



**INSTRUCTION BOOKLET
MODEL NUMBER**

700661-1



BERCO
Hydraulic rotation kit « R » TYPE

- * ASSEMBLY
- * OPERATION

- * REPAIR PARTS
- * MAINTENANCE

CAUTION:

**READ & FOLLOW ALL SAFETY RULES & INSTRUCTIONS BEFORE
OPERATING YOUR EQUIPMENT**



LIMITED WARRANTY

Conditions and Products Covered:

BERCOMAC guarantees any part of the product or accessory manufactured by BERCOMAC and found in the reasonable judgment of BERCOMAC to be defective in material and or workmanship will be repaired or replaced by an authorized dealer without charge up to our maximum labor rates and pre-established times. For replacement parts only standard ground freight services are covered. This warranty extends to the original retail purchaser only and is not transferable to any subsequent purchasers. This warranty applies to the products bought and used in North America.

Warranty Period

(from date of the original retail purchase)

- Residential use: 1 year
- Semi-commercial, professional or rental use: 90 days

Exceptions Noted Below; the following items are guaranteed by the original manufacturer and have their own warranty, conditions and limited time:

- Tire Chains: 90 days
- Engines: Will vary as per the manufacturer
Please refer to the engine manufacturer's warranty statement included with the unit. BERCOMAC is not authorized to handle warranty adjustments on engines.

Items and Conditions NOT Covered:

This warranty does not cover the following:

- Pick-up or delivery charges or in-home services fees.
- Any damage or deterioration of the unit, parts and or finish of these due to normal use, wear and tear, or exposure.
- Cost of regular use or maintenance service or parts, such as gas, oil, lubricants, tune-up parts, and adjustments.
- Any part or accessory which has been altered, modified, misused, neglected, accidentally damaged or not properly installed, maintained, stored or repaired not in accordance with the instructions in the owner's manual.
- Repair due to normal wear and or any wear items such as shear pins, bolts, belts, etc.
- Expedited freight fee services for replacement parts.
- Shear bolts and shear pins are to be considered as a preventive measure not as an assured protection, any damages resulting from the lack of shear bolts breakage are not covered.
- Damages due to product being installed on a vehicle other than stipulated in owner's manual.

NOTE: All warranty work must be performed by an authorized dealer using original (manufacturer) replacement parts.

NOTE: Bercomac reserves the right to change or improve the design of any part or accessory without assuming any obligation to modify any product previously manufactured.

Instructions for Obtaining Warranty Services:

Contact dealer where equipment was purchased or any other BERCO service dealer to arrange service at their dealership. Requests for warranty claims must be carried out through the same distribution network used to purchase the product.. Don't forget to bring your proof of purchase (sales receipt) to the BERCOMAC dealer.

Owner's Responsibilities:

BERCOMAC's defective equipment or part must be returned to an authorized dealer within the warranty period for repairs. In the event that defective merchandise must be returned to manufacturer for repairs, freight fees are prepaid and a written authorization from BERCOMAC must be obtained by dealer prior to the shipment. This warranty extends only to equipment operated under normal conditions. To validate a warranty claim, it is the user's responsibility to maintain and service the unit as specified in the owner's manual or to have the unit serviced at their dealer at their expense.

General Conditions:

The sole liability of BERCOMAC with respect to this warranty shall be strictly and exclusively repair and replacement as mentioned herein. BERCOMAC shall not have any liability for any other costs, loss or damage, including but not limited to, any incidental or consequential loss or damage. Taking advantage of the warranty does not in any way extend the length or renewal of the warranty.

In particular, without being limited to, BERCOMAC shall have no liability or responsibility for:

- Travel time, overtime, after hours time or other extraordinary repair charges or relating to repairs and or replacements outside of normal business hours.
- Rental of like or similar replacement equipment during the period of any, repair or replacement work.
- Any communicating or travel charges.
- Loss or damage to person or property other than that covered by the terms of this warranty.
- Any claims for lost revenue, lost profit or any similar costs as a result of damage or repair.
- Attorney's fees.

BERCOMAC's responsibility in respect to claims is limited to making the required repairs or replacement without charge up to our maximum labor rates and pre-established times and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any product or accessory. In no event recovery of any kind be greater than the amount of the purchase price of the product sold.

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

ASSEMBLY

Install the kit according to the following instructions:

STEP 1

HYDRAULIC HOSES PREPARATION AND ASSEMBLY

HYDRAULIC HOSES AND ADAPTORS

Since the connectors and the length of the hydraulic hoses vary a lot from one tractor to another and according to the different options installed on the vehicle, you must make sure that the hoses which are included in this kit are the right length.

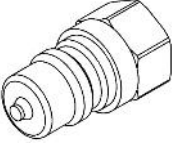
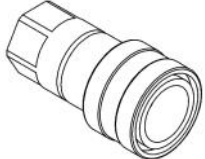
If needed, you must obtain locally the appropriate hydraulic hose extensions and hydraulic adaptors that fit your tractor.

Connect the hydraulic adaptors on the hydraulic hoses.

If available, follow the instructions included with the adaptor kit that corresponds to your vehicle (700740, 700741, or other).

Before starting the installation:

- Read and understand the instructions
- Please sort and identify all the hardware with the packing lists.

700740	700741
Quick nipple 3/8" ISO A	Quick coupler 3/8" ISO A
	



WARNING



TO PREVENT INJURIES:

If you suspect a oil leak in the hoses **NEVER** use you hand to locate it. Use a piece of cardboard or a piece of wood.

STEP 2

HYDRAULIC MOTOR ASSEMBLY

Hydraulic motor support installation:

Remove the two 1/4" nylon insert lock nuts (item a) and flat washers (item a) that were preinstalled on the snowblower.

Install the motor support (item 3) using the two 1/4 x 3/4" carriage bolts (item a) on the snowblower and secure in place with two flat washers and nylon insert lock nuts (item a) that were previously removed.

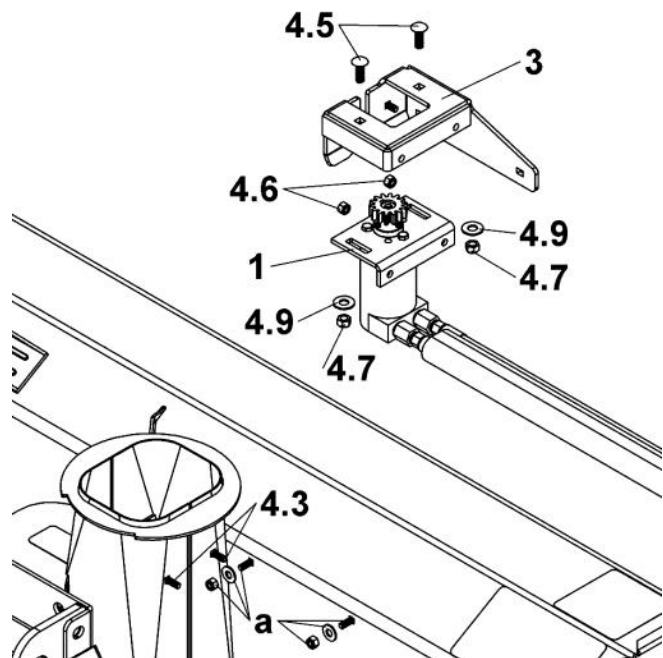
Install two 1/4 x 3/4" carriage bolts (item 4.3) inside the chute support as shown and two 1/4" nylon insert lock nuts (item 4.6).

Tighten in place.

Hydraulic motor installation:

Install the hydraulic motor assembly (item 1) on the motor support using two 5/16 x 1" carriage bolts (item 4.5), two 3/8" flat washers (item 4.9) and two 5/16" nylon insert lock nuts (item 4.7).

Do not tighten the bolts right now.



Install the support and the hydraulic motor.

ASSEMBLY

STEP 3 CHUTE INSTALLATION

Refer to parts breakdown for identification of the parts.

Install the rotation rings:

Place the metal rotation ring (item 2) over the opening for the chute as shown.

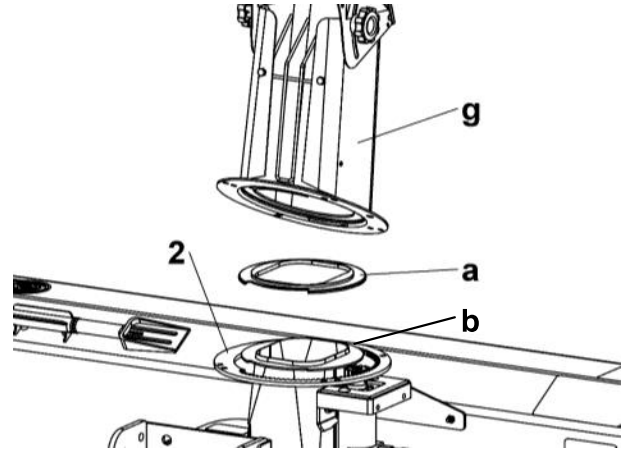
IMPORTANT: Make sure to place the rotation ring in the right direction in accordance with a chute discharge on the **right side** of the snowblower (see figure A).

Install the nylon rotation ring (item a) (included with the snowblower) over the opening for the chute as shown.

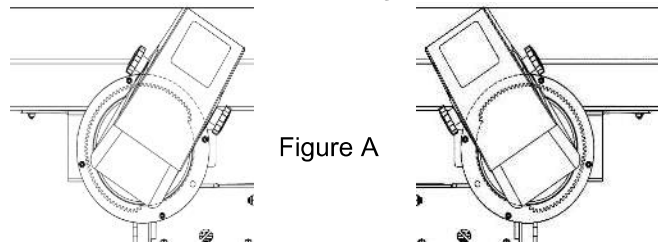
Chute Installation:

Place the assembled chute (item g) opening towards the back of the snowblower over the opening as shown.

Fit the back under the ring of the snowblower (item b) and turn the chute towards the front to lock into place.



Install rotation rings and chute



Chute discharge on the left side of the snowblower

Chute discharge on the **right side** of the snowblower

Check orientation of the chute

Install the metal rotation ring:

IMPORTANT: Make sure to place the holes of the rotation ring (item 2) in line with the holes at the base of the chute (item g) as shown in figure A.

Install the metal rotation ring (item 2) under the chute (item g) by using four spacers (item 4.1), four 1/4 x 1" carriage bolts (item 4.4) and four 1/4" nylon insert lock nuts (item 4.6).

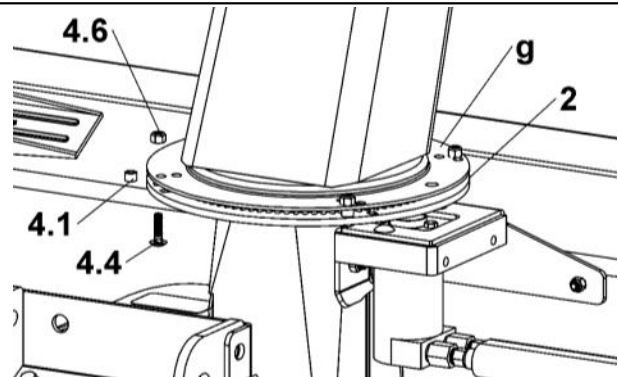
Use the two 1/4 x 1 1/4" bolts (item 4.2) to insert the teeth of the rotation gear (item 1) in the teeth of the metal rotation ring.

Make sure the gear of the motor, rests lightly inside of the rotation ring. Tighten the bolts.

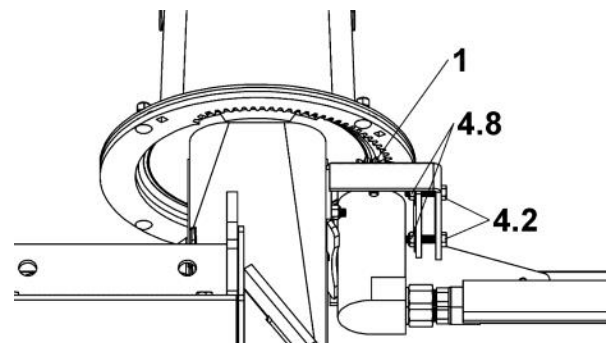
IMPORTANT: Do not tighten the adjustment bolts (item 4.2) too much. Over tightening the bolts could cause damage to the rotation ring.

Lock the bolts (item 4.2) with the nuts (item 4.8)

NOTE: Once the assembly is installed and connected with the vehicle, make sure the chute turns toward the front of the snowblower and not towards the back (towards the tractor). If the chute turns toward the back, the rotation ring must be installed in the other direction.

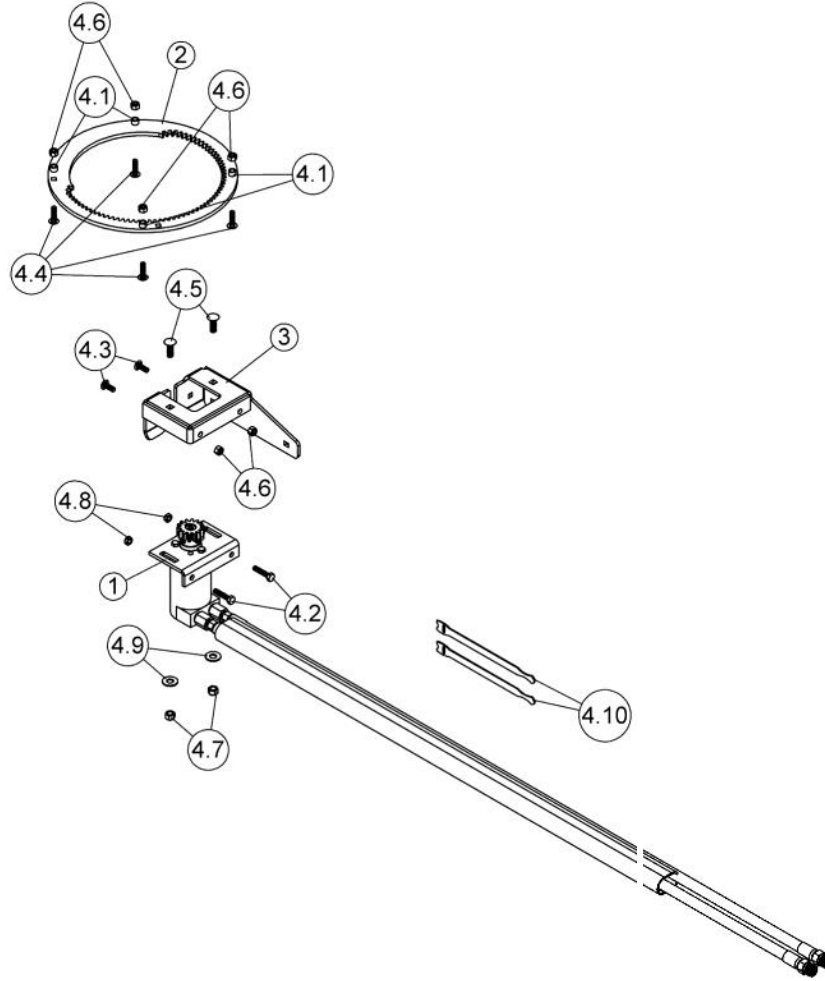


Secure the rotation ring and the chute together



Lock the gear into position

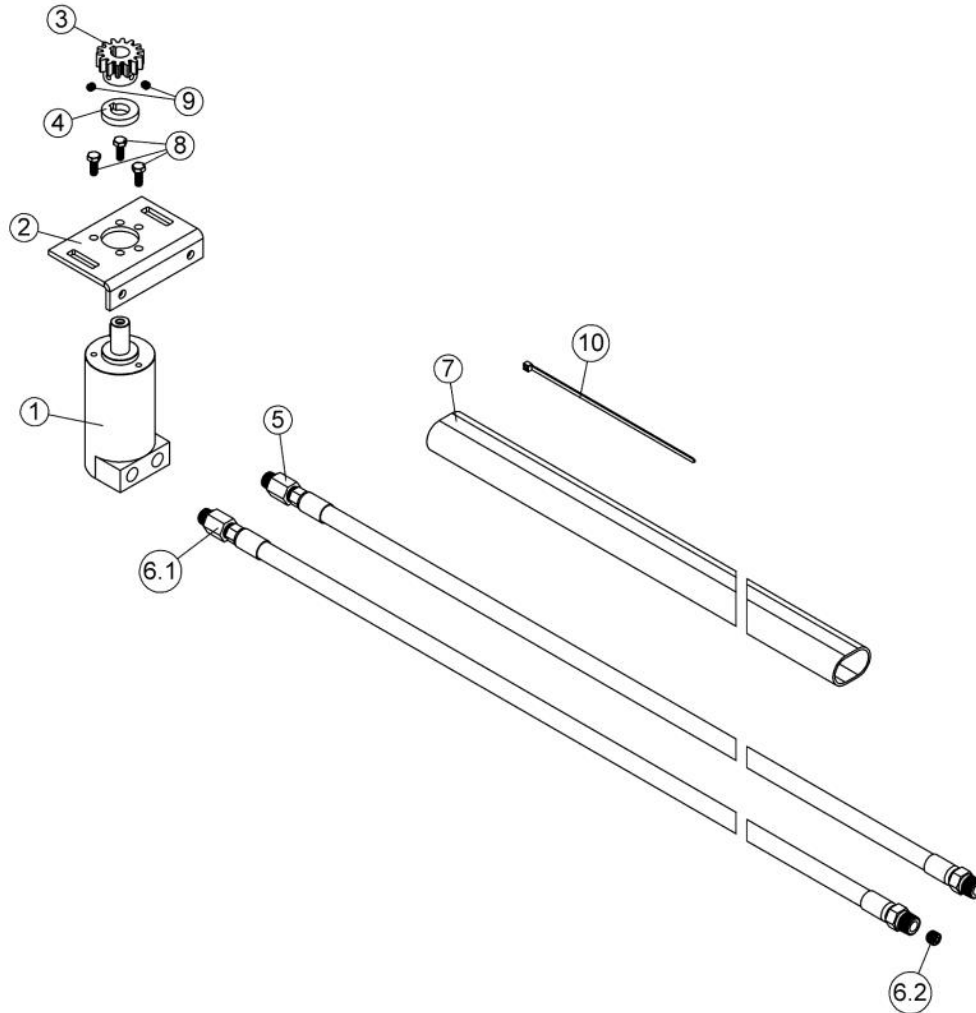
PARTS BREAKDOWN & PARTS LIST



REF.	ENGLISH DESCRIPTION	DESCRIPTION FRANÇAISE	QTY.	PART#
1	Hydraulic motor assembly	Moteur hydraulique assemblé	1	501018
2	Rotation ring	Anneau de rotation	1	105888
3	Motor support	Support-moteur	1	106742
4	Hardware bag	Sac de quincaillerie	1	107418
4.1	Spacer	Espaceur	4	105889
4.2	Hex. bolt 1/4" n.c. x 1 1/4" GR5 FULLY THREADED	Boulon hex. 1/4" n.c. x 1 1/4" GR5 FILETE COMPLET	2	O/L (300NC.5P.F_1-4x1-1-4)
4.3	Carriage bolt 1/4" n.c. x 3/4 " GR5	Boulon à carrosserie 1/4" n.c. x 3/4" GR5	2	O/L (320NC.5P_1-4x3-4)
4.4	Carriage bolt 1/4" n.c. x 1 " GR5	Boulon à carrosserie 1/4" n.c. x 1 " GR5	4	O/L (320NC.5P_1-4x1)
4.5	Carriage bolt 5/16" n.c. x 1 " GR5	Boulon à carrosserie 5/16" n.c. x 1 " GR5	2	O/L (320NC.5P_5-16x1)
4.6	Nylon Insert lock Nut 1/4" n.c.	Écrou à garniture de nylon 1/4" n.c.	6	O/L (335NC.P_1-4)
4.7	Nylon Insert lock Nut 5/16" n.c. GR5	Écrou à garniture de nylon 5/16" n.c. GR5	2	O/L (335NC.P_5-16)
4.8	Nylon insert lock nut 1/4" n.c. (thin)	Écrou à garniture de nylon 1/4" n.c. (mince)	2	O/L (336NC.P_1-4)
4.9	Flat washer 3/8" hole	Rondelle plate 3/8" trou	2	O/L (360.P_3-8T)
4.10	Hook-it cable ties	Attache câble auto-grippante	2	104408

O/L = Obtain Locally

PARTS BREAKDOWN & PARTS LIST HYDRAULIC MOTOR ASSEMBLY #501018



REF.	ENGLISH DESCRIPTION	DESCRIPTION FRANÇAISE	QTY.	PART#
1	Hydraulic motor with key	Moteur Hydraulique avec clé	1	105783
2	Support plate	Plaque de support	1	105886
3	Gear	Pignon	1	105887
4	Spacer	Espaceur	1	107471
5	Hydraulic hose	Flexible hydraulique	1	106489
6	Hydraulic hose assembly	Flexible hydraulique assemblé	1	106492
6.1	Hydraulic hose	Flexible hydraulique	1	106490
6.2	Orifice	Orifice calibré	1	105916
7	Nylon sleeving	Gaine de nylon	1	106459
8	Hex. bolt M6 x 1.00 x 16 GR8.8	Boulon hex. M6 x 1.00 x 16 GR8.8	3	O/L (310.8.8P_M6X1.00X16)
9	Socket head set screw 1/4" n.c. x 1/4" (knurled)	Vis à pression à tête plate 6PC 1/4" n.c. x 1/4" (moletée)	2	O/L (391NC.N_1-4x1-4)
10	Tie wrap 8"	Attache de nylon 8"	1	O/L (tiewrap_8)

O/L = Obtain Locally

TORQUE SPECIFICATION TABLE

GENERAL TORQUE SPECIFICATION TABLE USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

* Thick nuts must be used with grade 8 bolts

SEE Grade No.		2				5				8 *			
BOLT HEAD IDENTIFICATION MARKS AS PER GRADE NOTE MANUFACTURING MARKS WILL VARY		TORQUE				TORQUE				TORQUE			
BOLT SIZE		FOOT POUNDS		NEWTON-METERS		FOOT POUNDS		NEWTON-METERS		FOOT POUNDS		NEWTON-METERS	
Inches	Millimetre	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4"	6.35	5	6	6.8	8.13	9	11	12.2	14.9	12	15	16.3	30.3
5/16"	7.94	10	12	13.6	16.3	17	20.5	23.1	27.8	24	29	32.5	39.3
3/8"	9.53	20	23	27.1	31.2	35	42	47.5	57	45	54	61	73.2
7/16"	11.11	30	35	40.7	47.4	54	64	73.2	86.8	70	84	94.9	113.9
1/2"	12.7	45	52	61	70.5	80	96	108.5	130.2	110	132	149.2	179
9/16"	14.29	65	75	88.1	101.6	110	132	149.2	179	160	192	217	260.4
5/8"	15.88	95	105	128.7	142.3	150	180	203.4	244.1	220	264	298.3	358
3/4"	19.05	150	185	203.3	250.7	270	324	366.1	439.3	380	456	515.3	618.3
7/8"	22.23	160	200	216.8	271	400	480	542.4	650.9	600	720	813.6	976.3
1"	25.4	250	300	338.8	406.5	580	696	786.5	943.8	900	1080	1220.4	1464.5

METRIC BOLT TORQUE SPECIFICATIONS							
		COARSE THREAD			FINE THREAD		
Size Screw	Grade No.	Pitch (mm)	Foot Pounds	Newton-Meters	Pitch (mm)	Foot Pounds	Newton-Meters
M6	4T	1.00	3.6 - 5.8	4.9 - 7.9	-	-	-
	7T		5.8 - 9.4	7.9 - 12.7		-	-
	8T		7.2 - 10	9.8 - 13.6		-	-
M8	4T	1.25	7.2 - 14	9.8 - 19	1.00	12 - 17	16.3 - 23
	7T		17 - 22	23 - 29.8		19 - 27	25.7 - 36.6
	8T		20 - 26	27.1 - 35.2		22 - 31	29.8 - 42
M10	4T	1.50	20 - 25	27.1 - 33.9	1.25	20 - 29	27.1 - 39.3
	7T		34 - 40	46.1 - 54.2		35 - 47	47.4 - 63.7
	8T		38 - 46	51.5 - 62.3		40 - 52	54.2 - 70.5
M12	4T	1.75	28 - 34	37.9 - 46.1	1.25	31 - 41	42 - 55.6
	7T		51 - 59	69.1 - 79.9		56 - 68	75.9 - 92.1
	8T		57 - 66	77.2 - 89.4		62 - 75	84 - 101.6
M14	4T	2.00	49 - 56	66.4 - 75.9	1.50	52 - 64	70.5 - 86.7
	7T		81 - 93	109.8 - 126		90 - 106	122 - 143.6
	8T		96 - 109	130.1 - 147.7		107 - 124	145 - 168
M16	4T	2.00	67 - 77	90.8 - 104.3	1.50	69 - 83	93.5 - 112.5
	7T		116 - 130	157.2 - 176.2		120 - 138	162.6 - 187
	8T		129 - 145	174.8 - 196.5		140 - 158	189.7 - 214.1
M18	4T	2.00	88 - 100	119.2 - 136	1.50	100 - 117	136 - 158.5
	7T		150 - 168	203.3 - 227.6		177 - 199	239.8 - 269.6
	8T		175 - 194	237.1 - 262.9		202 - 231	273.7 - 313
M20	4T	2.50	108 - 130	146.3 - 176.2	1.50	132 - 150	178.9 - 203.3
	7T		186 - 205	252 - 277.8		206 - 242	279.1 - 327.9
	8T		213 - 249	288.6 - 337.4		246 - 289	333.3 - 391.6



***WHEN PERFORMANCE
& DEPENDABILITY
ARE NON NEGOTIABLE!***

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