PRODUCT MANUAL

V2023.9.25

SKID STEER DOUBLE DISCHARGE CONCRETE MIXER MANUAL

Model: DCM-11-250G

LANDHONOR INDUSTRY

Content

Ⅰ. GENERAL SAFETY PRECAUTIONS

Tightening of hydraulic system joints under pressure is prohibited.

The equipment can manipulate (self-control) only mentally and physically competent person older than 18 years.

The mixing shovel can manipulate only person, that was documented conversant with this operating manual.

The mixing shovel can be used only according to operating rules and within technical documentation, that determine the producer.

Before you begin the work, check, if the low outlet is closed.

Before every using of mixing shovel check the technical conditions. Determined defects of technical conditions must you immediately report to superior.

If by using detect the staff the defects of technical conditions, must the mixing shovel secure from unwanted manipulation and the determined defects must report to competent superior, the mixing shovel cannot be used, till elimination of determined defects.

Monitor the equipment operation and conditions during performance of work. In case of any failure, stop the work immediately and continue only after its removal.

Repair and service of mixing shovel can realize only authorized person.

During execution of inspections, repairs and service is forbidden to work with mixing shovel.

In time, when the mixing shovel is not manipulated with person, that is documentary charged with operating rules, must be secured from unwanted manipulation.

Staff can manipulate the mixing shovel only then, when is confirm, that the mixing shovel is safely griped on machine.

Staff must obvious to see the mixing shovel and must still watch her movement and the operator, that is mounting the outlet pipe.

The staff must manipulate equipment so, that the mixing shovel can be not coming in contact with surrounding objects and frames.

It is forbidden whatever modifying of mixing shovel parts, especially those, that are important for her safely using.

By activities on mixing shovel, must the operating staff follow the operating procedures and use the appropriate protective means for work (protective helmet, eyeglasses, gloves).

It is necessary from the beginning of mixing to add the water, that forward the mixing process.

Any dismantling of the protective grate or manipulation inside the mixing worm area required disconnection of the mixing shovel from the primer hydraulic system and its standstill.

It's prohibited to mix more mixture in the shovel than defined in technical parameters of specified mixing shovel size.

By mixing of dry mix come to fast wearing of mixing worm and framework !!! When is the protective grate dismantled， it's prohibited to operate the mixing shovel in case of improperly installed and secured protective grate due to the danger of trapping attendance´s clothing or body to rotating worm resulting in possible injuries.

It is forbidden to touch the protective grating or to put the hands over protective grating in workspace of mixing worm.

It is forbidden to put whatever objects in workspace of mixing worm over protective grating.

Mounting of outlet pipe must to realize other operator as operator that is sitting in cab. ATTENTION!!! The machine must be in stabilized position and must be secured.

Stand never under mixing shovel, if this is used.

Open never and on no account the outlet of mixing shovel, if you are mounting the outlet pipe.

Operator in cab must always to see, where is the operator that is using

the outlet pipe. In opposite case is that dangerous for operator, that is using the outlet pipe.

It's prohibited to stay under the mixing shovel during discharge due to risk of injury by the shovel or discharged mixture.

Otherwise threat the destruction by following charging of mixing shovel.

Dismantle always after deflation of mixing shovel the outlet pipe!!!

It's prohibited to lift full mixing shovel above the cab level without using rear counter-weight due to the danger of forward tilting of the loader with shovel at travel across rough terrain.

LandHonor

EMAIL:SERVICE@LANDHONOR.COM

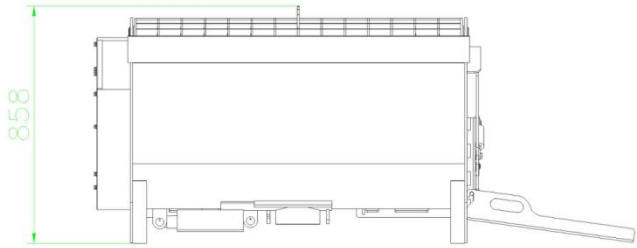
LandHonor	POWERFUL ATTACHMENT TOOLS			
Model	DCM-11-250G	Weight	900	lbs
Serial NO.	HL*****	Max pressure	3000	PSI
Hopper capacity	250L	Flow Range	11-22	GPM
Year	202*	Width		in
Email: service@landhonor.com				CE

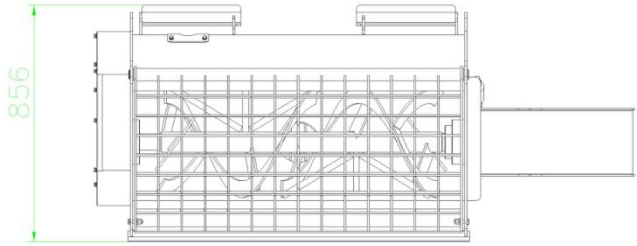

DANGER
Crush Hazard
Stay clear of this area during operation.

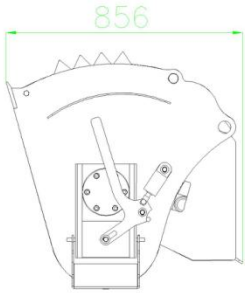

DANGER
Crush Hazard.
Keep hands clear while operating.
Lock out power before servicing.


WARNING
Read and understand operator's manual and all other safety instructions before using this equipment.

Ⅱ. CONCRETE/MORTAR MIXER DIMENSIONS







Ⅲ. BASIC PARAMETER OF Double Discharge Concrete Mixer

No.	Item	Parameter	Remark
1	Overall Length	55.6"	
2	Overall Width	33.8"	
3	Overall Height	34.1"	
4	Hopper Capacity	0.5 cubic yard	
5	Max. flow of oil	20GPM	
6	Max. pressure of oil	2000 psi	
7	Direct Current Voltage	DC12V	
8	Type of chain	ISO 16A	
9	Chain reduction ratio	3	
10	Auger rotation speed	45r/min	
11	Grizzly spacing	3.3" x3.3"	
12	Cylinder bore	1.5"	
13	Cylinder stroke	6.25"	
14	Discharge Tube (IDxOD)	6.3"x6.9"	Length 47"-59"
15	Deep groove ball bearing(mm)	6209-2RS （dxDxT=45x85x19）	
16	Mounted Bearings	UCF207	ID: 35mm
17	Framework Oil Seal(mm)	dxDxT=60x75x9	
18	Auger Diameter	15.8"	
19	Weight	850lbs	

Ⅳ. INSTALLATION & SET-UP

The mixing shovel for concrete is an attachment for using on the skid steer loaders. It is intended for the quick and effective production of the high-quality concrete even in adverse conditions.

Framework is the welded piece of trough shape on which back there are welded the brackets serving for fixing on the quick speed clamp of the carrier. To the bottom of the shovel body there are welded two supporting legs that ensure stability of the shovel during preparation of mixture. The driving unit is placed on the right-hand side of the shovel viewed from the operator position. It consists of the orbital hydraulic motor and the chain gear that ensure drive of the mixing worm. The drive sprocket is found on the output shaft of the hydraulic motor and is supported in the bearing. The driven sprocket with shaft is supported in the bearings on the shaft of the mixing worm. The chain can be tensioned by stretching under the chain gearing cover. The whole driving unit is placed in the removable cover. The mixing worm is a welded piece consisting of the tube and the segments. The mixing worm is supported in the bearings which are protected by the rubber seals against leakage of the concrete mixture sealing ring.

It is a skid steer mounted concrete mixer that allows you to scoop up the material, mix it on the go and then dispense the material in three different methods. A manual side chute allows the operator to efficiently dispense the concrete from the side of the attachment. It also has a hydraulically operated center chute with a dispenser hose that gives the operator even more flexibility to place the material anywhere. The center chute not only lets you dispense concrete but it also works as a sand bag filler. You can also just pour the finished batch out the front of the mixer in one big pour.

a) FASTENING OF MIXING SHOVEL ON MACHINE

The mixing shovel is being fasted on the quick clamping (clamping, fasting mechanism) of your machine. Therefore, it's important to follow the mounting instructions in operating rules of your machine.

1.Put the mixing shovel on firm and flat surface.

2.Shift the lifting arm in mixing shovel clamp.

3.Carefully shut the lifting arm to machine and ensure with lever the connecting of mixing shovel and machine. Check, if eject the safety pins with help of lever, if these are in correct position and if the lever is in safety equipment. If the pins are not ejected, repeat the clamping.

4.Carefully lift the lifting arms of loader and move with the tilting cylinders to check, if the movement of hydraulic hoses is free and if all mounting procedures have been successfully finished.

b) HYDRAULIC CONNECTING OF MIXING SHOVEL

1.The quick couplers of mixing shovel are ending with safety covers.

2.Take off the safety covers from quick couplers on mixing shovel.

3.The quick couplers of mixing shovel hydraulic hoses connect to machine according to instructions in operating manual of your machine for additional equipment.

4.Carefully lift the lifting arms of the loader and move with tilting cylinders to check, if the movement of hydraulic hoses is free and if they do not interfere into the way of parts movement.

Ⅴ. OPERATING INSTRUCTIONS

1.Before Use:

Read all sections of this manual. There is operational and safety information you will need to ensure that the Concrete/Mortar Mixer operates properly and safely.

Caution:

Extreme caution should be exercised when working around a mixer or any piece of equipment with rotating mixing paddles. The paddle rotation is very powerful and can crush an arm or pull a man into the tub. Always be careful to keep loose clothing clear of the paddles. Never stick a hand thru the screen regardless of whether or not the paddles are rotating. If it is necessary to reach into the drum for maintenance, first make sure the hydraulic lines are disconnected, and then raise the screen by removing the two bolts that secure the leading edge of the screen.

2.Loader Requirements:

Care must be taken not to exceed the load capacity of the skid-steer loader. It is strongly recommended, especially for elevated discharge applications, that a load chart be obtained from the skid-steer manufacturer that takes into consideration not only the weight of the empty mixer and the live weight of the concrete but also the increased horizontal and vertical centers of gravity of the Concrete/Mortar Mixer. However, for "on-grade only" concrete placement applications, experience has shown that a skid-steer loader with a minimum rated capacity of 1600 lbs can generally handle the load.

The skid-steer loader must be equipped with auxiliary hydraulics to the front of the loader. Hydraulic hoses from the Concrete/Mortar Mixer drive motor to the auxiliary quick-disconnects are included, however the quick disconnect fittings are not included. Auxiliary hydraulics

requirements (high-flow kit not required) - 12 to 15 GPM flow - 2000 psi operating pressure.

3.Concrete Mix Design:

The Concrete/Mortar Mixer is a concrete mixer - not a grout mixer- all mix designs must have coarse aggregate of at least 3/8” or larger, but must not exceed 3/4".

Concrete strength is dependent on many factors, including but not limited to, type and gradation of fine and coarse aggregate, amount of cement and amount of water added to the mix as well as atmospheric conditions. It is the sole responsibility of the user to determine the proper quantities of the various concrete ingredients to produce the desired concrete strengths and qualities.

Using type of aggregate mix, fill the Concrete/Mortar Mixer drum to a point indicated by the "top of the triangular paddle gusset" when a paddle is in a vertical position. Break two bags of cement into the mixer using the bag splitter on the grate and add water in steps to prevent getting the mix too wet. Give the paddles time to mix concrete thoroughly before placement - typically about 5 to 10 minutes depending on materials and slump. The top of the paddles should just break the surface for a full 9 CUFT of wet concrete.

A good source for mix design information is your cement and aggregate supplier. In addition,

Minimum slump recommended -3"

Maximum course aggregate size - 3/4" (a minimum of 3/8" course aggregate size is required)

4.Loading Materials & Mixing Concrete：

Operation of the Concrete/Mortar Mixer requires two workers - a loader operator and a man on the ground. Also note, it is desirable to spray the mixer thoroughly with a release agent prior to use for easier cleanup.

The Concrete/Mortar Mixer can be loaded manually with a shovel or aggregates can be scooped up with the mixer in a loader position, the latter being much faster and requiring far less physical effort. Before scooping up the aggregates, first engage the rotation of the paddles with the auxiliary hydraulic valve placed in the locked-on, detent position, and then use the bucket tilt-cylinders to tilt the mixer forward into a loader position. Scoop up materials as you would with a loader. Tilt mixer up to the vertical position with the top of the drum level with the ground and check for the proper level of materials. If level is a little low, add a few shovels as needed or if level is too high, a small amount can be let out thru the side gate. Adjust paddle rotation speed with loader throttle for approximately 12 to 15 revolutions per minute for most effective mixing. Break cement bags into mixer using the built-in bag splitter on the grate. Add water in steps to prevent getting the mix too wet. Mix thoroughly before discharging concrete. Paddle rotation should continue at all times. When reversing the paddles please make sure they come to a complete stop in the neutral position first before going into reverse. When the paddles are free, the auxiliary hydraulic valve should then be returned to "locked-on" position for continued operation.

5.Discharging Concrete:

The concrete agitator can discharge the material through the discharge port below. The opening or closing of the discharge port is controlled by the oil cylinder. The extension or retraction of the oil cylinder is controlled by the hydraulic multi-way valve, which is connected with the electric control switch. The discharge port is connected with a diversion pipe to accurately control the concrete unloading position, which is very convenient to use.

6.Clean up:

The mixer should be thoroughly cleaned with water as quickly as possible after use. Using a long handle brush, remove all concrete residue. If the mixer is cleaned thoroughly after each use, it will be much easier to maintain. The quick disconnects should be covered to keep them clean and prevent contamination of the hydraulic fluid. Each time, after mixer is cleaned, apply grease thru the zerks on each end of the paddle shaft. This will clean the bearings and lubricate them for extended life.

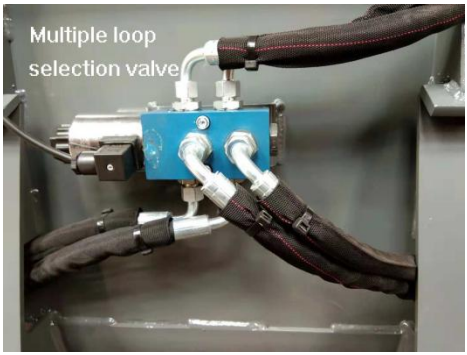
Ⅵ. HYDRAULIC ELECTRIC CONTROL SYSTEM

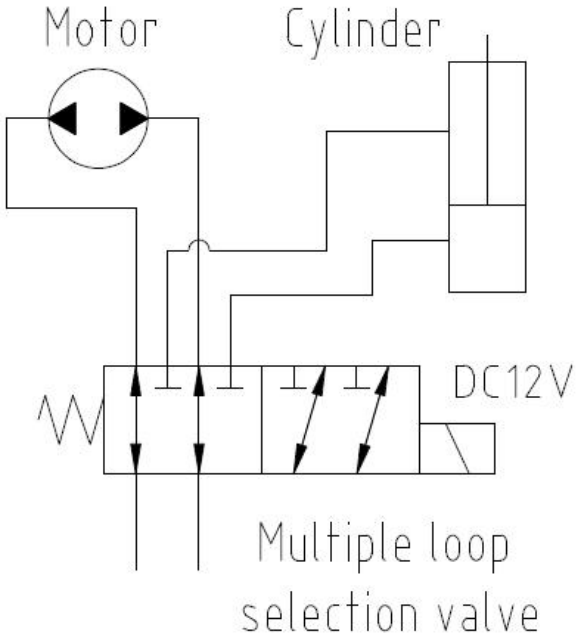
MOUNTING OF ELECTRIC OPERATING AND CABELING

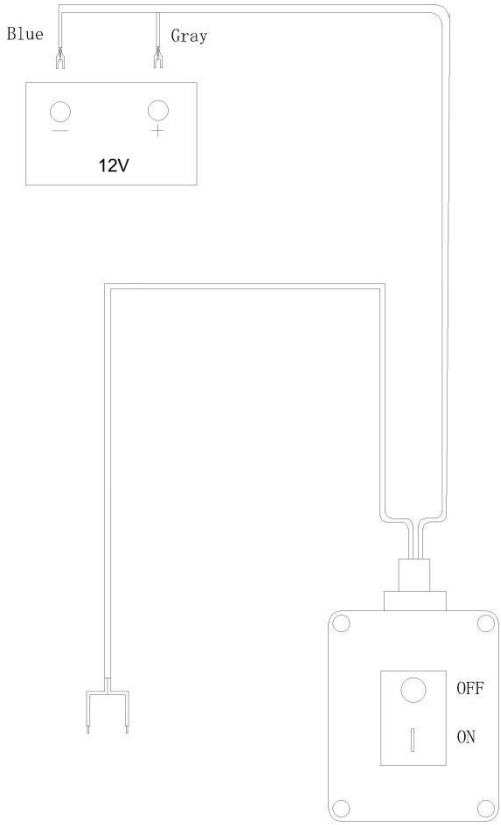
1.Electrovalve of mixing shovel is ended with cable bundle. The cable bundle is ended with plug connector (auto plug).
2.The cable from mixing shovel to pocket connector on your loader route so, that is not coming to his defect by working with mixing shovel.
3.Insert the plug connector (auto plug) on cable bundle in stage pocket, that is situated in cab of your loader.
4.With switch between electric valve and auto plug control the electric valve.

DISCHARGING OPENING MECHANISM WITH ELECTROVALVE

a) Remove the machine on place, where you want dump the mixture from shovel.
b) Switch of electric valve is in position “0” .
c) Change the electric valve switch in position “1” . (Now is the hydraulic flow redirected in hydraulic cylinder of mixing shovel, that controls the low outlet.)
d) Open the low outlet.
e) After the mixing shovel has been fully emptied, change the switch to position “0”. Close the low outlet.
f) The mixing shovel is ready for the next cycle.


Multiple loop
selection valve


Motor
Cylinder
DC12V
Multiple loop
selection valve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12V
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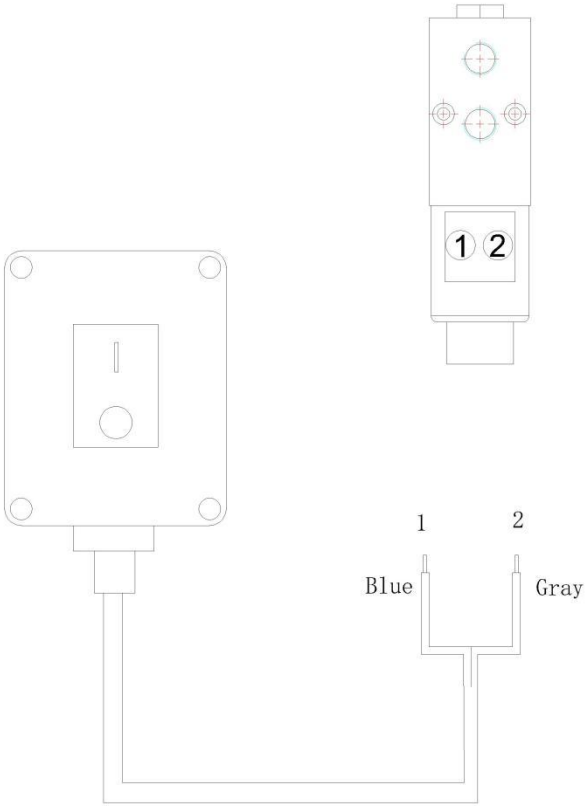
ON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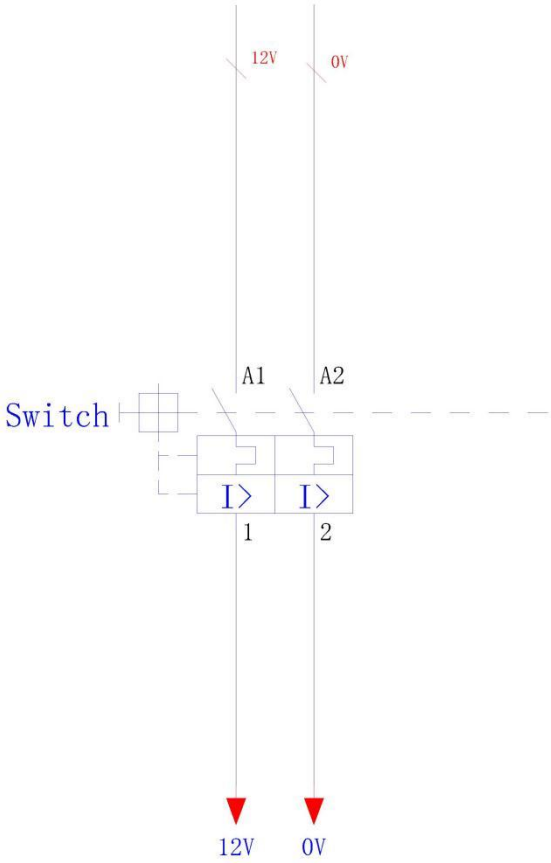

Solenoid Valve

Ⅶ. MAINTENANCE

Keep the working equipment clean, especially in the points of pintle and hydraulic connections.

After finishing work clean the all equipment from the remains of concrete mixture by the flow of pressure water or by a mechanical way.

Take care of perfect cleanness of low outlet valve.

In normal operation lubricate all lubrications points chain of gear after every 40 MH (once a week)

The chain gear must be lubricated every day (8 MH)

If the mixing shovel is put out of operation for a longer period, it is recommended to place the equipment under the roof.

After dismantling of the equipment from the machine assemble the quick couplers mutually into itself, or protect them by the protective plastic caps which are supplied in the basic outfit of the equipment.

You should check tightening of screwed joints and connections of hydraulic system once a week.

CAUTION: Tightening of hydraulic system joints under pressure is prohibited.

Perform complete inspection of mixer every 200 MH. Focus on condition and tightness of protection rubber (sealing rings) ensuring tightness and protection of worm bearings on the left and right side. Their damaging results in total destruction of bearings and shaft. Typical sign – squeaking in worm lead. In such case, stop the mixer and replace damaged components according to the spare parts catalogue. Early diagnostic and replacement of protective rubber will save you further costs of its repair.

Ⅷ. TROUBLE SHOOTING

Problem	Possible Cause	Possible Solution
Auger will not rotate	Hoses installed incorrectly	Switch quick coupler fittings
	Hydraulic valve on skid steer not engaged	See skid steer operator's manual for auxiliary operation procedure
	Worn, damaged, insufficient or inadequate pump	Repair or replace hydraulic pump
	Insufficient oil in system	Service the skid steer hydraulic reservoir, see skid steer operator's manual
	Hose ends not completely engaged	Check hose couplings and engage properly
	Air in hydraulic lines	Cycle skid steer auxiliary system several times to remove air from lines
	Obstruction in hydraulic lines	Replace obstructed or damaged line
Discharge port cannot be opened or closed normally	Low battery	To recharge a battery
	The power cord is not connected properly	Reconnect the power cord
	The wire is damaged and not energized	Replacement of the wire
	Control switch or motor damaged	Repair or replace the control switch or motor

	Incorrect wire connection	Connect each component correctly according to the instruction manual
Oil leaks	Worn or damaged seal	Replace leaking seal
	Loose or damaged hoses	Replace damaged hoses and secure loose hoses
	Loose or damaged connections	Replace damaged hose connections and tighten loose fittings

Ⅸ. BOLT TORQUE SPECIFICATIONS

GENERAL TORQUE SPECIFICATION TABLES

Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 8.8 or better when replacing bolts.

METRIC BOLT TORQUE SPECIFICATIONS

The following torque values are for use with metric Bolt head identification marks as per grade. Hardware is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications.

(A) Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				(A) Diameter & Thread Pitch (Millimeters)
		MARKING ON HEAD				MARKING ON HEAD				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12 x 1.75	18 mm	68	50	94	70	75	55	103	76	12 x 1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0

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