHINES GA\DIAMOND WIRE\FLOATATION\MDWS620-30
A3 ASSEMBLY (AUTO) - 7-4-2009

12.3. General Notes

[illegible]

[illegible]

[illegible]

[illegible]

