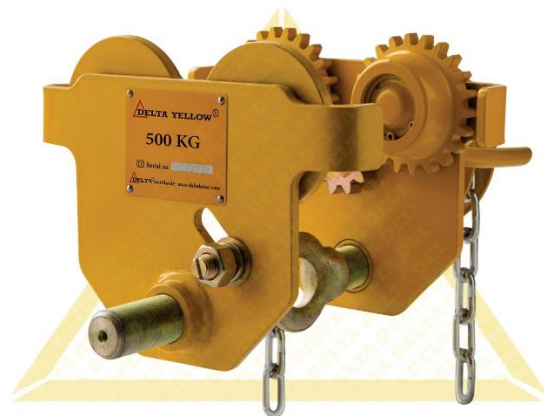


DELTA® **HOISTING EQUIPMENT**

DELTA YELLOW® **OPERATIONS MANUAL** **PUSH & GEARED TROLLEY** **[DY.0.036 & DY.0.037 series]**



DY.0.036




DY.0.037



NOTE:

All of the information reported herein is based on data available at the moment of printing. We reserve the right to modify our own products at any moment without notice. Please read the operating instructions carefully before using this product. Always keep a copy of this instruction manual at hand. Failure to read and comply with the contents of this manual can result in serious body injury or death, and property damage.

















THIS IS THE SAFETY ALERT SYMBOL. WHEN YOU SEE THIS SYMBOL ON YOUR  PRODUCTS OR IN THIS MANUAL, BE ALERT FOR DANGEROUS SITUATIONS. FOLLOW RECOMMENDED AND SAFE OPERATING INSTRUCTIONS AT ALL TIMES.

If any doubt remains, please contact your supplier.


PRECAUTION – SAFETY WARNINGS

The user of the **DELTA YELLOW®** push and geared trolleys must always check if guidelines are followed, which you can find in this manual. Also he/she needs to understand the manual and user instructions completely for safety purposes. Please note that if not followed or understood correctly, potential risks are even greater and can lead to severe injuries or equipment damage. Therefore it is always recommended to save this manual correctly, accessible for the any person who is going to use it.


	Never use or install DELTA YELLOW® push and geared trolleys before reading and understanding the user manual.
	DELTA YELLOW® push and geared trolleys may only be used by qualified personnel of age. Make sure that people who are using this for the first time are familiar with the correct operation instructions and have knowledge about the safety requirements. The user must have a good mental and physical condition.
	Installation of DELTA YELLOW® push and geared trolleys may only be performed by professional and qualified persons who completely understand the user manual.
	Never remove the nameplate, operating and warning labels. Do not use this product without.
	Do not exceed the rated capacity, which you can find on the nameplate. If not, do not use.
	Always make sure that the supporting structures and additional lifting equipment are rated equally or higher to support the rated capacity of DELTA YELLOW® push and geared trolleys.
	Before installing, make sure that DELTA YELLOW® push and geared trolleys are visibly in good condition. After installing periodically inspect, to make sure that this is kept. If not, please contact your supplier or another professional.
	The ambient temperature of DELTA YELLOW® push and geared trolleys hoist and load must be between -10 °C / $+ 60\text{ degrees °C}$
	A technical study by a professional must be carried out before instalment to prevent any risks.
	Never use the DELTA® DELTA YELLOW® push and geared trolleys, supporting or transporting people.
	Never lift / run loads over or in close proximity of people.
	People may never walk under the suspended load or stand in close proximity when DELTA YELLOW® push and geared trolleys is used with lifting equipment. (Danger zone) Never let people stand near the load. Make it clear. Never lift load unattended.
	Maintenance and repairs must be done by professionals and qualified companies. Always use DELTA® spare parts. Always make sure to keep a journal.
	DELTA YELLOW® push and geared trolleys must be regularly examined. depended on use at least once a year tested by a professional, if you have any questions, please contact your supplier.

If you have any questions , please contact your supplier.

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1. Introduction

 **DELTA YELLOW**® push and geared trolleys are designed for beams in a safe working environment. The user is responsible for correct operation and must always make sure that the load weight doesn't exceed the rated capacity.


 **DELTA YELLOW**® push and geared trolleys are in compliance with the safety factor and further safety requirements in conformity with the European Communities Machinery Directives 2006/42/EC.

Illustrations are for the general understanding and may differ from the actual versions

 **DELTA** reserve the right to change materials or design, if, in our opinion, such changes will improve our product. For the correct use of the  **DELTA YELLOW**® push and geared trolleys, operation and maintenance instructions must be followed. Abuse, repair by an unauthorized person, or use of non  **DELTA** replacement parts voids the guarantee and could lead to dangerous operation.


Please read the instructions carefully before using this product. If any doubt remains, please contact your supplier.

2. Safety instructions

	<p>Improper operation of a DELTA YELLOW® push and geared trolleys can create a potentially dangerous situation which, if not avoided, could result in minor or moderate injury. Please read the safety instructions carefully.</p>
<p>CAUTION</p>	<p>DELTA YELLOW® push and geared trolleys may only be used by qualified personnel of age. Make sure that people who are using this product are familiar with correct operation and know all the safety requirements. The user should be in a good mental and physical condition.</p>
<p>CAUTION</p>	<p>Any person using DELTA YELLOW® push and geared trolleys for the first time must check (under risk-free conditions) that he/she has perfectly understood all the safety requirements and methods for safe and efficient use.</p>
<p>CAUTION</p>	<p>For professional purposes, DELTA YELLOW® push and geared trolleys must be placed under the responsibility of a person who is familiar with the regulations applicable at the intervention location, and having the authority to enforce application of the regulations when the person in charge is not the operator.</p>
<p>CAUTION</p>	<p>The operator must wear and use the necessary personal protective gear when using the push & geared trolley.</p>
<p>CAUTION</p>	<p>Ensure that you are in compliance with all safety at working regulations governing installation, maintenance and use of the equipment.</p>
<p>CAUTION</p>	<p>DELTA YELLOW® push and geared trolleys must only be installed under condition which ensure the safety of the installer in compliance with the regulations applicable to its category.</p>
<p>CAUTION</p>	<p>Make sure that DELTA YELLOW® push and geared trolleys is installed on a beam which has the necessary strength to support the maximum working load (W.L.L), which is indicated on the nameplate/label of the DELTA YELLOW® push and geared trolleys.</p>
<p>CAUTION</p>	<p>Only use DELTA hoist equipment which has a rated capacity equal or less than the capacity of the DELTA YELLOW® push and geared trolleys. We advise to always use a DELTA hoist equipment corresponding to the capacity of the beam and DELTA YELLOW® push and geared trolleys. Always make sure that the DELTA hoist equipment and load chain is in good condition, so they don't have any signs of wear cracks, corrosion or any other kind of damage.</p>
<p>CAUTION</p>	<p>DELTA YELLOW® push and geared trolleys must have a nameplate indicating the W.L.L. If not, please put the DELTA YELLOW® push and geared trolleys out of service and contact your supplier.</p>
<p>CAUTION</p>	<p>DELTA YELLOW® push and geared trolleys is designed for manual operation and may never be motorized.</p>
<p>CAUTION</p>	<p>Prior to use, ensure that inspection and maintenance has been carried out. Make sure that the push & geared trolley is in visible good condition. If not, contact your supplier.</p>
<p>CAUTION</p>	<p>The operator is not allowed to use the DELTA YELLOW® push and geared trolleys, when exceeding the rated capacity This is strictly forbidden, so always calculate the weight which is being applied.</p>
<p>CAUTION</p>	<p>During operation the user must check and observe the DELTA YELLOW® push and geared trolleys, beam and surroundings continuously to avoid any contact with obstacles.</p>
<p>CAUTION</p>	<p>Do not use the DELTA YELLOW® push & geared trolley to transport or lift people.</p>
<p>CAUTION</p>	<p>The user should never be distracted by its surrounding and be concentrated during operation process. Never lift/run load over people or let it make contact with obstacles.</p>
<p>CAUTION</p>	<p>It is strictly forbidden to allow people below or in the danger distance when being used. Do not walk under suspended load and lift load over people.</p>


CAUTION	The operator may never leave the DELTA YELLOW ® push and geared trolleys unattended during use, with suspended load.
CAUTION	Do not modify DELTA YELLOW ® push and geared trolleys. Any disassembly or change is the sole responsibility of the user/owner.
CAUTION	DELTA YELLOW ® push and geared trolleys can be operated in ambient temperatures between - 10°C and 60°C. Brake systems should be checked for freezing at ambient temperatures below 0°C.
CAUTION	DELTA YELLOW ® push and geared trolleys is not suitable for use underwater, in humid environments or danger zone areas.
CAUTION	When DELTA YELLOW ® push and geared trolleys are not used, it must be properly stored in a dry and clean location. Inaccessible to persons who are not authorized to use it. This mean it cannot be laying around causing potential dangerous situations.
CAUTION	If any defects are found, stop using DELTA YELLOW ® push and geared trolleys immediately. Please contact your supplier.
CAUTION	Only use DELTA ® spare parts. Any repair without contacting a qualified person is the sole
CAUTION	Only use DELTA ® spare parts. Any repair without contacting a qualified person is the sole responsibility of the owner/user. In the event of definitive removal of the DELTA YELLOW ® push and geared trolleys, all environmental protections regulations applicable in the country of use must be observed.
CAUTION	Registration and documentation of inspections and maintenance services is the responsibility of the owner/user. This should be stored and available at all time .

3. PRE-check















	Improper operation of a DELTA YELLOW ® push and geared trolleys can create a potentially dangerous situation which, if not avoided, could result in minor or moderate injury. Please read the safety instructions carefully.
WARNING	Check DELTA YELLOW ® push and geared trolleys for wear, cracks or any other kind of damage. If detected, please put trolley out of use and contact your supplier.
CAUTION	Never use a DELTA YELLOW ® push and geared trolleys, which is damaged.
CAUTION	Make sure that all parts are in place.
CAUTION	Do not make any modifications on DELTA YELLOW ® push and geared trolleys.
CAUTION	Make sure that the beam has the correct capacity and width.
CAUTION	Only use DELTA ® hoist equipment which has equal or less capacity than the DELTA YELLOW ® push and geared trolleys.
CAUTION	Always calculate load weight before lifting..
CAUTION	Always inform everyone when DELTA YELLOW ® push and geared trolleys when working activities begin or stop.
CAUTION	During use, it is strictly forbidden to be in the danger zone. Do not stand, walk under suspended load. Also do no lift load over people. Always keep a safe distance.
If you have any questions, please contact your supplier.	

4. Installation & operating instructions

4.1 Installation

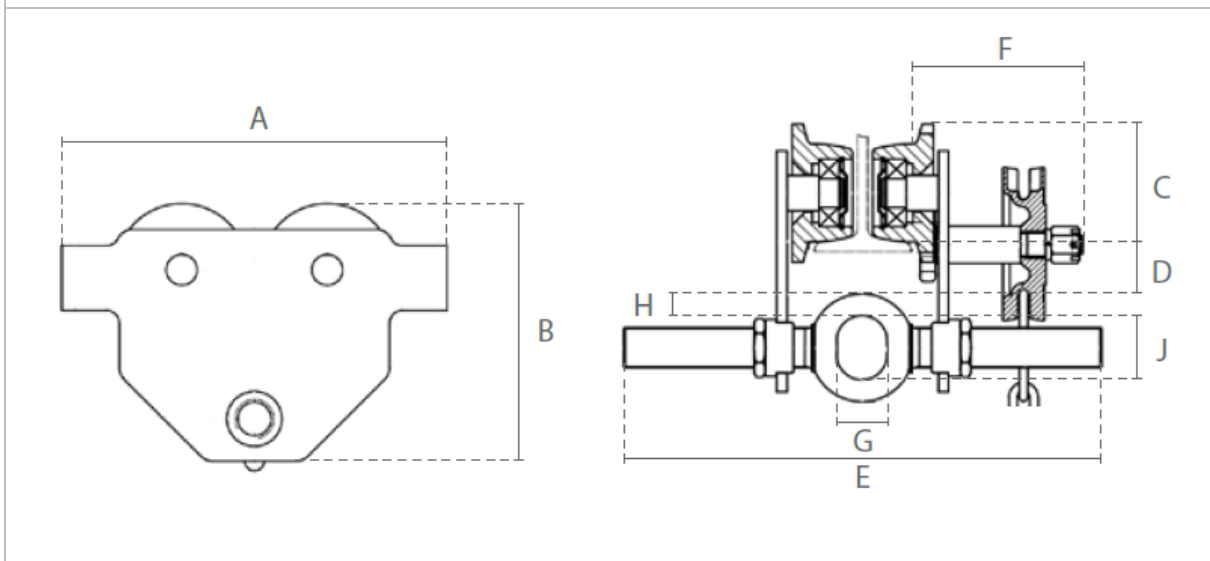
	<p>Improper installation or operation of a DELTA YELLOW® push and geared trolleys and additional lifting equipment can create a potentially dangerous situation which, if not avoided, could result in minor or moderate injury. Please read the safety instructions carefully.</p>
<p>WARNING</p>	<p>Before installation, check the beam and DELTA YELLOW® push and geared trolleys on wear, cracks or any other kind of damage. Never use trolley, which is damaged.</p>
<p>CAUTION</p>	<p>Make sure that the beam has sufficient capacity to hold the trolley at its rated capacity. Make sure that the beam is properly marked, so it is recognizable for the user. Always use trolley that is equal to the beam strength.</p>
<p>CAUTION</p>	<p>Ensure that stops are securely installed at both end of the beam prior to installation of DELTA YELLOW® push and geared trolleys. If not installed, do not use DELTA YELLOW® push and geared trolleys.</p>
<p>CAUTION</p>	<p>Only use DELTA hoist equipment which has a rated capacity equal or less than the capacity of the trolley. We advise to always use a DELTA hoist equipment corresponding to the capacity of the beam and DELTA YELLOW® push and geared trolleys. Always make sure that the DELTA hoist equipment and load chain is in good condition, so they don't have any signs of wear cracks, corrosion or any other kind of damage.</p>
<p>CAUTION</p>	<p>Measure the actual width of the beam.</p>
<p>CAUTION</p>	<p>Assemble the DELTA YELLOW® trolley side plates to the required beam width, therefore turn the spindle / equalizer pin and make sure the eye is centred in the middle.</p>
<p>CAUTION</p>	<p>Suspend the maximum safe working load on the DELTA YELLOW® push and geared trolleys then run the unit slowly along the full length of the Runway to ensure satisfactory and safe operation.</p>
<p>CAUTION</p>	<p>The installation of DELTA YELLOW® push and geared trolleys may only be carried out by competent and professional person, whom understand the instructions as mentioned. If you have any questions, please contact your supplier</p>

4.2 Operation

CAUTION	After the correct installation the  push and geared trolleys, it can be used.  push and geared trolleys are operated by pulling the hand chain clockwise..
CAUTION	Only operate a  push and geared trolleys when the load is centred directly below. Do not apply any side pull.
CAUTION	Make sure that all people are away from the danger zone. It is strictly forbidden to lift load over people. The user must make sure that people always keep a safe distance.
CAUTION	Only use  hoist equipment which has a rated capacity equal or less than the capacity of the trolley. We advise to always use a  hoist equipment corresponding to the capacity of the beam and  push and geared trolleys Always make sure that the  hoist equipment and load chain is in good condition, so they don't have any signs of wear cracks, corrosion or any other kind of damage.
CAUTION	It is strictly forbidden to walk or stand under suspended load.
CAUTION	Avoid collision or bumping  push and geared trolleys to any obstacle during use.
CAUTION	Never splice a hand chain by inserting a bolt between links.
CAUTION	Do not swing a suspended load.
CAUTION	Do not make any modifications to the  push and geared trolleys. This is strictly forbidden and will create dangerous situation when not followed.
	Improper operation of a  push and geared trolleys can create a potentially dangerous situation which, if not avoided, could result in minor or moderate injury. Please read the safety instructions carefully.
	Emergency procedure: In the event of a blocked chain or any other malfunction of  push and geared trolleys or  chain hoist. Immediately stop the maneuverer without attempting any further actions. Immediately set up a safety perimeter around the hoist and directly under the load to prevent access by any unauthorized persons. Call in the necessary personnel to remove the load and intervene on the hoist.

5. Technical information

5.1 Push trolley

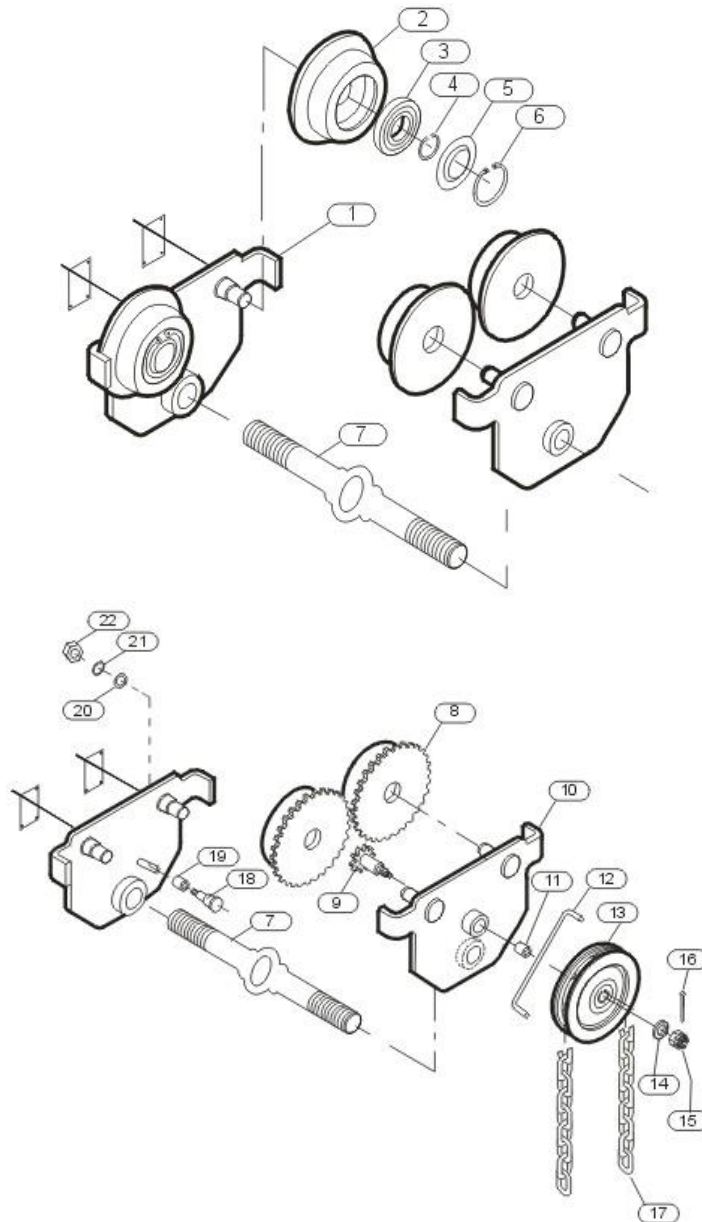


Capacity (t)		0.5	1	2	3	5
Test load (t)		0.625	1.25	2.5	3.75	6.25
Beam width (mm)		50-305	58-305	66-305	74-305	90-305
Dimensions (mm)	A	198	238	277	324	373
	B	158	183	208	249	296
	C	68	82	95	116	138
	D	40	31	31	31	40
	E	385	388	405	429	435
	G	25	29	36	46	52
	H	13	17	20	26	28
J	28	37	48	56	65	
Min. Radius (m)		0.5	0.7	0.9	1.2	1.0
Nett. Weight (kg)		5.4	9.3	14.8	24.1	41.1

5.2 Geared trolley

Capacity (t)		0.5	1	2	3	5
Test load (t)		0.625	1.25	2.5	3.75	6.25
Beam width (mm)		50-305	58-305	66-305	74-305	90-305
Dimensions (mm)	A	198	238	277	324	373
	B	158	183	208	249	296
	C	68	82	95	116	138
	D	40	31	31	31	40
	E	385	388	405	429	435
	F	103	103	103	136	140
	G	25	29	36	46	52
	H	13	17	20	26	28
	J	28	37	48	56	65
Min. Radius (m)		0.5	0.7	0.9	1.2	1
Nett. Weight (kg)		8.9	13	17.8	29.1	46.1

6. Spare parts



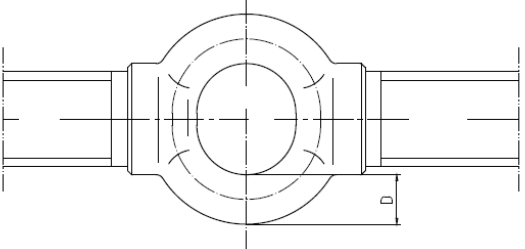
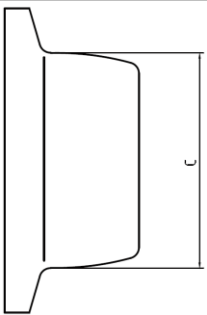




Push trolley / Geared Trolley




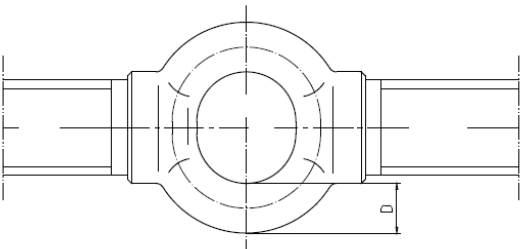
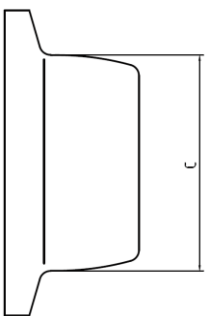
1	Left side gear case	12	Catch pin
2	Driven wheel	13	Chain wheel
3	Bearing	14	Spacer Washer
4	Axle ring	15	Hex castle nut
5	Bearing ring	16	Split pen
6	Hole ring	17	Chain
7	Equalizer pin	18	Roll spindle
8	Tooth gear	19	Roll sleeve
9	Driven spindle	20	Spacer Washer
10	Right side gear case	21	Spring Washer
11	Copper Sleeve	22	Hex nut

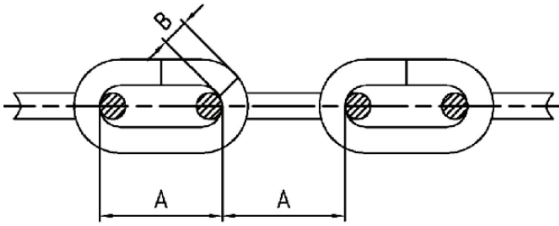


7. Maintenance




7.1 Maintenance Push trolley

CAUTION	The minimal maintenance requirements depends on the use of the product. A check-up and examination by a professional is required on a yearly basis.			
CAUTION	Regularly inspect  push and geared trolleys for wear, damage, distortion, cracks and any defects likely to cause a danger. Always before use			
CAUTION	If any of the above defects are found remove trolley from service and contact your supplier.			
CAUTION	In case of doubts, please put the push trolley out of use and contact your supplier.			
CAUTION	Only use  spare parts.			
CAUTION	Please see standard periodic maintenance chart below:			
Part	Method	Discard criteria	Solution	
Side Plates	Check visually	Check plates for any kind of damage.	Replace	
Axle	Measure:		Capacity (T)	
			D (mm)	
			Replace	
			0.5	≤ 11
			1	≤ 15
			2	≤ 18
			3	≤ 23
5	≤ 25			
Check the axle for wear, tear, cracks and deformation.				
Wheel			Capacity (T)	
			C (mm)	
			Replace	
			0.5	≤ 49.5
			1	≤ 63,5
			2	≤ 75
3	≤ 94			
5	≤ 114			
Wheel	Check visually	Check the wheels for any kind damage or wear. It needs to run smooth	Replace	
CAUTION	The user / owner is responsible for correct administration / documentation of these tests, for example log.			
	Use only  supplied replacement spare parts.			

7.2 Maintenance Geared trolley

CAUTION	The minimal maintenance requirements depends on the use of the product. A check-up and examination by a professional is required on a yearly basis.			
CAUTION	Regularly inspect  push and geared trolleys for wear, damage, distortion, cracks and any defects likely to cause a danger. Always before use			
CAUTION	If any of the above defects are found remove trolley from service and contact your supplier.			
CAUTION	In case of doubts, please put the push trolley out of use and contact your supplier.			
CAUTION	Only use  spare parts.			
CAUTION	Only use  hand chain			
CAUTION	Please see standard periodic maintenance chart below:			
Part	Method	Discard criteria	Solution	
Side Plates	Check visually	Check plates for any kind of damage.	Replace	
Axle	<p>Measure:</p>  <p>Check the axle for wear, tear, cracks and deformation.</p>		Capacity (T)	D (mm)
				Replace
			0.5	≤ 11
			1	≤ 15
			2	≤ 18
			3	≤ 23
			5	≤ 25
Wheel	 <p>Measure</p>		Capacity (T)	C (mm)
				Replace
			0.5	≤ 49.5
			1	≤ 63,5
			2	≤ 75
			3	≤ 94
			5	≤ 114
Wheel	Check visually	Check the wheels for any kind damage or wear.	Replace	

Hand chain	Measure:			Replace
				
	Size	A (mm)	B (mm)	
		Discard	Discard	
	5 X 23.7	≤ 25	≤ 4.5	
CAUTION	The user / owner is responsible for correct administration / documentation of these tests, for example log.			
	Use only  supplied replacement spare parts.			

8. Trouble shooting		
TROUBLE	CAUSE AND EXPLANATION	SOLUTION
 DELTA YELLOW ® push and geared trolleys wheels do no move.	<ol style="list-style-type: none"> 1. Lack of grease (bearing). 2. Bearing is damaged. 	<ol style="list-style-type: none"> 1. Open the bearing cover and grease the components. 2. Change bearing
 DELTA YELLOW ® push and geared trolleys trolley runs tilt.	<ol style="list-style-type: none"> 1. Wheel are out of position. 2. Beam is uneven. 	<ol style="list-style-type: none"> 1. Adjust the wheels and make sure that the wheel flanges are correctly positioned on to the beam by covering enough beam edge surface. 2. Check the beam surface.
Hand chain is fixed or pulling force is heavier than usual.	<ol style="list-style-type: none"> 1. Driven shaft is rusted 2. Hand wheel or catch pin is jammed 3. Bearing is damaged 4. Overload 5. Beam is uneven 	<ol style="list-style-type: none"> 1. Remove rust 2. Try to get catch pin to right position and loosen hand wheel. 3. Replace bearing 4. Check if the trolley is overloaded 5. Check the beam surface.
Hand chain climbed	<ol style="list-style-type: none"> 1. Serious hand wheel wear 2. Hand chain is deformed 	<ol style="list-style-type: none"> 1. Replace the hand wheel 2. Replace the hand chain.
The  DELTA YELLOW ® push and geared trolleys deviates when used.	<ol style="list-style-type: none"> 1. Side plate deformation. 2. Bearing damaged. 3. Beam is uneven 	<ol style="list-style-type: none"> 1. Replace the side plate 2. Replace the bearing 3. Check the beam surface.

9. Derived certificate of test & Declaration of  conformity



**AFLEID TEST CERTIFICAAT
&
 CONFORMITEITSVERKLARING**

Hiermede verklaren wij dat het hieronder vermeldde product zorgvuldig geïnspecteerd en beproefd is en dat de volgende beproevings- en inspectiegegevens overeenstemmen met de specificaties van ons technisch dossier.


Omschrijving :

Model :

Serie nummer :

Max. veilige belasting :

MinimumBreeklast:

**DERIVED CERTIFICATE OF TEST
&
DECLARATION OF  CONFORMITY**

This is to certify that the under-mentioned product has been thoroughly inspected and tested and that the following data of inspection and test is in conformity with the requirements of our technical file.

: Description.

: Type

: Serial Number

: Safe Working Load S.W.L.

: Minimum Breaking Load

Wij verklaren dat het bovengenoemde product in overeenstemming is met de veiligheidsfactor en overige veiligheidseisen van de Europese Machinerichtlijn 2006/42/EC.

We declare that the above-mentioned product is in compliance with the safety factor and further safety requirements in conformity with the European Communities Machinery Directives 2006/42/EC.

Handtekening :

Signed by :

M.F. Stam

Functie :

**Director
Director**

Position :

Datum :

Date :

Factuur nummer:

Invoice/no.




 -  DELTA BLUE[®] -  DELTA CLAMP[®] -  DELTA CONTROL[®] -  DELTA FOR[®] -  DELTA GREEN[®] -

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The Netherlands

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