



## RV HYDRAULIC WINCH OWNERS MANUAL

### WINCH MODELS:

---

80RVSDY-CAD, 80RVADY-CAD  
10RVSHY-CAD, 10RVAHY-CAD  
15RVSHY-CAD, 15RVAHY-CAD  
18RVSHY-CAD, 18RVAHY-CAD

ENGLISH



Doc-rev 20230907

**SAVE THESE INSTRUCTIONS.** This manual contains important safety precautions which should be read and understood before operating the product. Failure to do so could result in serious injury. Specifications, descriptions and images in this manual are as accurate as known at the time of publication, but are subject to change without notice.

## INTRODUCTION

Congratulations on your purchase of a winch. We design and build winches to strict specifications and with proper use and maintenance your winch should bring you years of satisfying service.

Every effort has been made to ensure the accuracy and completeness of the information in this manual at the time of publication, and we reserve the right to change, alter and/or improve the product and this document at any time without prior notice.

## SAFETY DEFINITIONS

Your winch can develop tremendous pulling forces and if used unsafely or improperly could result in property damage, serious injury or death. Throughout this manual, you will find the following symbols for caution, warning and danger. Pay particular attention to the notes preceded by these symbols as they are written for your safety. Ultimately, safe operation of this device rests with you, the operator.

### DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### NOTICE

NOTICE indicates information considered important, but not hazard-related (e.g., messages relating to property damage).

## GETTING TO KNOW YOUR WINCH

Your winch is a powerful piece of machinery. It is important that you understand the basics of its operation and specifications so that when you need to use it, you can use it with confidence and safety. Below is a list of the components of your winch and their uses.

1. This winch is engineered for maximum line pull with only one layer of cable spooled onto the winch drum (the first layer).
2. Motor: The motor is powered by hydraulic fluid and provides power to the gear assembly which turns the drum and winds the wire rope in either direction.
3. Winch Drum: The winch drum is the cylinder on which the wire rope is stored. It can be spooled In or Out by use of the remote lead switch.
4. Wire Rope: Your winch has a galvanized aircraft cable designed specifically for load capacity of the rated line pull of this winch. The wire rope feeds on from underneath the drum position, it is looped at one end to accept the hook.
5. Gear Assembly System: The reduction gears convert the winch motor power into extreme pulling forces.
6. Braking System: Braking action is automatically applied to the winch when the winch motor is stopped or there is a load on the wire rope. This is achieved by a separate external mechanical brake which applies the braking action. (Brakes are NOT designed as securing devices and the winch cables should never be left attached when vehicle / equipment is in transport).
7. Free Spooling Clutch: The clutch allows the operator to manually disengage ("CLUTCH OUT") the spooling drum from the gear train. This is called free spool. Engaging the clutch ("CLUTCH IN") locks the winch into the gear system.
8. Selector Valve: (Not Included) This is a directional control valve that regulates flow to and from the hydraulic motor to power.
9. Pulley/Snatch Block: (Optional) If your winch is supplied with a pulley/snatch block which can double the pulling power of the winch, or change the pulling direction without damaging the wire rope. We recommend you to use a double line and snatch block for pulling over 70% of the rated line pull.

## IMPORTANT SAFETY INSTRUCTIONS

### DANGER

DO NOT EXCEED RATED CAPACITY.

#### INTERMITTENT USE ONLY - COOL BETWEEN USES.

**DO NOT** use winch for lifting/moving people or live animals.

A minimum of five wraps of cable around the drum barrel is necessary for pulling and holding the rated load. The cable clamp is not designed to hold the load without the 5 wraps of cable around the drum. (usually marked red on the drum end of the cable)

### DANGER

Keep yourself and others a **SAFE DISTANCE** to the side of the cable when under tension.

**NEVER** stand or step over a cable, or near a cable under load using a winch blanket or sail is strongly recommended.

**DON'T** move the vehicle to pull a load (towing) on the winch cable. This could result in cable breakage.

### DANGER

**DO NOT** exceed maximum pull rating. Avoid “shock loading” by using the remote lead switch intermittently to take up the slack in the wire rope. “Shock loading” can far exceed the rated capacity for the wire rope and drum and will result in damaging winch and brake. By doing so will void any warranty.

### DANGER

**DO NOT** use you winch as securing device it is not designed for this and will result in damaging winch and brake and will void any warranty.

**DO NOT** exceed maximum line pull ratings shown on the tables.

**DO NOT** use as a hoist. Do not use for overhead lifting.

### DANGER

**NEVER** cut, weld, or modify any part of the winch or cable. By doing so will void any warranty

### DANGER

**When re-spooling the cable** Ensure that the cable spools in the under-wind position with the cable entering the drum from the bottom, not the top. To re-spool correctly, and while wearing gloves, keep a slight tension on the cable while pushing the remote control button to draw in the cable. Walk toward the winch **NEVER** allowing the winch cable to slide through your fingers or hands.

**DO NOT** let your hands get within 12”(30cm) of the winch while re-spooling. Turn off the winch and repeat the procedure until a few feet of cable is left. Disconnect the remote control and finish spooling by hand by rotating the drum manually with the clutch disengaged. Keep hands clear of the fairlead and drum while the winch is under power.

### DANGER

Failure to read and understand these warnings may result in personal injury and/or property damage.

Always use gloves to protect hands when handling any type or cable/rope. Never let the cable slide through your hands.

**NEVER** connect the cable back to itself.

Always apply blocks/chocks/straps to the wheels of the vehicle/equipment when on an incline and in transportation.

No modifications, alterations, or deviation to the winch are authorized by the manufacturer and **MUST NOT** be made. By doing so will void any warranty.

Duration of winching pulls should be kept as short as possible. If the motor becomes uncomfortably hot to the touch, stop winching immediately and let it cool down for approx 8 mins minutes. Do not winch for more than two minutes at or near the maximum rated load without resting for 8 minutes.

### DANGER

If the motor stalls **DO NOT** maintain winching. Winches are designed and made for intermittent use and should be used in conjunction with their duty cycles.

**NEVER** release the free-spool clutch when there is a load on the winch as the load will roll backwards.

Use hand saver hook when handling the hook for spooling or unspooling the wire rope.

### NOTICE

The winch and its all-derivative types are rated at rated capacity when spooling the first rope layer on the drum. Overloading can damage the winch / motor / or wire rope.

For loads over 70% of rated line pull, we recommend the use of the pulley block / snatch block to double the wire rope line and reduce the strain. This will aid in two ways:

It will reduce the number of rope layers on the drum and reduce the load on the wire rope by as much as 50%. When doubling the lineback to the vehicle, always attach to the frame or another load bearing point..

### NOTICE

The vehicle engine should always be kept running during winching operation to minimize battery drain and maximize power and speed of the winch. If the winch is used for a considerable amount of time with the engine switched off the battery will drain and be too weak to restart the vehicle engine. If this happens stop winching immediately, jump start the vehicle and charge the battery up before resuming winching operation.

**NOTICE**

Get to know your winch before you need to use it. We recommend that you set up a few test runs to familiarize yourself with rigging techniques; the sounds your winch makes under various loads and the way the cable spools on the drum, etc.

INSPECT the wire rope and equipment before each use. A frayed or damaged rope must be replaced immediately. Use only manufacturer's identical replacement rope with the exact specifications. (Ropes are not covered by any warranty offered)

INSPECT the winch installation and bolts to ensure that all bolts are tight before each operation or periodically.

**NOTICE**

Store the remote control lead inside your vehicle or in a safe place.

Never connect the winch cable back to itself. This will cause cable to damage. Always use a pulley, snatch block, sling or chain of suitable strength as shown in the illustrations.

**NOTICE**

Any winch that appears to be faulty, damaged, worn, or operates abnormally **MUST BE REMOVED FROM SERVICE UNTIL REPAIRED, REPLACED OR OVERHAULED**. It is recommended that the necessary repairs **ARE** made by a manufacturer's authorized repair facility **ONLY**.

**NOTICE**

Pull only on areas of the vehicle as specified by the vehicle manufacturer.

- Only accessories, attachments and/or adapters supplied by the manufacturer shall be used.

**CAUTION**

When using the tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to the equipment. Read all these instructions before using this tool!

**WARNING**

Keep children away. Children must never be allowed in the work area, Do not let them handle machines, tools, extension cords or operate this tool.

**WARNING**

Store idle equipment. When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.

**CAUTION**

Dress properly. Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

**WARNING**

Use eye and ear protection. Always wear impact safety goggles. Wear a full-face shield if you are producing metal filings or wood chips. Wear a dust mask or respirator when working around metal, wood, and chemical dusts, and mists.

**CAUTION**

Maintain this winch with care. Keep this tool dry and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect winch rope periodically and, if damaged, have them replaced immediately by an authorized technician. The handles must be kept clean, dry, and free from oil and grease always. Disconnect or unplug remote switch when not in use.

**DANGER**

Stay alert, watch what you are doing, use common sense. Do not operate any tool when you are tired.

**WARNING**

**Check for damaged parts.** Before using this winch, any parts that appear worn or damaged should be carefully checked to determine that it will operate properly and perform to its intended function. Check for damage including alignments, binding of moving parts; mounting fixtures. Any part that is damaged should be properly repaired or replaced by a qualified person. Do not use the tool if any switch does not turn "On" and "Off" properly.

**WARNING**

**Replacement parts and accessories.** When repairing or servicing, only use identical replacement parts. The use of any other parts will void the warranty.

**WARNING**

**Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescription to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

**DANGER**

Keep hands and body away from Fairlead (cable intake slot) when operating. Always secure vehicle in position before using winch.

**⚠ WARNING**

Be certain the winch is properly bolted to a structure (or vehicle) that can hold the winches maximum rated load.

Do not use inappropriate attachments to extend the length of the winch cable.

**⚠ DANGER**

Never lift people or hoist loads over people or lift live animals.

Never come in between the winch and the load when operating.

**⚠ WARNING**

Do not apply any loads to the winch when cable is fully extended past the safety mark. Keep at least 5 full wraps of cable on the spool, (Usually marked red on the winch cable at the drum end.)

After moving any piece of equipment with the winch, secure the the equipment in place. Do not rely on the winch to hold for an extended period of time nor whilst in transport, winches are not securing device, By doing so will void any warranty

**⚠ CAUTION**

Examine winch before using. Components may be affected by exposure to chemicals, salts, and rust.

Do not cross over or go underneath winch cable when under load.

Use gloves while handling cable.

**⚠ WARNING**

Never operate winch if cable shows any signs of weakening, such as knotting or kinking. If it does you must replace immediately.

**⚠ DANGER**

Do not move your vehicle with the cable extended and attached to the load. You could easily exceed the winch rating and snap the cable.

When the vehicle is parked on an incline you should use wheel chocks.

**⚠ CAUTION**

Always re-spool cable neatly after any operation this will avoid any winch cable misalignment for the next use

**⚠ CAUTION**

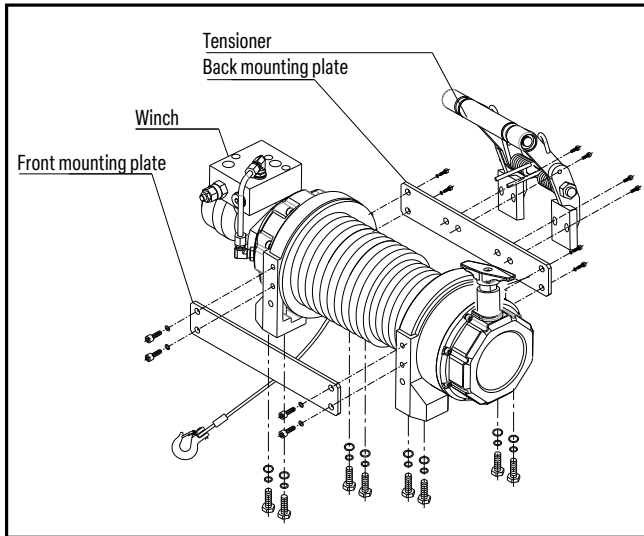
The winch cable must be wound onto the drum under a load of at least 10% of the rated line pull or the outer wraps will draw into inner wraps and damage winch cable.

Before operating the winch under load you should check proper function of the winch by engaging and disengaging the clutch, by operating the directional controls, and operating the speed controls. This will ensure that the winch is working properly and will help prevent unintended damage and injury. Cycling the winch prior to loading will also ensure the gears are properly aligned.

**⚠ CAUTION**

Batteries contain gases which are flammable and explosive. Wear eye protection during installation and remove all jewelry. Do not lean over battery while making connections.

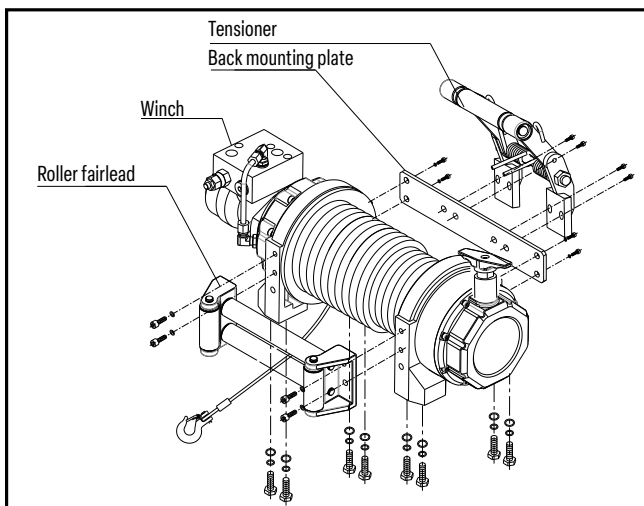
# WINCH ASSEMBLY AND MOUNTING



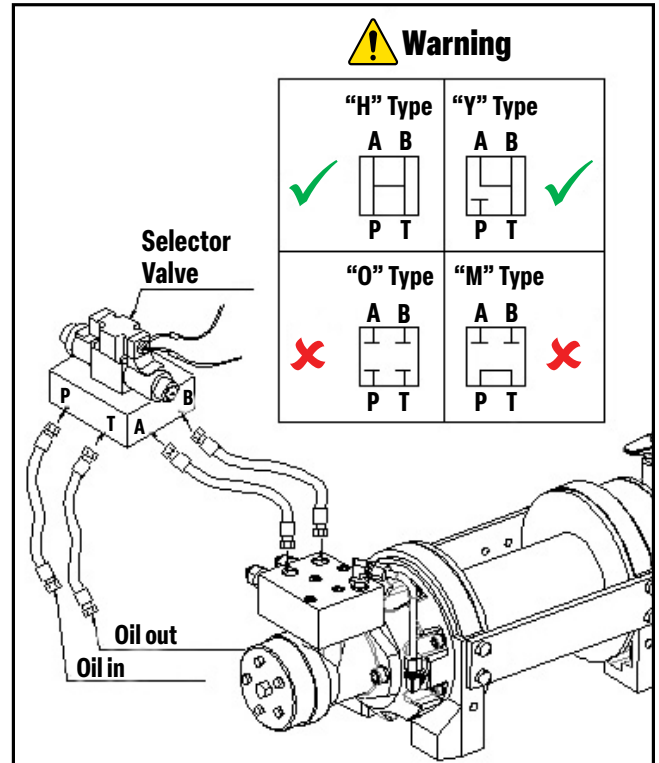
**Installation illustration of winch:**

— **Installing:** Your new winch is designed with a bolt pattern that is standard in this class of winch. A winch mounting kit may be available that utilizes this bolt pattern. If you cannot find a kit locally, you may have to have one engineered, contact a local engineering company. If you utilize a mounting channel, you must ensure that it is mounted on a flat surface so that the three major sections (motor, drum and gear housing) are properly aligned. Improper alignment of the winch will cause uneven distribution of load and damage the winch or equipment. Mount the winch to the vehicle using high tensile steel bolts. It should be aligned and secured to a solid part of the vehicle (front or rear) where the full rated load will be evenly distributed without causing damage to vehicle or equipment.

**Installation illustration with roller fairlead of winch:**



## Hydraulic principal chart and installation:



Hydraulic control valves are an essential component for optimizing system performance. They’re used to regulate the flow rate and pressure of the hydraulic oil as it passes through a hoses or pipes, always maintaining the speed and pressure.

Hydraulic flow control valves are adept at controlling the flow of these liquids from the pumps to cylinders and motors. Their primary function is to regulate the flow and direction rate within a specific area of a hydraulic circuit. At the same time, they also control the transfer rate of energy across all pressure levels.

A selector valve is used to control the direction of movement of a hydraulic actuating cylinder or similar device. It provides for the simultaneous flow of hydraulic fluid both into and out of the unit. Hydraulic system pressure can be routed with the selector valve to operate the unit in either direction or a corresponding return path for the fluid to the reservoir is provided. There are two main types of selector valves: open-center and closed-center. An open center valve allows a continuous flow of system hydraulic fluid through the valve even when the selector is not in a position to actuate a unit. A closed-center selector valve blocks the flow of fluid through the valve when it is in the NEUTRAL or OFF position.

Selector valve choice as follows:

(H type and Y type are available, O type and M type is not available)

There are three positions for the selector valve. This means the Solenoid directional/selector valve spool has three working positions, both ends of the valve are solenoid coil control action.

- A' coil is energized, and 'B' coil is powered off, the spool moves to the direction of the 'A' coil.
- B' coil is energized, and 'A' coil is powered off, the spool moves in the direction of the 'B' coil.
- 'A' and 'B' coils are powered off at the same time, the solenoid valve spools back to the middle position, forming a closed loop, that is, the two chambers of the cylinder are completely closed, resulting in no movement.

The valve has four channels: P, T, A and B.

'P' is for oil In, 'T' is for oil Out, 'A' and 'B' is for output.

When the electromagnet is not energized, the reversing valve is in the middle position. The PTAB is connected to each other in the middle of 'H' type. In the middle position of 'Y', TAB is connected to each other, and P is disconnected from other routes. Type O directional valve in the PTAB access is blocked. In the middle position of 'M' type, PT communicates with each other, 'A' does not communicate with other, and 'B' does not communicate with other.

"H" type: all oil ports are connected, the system is unloaded, and the cylinder is floating. Hydraulic cylinder is connected to oil tank in two chambers, from static stop to start impact. When braking, the oil port is interconnecting, and the braking is more stable than the "O" type, but the reversing position changes greatly.

"Y" type: the oil pump does not unload, the hydraulic cylinder is connected to the oil tank in two chambers, there is impact from rest to start, and the braking performance is between "O" type and "H" type.

"O" type: all oil ports are closed and the system does not unload. Hydraulic cylinder filled with oil, smooth from rest to start. When braking motion inertia caused by hydraulic impact. High accuracy of reversing position.

"M" type: oil pump unloading, from rest to start smoothly. The braking performance is the same as the "O" type.

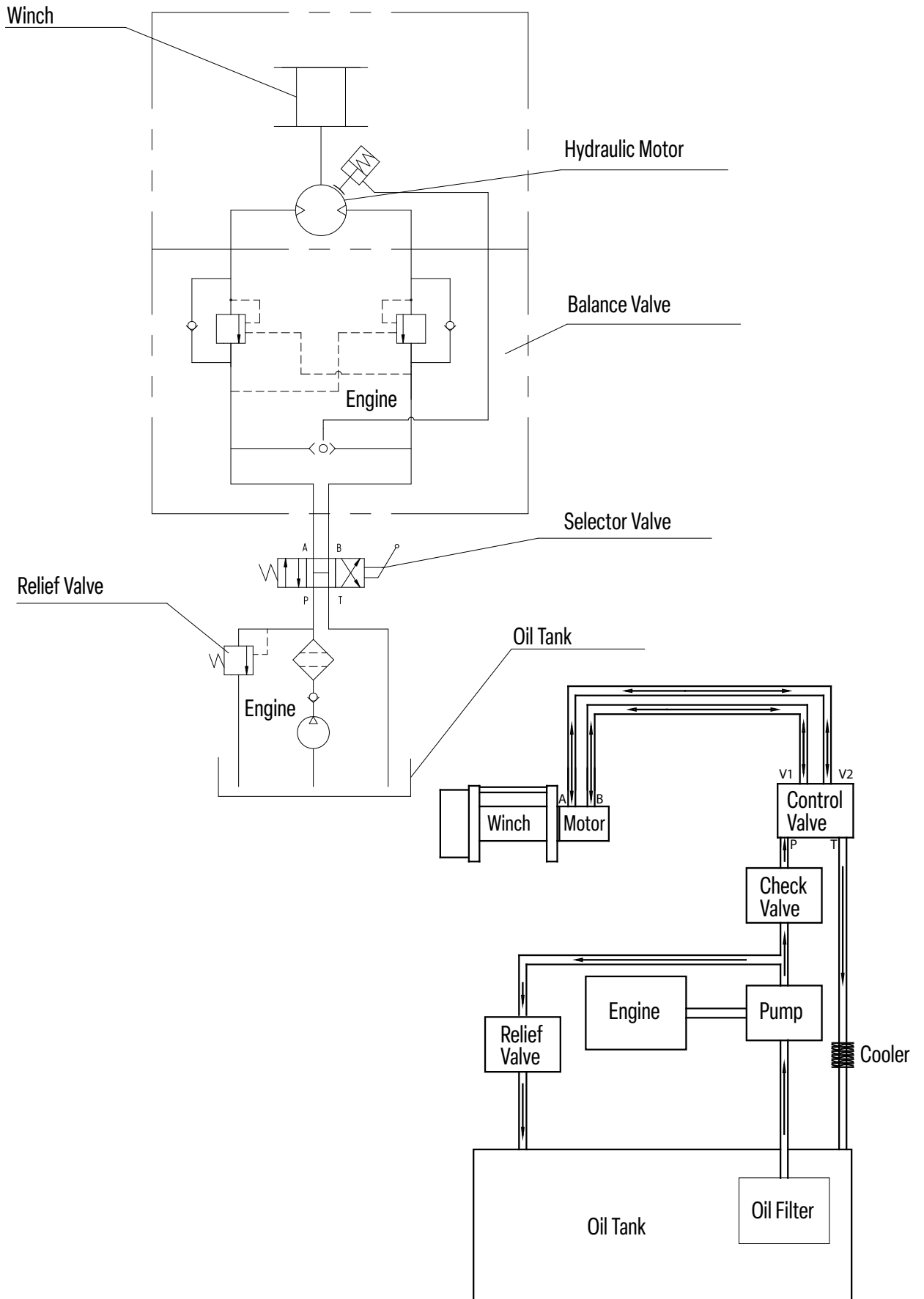
The hydraulic system should be purged at this time. Listed below are the directions on how to purge the hydraulic system.

#### **How to purge the hydraulic system.**

1. Start the engine.
2. Power the winch to draw out about 5 feet of cable.
3. Shut down the engine.
4. Check the fluid level and fill as needed.
5. Repeat steps 1 through 4 as necessary.
6. Start the engine.
7. Move the cable into the desired position.
8. Turn the wheels on the vehicle from the right lock to the left lock positions five times to help bleed the hydraulic system.

9. If the hand control unit is working backwards, simple exchange the brown and the white wire connections within the valve.

Test the winch for proper operation. Refer to the Operation section.





## OPERATION

### **⚠ WARNING**

1. Make sure clutch is totally engaged before starting any winch operation
2. Stay clear and away from raised loads
3. Stay clear of cable while pulling do not try to guide cable
4. A min. of 5 wraps of cable around the drum barrel

### General information

The Winch's standard equipments contain gear reducer, drum hydraulic motor, solenoid valve, switch assembly, female connector and plumbing fittings. The winch obtains its pressure from the vehicle's existing power steering pump or other hydraulic power. The winch is totally sealed, can be used underwater.

There are several other ways to supply power to the winch. The first way is to use an individual pump for engineering use. The second way is to provide the winch's hydraulic pressure is with the vehicle's exiting power steering pump (See Installation Instructions).

- Use a suitable individual pump, which doesn't have an oil pressure relief valve. It will supply pressure for both the steering box and the winch.
- Use a combined pump with an integrated oil valve. The oil valve will supply two kinds of flow based on the difference in demand. One type of flow will be constant and should be used with the steering system. The other will provide higher pressure and is for engineering use.

### **⚠ CAUTION**

Hydraulic system needs an relief valve to make sure the system is safe; If there is not relief valve in the system; it would be serious danger and the system can't operation. If your winch driven by an existing hydraulic power system, the relief valve is also existing.

### Winch working demonstration:

1. Disengage the clutch by turning the clutch to the "CLUTCH OUT" position.
2. Grab the cable assembly and pull the cable to the desired length, then attach to item being pulled.

### **⚠ CAUTION**

Always leave at least five turns of cable on the drum. Review Winch Safety Warnings and Precautions, before continuing.

3. Reengage the clutch by turning the clutch assembly to the "CLUTCH IN" position as needed.
4. Test-run winch in both directions. Turn the winch in each direction for about one or two seconds meantime make the clutch totally engaged automatically.
5. While standing aside of the tow path, hold and operate the switch assembly supplied by your choice. Wait until the motor stops before reversing directions.

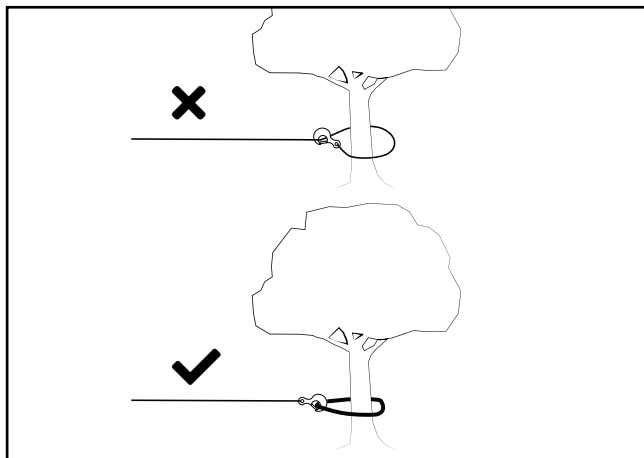
## RIGGING TECHNIQUES

Locate a suitable anchor such as a strong tree trunk or boulder.

ALWAYS use a sling or strap as an anchor point on a object, Never use the cable or hook as an anchor point attached to an object.

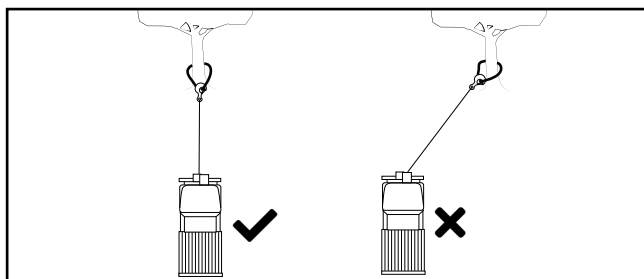
### **⚠ CAUTION**

NEVER attach the clevis hook back onto the winch cable as this could cause damage to the cable.



### **⚠ CAUTION**

Do not winch from an acute angle as the wire rope will bind up on one side of the drum causing damage to wire rope (Bird Nesting) and cause major damage to winch and possible equipment.



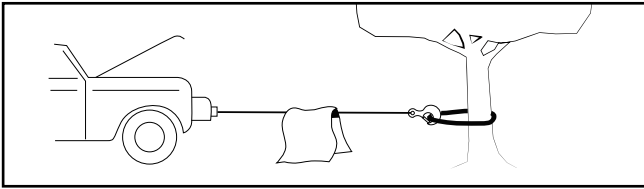
### **🗨 NOTICE**

Short pulls from an angle can be used to straighten the vehicle/ equipment. Long pulls should be done with the wire rope in a straight line to winch/vehicle, see above illustration.

### **⚠ CAUTION**

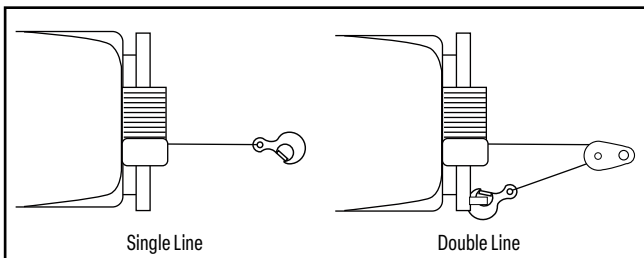
When pulling a heavy load, place a blanket or jacket over the wire rope five or six feet from the hook because in the event of a broken cable it will dampen the force.

For additional protection open the hood/bonnet of the vehicle as shown.



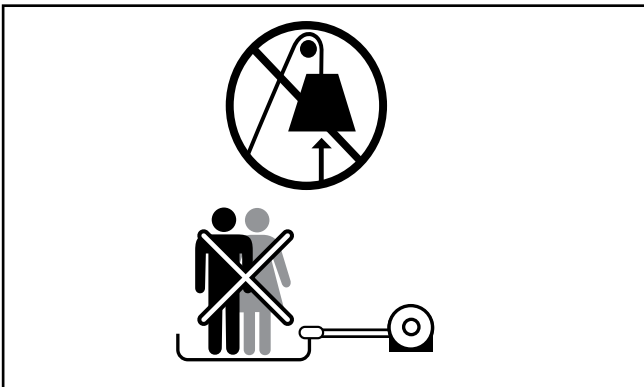
### NOTICE

For pulls over 70% rated line pull, we recommend the use of the snatch/pulley block to double line the wire rope. This reduces the load on the winch and the strain on the rope.



### ⚠ DANGER

Never use your winch for overhead hoisting, lifting of people, moving people or moving of live animals.



## MAINTENANCE

1. Correct use of the hydraulic winch can effectively increase the life of the winch by many years.
2. We strongly recommend spring washers are used with mounting bolts. Mounting bolts and wire rope must be inspected for looseness regularly, if found to be loose always tighten before using the winch.
3. Re-spooling or changing the wire rope: Using the selector valve, spool the drum into a suitable position, remove or feed the wire rope into the hole on the edge of the drum. Insert steel plate and screws and tighten. Start the winch, using minimum load spool in the wire rope making it neat and tidy.
4. Pay attention to the wire ropes orientation on the drum reel. If the rope is kinked, frayed or damaged in any way it MUST be replaced

immediately with a OEM part, if not replaced with an original this will void any warranty.

5. During normal working, the pulling force must be equal or less than the rated capacity. Overloading the winch capacity, is not allowed. The maximum pulling force of the winch, is around 1.25 times of its rated capacity, if exceeded will cause damage to the winch and(or) equipment or serious injury. By doing so will void any warranty.
6. The opening pressure of the balancing valve must be 0.1-0.4Mpa higher than the brake, or the winch will shake when lowering it down. Our company has tested hoisting and adjusted balancing valves for every winch before it leaves the factory. Therefore, there is no need for users/operator to adjust it at all, But if there are special cases where the users need to adjust it, the users can spiral the adjusting screw outward, thus making the opening pressure higher, Never try to adjust the balance valve yourself use a specialist person or service agent.
7. If there is an abnormal pressure increase in the system, the users must stop using the winch immediately. Check if there is leakage of the oil, and if the hydraulic motor is normal. Usually, when hydraulic motor works under the load, the leaked oil from the pipe must not surpass 1m/m. Plenty of leakage demonstrates a damaged hydraulic motor, which must be repaired or replaced immediately. Or, if the hydraulic motor is in good condition, check other parts inside the system.
8. Check the operation of the hydraulic winch and its systems regularly during the work or weekly. In case of abnormal temperature rise, leakage, abnormal noise and vibration or pressure fluctuation, the user should stop the winch immediately to check the causes and overhaul it.
9. Pay attention to the tank's oil and its level. If there is much foam, the users should stop immediately to check whether air leaks from the oil inlet of hydraulic system, the return oil port below the water, and whether hydraulic oil is emulsified by the entrance of the water.
10. If the winch is showing signs of degraded performance change the hydraulic oil. Do Not mix old and new oil always replace all.
11. Put 90 # gear oil into the winch speed reducer before using it and replace the oil after 100 accumulated working hours. First remove the screw plugs on the drum, then slowly roll the drum to make drum block hole aim at the block hole on the planetary gear reducer. Carefully take the plug out with an Allen Key. Drain all the used oil and add the new oil. Tighten each and every plug.
12. Regularly check the oil filter, which should be cleaned and replaced regularly.
13. Standing under the winch hook is strictly prohibited.

### Overhaul

When the hydraulic winch doesn't work or has malfunctioned is confirmed, the operator/user can check and repair if qualified to do so. In instances where user is not able to do this, then do not dismantle or repair. Contact a professional repair specialist to overhaul. Be careful when dismantling this hydraulic winch that you don't make scratches or indentations on precision parts, especially to surfaces of moving and seal parts. Repair or replace damaged parts immediately. Before assembling, all parts must be cleaned, and coated with lithium grease (If applicable)

## Lifting

These winches are not recommended to be used for lifting, if you use your winch for hoisting (lifting) then you need to implement a safety factor 5:1. Ensure when using for lifting there is a minimum of 1 layer on the drum at any time and pay attention to fixations and drum capacity.

## Storage

The Hydraulic winch should be stored in the warehouse where the air is dry and no corrosive gas. Do not put it under high temperature 50°C or at a -20°C environment for long-term storage, in case the aging of sealing parts are accelerated.

If the Hydraulic winch is in a long-term storage, the user should drain all the oil from it, and fill the machine fully with Turbine Oil with a low acid value.

## LUBRICATION:

- All moving parts within the Winch having been Lubricated using high temperature lithium grease at the factory. No internal lubrication is required.
- Lubricate Cable Assembly periodically using a light penetrating oil.

## CABLE ASSEMBLY REPLACEMENT

If the wire rope has become worn or is beginning to show signs of strands breaking, it must be replaced before being used again.

1. Turning clutch to the “CLUTCH OUT” position.
2. Extend cable assembly to its full length. Note how the existing cable is connected to the drum.
3. Remove old cable assembly and attach new one as the Id cable connected to the drum. Insert the end of the new rope and secure the screw being tightly screwed
4. Turning clutch to the “CLUTCH IN” position.
5. Retract cable assembly onto drum, first five wraps being careful not to allow kinking, then winch cable must be wound onto the drum under a load of at least 10% rated line pull.

### **WARNING**

Only replace the wire rope with the identical replacement part recommended by the manufacturer. Ropes are not part of any warranty offered and the sole responsibility of the operate / user to maintain or change.

## TROUBLESHOOTING

Problem	Cause	Solution
Winch does not does not turn	Insufficiently hydraulic system pressure.	Check relief valve regulate pressure.
	Improper connections of hydraulic system, no oil into motor.	Check all the plumbing fixtures according to the working principle chart.
		Defective directional control valve.
Motor runs but drum does not turn	Clutch not engaged	Turn clutch to the High or Low speed position. If problem persists, ask a technician to check and repair.
Motor runs slowly or without normal power	Insufficient pressure or oil flow	Bump is not suitable or defective. Change a new one or a suitable one
	Insufficient fluid in the system	Check fluid level. Add fluid until full.
	Wrong winch working direction.	Change the connection of balance valve and motor.
Winch cannot spool off wire rope with load smoothly.	Wrong winch working direction.	Change the connection of balance valve and motor.

## WARRANTY\*

**BPE Solutions North America are the sole distributors of these WARRIOR WINCHES and associated brands/equipment.**

BPE Solutions North America (“seller” or BPE) warrants to the original retail buyer only (“Buyer”) that any mechanical component of this genuine winch (“product(s)”) are free of defects in material and workmanship for the lifetime of the winch.

The electrical components (including the motor, contactor, and switches) will be free of defects in material and workmanship for a period of (3) three years (36 Months) from the original purchase provable date of purchase

Any product BPE Solutions North America determines to be defective will be repaired or replaced at our (BPE Solutions North America) sole discretion without charge to the Buyer upon Buyer’s compliance with this procedure. Seller or its Authorized Agent may make reasonable charges for parts and/or labour for repairs not covered by this Lifetime Limited Warranty. None warrantable returns will be charged at BPE Solutions North America standard rates. The warranties set forth herein are exclusive and in lieu of all other warranties, whether oral or written, express or implied.

### If in the event your product becomes faulty within your warranty period

To obtain service or repair under this warranty, the Buyer shall mail, ship or otherwise deliver to the manufacturers address, at the Buyers expense; (1) the Product, (2) a written description of the problem, (3) Buyers name, address and contact number, (4) copy of the original purchase receipt or BPE Solutions North America can arrange a suitable collection method (Charges apply).

## Warranty Exclusions

The Warranty does not cover the cost of labour or transportation/shipping charges for the replacement or installation of defective part(s).

This warranty does not apply to defects of the Product caused by; (1) normal wear and tear, (2) failure to comply with any installation, maintenance or subjecting the product to loads in excess of the loads written/listed in the owners manual or as detailed upon the Sellers website, (3) alteration or modification by any parties other than the manufacturer, (4) misuse, abuse, neglect, accidents, Acts of God, terrorism or (5) failure to correctly use the item according to the owners manual (7) other causes beyond the control of the Seller after delivery of the Product to the Sellers Authorized Agent.

## Other Exclusions

This Warranty does not cover steel cables, synthetic ropes, fairleads, wireless remotes or any exterior finishes outside thirty (30) Days from purchase.

BPE Solutions North America shall not be responsible or liable for any indirect or consequential damages. These consequential damages may include, but are not limited to, lost profits or loss of use, down time or damage to other person(s) equipment.

BPE Solutions North America reserves the right to change the Product design without notice. BPE Solutions North America reserves the right to replace any part or whole unit with a newer design of the same function.

**SPECIFICATIONS 80RVSDY-CAD, 80RVADY-CAD**

<b>Rated line pull</b>	8000 lbs (3629 kgs)	
<b>Motor displacement</b>	80ml/r	
<b>Oil flow</b>	5-60L/min	
<b>Pressure</b>	12Mpa	
<b>Gear reduction ratio</b>	17.6:1	
<b>Cable (Dia.×L)</b>	80RVSDY	80RVADY
	Ø3/8"×65.6' (Ø9.2mm×20.0m)	Ø11/31"×65.6' (Ø9mm×20.0m)
<b>Drum size(Dia.×L)</b>	Ø4.0 "×6.65" (Ø102mm×169mm)	
<b>Mounting bolt pattern</b>	8.74"×4.5 " (222mm×114.3mm) 8.74"×6.5" (222mm×165.1mm) 8-M10	
<b>Overall dimensions (L×W×H)</b>	22.0"×9.3"×9.5" 558mm×237mm×241mm	
<b>Net weight lbs (kg)</b>	80RVSDY	80RVADY
	98.1(44.5)	84.9(38.5)

**Line Pull and Pressure (First layer)**

Line pull lbs (kgs)	Pressure Mpa(Psi)
0	2.0(290.1)
4000(1814)	5.0(725.2)
6000(2722)	8.0(1160.3)
8000(3629)	12.0(1740.4)

**Oil Flow and Line Speed (First layer)**

Flow G/min (L/min)	Line speed ft/min(m/min)
1.3(5)	3.2(1.0)
5.3(20)	10.8(3.3)
10.5(40)	23.9(7.3)
15.8(60)	37.7(11.5)

**Layers, Line Pull and Rope Capacity**

Layer of wire rope	Rated line pull lbs(kgs)	Total rope on drum ft (m)
1	8000(3629)	18.4(5.6)
2	6864(3113)	42.3(12.9)
3	6010(2726)	65.6(20)

**SPECIFICATIONS 10RVSHY-CAD, 10RVAHY-CAD**

<b>Rated line pull</b>	10000 lbs (4536 kgs)	
<b>Motor displacement</b>	100ml/r	
<b>Oil flow</b>	5-60L/min	
<b>Pressure</b>	15Mpa	
<b>Gear reduction ratio</b>	17.6:1	
<b>Cable (Dia.×L)</b>	10RVSHY	10RVAHY
	Ø13/32"×65.6' (Ø10.2mm×20.0m)	Ø25/64"×65.6' (Ø10mm×20.0m)
<b>Drum size(Dia.×L)</b>	Ø4.0 "×7.91" (Ø102mm×201mm)	
<b>Mounting bolt pattern</b>	10"×4.5 " (254mm×114.3mm) 10"×6.5" (254mm×165.1mm) 8-M10	
<b>Overall dimensions (L×W×H)</b>	23.4"×9.3"×9.5" 594mm×237mm×241mm	
<b>Net weight lbs (kg)</b>	10RVSHY	10RVAHY
	103.2(46.8)	90.4(41)

**Line Pull and Pressure (First layer)**

Line pull lbs (kgs)	Pressure Mpa(Psi)
0	3.0(435.1)
4000(1814)	6.8(986.2)
6000(2722)	9.2(1334.3)
8000(3629)	12.0(1740.4)
10000(4536)	15.0(2175)

**Oil Flow and Line Speed (First layer)**

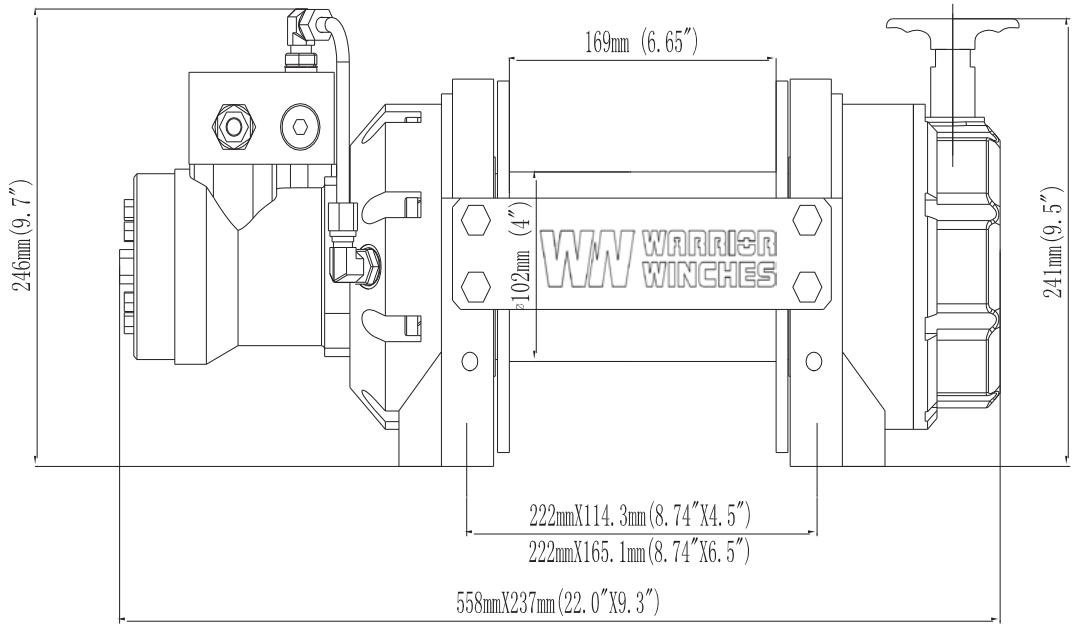
Flow G/min (L/min)	Line speed ft/min(m/min)
1.3(5)	3.0(0.9)
2.6(10)	5.9(1.8)
5.2(20)	11.8 (3.6)
10.4(40)	23.6(7.2)
15.6(60)	36.1(11)

**Layers, Line Pull and Rope Capacity**

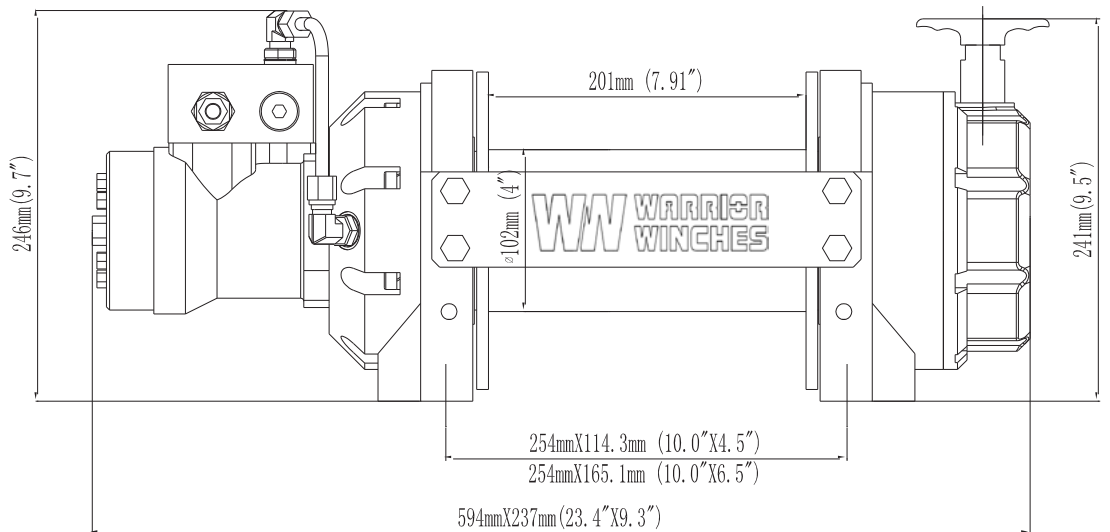
Layer of wire rope	Rated line pull lbs(kgs)	Total rope on drum ft (m)
1	10000(4536)	23.0(7.0)
2	7355(3336)	49.2(15.0)
3	6780(3075)	65.6(20.0)

WINCH ASSEMBLY DRAWING 80RVSDY-CAD, 80RVADY-CAD, 10RVSHY-CAD, 10RVAHY-CAD

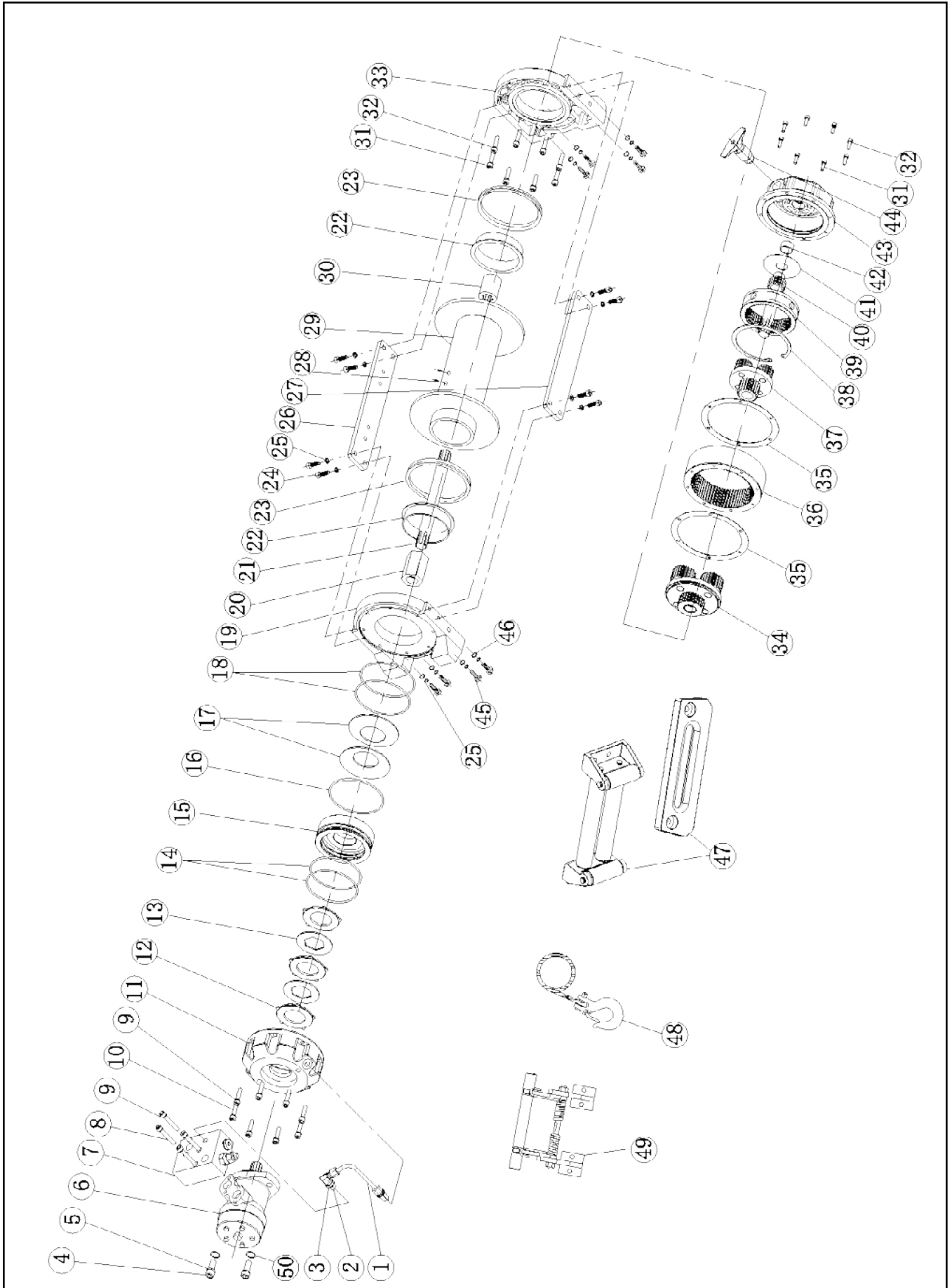
80RVSDY  
80RVADY



10RVSHY  
10RVAHY



WINCH ASSEMBLY DRAWING 80RVSDY-CAD, 80RVADY-CAD, 10RVSHY-CAD, 10RVAHY-CAD





**WINCH PARTS LIST 80RVSDY-CAD, 80RVADY-CAD, 10RVSHY-CAD, 10RVAHY-CAD**

#	Part Number	Description	Qty.
1	HV1000001	High-pressure oil tube	1
2	HV1000002	Oil connection	2
3	HV1000003	Combination Washer 14	2
4	HV1000004	Cap Screw M12 x 30	2
5	HV1000005	Lock Washer Ø12	2
6	HV1000100-1	Hydraulic Motor - 80RVSDY 80RVADY	1
	HV1000100-2	Hydraulic Motor - 10RVSHY 10RVAHY	1
7	HV1000006	Blanced valve	1
8	HV1000007	Cap Screw M8 x 55	4
9	HV1000008	Lock Washer Ø8	12
10	HV1000009	Screw M8 x 30	8
11	HV1000010	Brake stents	1
12	HV1000011	Brake block	3
13	HV1000012	Friction plate	2
14	HV1000013	O-ring seal 100*3.55	2
15	HV1000014	Piston	1
16	HV1000015	O-ring seal 140*2.65	1
17	HV1000016	Disk spring	2
18	HV1000017	O-ring seal 118*3.55	2
19	HV1000018	Motor bracket	1
20	HV1000019	Coupling	1
21	HV1000020-1	Transmission shaft - 80RVSDY 80RVADY	1
	HV1000020-2	Transmission shaft - 10RVSHY 10RVAHY	1
22	HV1000021	Bearing bush	2
23	HV1000022	Ring Seals	2
24	HV1000023	Screw M10 x 25	8
25	HV1000024	Lock Washer Ø10	16
26	HV1000025-1	Stand bar (b) - 80RVSDY 80RVADY	1
	HV1000025-2	Stand bar (b) - 10RVSHY 10RVAHY	1
27	HV1000026-1	Stand bar (a) - 80RVSDY 80RVADY	1
	HV1000026-2	Stand bar (a) - 10RVSHY 10RVAHY	1
28	HV1000027	Screw M8 x 15	2

#	Part Number	Description	Qty.
29	HV1000200-1	Drum Assembly - 80RVSDY 80RVADY	1
	HV1000200-2	Drum Assembly - 10RVSHY 10RVAHY	1
30	HV1000028	Coupling I	1
31	HV1000029	Cap Screw M6 x 20	16
32	HV1000030	Lock Washer Ø6	16
33	HV1000031	End Bearing	1
34	HV1000300	Gear Carrier Assembly (Output)	1
35	HV1000032	Gasket	2
36	HV1000033	Gear-Ring (Output)	1
37	HV1000400	Gear Carrier Assembly (Input)	1
38	HV1000034	Circlip for hole Ø125	1
39	HV1000035	Gear-Ring (Input)	1
40	HV1000036	Gear-Input Sun	1
41	HV1000037	Trust Washer	1
42	HV1000038	Axle sleeve	1
43	HV1000039	Cover-Gear Housing	1
44	HV1000500	Clutch Assembly	1
45	HV1000040	Screw M10 x 35	8
46	HV1000041	Think Flat Washer Ø10	8
47	HV1000600-1	Roller Fairlead / Aluminium Fairlead - 80RVSDY 80RVADY	1
	HV1000600-2	Roller Fairlead / Aluminium Fairlead - 10RVSHY 10RVAHY	1
48	HV1000700-1	Cable Assembly - 80RVSDY 80RVADY	1
	HV1000700-2	Cable Assembly - 10RVSHY 10RVAHY	1
49	HV1000800-1	Tensioned Of Steel Wire Supplied Assembly - 80RVSDY	1
	HV1000800-2	Tensioned Of Steel Wire Supplied Assembly - 10RVSHY	1
50	HV1000042	Think Flat Washer	2

**SPECIFICATIONS 15RVSHY-CAD, 15RVAHY-CAD**

<b>Rated line pull</b>	15000 lbs (6804 kgs)	
<b>Motor displacement</b>	160ml/r	
<b>Oil flow</b>	5-60L/min	
<b>Pressure</b>	17.5Mpa	
<b>Gear reduction ratio</b>	17.3:1	
<b>Cable (Dia.×L)</b>	15RVSHY	15RVAHY
	Ø15/32"×65.6' (Ø12mm×20.0m)	Ø15/32"×65.6' (Ø12mm×20.0m)
<b>Drum size(Dia.×L)</b>	Ø5.0 "×10.5" (Ø127mm×266mm)	
<b>Mounting bolt pattern</b>	12.0 "×4.5 " (303.5mm×114.3mm) 14.5 "×6.7" (368.5mm×171.2mm) 8-M12	
<b>Overall dimensions (L×W×H)</b>	28.9"×11.8"×10.9" 735mm ×300mm ×277mm	
<b>Net weight lbs(kg)</b>	15RVSHY	15RVAHY
	171.1(77.6)	146.8(66.6)

**Line Pull and Pressure (First layer)**

Line pull lbs (kgs)	Pressure Mpa(Psi)
0	2.0(290)
8000(3629)	9.2(1337)
10000(4536)	11.5(1627)
12000(5448)	14.0(2030)
15000(6810)	17.5(2537)

**Oil Flow and Line Speed (First layer)**

Flow G/min (L/min)	Line speed ft/min(m/min)
2.6(10)	4.2(1.3)
5.2(20)	8.5(2.6)
7.9(30)	12.4 (3.8)
10.4(40)	16.7(5.1)
15.6(60)	23(7)

**Layers, Line Pull and Rope Capacity**

Layer of wire rope	Rated line pull lbs(kgs)	Total rope on drum ft (m)
1	15000(6804)	29.5(9.0)
2	12791(5807)	65.6(20.0)

**SPECIFICATIONS 18RVSHY-CAD, 18RVAHY-CAD**

<b>Rated line pull</b>	18000 lbs (8165 kgs)	
<b>Motor displacement</b>	200ml/r	
<b>Oil flow</b>	5-60L/min	
<b>Pressure</b>	16Mpa	
<b>Gear reduction ratio</b>	17.3:1	
<b>Cable (Dia.×L)</b>	18RVSHY	18RVAHY
	Ø9/16"×65.6' (Ø14mm×20.0m)	Ø9/16"×65.6' (Ø14mm×20.0m)
<b>Drum size(Dia.×L)</b>	Ø5.0 "×10.5" (Ø127mm×266mm)	
<b>Mounting bolt pattern</b>	12.0 "×4.5 " (303.5mm×114.3mm) 14.5 "×6.7" (368.5mm×171.2mm) 8-M12	
<b>Overall dimensions (L×W×H)</b>	29.2"×11.8"×10.9" 742mm ×300mm ×277mm	
<b>Net weight lbs(kg)</b>	18RVSHY	18RVAHY
	176.4(80)	152.1(69)

**Line Pull and Pressure (First layer)**

Line pull lbs (kgs)	Pressure Mpa(Psi)
0	2.0(290.1)
8000(3629)	5.8(841.2)
12000(5448)	9.2(1334.3)
15000(6810)	12.0(1740.5)
18000(8165)	16.0(2320.6)

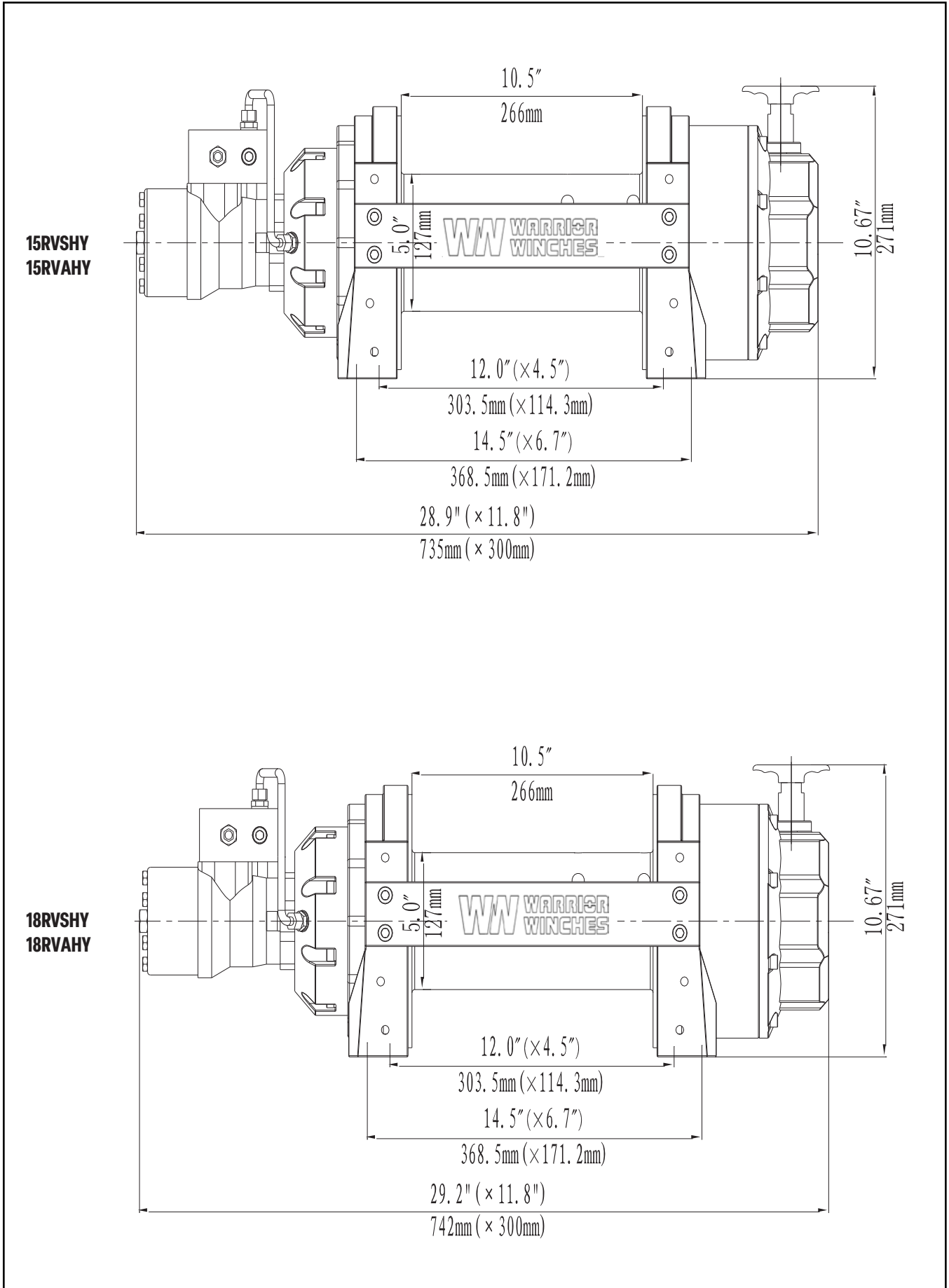
**Oil Flow and Line Speed (First layer)**

Flow G/min (L/min)	Line speed ft/min(m/min)
2.6(10)	4.6(1.4)
5.2(20)	6.6(2.0)
10.4(40)	13.1(4.0)
13.2(50)	17.4(5.3)
15.6(60)	24(7.3)

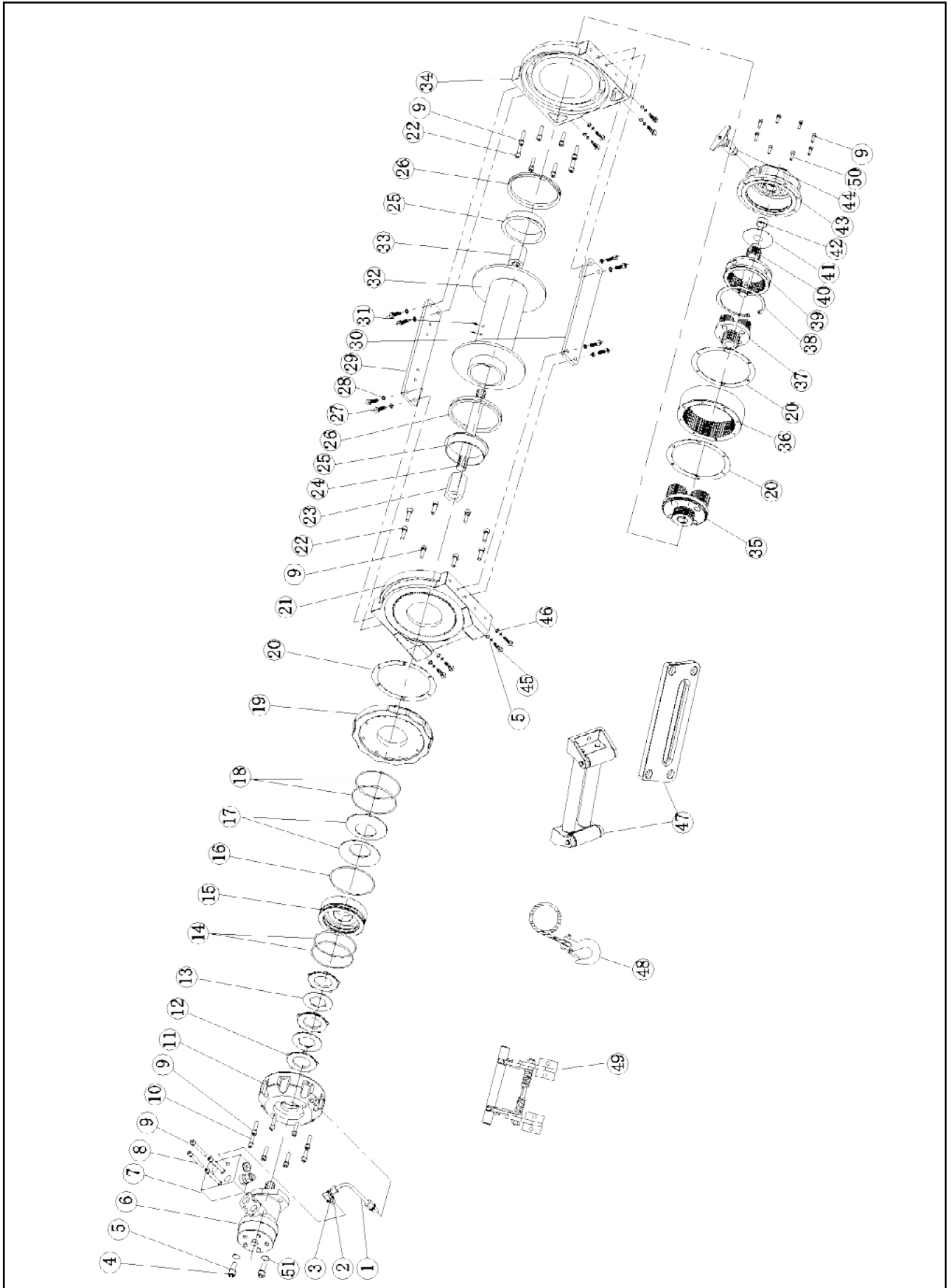
**Layers, Line Pull and Rope Capacity**

Layer of wire rope	Rated line pull lbs(kgs)	Total rope on drum ft (m)
1	18000(8165)	25.9(7.9)
2	15017(6811)	58.7(17.9)
3	12882(5843)	65.6(20.0)

**WINCH ASSEMBLY DRAWING 15RVSHY-CAD, 15RVAHY-CAD, 18RVSHY-CAD, 18RVAHY-CAD**



WINCH ASSEMBLY DRAWING 15RVSHY-CAD, 15RVAHY-CAD, 18RVSHY-CAD, 18RVAHY-CAD



## WINCH PARTS LIST

## 15RVSHY-CAD, 15RVAHY-CAD, 18RVSHY-CAD, 18RVAHY-CAD

#	Part Number	Description	Qty.
1	HV1500001	High-pressure oil tube	1
2	HV1500002	Oil connection Oil	2
3	HV1500003	Combination Washer 14	2
4	HV1500004	Cap Screw M12 x 30	2
5	HV1500005	Lock Washer Ø12	10
6	HV1500100-1	Hydraulic Motor - 15RVSHY 15RVAHY	1
	HV1500100-2	Hydraulic Motor - 18RVSHY 18RVAHY	1
7	HV1500006	Blanced valve	1
8	HV1500007	Cap Screw M8 x 55	4
9	HV1500008	Lock Washer Ø8	38
10	HV1500009	Screw M8 x 30	8
11	HV1500010	Brake stents	1
12	HV1500011	Brake block	3
13	HV1500012	Friction plate	2
14	HV1500013	O-ring seal 100*3.55	2
15	HV1500014	Piston	1
16	HV1500015	O-ring seal 140*2.65	1
17	HV1500016	Disk spring	2
18	HV1500017	O-ring seal 118*3.55	2
19	HV1500018	Motor mounting plate	1
20	HV1500019	Gasket	3
21	HV1500020	Motor bracket	1
22	HV1500021	Screw M8 x 25	18
23	HV1500022	Coupling	1
24	HV1500023	Transmission shaft	1
25	HV1500024	Bearing bush	2
26	HV1500025	Ring Seals	2
27	HV1500026	Screw M10 x 25	8
28	HV1500027	Lock Washer Ø10	8
29	HV1500028	Stand bar(a)	1
30	HV1500029	Stand bar(b)	1
31	HV1500030	Screw M8 x 15	2
32	HV1500200-1	Drum Assembly - 15RVSHY 15RVAHY	1
	HV1500200-2	Drum Assembly - 18RVSHY 18RVAHY	1
33	HV1500031	Coupling I	1

#	Part Number	Description	Qty.
34	HV1500032	End Bearing	1
35	HV1500300	Gear Carrier Assembly (Output)	1
36	HV1500033	Gear-Ring (Output)	1
37	HV1500400	Gear Carrier Assembly (Input)	1
38	HV1500034	Circlip for hole Ø125	1
39	HV1500035	Gear-Ring (Input)	1
40	HV1500036	Gear-Input Sun	1
41	HV1500037	Trust Washer	1
42	HV1500038	Axle sleeve	1
43	HV1500039	Cover-Gear Housing	1
44	HV1500500	Clutch Assembly	1
45	HV1500040	Screw M10 x 35	8
46	HV1500041	Think Flat Washer Ø10	8
47	HV1500600	Roller Fairlead	1
48	HV1500700-1	Cable Assembly - 15RVSHY 15RVAHY	1
	HV1500700-2	Cable Assembly -18RVSHY 18RVAHY	1
49	HV1500800	Tensioned Of Steel Wire Supplied Assembly	1
50	HV1500042	Screw M8 x 30	8
51	HV1500043	Think Flat Washer	2

**For warranty and repair enquiries, please  
contact the retailer where you purchased  
your winch product.**

**[support@warriorwinches.com](mailto:support@warriorwinches.com)**