OPERATING & INSTALLATION INSTRUCTION

DFF 08 / 10 / 12 / 15
DW 06 / 08 / 10 / 12 / 15

Drum Winch

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INTRODUCTION

Thank you for purchasing a Muir Drum Winch. Muir go to great lengths to develop anchoring systems that not only meet all your performance and safety requirements, but at the same time are designed with a style and finish that enhances the aesthetics of your vessel. The Muir commitment to quality, the use of superior materials and processes is to ensure you will be pleased with your investment. Rest assured that through the correct installation, operation and maintenance, your new Muir Windlass will give you years of reliable performance.

IMPORTANT INFORMATION

To avoid damage to the drum winch or vessel when bringing the anchor up hard, it is a preferred practice to mark the chain at approximately 5-meter intervals from the anchor, to alert the operator to the anchor position.

Under no circumstances should the windlass be operated if it is stalled or overloaded, check for the cause and rectify prior to resuming operation.

If anchor retrieval is impaired by high wind, heavy seas or the anchor is snagged, ease the load by either motoring or maneuvering slowly forward into the wind, until the anchor can be lifted vertically.

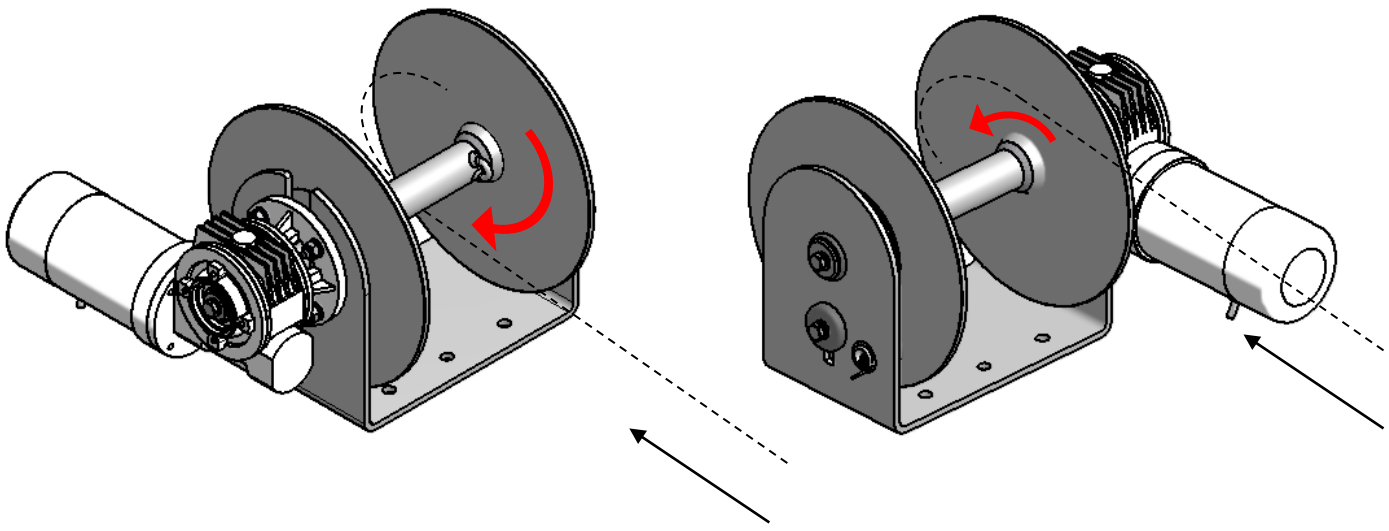
SAFE OPERATION

- Ensure that hands, feet, hair and clothing are kept clear of the Drum Winch and other loose gear when in operation.
- Ensure no one is swimming nearby as anchor is lowered or retrieved.
- Keep hands well clear of Drum Winch, chain and rope.
- The Drum Winch should never be used for lifting people aloft. Do not use a windlass as a bollard for mooring, towing or being towed.
- When the Drum Winch is in use or the anchor stowed, always ensure the clutch is tightened with the clutch handle, and a Chain lock, Devils claw or Snubber Line is fitted to retain the anchor. The use of these accessories will prevent excessive loads on the geardrive and accidental release of the anchor.

INSTALLATION INSTRUCTIONS

Locate the drum winch in a suitable position so there is no interference from other ropes or objects. Ensure that the rope has a clear lead to the winch – use a roller if required to direct the rode to the drum. Ensure that there is sufficient room to run the electrical cables to the winch underneath the deck.

Depending on the motor/gearbox position the Drum Winch can be underfeed or overfeed. The red arrows in pictures below indicate the direction of feed rotation of the rode.



If the deck or bulkhead selected for mounting is angled or curved, a suitably shaped mounting block will be required to spread the load evenly over the deck surface and mount the winch on a level and even footing. Place the shaped mounting block (if required) onto the deck or bulkhead. Use the drum winch as the layout template to mark the hole centres. Remove the winch and drill the holes.

Apply an appropriate sealant to the base plate and mounting block (if required), taking care to align mounting holes when assembling. For Aluminium or Steel hull vessels, it is important to insulate the drum winch with a non-conductive gasket to avoid corrosion. This also applies below deck with the mounting bolts, nuts and washers. Where the deck construction is light or of foam sandwich construction, a plywood stiffener of at least 16mm (5/8") should be fitted to the underside of the deck to spread the load. Install and tighten mounting bolts.

Gearbox Orientation: The gearbox can be orientated at any angle using the supplied holes. If the installion requires the gearbox to be at 45 Degrees to the winch, the use of 3 mounting holes will be acceptable.

Electrical Installation: To complete the Electrical installation, please review electrical section.

Rope & Chain Installation: To assure the correct operation of the winch, the rope and chain should be installed onto the drum using the electric motor.

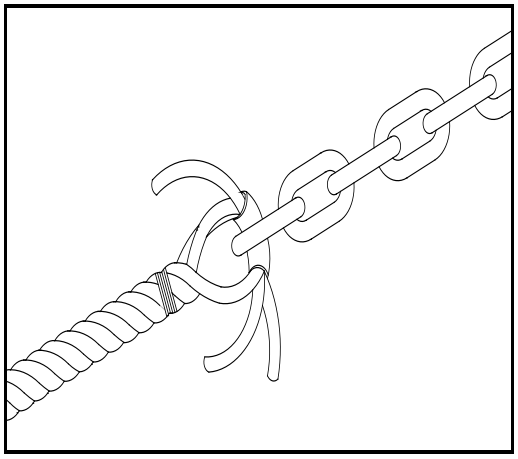
TIPS FOR EXTENDING THE LIFE OF YOUR WINCH

Do not allow winch motor to overheat. Remember the winch is for intermittent use only. During long or heavy pulls the motor will get hot. At maximum design loads avoid running for periods exceeding 5 min.

Line Care

Muir Drum winches can use 3-strand nylon line (supplied by Muir) which has been specially treated with fabric softener to prevent it from hardening. It is recommended to soak your rope in fresh water containing fabric softener every 3 months.

Rope/Chain Splice.



1. To stop rope unravelling, seize rope 400mm(16") from end with whipping twine. Unlay strands.
2. After placing 20mm (3/4") of heat shrink sleeve tubing through the last link of chain, pass one strand of rope through sleeve and chain from one side and the other two strands of rope from the opposite side. (See illustration).
3. While pulling all three strands tight, shrink the sleeve tightly onto the rope using a hairdryer / fan heater or by immersing in boiling water.
4. Remove seizing and complete back splice in normal manner for two full tucks. With a hot knife pare down the three strands by 1/3 and insert two further tucks. Pare down by another1/3 and finish with two tucks. Cut any remaining tails.

OPERATING DFF 08/10/12/15 SERIES WINCHES (FREE FALL)

It is adviseable to “mark” the anchor end of the chain/rope at 2 and 5 metre (6.5’ & 16.5’) intervals which will enable the operator to judge when the anchor is almost up.

The concept of the Free Fall windlass is to deploy and freefall an anchor remotely from the helm station.

- ***Deployment:***

1) Engaging the down toggle switch (approx 2-3 seconds only) or reversing the drum winch automatically releases the clutch allowing the drum to free wheel thus launching the anchor.

   WARNING: Engaging the toggle switch for an extended period may result in damage to the shaft or sideplates, voiding warranty.

2) Engaging the up toggle switch of the windlass will automatically tighten the clutch allowing the winch to take up any slack in the anchor rode. **This must be done only when the anchor and chain has touched the bottom and not whilst in freefall**.

3) Then release the switch when sufficient slack in the anchor rode has been taken up

4) Once the Anchor is deployed it is recommended to tie off the rope to a cleat or bollard.

- ***Retrieval:***

1) To retrieve the anchor, operate the Drum winch in the up direction. It is also recommended that the vessel is motored into the wind / towards the anchor rode to minimize excessive load on the windlass.

2) Check that the rope is being dispersed evenly on the drum. **Do not use your hands or feet to adjust the rope as it may become caught and entangled in the winch drum.** Also take care not to run over the anchor rope and entangle it in your prop or rudder.

3) Go gently with the last five (5) metres of retrieving the anchor. Do not wait for the anchor to fly up over the roller and bang tight, putting excessive load onto the bow roller, winch and fore deck.

4) Always use a snubber line or bollard to take the load when the anchor is stowed.

5) If the anchor jams tight in the bow roller, take the load off the gearbox by engaging the down switch or reversing the drum winch, and this should allow you to lower the anchor.

6) Reversing Motor: The motor must be stopped before changing direction.

- *Power up / Power down Operation:*

If necessary the Free Fall Drum Winch can be powered down without free fall, this can be done by loosening the Declutcher with the Clutch Handle and allowing the Declutcher to drop to the bottom of the slot. *(Pictures below show the Handle –Item 21 &* Declutcher *–Item 8 from the part list drawing)*

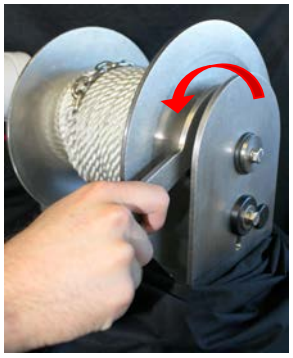
Clutch Handle

Loosening Declutcher

Slide Declutcher Downward

- *Manual Operation:*

To Manually Freefall the winch, the clutch can also be operated manually. The clutch **has a right hand thread**, so to release the clutch connect & turn the clutch handle *(see item 21 & 5 on the parts breakdown drawing)* in an anti-clockwise direction. To tighten turn the handle in a **clockwise direction**.



For the efficient operation of the drum winch periodically **apply grease to the Declutching Pawl and the clutch plunger** *(see item 8 & 6 on the parts breakdown drawing)*.

IMPORTANT

IT IS NECESSARY TO INSTALL AN ISOLATION SWITCH AS WELL AS A CIRCUIT BREAKER TO THE FREEFALL DRUM WINCH TO ISOLATE THE UNIT WHEN NOT IN USE. This is to prevent the rope and chain from paying out if the winch is accidentally reversed

OPERATING DW 06/08/10/12/15 SERIES WINCHES

It is adviseable to “mark” the anchor end of the chain/rope at 2 and 5 metre (6.5’ & 16.5’) intervals which will enable the operator to judge when the anchor is almost up.

- **Deployment:**

To lower the anchor, operate the down switch as you reverse the boat. This allows the anchor and chain to layout properly on the sea bed. Lower the anchor until the rope is slack and/or you are in the right position. Once in position, it is recommended to tie off the rope to a cleat or bollard, or use a snubber, to avoid unnecessary strain on the gearbox.

- **Retrieval:**

To retrieve/raise the anchor, it is also recommended that the vessel is motored into the wind / towards the anchor rode to minimize excessive load on the windlass, whilst operating the up switch. Check that the rope is being dispersed evenly on the drum. **Do not use your hands or feet to adjust the rope as it may become caught and entangled in the winch drum.** Also take care not to run over the anchor rope and entangle it in your prop or rudder.
Go gently with the last five (5) metres of retrieving the anchor. Do not wait for the anchor to fly up over the roller and bang tight, putting excessive load onto the bow roller, winch and fore deck.

Always use a snubber line or bollard to take the load once the anchor is stowed.

If the anchor jams tight in the bow roller, take the load off the gearbox by engaging the down switch or reversing the drum winch, and this should allow you to lower the anchor.

Reversing Motor: The motor must be stopped before changing direction.

RULES FOR OPERATION AND SAFETY (DFF/DW 06/08/10/12/15)

The DFF/DW 06/08/10/12/15 winches are powerful machines. Treat them with respect, use with caution and always follow the safety guidelines.

WARNING!

The anchor rope may break before the winch stalls.

- **Do not** overload.
- **Do not** attempt pro-longed pulls at heavy loads.
- **Do not** maintain power to the winch if the motor stalls.

Overloads can damage the winch and/or the rope and create unsafe operating conditions.
The generator/ main engine should be running during winch operation to minimize battery drain and maximize winch power and speed. If considerable winching is performed with engine off, the battery may become too weak to restart the engine.

1. Keep winching area clear. Ensure that hands, feet, hair and clothing are kept clear of the windlass and other loose gear when in operation.
2. Inspect the Anchor rope, chain and equipment frequently. A frayed rope or damaged splice to the chain should be replaced immediately.
3. Periodically check the winch installation to ensure that all bolts are tight.
4. Never use your winch for lifting or moving people.
5. This winch not designed or intended for overhead hoisting operations.
6. Avoid continuous pulls from extreme angles as this will cause the rope to pile up on one end of the drum. This can jam the rope in the winch causing damage to the rope or the winch.
7. It is not recommended to guide the rope onto the drum with your hand. It is recommended that a roller or fairlead is used for this purpose.
8. Always operate winch with an unobstructed view of the winching operation if possible.
9. Never release free spool clutch with a load on the winch.
10. **Do not** use the winch to hold load in place.
11. Use only factory approved switches, remote controls and accessories. Use of non- factory approved components may cause injury or property damage and will void your warranty.
12. **Do not** machine or weld any part of the winch. Such alterations may weaken the structural integrity of the winch and will void your warranty.
13. Never allow shock loads to be applied to winch.

HANDY HINTS

- Ensure sufficient room to run electric cables to the drum winch. Follow the instructions above including underdeck stiffening, alignment, mounting blocks and sealing procedures.
- Position drum winch carefully checking desired rope path before mounting to your deck or bulkhead.
- To help the rope to lead onto the drum a minimum of 1 meter is recommended between the last roller and the drum winch. If the winch is being used inside a chain locker it is recommended to have a roller as wide as the winch drum feeding the rope to the drum.
- When operating in shallow water, avoid over loading Drum with rope and chain.
- Operating in salt waters may cause the salt build up around the Clutch and Brake Plungers. To avoid the Plungers becoming stuck, rinse with fresh water after use.

MAINTENANCE AND REPAIR

- Periodically check tightness of mounting bolts and electrical connections. Remove bolts and electrical connections. Remove any dirt or corrosion that may have accumulated on the electrical connections.
- Repair should be done by Authorized Muir Repair Centres Only. Do not attempt to disassemble the gearbox, Disassembly will void warranty.
- We recommend that the winches are stripped yearly and all moving parts cleaned and greased with Marine Grease, Teflon or Lithium based grease (e.g. Duckhams'Keenol'; 'Castrol LMX'.). **Do not use a soap based grease.**
- In the case of Work and Charter Vesels we suggest it is carried out more frequently.
- The geardrive is filled and sealed at the factory with long life synthetic oil and does not require replacement. A rinse of fresh water on all your deck gear after every excursion ensures all salt deposits and corrosion are kept to a minimum.
- Muir recommends to run the winch motor periodically if the vessel is not being used for a long period to keep all the moving parts lubricated.

LUBRICATION

- The gearbox and drum bearings are permanently lubricated with a high performance gear lube. If relubricating is necessary (after repair or disassembly) only use Shell Alvenia EP2 or equivalent.
- All black nylon components are self lubricating and should not be lubricated as grease can reduce there efficiency and purformance life.

CORROSION PREVENTION

- Although much effort has been undertaken to manufacture the windlass to make it as durable as possible, the winch will be operating in an extremely corrosion enviroment. Therefore it is highly recommend that Denso Tape (grease tape) be used on external surface of the windlass motor, gearbox and adaptor. Additonally, corrosion protection should be used in any area where water may be present (example: chain locker) , to protect against moisture. Product such as TECHTYL under body anti corrosion film are ideal for this application.
- Any damage to external paint should be repaired immediately, to prevent corrosion.
- Yearly it is recommended that the above deck running gear is disassembled, all salt crust removed, the parts thoroughly cleaned, greased and the windlass reassembled. It is good practice to wash salt water off all running parts with fresh water after every use to avoid corrosion. The use of a close fitting cover when the winch is not in use is highly recommended. Ensure the main drive shaft remains greased at all times. Before installation always store the unit vertically or in a similar orientation as to the installed position.

ELECTRICAL INFORMATION

See Wiring Diagrams for wiring instructions.

Circuit breaker (must be fitted to ensure warranty)

If the drum winch is overloaded or stalled the circuit breaker automatically cuts off power to the winch and protects the wiring and motor. The circuit breaker should not be used as an isolating switch, for safety reasons.

Deck Switches (if fitted) are best located to either port or starboard or directly behind the drum winch in a position where it can be easily reached with your foot or knee, preferably where you can view the anchor and chain coming aboard.

Isolating Switch should be fitted in an accessible position for safety, ideally close to the battery or switches. The isolating switch is not a circuit breaker.

Batteries are best located as close to the drum winch as possible. Larger cables will reduce the voltage drop to the motor and the heat generated when operating the winch. Small diameter cables drop voltage considerably. Use the following table as a guide to your required wire size:

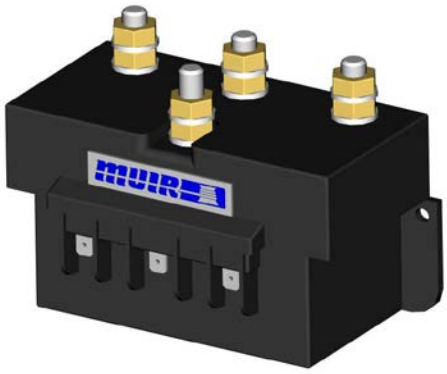
DFF/DW 06/08/10

Distance from battery to motor (m)	Cable Size (mm^2)	AWG	Cable Core Diameter (mm)
< 8 (26')	54	1/0	8.25 (21/64")
9 – 12 (29' – 39')	85	3/0	10.4 (25/64")
13 – 18 (42' – 60')	125	4.7/0	12.7 (1/2")

DFF/DW 12/15

Distance from battery to motor (m)	Cable Size (mm^2)	AWG	Cable Core Diameter (mm)
7 (23')	85	3/0	10.4 (25/64")
9 – 17 (30' – 55')	186	6.2/0	15.0 (19/32")

Rotation: Drum winches may be wired for single or dual direction, using a toggle switch, or single or dual deck switches for raising or lowering. Alternatively remote control solenoid packages with Hand Pendant are available.



Solenoid DFF/DW 08

For wiring information, please refer to the wiring diagram/schematic.

Solenoid DFF/DW 10 / 12 / 15 / 18 / 20

Solenoid Installation

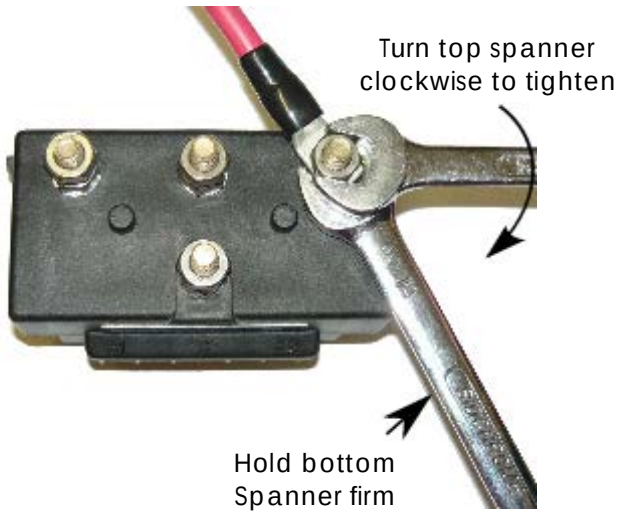
We recommend that the solenoid is installed in an upright position, where it has no exposure to sea water and in close proximity to the electric motor of the winch. Do not install in the anchor locker unless in a waterproof box.

WINCH MODEL	MOTOR SIZE	MOTOR TYPE
DFF/DW 06/08	600W	2 POLE
DFF/DW 10	1000W	3 POLE
DFF/DW 12	1200W	3 POLE
DFF/DW 15	1500W	3 POLE

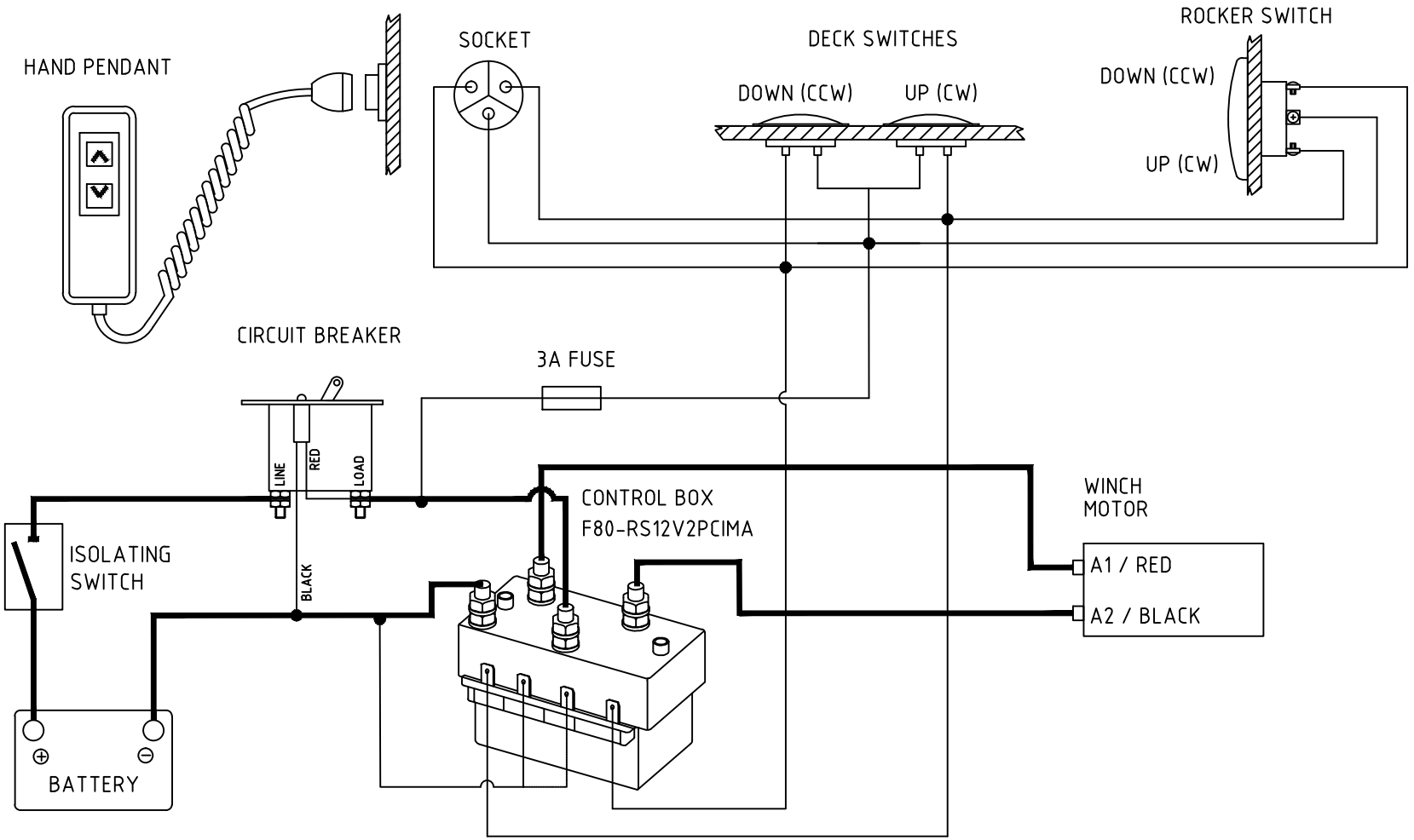
WARNING

Do not over tighten terminal nuts.
It may cause internal damage.
Ensure bottom nut is held with a spanner when tightening top nut.

Please apply this method to all reversing solenoids, circuit breakers and motor terminals.



Correct method using 2 spanners. Incorrect method using 1 spanner.



- REFER TO MANUAL FOR WIRING INDICATED BY HEAVY LINES
- LIGHTER LINES INDICATE LIGHT WIRING.
- DASHED LINES INDICATE OPTIONAL WIRING.

MOTOR 12/24V	200/400W	600W

REV No.	DESC.	BY.	DATE.
02	NC# 1526	BW	20/08/18

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ±
X.X ±
X.XX ±
UNLESS OTHERWISE SPECIFIED

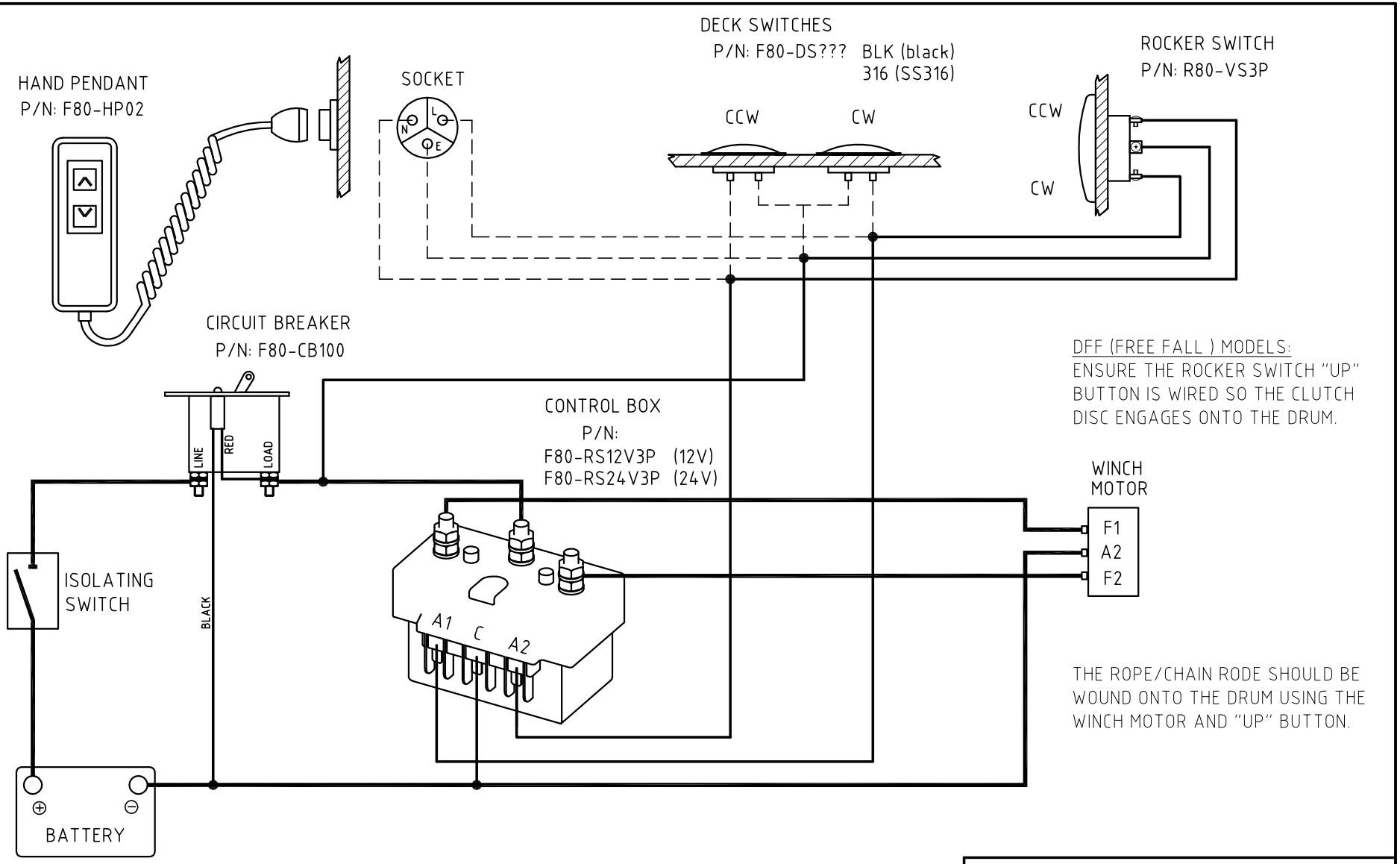
MATERIAL

FINISH

TITLE
TWO TERMINAL MOTOR (REVERSING)
WIRING DIAGRAM (POSITIVE ACTING SOLENOID)

PART No. WIRE-600 CIMA SOLENOID

DRN	DATE	DRG No.	
MW	8/12/14	WIRE-600	
SCALE NTS	APP1	APP2	SIZE A4



DFF (FREE FALL) MODELS:
ENSURE THE ROCKER SWITCH "UP" BUTTON IS WIRED SO THE CLUTCH DISC ENGAGES ONTO THE DRUM.

THE ROPE/CHAIN RODE SHOULD BE WOUND ONTO THE DRUM USING THE WINCH MOTOR AND "UP" BUTTON.

— REFER TO MANUAL FOR WIRING INDICATED BY HEAVY LINES
— LIGHTER LINES INDICATE LIGHT WIRING.
– – DASHED LINES INDICATE OPTIONAL WIRING.

WINCH MODEL	DFF/DW 10/12/15

TOLERANCES (mm)
X. ±
X.X ±
X.XX ±
UNLESS OTHERWISE SPECIFIED

MATERIAL

FINISH

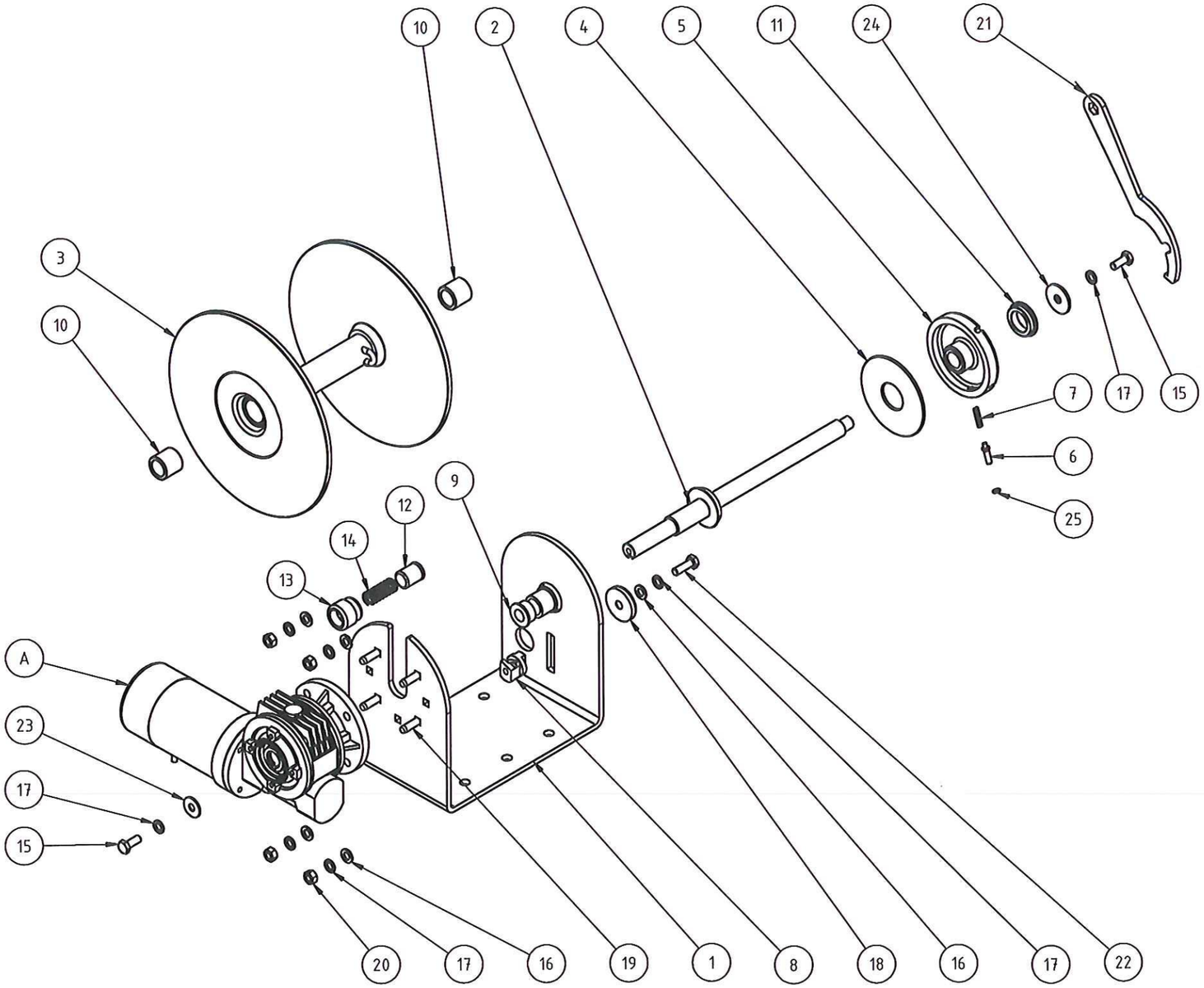
MUIR WINDLASSES AUSTRALIA

TITLE
THREE TERMINAL MOTOR (REVERSING)
WIRING DIAGRAM (POSITIVE ACTING SOLENOID)

PART No.

DRN	DATE	DRG No.	
AJN	16/06/10	WIRE0086-DFF-DW10-15	
SCALE NTS	APP1	APP2 14	SIZE A4

1



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	P22-BSE316DFF08	BASE SS316 DFF08 DRUM WINCH
2	1	K06-SFTDFF08	SHAFT ASSEMBLY DFF08
3	1	K06-DRUMDFF08	DRUM ASSEMBLY DFF08
4	1	P21-NYL100.0032.003	WASHER NYLACAST 96X32X3 MM
5	1	P07-CLN316DFF08	CLUTCH NUT SS316 DFF08
6	1	P15-PINAB209.52025B	PIN- PLUNGER VFF600A
7	1	S36-SPR304VFF600B	VFF600 PLUNGER SPRING
8	1	P13-PWL316DFF08	DECLUTCHER DFF08
9	1	P02-AB2DFF08HAT	BUSH HAT DFF08
10	2	P02-NYLDFF08DRUM	BUSH NYLON DFF08 DRUM
11	1	P02-NYLDFF08BRG	BUSH NYLON DFF08 END BEARING
12	1	P02-NYLDFF08BRK	BUSH NYLON DFF08 BRAKE
13	1	P15-PINNYLDFF08BRK	BRAKE PIN NYLON DFF08
14	1	S36-SPR316DW08FF	DFF08 FREEFALL COMPRESSION BRAKE SPRING
15	2	S36-31608.00020	SCREW HEX HD SS316 8MM X 20MM
16	5	S75-31608.00	WASHER FLAT SS316 8MM
17	7	S76-31608.00	WASHER SPRING SS316 8MM
18	1	P21-NYLDFF08PWL	WASHER NYLON DFF08 PAWL
19	4	S14-31608.00025	BOLT CUP HD SS316 8MM X 25MM
20	4	S20-31608.00	NUT HEX SS316 8MM
21	1	P11-HANCLNDFF08	HANDLE CLUTCH DFF08
22	1	S36-31608.00030	SCREW HEX HD SS316 8MM X 30MM
23	1	S75-30408.00024	WASHER FLAT SS304 M8 X 24
24	1	P21-316035.0008.504	END WASHER DFF08/10
25	1	R41-ORG00900502.0	'O' RING 9 X ID5 X 2MM VFF600 PLUNGER

A: MOTOR & GEARBOX

REV No.	DESC.	BY	DATE
3	CR#953 ITEM 4 CHANGED	MW	12/08/14

WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. 0.5
X.X 0.1
X.XX 0.03
UNLESS OTHERWISE SPECIFIED

MATERIAL: SS 316
FINISH

TITLE: DFF08 FREEFALL / VF44
EXPLODED VIEW
PART No: K08-DFF08044

DRN	DATE	DRG No
JT	1/07/2010	K08-DFF08044

SCALE	APP1	APP2	SIZE
NTS			A3

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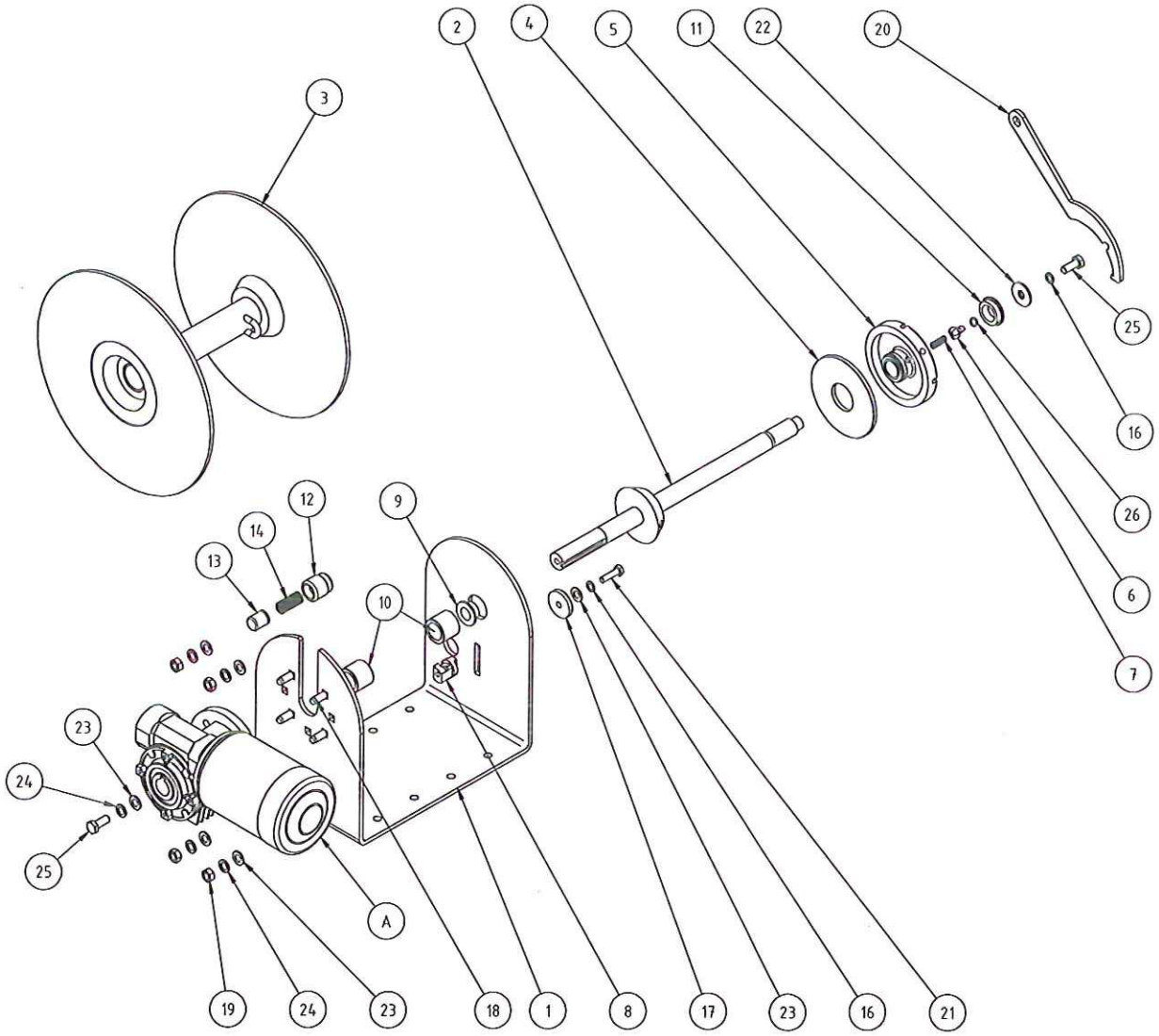


ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	P22-BSE316DFF10	BASE SS316 DFF10 DRUM WINCH
2	1	K06-SFTDFF10	SHAFT ASSEMBLY DFF10
3	1	K06-DRUMDFF10	DRUM ASSEMBLY DFF10
4	1	P21-NYL120.0040.003	WASHER NYLACAST 120X40X3MM DFF10
5	1	P07-CLN316DFF10	CLUTCH NUT SS316 DFF10
6	1	P15-PINAB2DFF10PLG	PIN - PLUNGER DFF10
7	1	S36-SPR316DWP	DFF10 PLUNGER SPRING - SS316
8	1	P13-PWL316DFF10	DECLUTCHER DFF10
9	1	P02-AB2DFF10HAT	BUSH HAT DFF10
10	2	P02-NYLDFF10DRUM	BUSH NYLON DFF10 DRUM
11	1	P02-NYLDFF08BRG	BUSH NYLON DFF10 END BEARING
12	1	P02-NYLDFF08BRK	BUSH NYLON DFF08 BRAKE
13	1	P15-PINNYLDFF08BRK	BRAKE PIN NYLON DFF08 / 10
14	1	S36-SPR316DW10FF	DFF10 FREEFALL COMPRESSION BRAKE SPRING
16	2	S76-31608.00	WASHER SPRING SS316 8MM
17	1	P21-NYLDFF08PWL	WASHER NYLON DFF10 PAWL
18	4	S14-31610.00030	BOLT CUP HD SS316 10MM X 30MM
19	4	S20-31610.00	NUT HEX SS316 10MM
20	1	P11-HANCLNDFF10	HANDLE CLUTCH DFF10
21	1	S36-31608.00030	SCREW HEX HD SS316 8MM X 30MM
22	1	P21-316035.0010.504	END WASHER DFF10
23	6	S75-30410.00	WASHER FLAT SS304 10MM
24	5	S76-30410.00	WASHER SPRING SS304 10MM
25	2	S36-31610.00025	SCREW HEX HD SS316 10MM X 25MM
26	1	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)

A: MOTOR & GEARBOX

REV No.	DESC.	BY	DATE
4	CR#1267 SHAFT BOLT BALLOON	IM	13/11/2018

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. 0.5
X.X 0.1
X.XX 0.03
UNLESS OTHERWISE SPECIFIED

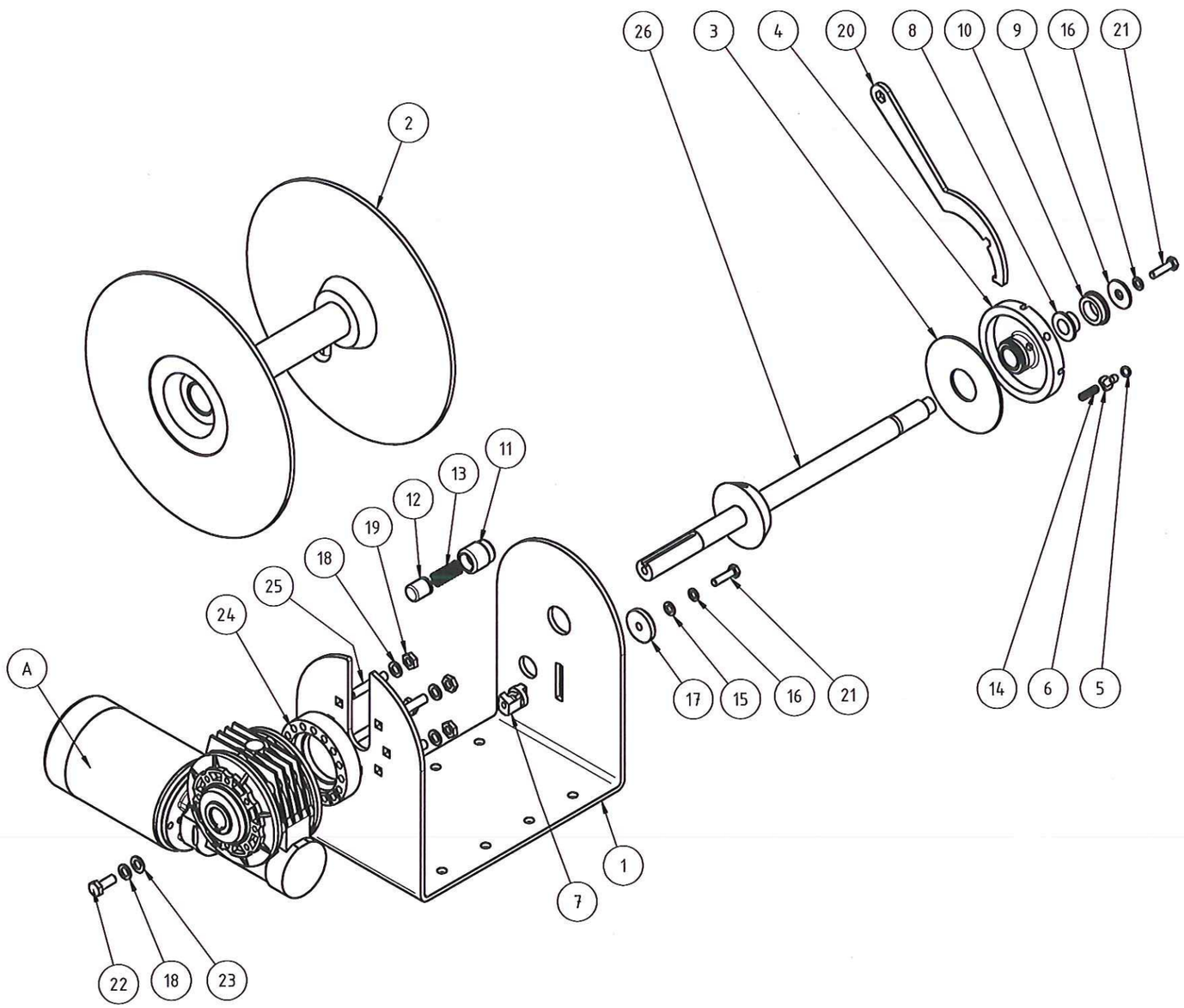
TITLE: DFF10 FREEFALL / VF49
EXPLODED VIEW

PART No: K08-DFF10049

MATERIAL: SS 316
FINISH

DRN: JT | DATE: 1/07/2010 | DRG No: K08-DFF10049
SCALE: NTS | APP1 | APP2 | SIZE: A3

G:\R & D (To 10.10.12)\DFF10-15 FREEFALL\K08-DFF10049.idw



ITEM	PART NUMBER	DESCRIPTION	QTY
1	P22-BSE316DFF10	BASE SS316 DFF10 DRUM WINCH	1
2	K06-DRUMDFF10	DRUM ASSEMBLY DFF10	1
3	P21-NYL120.0040.003	WASHER NYLON 120X40X3mm	1
4	P07-CLN316DFF10	CLUTCH NUT SS316 DFF10	1
5	R41-ORG01100701.8	"O" RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
6	P15-PINAB2DFF10PLG	PIN - PLUNGER DFF10	1
7	P13-PWL316DFF10	DECLUTCHER DFF10	1
8	P02-AB2DFF10HAT	BUSH HAT DFF10	1
9	P21-316035.0010.504	END WASHER DFF10	1
10	P02-NYLDFF08BRG	BUSH NYLON DFF10 END BEARING	1
11	P02-NYLDFF08BRK	BUSH NYLON DFF08 BRAKE	1
12	P15-PINNYLDFF08BRK	BRAKE PIN NYLON DFF08 / 10	1
13	S36-SPR316DW10FF	DFF10 FREEFALL COMPRESSION BRAKE SPRING	1
14	S36-SPR316DWP	DW 08/10 COMPRESSION PLUNGER SPRING	1
15	S75-31608.00	WASHER FLAT SS316 8MM	1
16	S76-31608.00	WASHER SPRING SS316 8MM	2
17	P21-NYLDFF08PWL	WASHER NYLON DFF10 PAWL	1
18	S76-30410.00	WASHER SPRING SS304 10MM	5
19	S20-31610.00	NUT HEX SS316 10MM	4
20	P11-HANCLNDFF10	HANDLE CLUTCH DFF10	1
21	S36-31608.00030	SCREW HEX HD SS316 8MM X 30MM	2
22	S36-31610.00025	SCREW HEX HD SS316 10MM X 25MM	1
23	S75-30410.00	WASHER FLAT SS304 10MM	1
24	P01-ADP063DW12	BASE - GEARBOX ADAPTOR DFF12/15	1
25	S00-31610.00042	STUDS ALLTHREAD M10X42mm	4
26	K06-SFT431DFF10	DFF10 (FREEFALL) SHAFT ASSEMBLY	1

A: MOTOR & GEARBOX

REV No.	DESC.	BY	DATE
3	CR#953 ITEM 3 CHANGED	MW	21/08/14

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. 0.5
X.X 0.1
X.XX 0.03
UNLESS OTHERWISE SPECIFIED

MATERIAL
SS316
FINISH

TITLE
DFF12 FREEFALL / VF63 /1200w
EXPLODED VIEW

PART No
F33-DFF12063

DRN	DATE	DRG No
MW	11/10/2012	K08-DFF12063

SCALE	APP1	APP2	SIZE
NTS			A3

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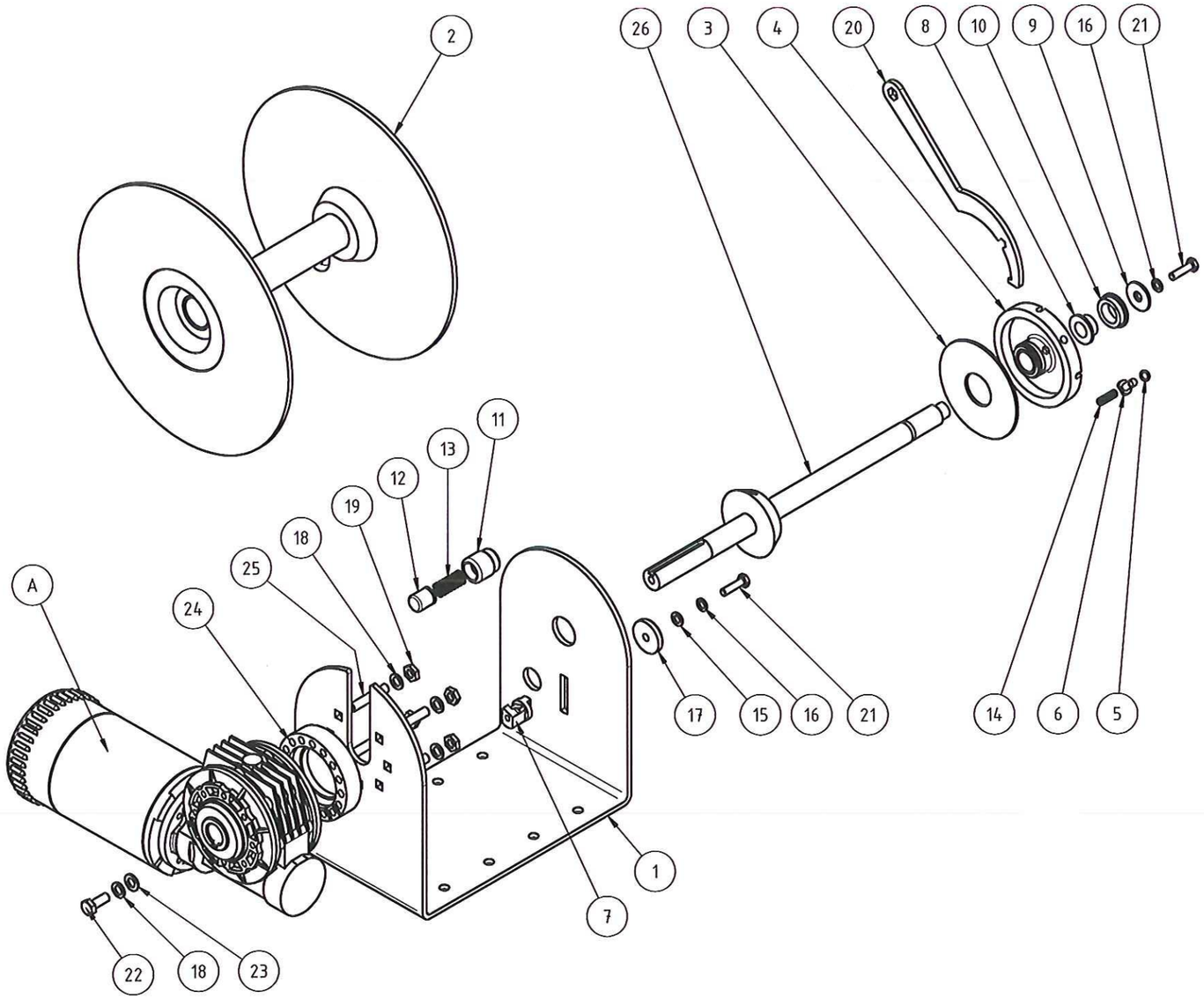

ITEM	PART NUMBER	DESCRIPTION	QTY
1	P22-BSE316DFF10	BASE SS316 DFF10 DRUM WINCH	1
2	K06-DRUMDFF10	DRUM ASSEMBLY DFF10	1
3	P21-NYL120.0040.003	WASHER NYLON 120X40X3mm	1
4	P07-CLN316DFF10	CLUTCH NUT SS316 DFF10	1
5	R41-ORG01100701.8	"O" RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
6	P15-PINAB2DFF10PLG	PIN - PLUNGER DFF10	1
7	P13-PWL316DFF10	DECLUTCHER DFF10	1
8	P02-AB2DFF10HAT	BUSH HAT DFF10	1
9	P21-316035.0010.504	END WASHER DFF10	1
10	P02-NYLDFF08BRG	BUSH NYLON DFF10 END BEARING	1
11	P02-NYLDFF08BRK	BUSH NYLON DFF08 BRAKE	1
12	P15-PINNYLDFF08BRK	BRAKE PIN NYLON DFF08 / 10	1
13	S36-SPR316DW10FF	DFF10 FREEFALL COMPRESSION BRAKE SPRING	1
14	S36-SPR316DWP	DW 08/10 COMPRESSION PLUNGER SPRING	1
15	S75-31608.00	WASHER FLAT SS316 8MM	1
16	S76-31608.00	WASHER SPRING SS316 8MM	2
17	P21-NYLDFF08PWL	WASHER NYLON DFF10 PAWL	1
18	S76-30410.00	WASHER SPRING SS304 10MM	5
19	S20-31610.00	NUT HEX SS316 10MM	4
20	P11-HANCLNDFF10	HANDLE CLUTCH DFF10	1
21	S36-31608.00030	SCREW HEX HD SS316 8MM X 30MM	2
22	S36-31610.00025	SCREW HEX HD SS316 10MM X 25MM	1
23	S75-30410.00	WASHER FLAT SS304 10MM	1
24	P01-ADP063DW12	BASE - GEARBOX ADAPTOR DFF12/15	1
25	S00-31610.00042	STUDS ALLTHREAD M10X42mm	4
26	K06-SFT431DFF10	DFF10 (FREEFALL) SHAFT ASSEMBLY	1

A: MOTOR & GEARBOX

REV No.	DESC.	BY	DATE
1	CR #953 ITEM 3 CHANGED	MW	21/08/14

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. 0.5
X.X 0.1
X.XX 0.03
UNLESS OTHERWISE SPECIFIED

MATERIAL: SS316
FINISH

TITLE: DFF15 FREEFALL / VF63 /1500w
EXPLODED VIEW

PART No: F33-DFF15063

DRN	DATE	DRG No
PG	5/09/2013	K08-DFF15063

SCALE	APP1	APP2	SIZE
NTS			A3

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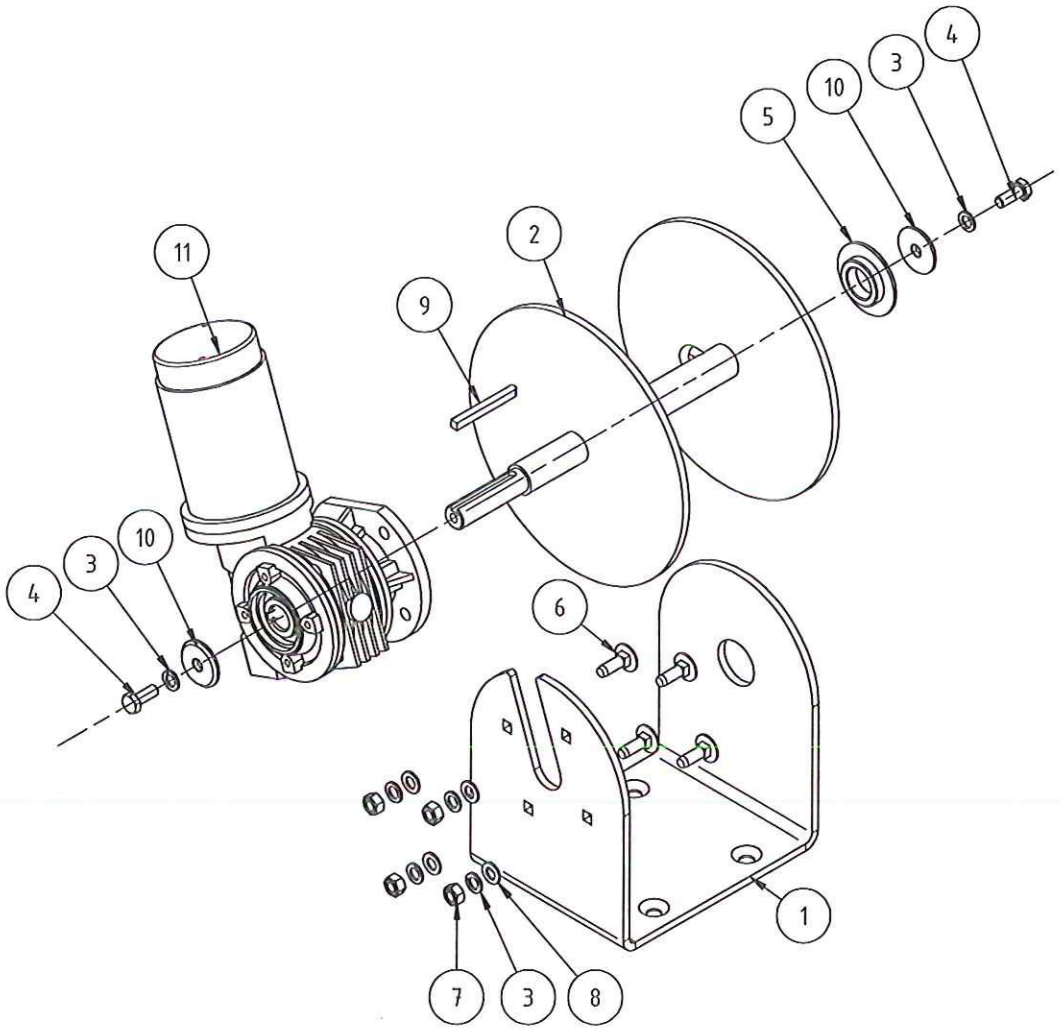

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	P221138	BASE PLATE SS316
2	1	K061194	SHAFT/DRUM ASSEMBLY
3	6	S761012	SPRING WASHER SS316 M8
4	2	S361025	SCREW HEX HD - M8 x 20mm SS316
5	1	P021067	BUSH MOLY-HAT BUSH
6	4	S141001	BOLT CUP HD SS316 M8x25
7	4	S201010	NUT HEX SS316 M8
8	4	S751020	WASHER FLAT SS316 M8
9	1	P121011	KEY BRASS 6 X 6 X 60mm
10	2	P211010	END WASHER
11	1	G041040	MVF44P R60 / 12V 400W MOTOR

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X.
X.X
X.XX
UNLESS OTHERWISE SPECIFIED

TITLE
DW06 VFF44/400W-CUSTOM
GENERAL ARRANGEMENT

PART No
F331030

SHEET 2 OF 2

MATERIAL

FINISH

DRN	DATE	DRG No
PS	11/04/2017	F331030

SCALE	APP1	APP2	SIZE
NTS			A4

REV No.	DESC.	BY	DATE
0	INITIAL RELEASE	PS	20/03/2017

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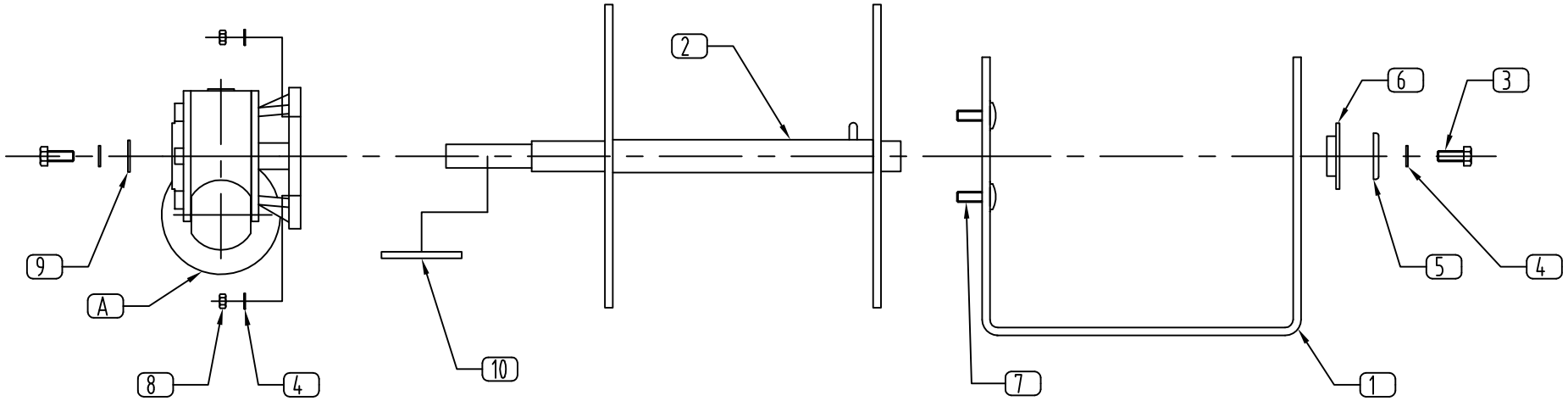
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P22-BSE316DFF08	BASE SS316 DFF08 DRUM WINCH	1
2	K06-DRUMDW08	DRUM ASSEMBLY DW08	1
3	S36-31608.00020	SCREW HEX HD SS316 M8 X 20	2
4	S76-31608.00	WASHER SPRING SS316 M8	6
5	P21-316035.0008.504	END WASHER DFF08	1
6	P02-MOL055.023.010	BLACK NYLON HAT BUSH	1
7	S14-31608.00025	BOLT CUP HD SS316 8MM X 25MM	4
8	S20-31608.00	NUT HEX SS316 M8	4
9	S75-30408.00024	WASHER FLAT SS316 8 X 24	1
10	P12-BRS06.006.0065	KEY BRASS 6 X 6 X 65	1

A MOTOR / GEARBOX ASSEMBLY



MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

TITLE
DW08 DRUM WINCH
EXPLODED VIEW

PART No.
K08-DW08044

MATERIAL
SS 316

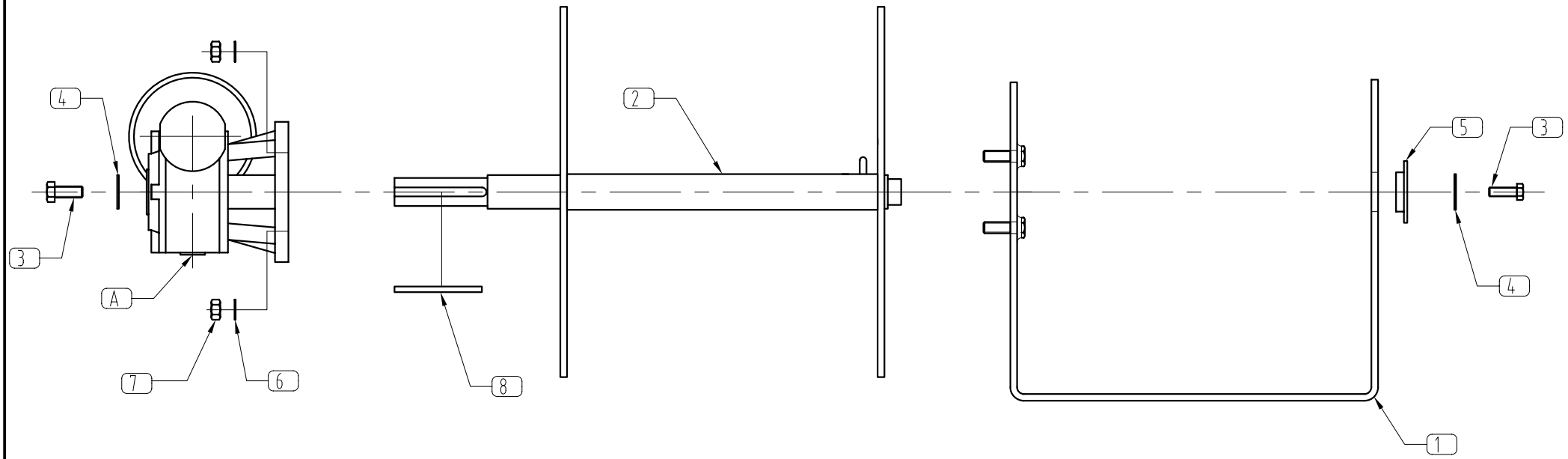
FINISH

DRN	DATE	DRG No.	
JT	14/7/06	K08-DW08044	
SCALE NTS	APP1	APP2	SIZE A4

REV No.	DESC.	BY.	DATE.
1	PER CR #1238, 1239, 1267 - UPDATE BOM	PB	6/8/2015

ITEM	PART NUMBER	DESCRIPTION	QTY
1	P22-BSE316DW10	BASE PLATE SS316	1
2	P18-SFT316DW10	SHAFT ASSEMBLY SS316	1
3	S36-31610.00025	SCREW HEX HD SS316 M10 X 25	2
4	S75-30410.00030	WASHER FLAT SS304 10 X 30 X 2.5	2
5	P02-MOL055.023.010	BLACK MOLLY HAT BUSH	1
6	S76-31610.00	WASHER SPRING SS316 M10	4
7	S20-316010.00	NUT HEX SS316 M10	4
8	P12-BRS08.008.0082	KEY BRASS 8 X 8 X 82	1

A MOTOR / GEARBOX ASSEMBLY



MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

TITLE
DW10 DRUM WINCH
EXPLODED VIEW

PART No. K08-DW10049

MATERIAL SS 316

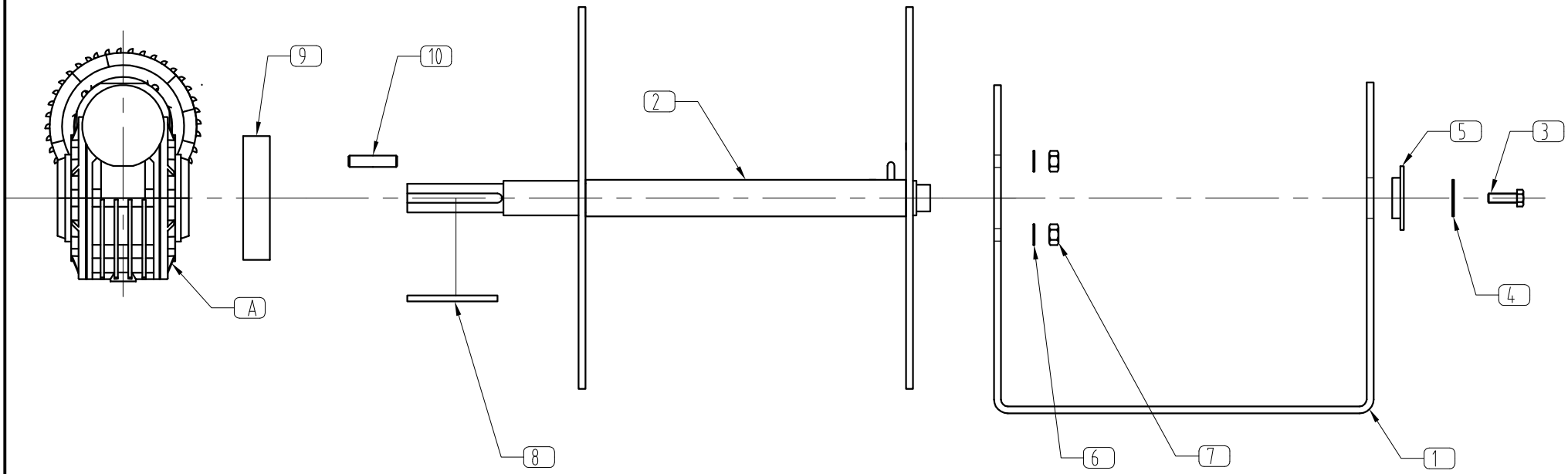
FINISH

DRN	DATE	DRG No.	
JT	14/7/06	K08-DW10049	
SCALE NTS	APP1	APP2 19	SIZE A4

REV No.	DESC.	BY.	DATE.
1	UPDATED DRAWING AS PER ERC #406	JT	29/3/07

ITEM	PART NUMBER	DESCRIPTION	QTY
1	P22-BSE316DW10	BASE PLATE SS316	1
2	P18-SFT316DW10	SHAFT ASSEMBLY SS316	1
3	S36-31610.00025	SCREW HEX HD SS316 M10 X 25	2
4	S75-30410.00030	WASHER FLAT SS304 10 X 30 X 2.5	2
5	P02-MOL055.023.010	BLACK MOLLY HAT BUSH	1
6	S76-31610.00	WASHER SPRING SS316 M10	4
7	S20-316010.00	NUT HEX SS316 M10	4
8	P12-BRS08.008.0082	KEY BRASS 8 X 8 X 82	1
9	P01-ADP063DW12	BASE - GEARBOX ADAPTOR DW/DFF12/15	1
10	S00-31610.00042	STUDS ALLTHREAD M10X42mm	4

A MOTOR / GEARBOX ASSEMBLY



MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

TITLE
DW12 DRUM WINCH / VF63 /1200w
EXPLODED VIEW

PART No. K08-DW12063

MATERIAL SS 316

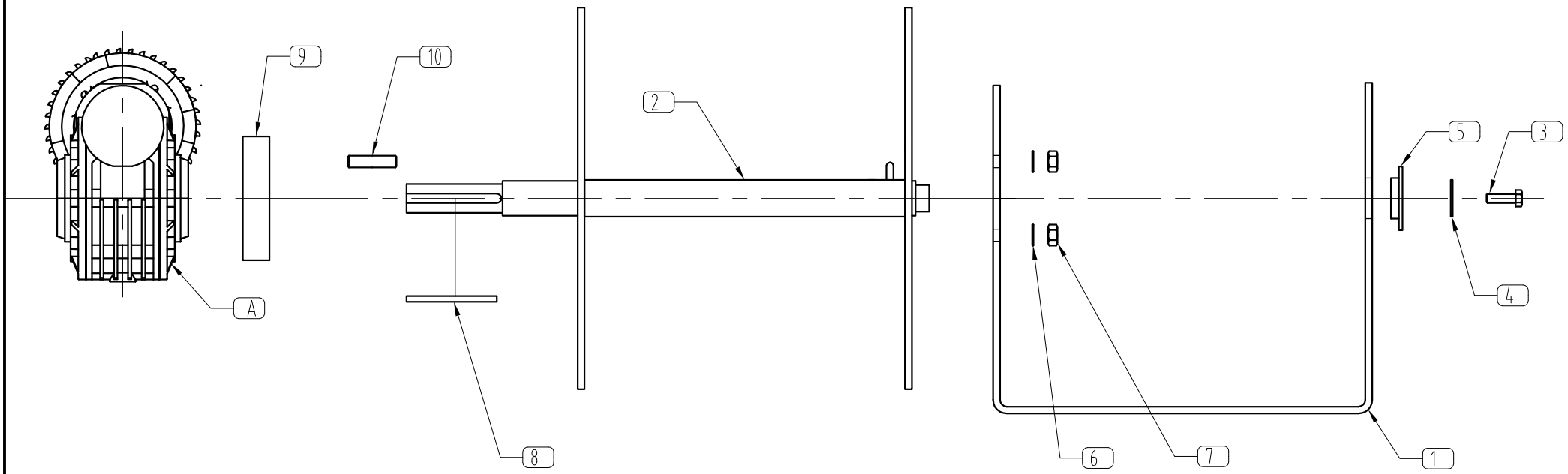
FINISH

DRN	DATE	DRG No.	
MW	16/10/12	K08-DW12063	
SCALE NTS	APP1	APP2	SIZE A4

REV No.	DESC.	BY.	DATE.
1	CR#1032 ADAPTOR AND STUDS ADDED	PG	12/09/2013

ITEM	PART NUMBER	DESCRIPTION	QTY
1	P22-BSE316DW10	BASE PLATE SS316	1
2	P18-SFT316DW10	SHAFT ASSEMBLY SS316	1
3	S36-31610.00025	SCREW HEX HD SS316 M10 X 25	2
4	S75-30410.00030	WASHER FLAT SS304 10 X 30 X 2.5	2
5	P02-MOL055.023.010	BLACK MOLLY HAT BUSH	1
6	S76-31610.00	WASHER SPRING SS316 M10	4
7	S20-316010.00	NUT HEX SS316 M10	4
8	P12-BRS08.008.0082	KEY BRASS 8 X 8 X 82	1
9	P01-ADP063DW12	BASE - GEARBOX ADAPTOR DW/DFF12/15	1
10	S00-31610.00042	STUDS ALLTHREAD M10X42mm	4

A MOTOR / GEARBOX ASSEMBLY



MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

MATERIAL: SS 316

FINISH

TITLE: DW15 DRUM WINCH / VF63 / 1500w
EXPLODED VIEW

PART No.: K08-DW15063

DRN	DATE	DRG No.
PG	12/09/2013	K08-DW15063

SCALE	APP1	APP2	SIZE
NTS			A4

REV No.	DESC.	BY.	DATE.
0	BASED ON K08-DW12063 REV1	PG	12/09/2013

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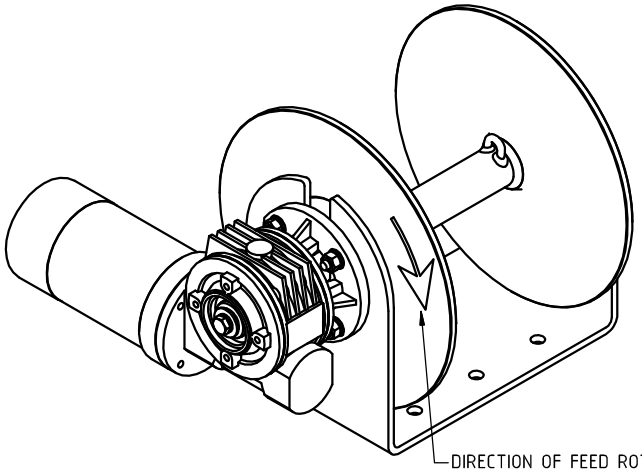
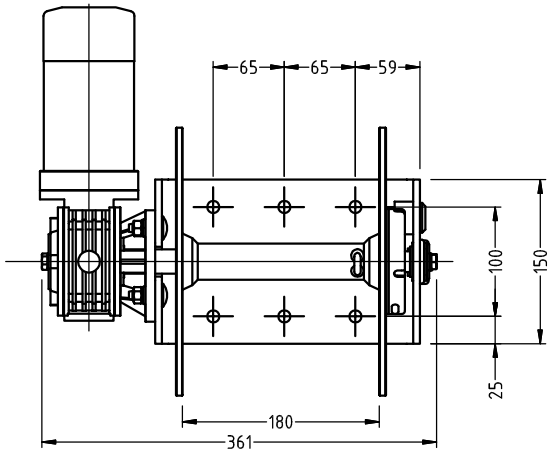
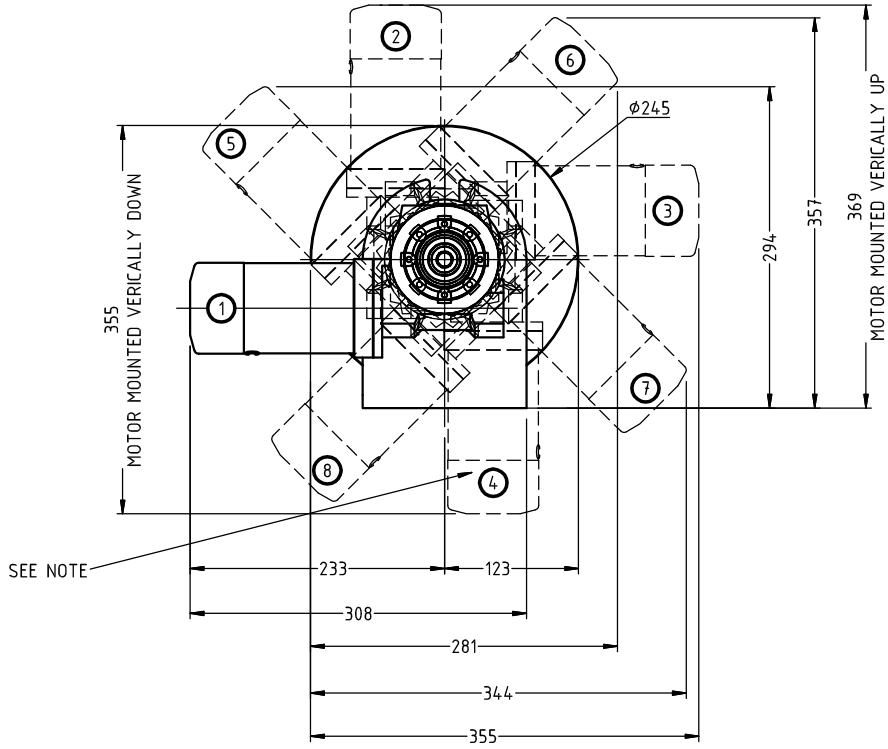
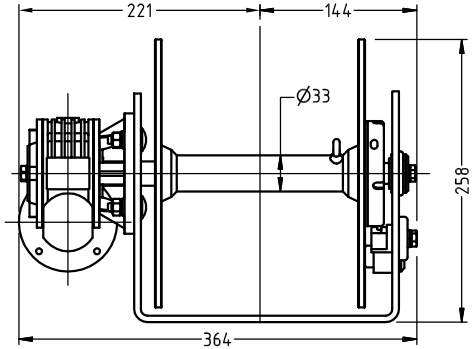








note:
When motor and gearbox is mounted vertically and is below the base of the winch assembly, the winch will be required to be mounted on a plinth.

Note:
Terminal box position may vary depending on availability of stock. Yard must notify Muir of any particular requirements (if any) regarding the terminal box position prior to approval.

note:
Yard must allow 100mm clearance in addition to motor length stated to ensure adequate cooling and allowance for motor unit length variations.

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

MATERIAL

FINISH

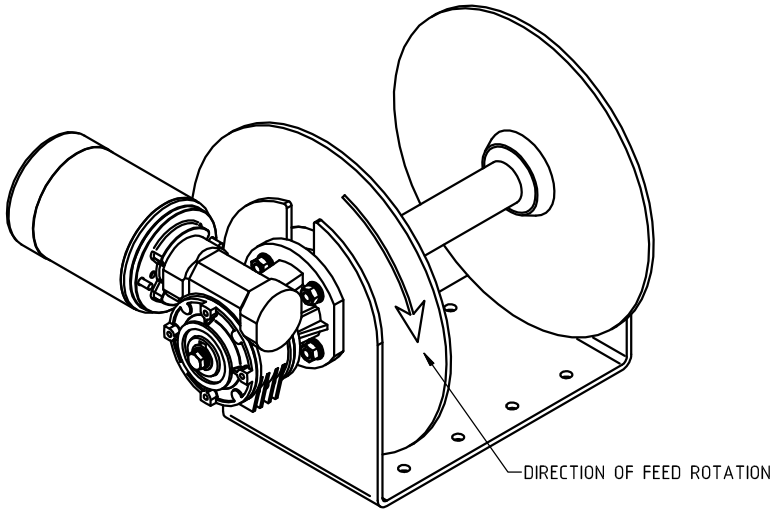
TITLE
DFF08 VF44 / 600W
GENERAL ARRANGEMENT

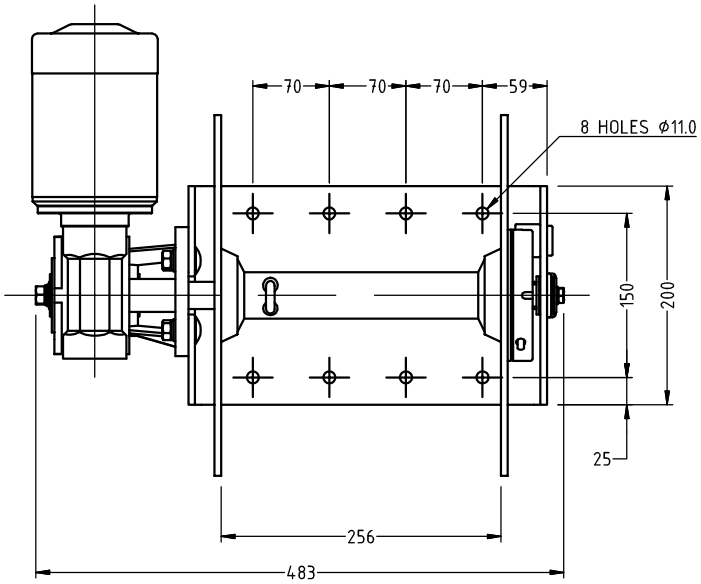
PART No. F33-DFF08044

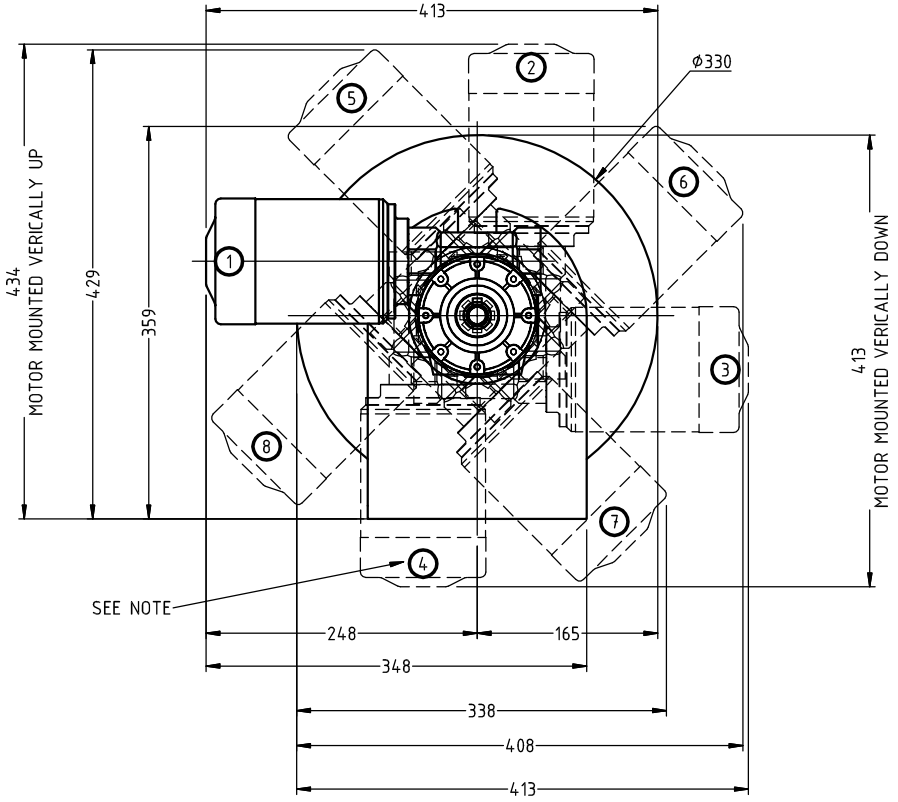
DRN	DATE	DRG No.
JT	02-07-10	2F33-DFF08044

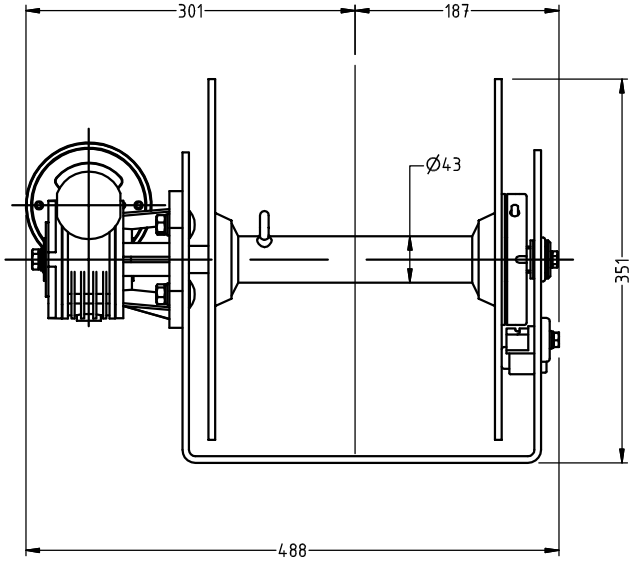
SCALE	APP1	APP2	SIZE
1:5			

REV No.	DESC.	BY.	DATE.
1	MULT. MOUNT POS. AND ROTATION	RS	20-06-11









note:
When motor and gearbox is mounted vertically and is below the base of the winch assembly. The winch will be required to be mounted on a plinth.

Note:
Terminal box position may vary depending on availability of stock. Yard must notify Muir of any particular requirements (if any) regarding the terminal box position prior to approval.

note:
Yard must allow 100mm clearance in addition to motor length stated to ensure adequate cooling and allowance for motor unit length variations.

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

MATERIAL

FINISH

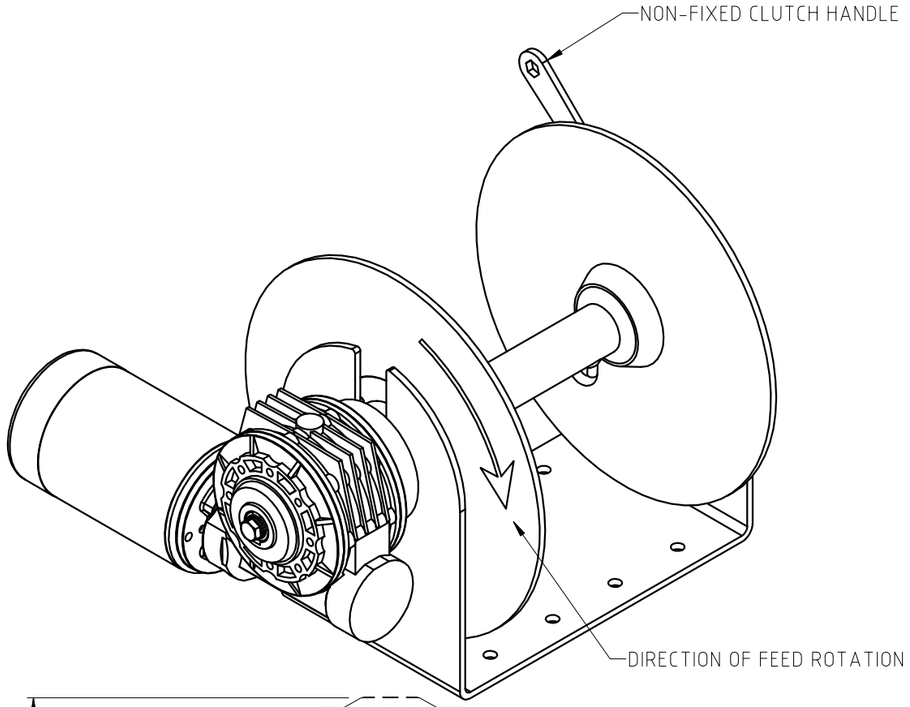
TITLE
DFF10 FREEFALL VF49 / 1000W
GENERAL ARRANGEMENT

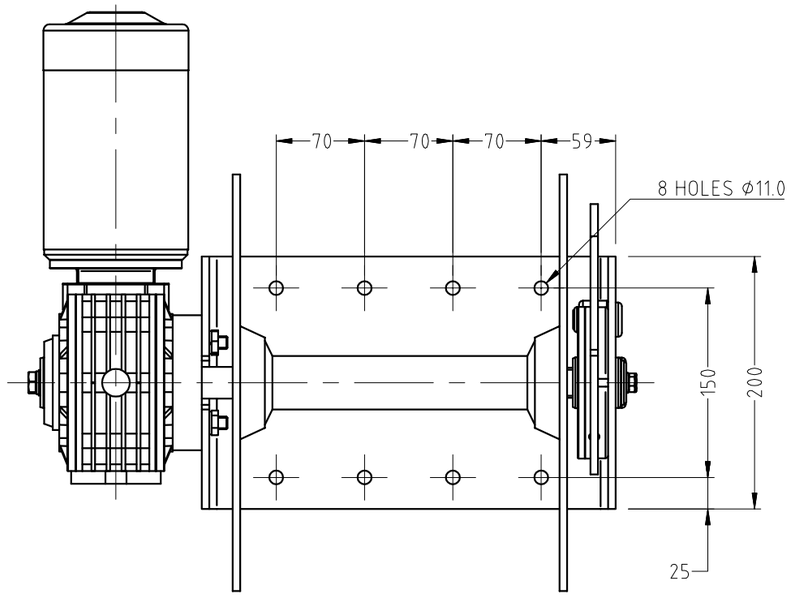
PART No. F33-DFF10049

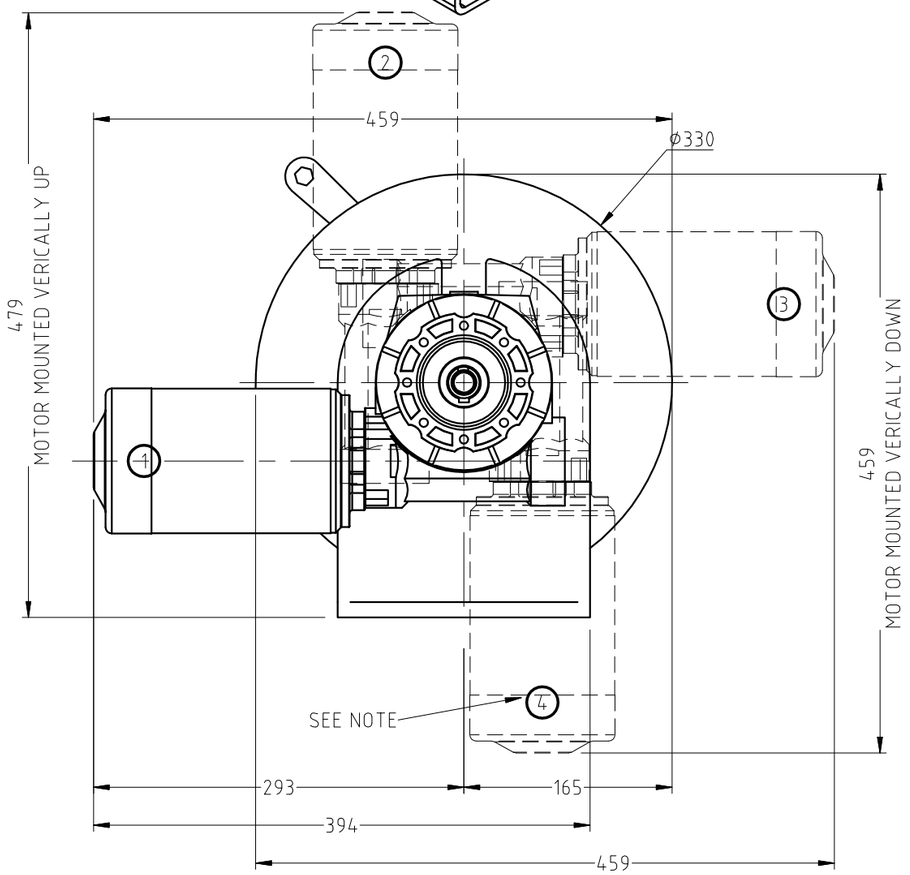
DRN	DATE	DRG No.
JT	02-07-2010	2F33-DFF10049

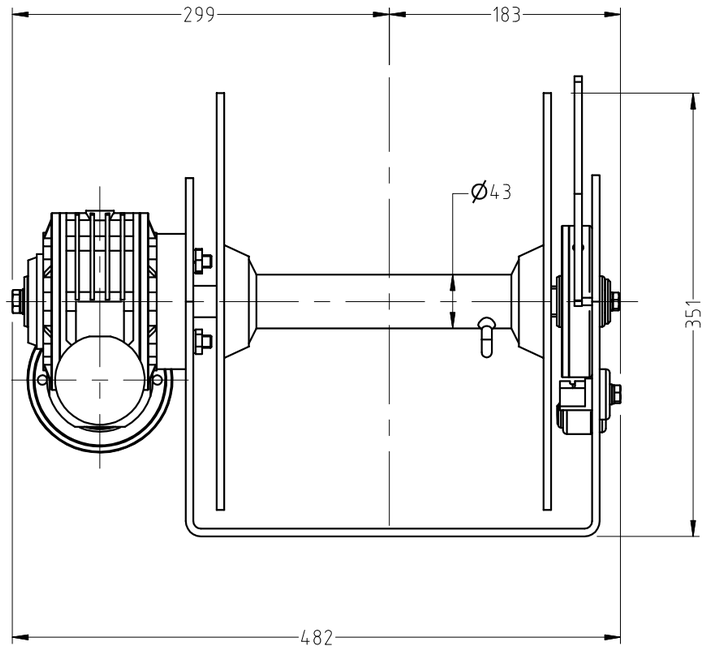
SCALE	APP1	APP2	SIZE
1:5			A3

REV No.	DESC.	BY.	DATE.
1	MULT. MOUNT POS. AND ROTATION	RS	06-06-2011









note:
When motor and gearbox is mounted vertically and is below the base of the winch assembly. The winch will be required to be mounted on a plinth.

Note:
Terminal box position may vary depending on availability of stock. Yard must notify Muir of any particular requirements (if any) regarding the terminal box position prior to approval.

note:
Yard must allow 100mm clearance in addition to motor length stated to ensure adequate cooling and allowance for motor unit length variations.

WINDLASSES AUSTRALIA

REV No.	DESC.	BY.	DATE.
2	CR#1032 ASSEMBLY CHANGED TO AS PER BUILT IN PRODUCTION	PG	4/09/2013

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

MATERIAL

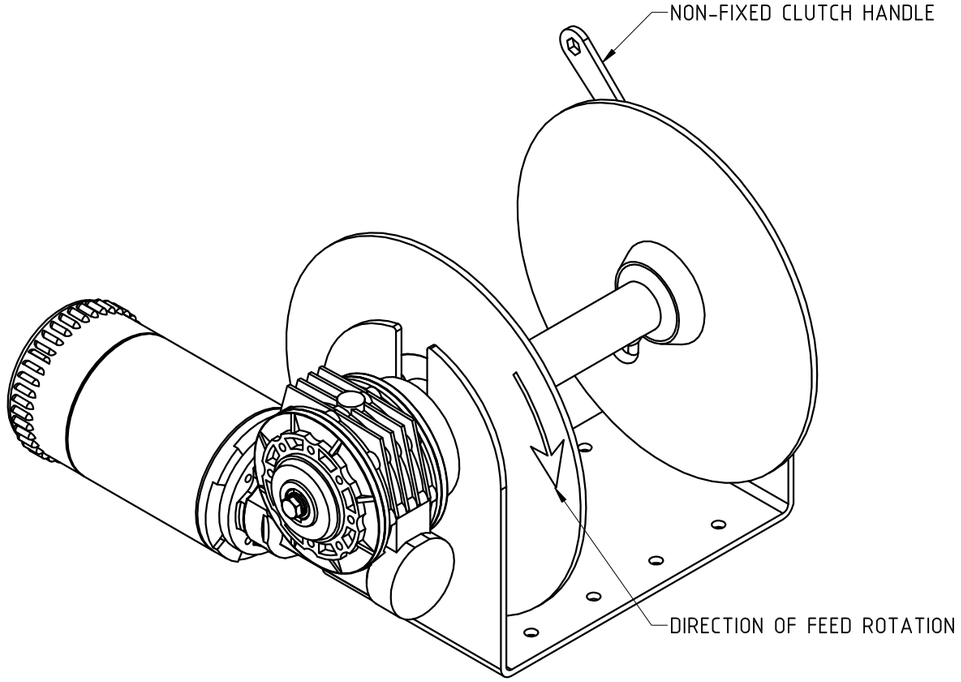
FINISH

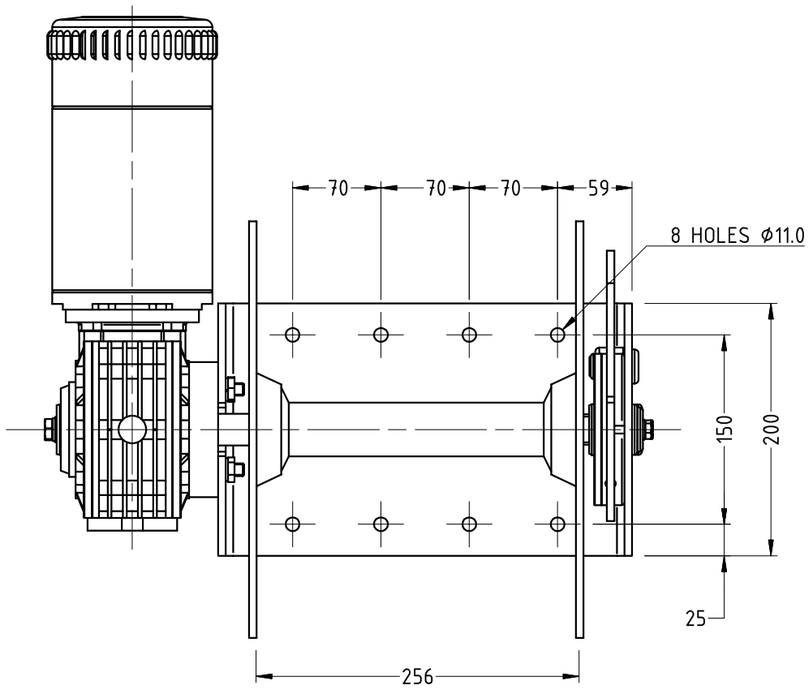
TITLE
DFF12 FREEFALL VF63 / 1200W
GENERAL ARRANGEMENT

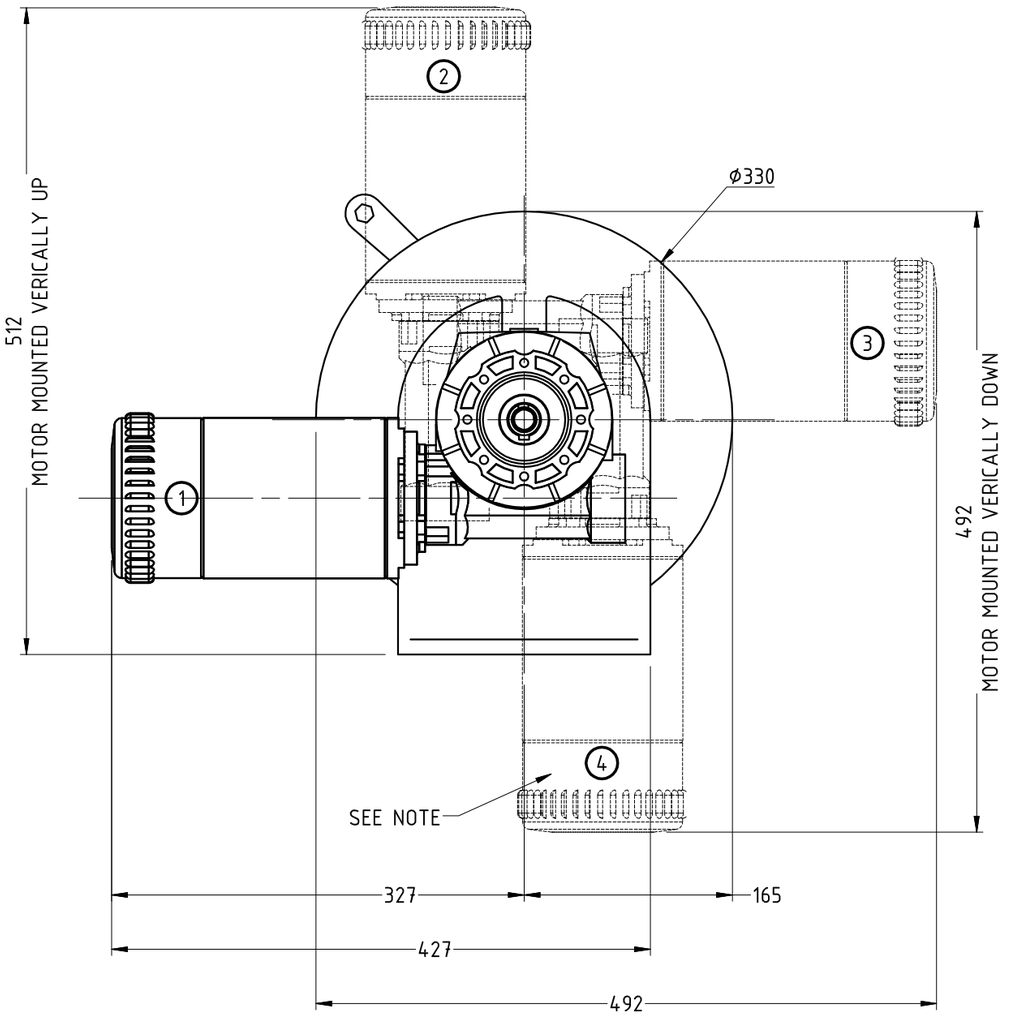
PART No.
F33-DFF12063

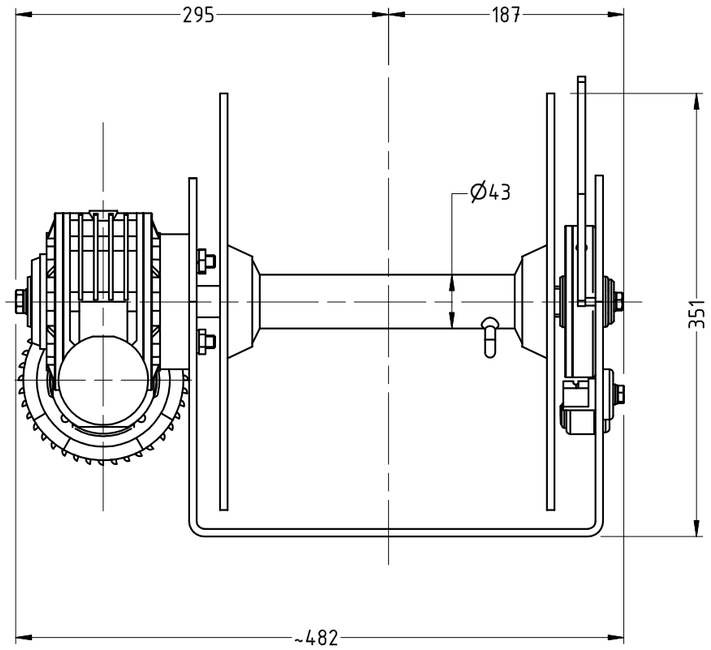
DRN	DATE	DRG No.
RS	25-08-11	F33-DFF12063

SCALE	APP1	APP2	SIZE
1:5			A3









note:
When motor and gearbox is mounted vertically and is below the base of the winch assembly. The winch will be required to be mounted on a plinth.

Note:
Terminal box position may vary depending on availability of stock. Yard must notify Muir of any particular requirements (if any) regarding the terminal box position prior to approval.

note:
Yard must allow 100mm clearance in addition to motor length stated to ensure adequate cooling and allowance for motor unit length variations.

REV No.	DESC.	BY.	DATE.
3	CORRECTED OVERALL WIDTH TO 482 FROM 530	MR	24/07/14

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

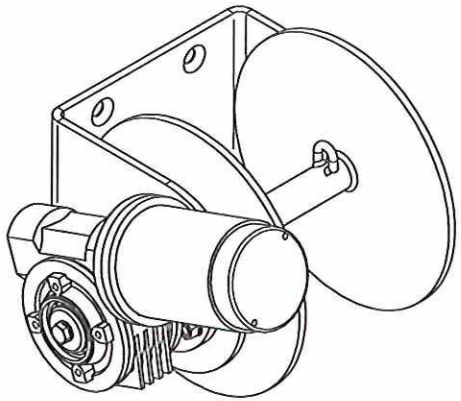
MATERIAL

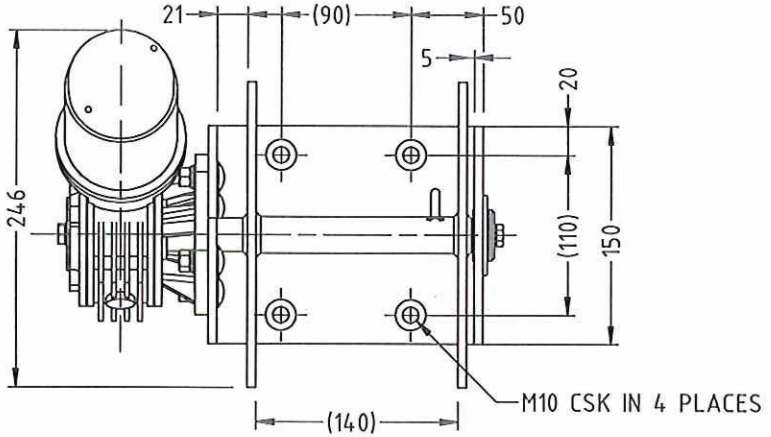
FINISH

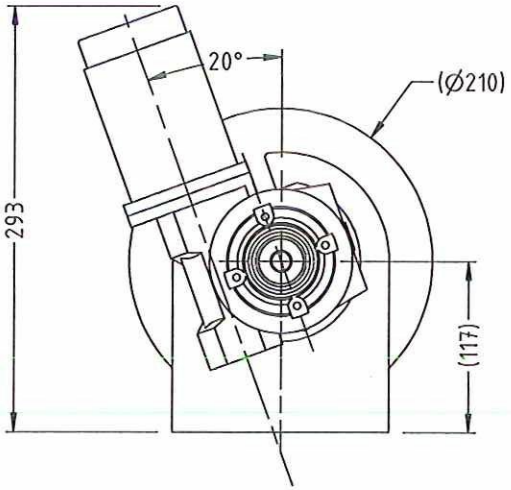
TITLE
DFF15 FREEFALL VF63 / 1500W
GENERAL ARRANGEMENT

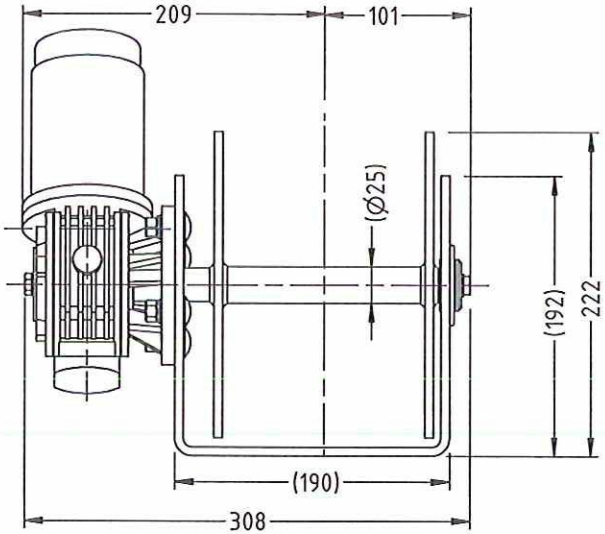
PART No.
F33-DFF15063

DRN	DATE	DRG No.	
JT	12-10-10	F33-DFF15063	
SCALE 1:5	APP1	APP2	SIZE A3









DESIGN SPECIFICATIONS	
Motor Rating	12V/400W
Max. Pull (kg)	270
Ave. Pull (kg)	113
Top Layer Pull (kg)	48
Ave. Line Speed (m/min)	15
Max. Line Speed (m/min)	36

REV No.	DESC.	BY	DATE
0	INITIAL RELEASE	PS	20/03/2017

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X.
X.X
X.XX
UNLESS OTHERWISE SPECIFIED

MATERIAL

FINISH

TITLE
DW06 VFF44/400W-CUSTOM
GENERAL ARRANGEMENT

PART No F331030 SHEET 1 OF 2

DRN	DATE	DRG No
PS	11/04/2017	F331030

SCALE	APP1	APP2	SIZE
1:3			A4

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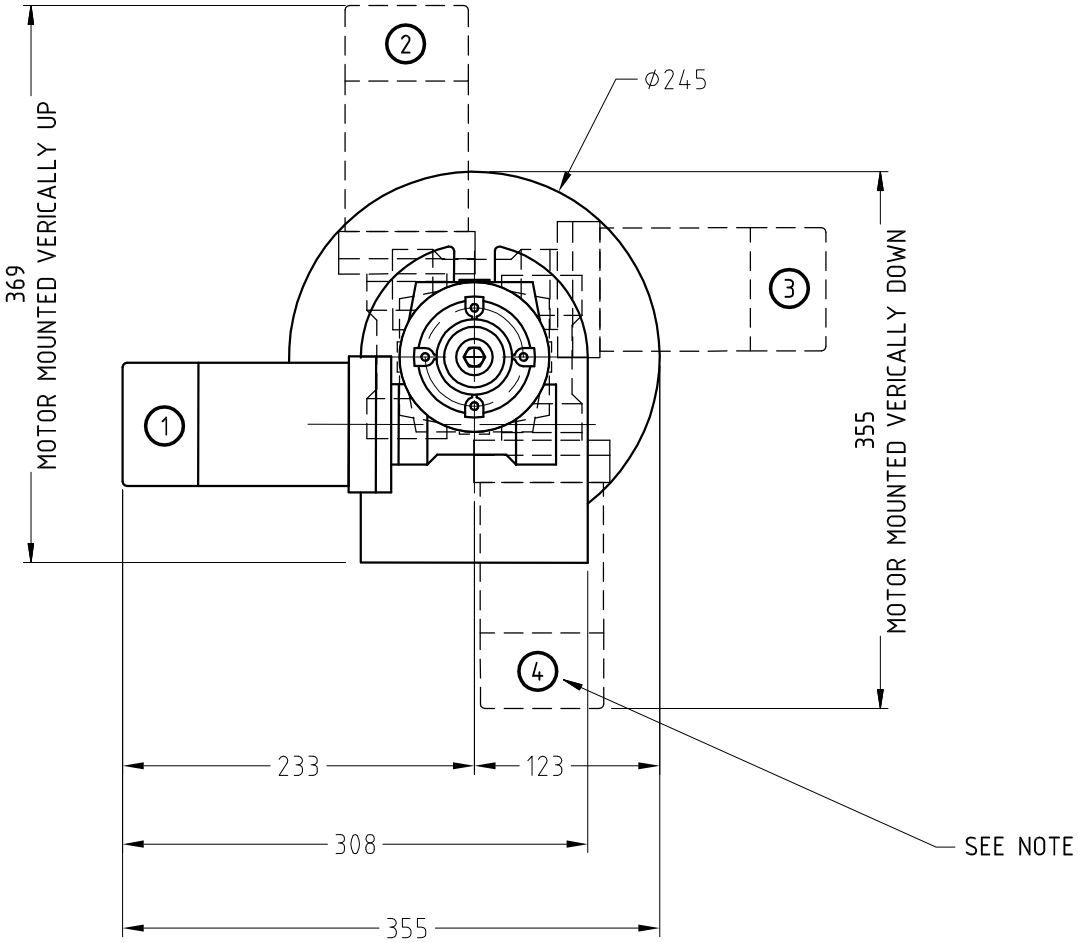
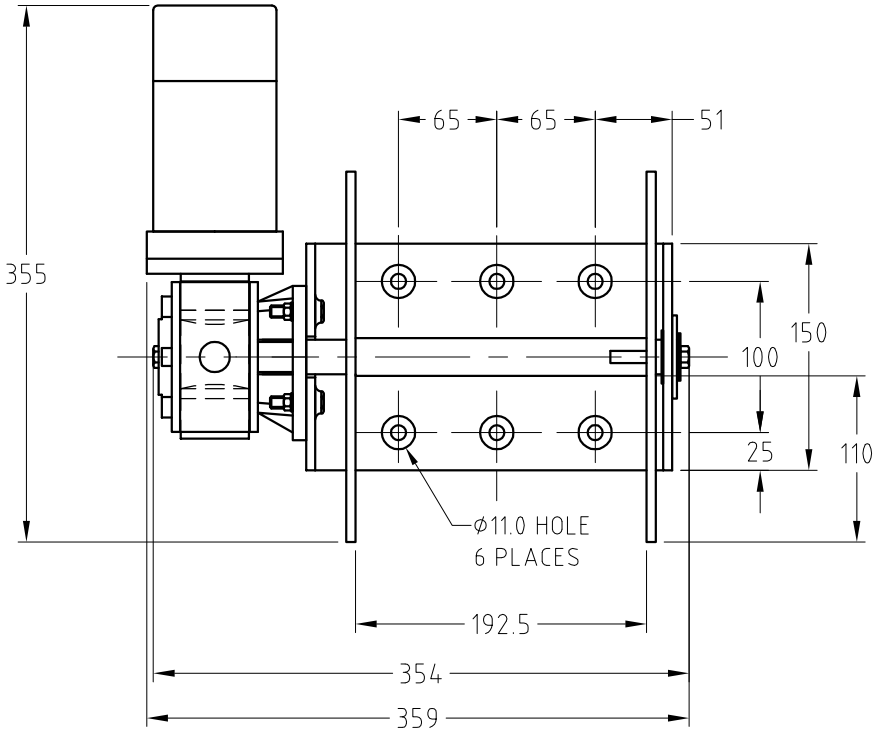




note:
When motor and gearbox is mounted vertically and is below the base of the winch assembly the winch will be required to be mounted on a plinth.

REV No.	DESC.	BY.	DATE.
2	ECR#825 DIA 245, MOTOR POSITIONS ADDED	MW	10/02/12

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.025
UNLESS OTHERWISE SPECIFIED

TITLE
DW08 DRUM WINCH
GENERAL ASSEMBLY

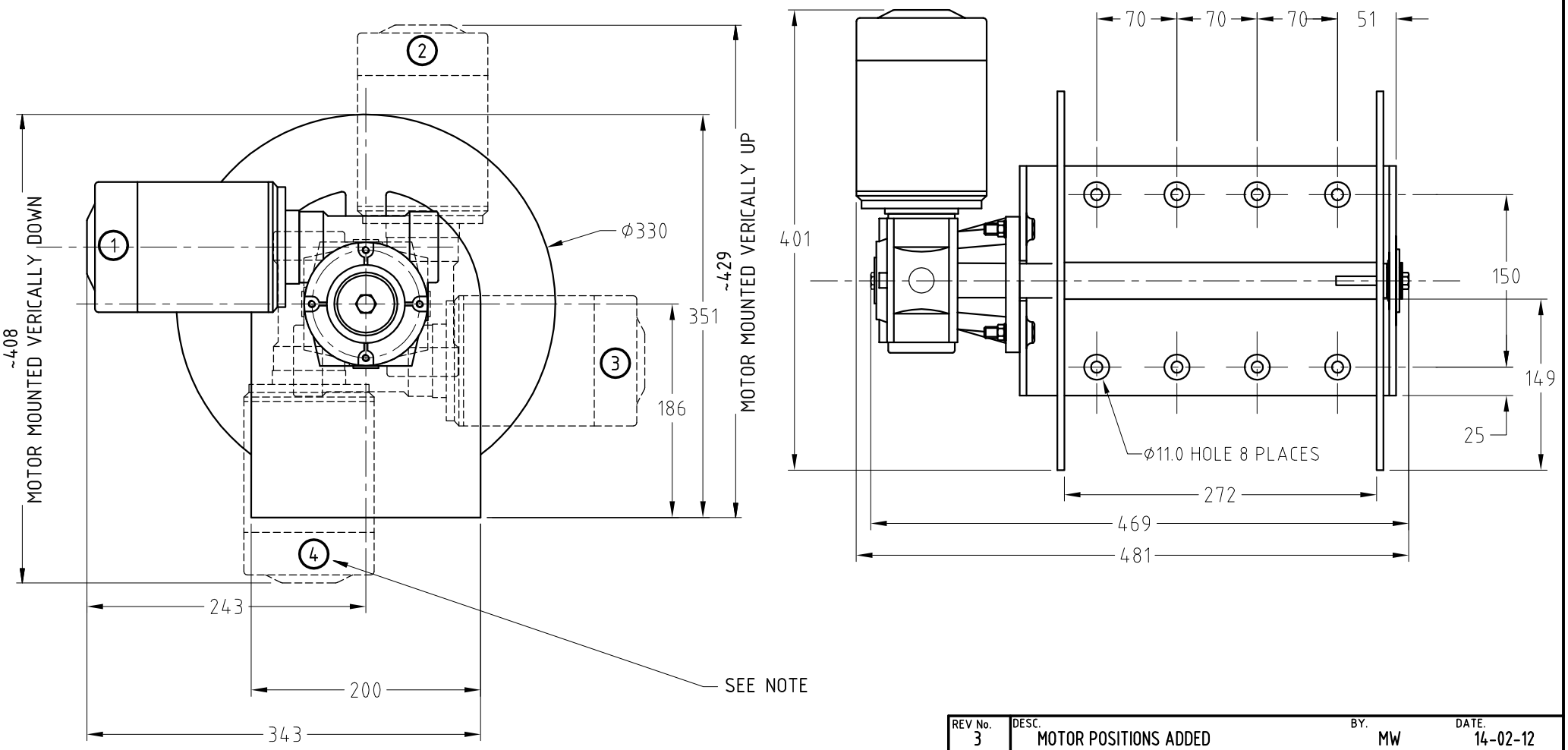
PART No. F33-DW08044

MATERIAL SS 316

FINISH

DRN	DATE	DRG No.
JT	4/10/06	F33-DW08044

SCALE	APP1	APP2	SIZE
1:5			A4



note:
When motor and gearbox is mounted vertically and is below the base of the winch assembly the winch will be required to be mounted on a plinth.

REV No.	DESC.	BY.	DATE.
3	MOTOR POSITIONS ADDED	MW	14-02-12

MUIR WINDLASSES AUSTRALIA

TOLERANCES (mm)
X. ± 0.5
X.X ± 0.1
X.XX ± 0.05
UNLESS OTHERWISE SPECIFIED

TITLE
DW10 DRUM WINCH
GENERAL ASSEMBLY

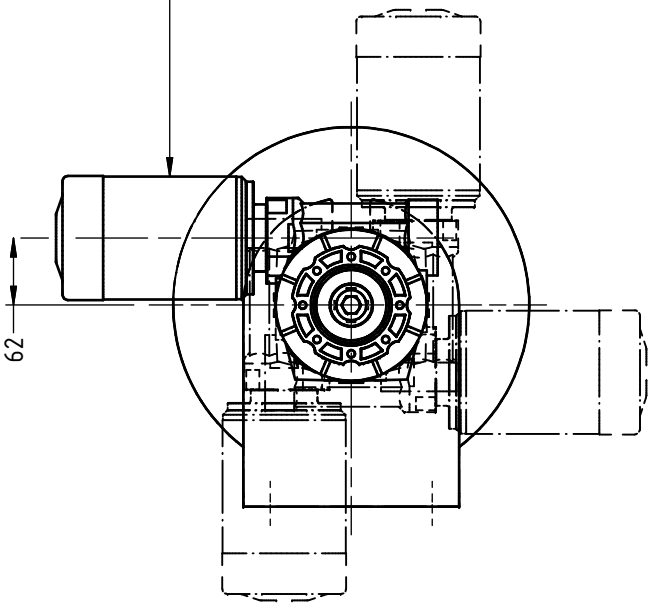
PART No. F33-DW10049

MATERIAL SS 316

FINISH

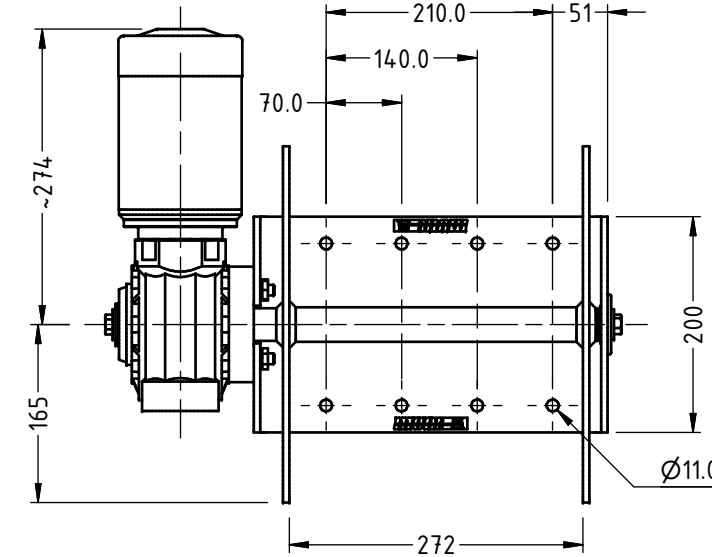
DRN JT | DATE 4/10/06 | DRG No. F33-DW10049

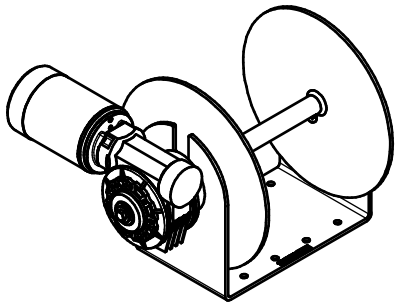
SCALE 1:5 | APP1 | APP2 | SIZE A4



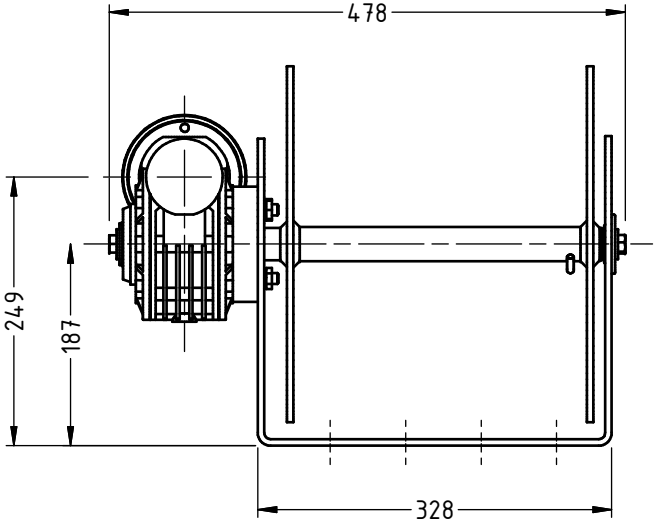
MOTOR - GEARBOX CAN BE MOUNTED IN 90° INCREMENTS (SEE ILLUSTRATION BELOW).

62





ISOMETRIC VIEW (SCALE 1:12)



REV No.	DESC.	BY	DATE
0	CR#1032 NEW MODEL REQ.	PG	16/09/2013

TOLERANCES (mm)
X. 0.5
X.X 0.1
X.XX 0.03
UNLESS OTHERWISE SPECIFIED

MATERIAL
SS316
FINISH

MUIR WINDLASSES AUSTRALIA

TITLE
DW12 DRUM WINCH /63 /1200W DC
GENERAL ASSEMBLY

PART No
F33-DW12063

DRN	DATE	DRG No	
PG	16/09/2013	F33-DW12063	
SCALE 1:7	APP1	APP2	SIZE A4

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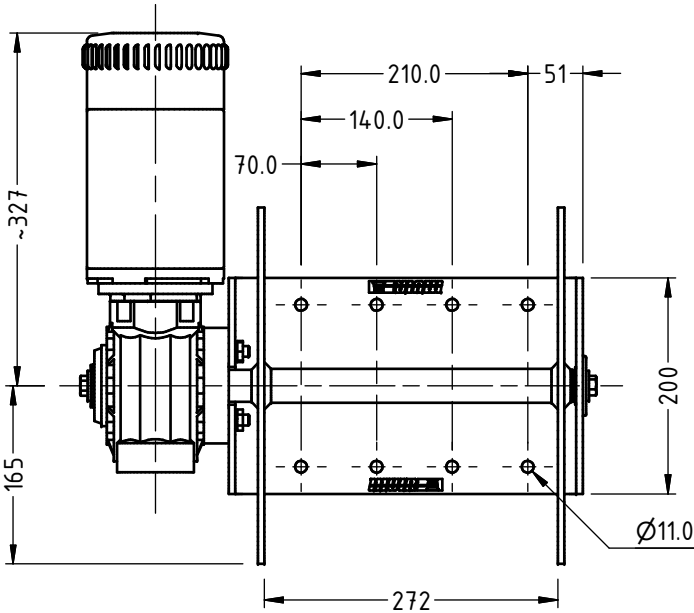
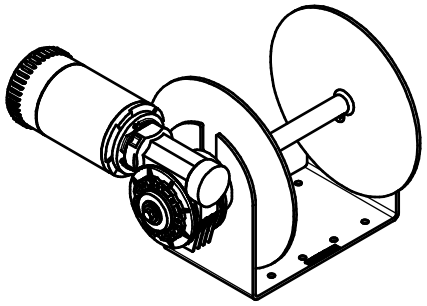
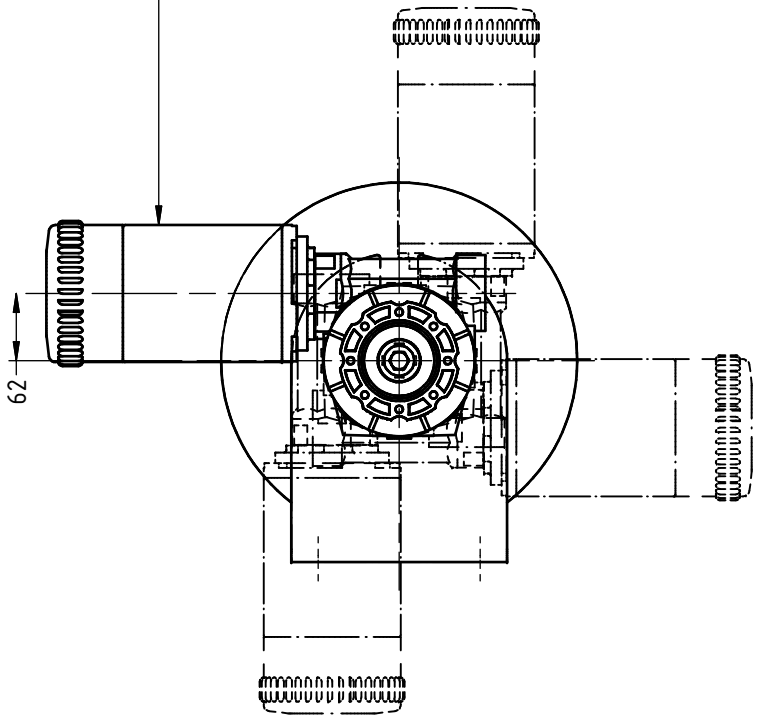
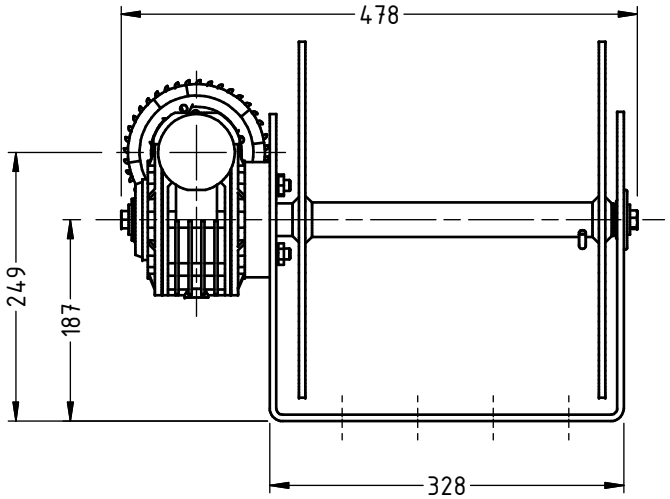




ISOMETRIC VIEW (SCALE 1:12)

MOTOR - GEARBOX CAN BE MOUNTED IN 90° INCREMENTS (SEE ILLUSTRATION BELOW).





REV No.	DESC.	BY	DATE
0	CR#1032 NEW MODEL REQ.	PG	16/09/2013

TOLERANCES (mm)
X. 0.5
X.X 0.1
X.XX 0.03
UNLESS OTHERWISE SPECIFIED

MATERIAL
SS316
FINISH

MUIR WINDLASSES AUSTRALIA

TITLE
DW15 DRUM WINCH /63 /1500W DC
GENERAL ASSEMBLY

PART No
F33-DW15063

DRN	DATE	DRG No	
PG	16/09/2013	F33-DW15063	
SCALE 1:7	APP1	APP2	SIZE A4

G:\Manusoft Drawings\F00-\F33\F33-DW15063.idw

NOTES

Warranty
Limited for period of Three years (First Owner)

We warrant each new product manufactured by us to be free from defects in material and workmanship for a period of 3 years (first Owner).
This warranty shall become effective only upon receipt of a completed warranty registration, which shall identify the product so registered by serial number. This warranty shall remain in effect for a period of three (3) years from the date of purchase. For vessels in charter or hire the warranty is one (1) year due to various operators and overloading which may occur.

Conditions
While this warranty applies to defects in material and workmanship, it does not apply to:
- Normal worn parts or to damage caused by neglect, lack of maintenance, accident or improper service/installation or service by persons other than an authorised Muir representative.
- Muir shall not be responsible for failures due to products being used in applications that they are not intended for, or exceed the products performance specifications.
- For warranty claim, defective product must be returned to Muir for inspection.
- Muir will not be responsible for freight charges, removal or installation labour on warranty claims.
- Damage due to unsatisfactory storage or use of equipment prior to installation in the approved/intended manner.

Exclusions
Warranty is limited to twelve months for:
- Electric motors / controls / equipment
- Hydraulic pumps / controls /valves
- Weather seals
- Use on charter/hire/commercial boats

All incidental and/or consequential damages are excluded from this warranty. Warranties of merchantability and fitness are excluded from this warranty. Implied warranties are limited to the life of this warranty. Some countries do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.
We reserve the right to improve the design or materials used on any product without assuming any obligation to modify any product previously manufactured or used.

Liability
Muir Engineering liability under this warranty shall be to the exclusion of all other warranties or liabilities (to the extent permitted bylaw). In particular (but without limitation):
Muir Engineering shall not be liable for:
Any indirect or consequential loss including (without limitation) any loss of anticipated profits, damage to reputation or goodwill, loss of expected future business, damages, costs or expenses payable to any third party or any other indirect losses. Any damage to yachts or equipment. Death or personal Injury (unless caused by Muir Engineering negligence).

Warranty Registration

Please visit " https://www.muir.com.au/warrantyregistration " to complete your online Warranty Registration.

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Tel Int: +61 (0) 3 6229 0600

Email: sales@muir.com.au
www.muir.com.au

WINDLASS
SERIAL NUMBER