



PUSH & GEARED TROLLEY [DC.0.032 & DC.0.033 series]





DC.0.032 DC.0.033

CE

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 sparkless 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 pelta sparkless push and geared trolleys before ready and understanding the user manual.



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 sparkless® 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 sparkless\* push and geared trolleys.



Before installing, make sure that Delta sparkless® 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  $^{\circ}$  push and geared trolleys hoist and load must be between -10  $^{\circ}$ C / + 60 degrees  $^{\circ}$ C



A technical study by a professional must be carried out before instalment to prevent any risks.



Never use the Delta sparkless push and geared trolleys, supporting or transporting people.



Never lift loads over or in close proximity of people.



People may never walk under the suspended load or stand in close proximity when Delta sparkless® 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.



DELITA SPARKLESS® 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 SPARKLESS® 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 SPARKLESS® 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

our product. For the correct use of the Delta sparkless 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 instruc	tions
	Improper operation of a Delta sparkless® 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.
CAUTION	DELTA SPARKLESS® 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.
CAUTION	Any person using Delta sparkless® 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.
CAUTION	For professional purposes, Delta sparkless® 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.  The operator must wear and use the necessary personal protective gear when using
CAUTION	the push & geared trolley.
CAUTION	Ensure that you are in compliance with all safety at working regulations governing installation, maintenance and use of the equipment.
CAUTION	Which ensure the safety of the installer in compliance with the regulations applicable to its category.
CAUTION	Make sure that Delta sparkless® 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 sparkless® push and geared trolleys.
CAUTION	Only use Delta hoist equipment which has a rated capacity equal or less than the capacity of the Delta sparkless® push and geared trolleys. We advise to always use a Delta hoist equipment corresponding to the capacity of the beam and Delta sparkless® 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.
CAUTION	W.L.L. If not, please put the Delta sparkless® push and geared trolleys out of service and contact your supplier.
CAUTION	DELTA SPARKLESS® push and geared trolleys is designed for manual operation and may never be motorized.
CAUTION	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.
CAUTION	The operator is not allowed to use the DELTA SPARKLESS® push and geared trolleys, when exceeding the rated capacity This is strictly forbidden, so always calculate the weight which is being applied.
CAUTION	During operation the user must check and observe the Delta sparalless® push and geared trolleys, beam and surroundings continuously to avoid any contact with obstacles.
CAUTION	Do not use the Delta sparkless push & geared trolley to transport or lift people.
CAUTION	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.
CAUTION	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.



CAUTION	The operator may never leave the Delta sparkless® push and geared trolleys unattended during use, with suspended load.
CAUTION	Do not modify Delta sparkless® push and geared trolleys. Any disassembly or change is the sole responsibility of the user/owner.
CAUTION	DELTA SPARKLESS® 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 SPARKLESS® push and geared trolleys is not suitable for use underwater, in humid environments or danger zone areas.
CAUTION	When Delta sparkless® 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 sparkless push and geared trolleys immediately. Please contact your supplier.
CAUTION	Only use 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 sparelless 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.



	Improper operation of a Delta sparkless® 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 sparkless® 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 sparkless® push and geared trolleys, which is damaged.
CAUTION	Make sure that all parts are in place.
CAUTION	Do not make any modifications on Delta sparkless® 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 sparkless push and geared trolleys.
CAUTION	Always calculate load weight before lifting
CAUTION	Always inform everyone when Delta sparkless® 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.



4. Installation & op	perating instructions
4.1 Installation	
	Improper installation or operation of a Delta sparkless® 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.
WARNING	Before installation, check the beam and DELTA SPARKLESS® push and geared trolleys on wear, cracks or any other kind of damage. Never use trolley, which is damaged.
CAUTION	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.
CAUTION	Ensure that stops are securely installed at both end of the beam prior to installation of Delta sparkless® push and geared trolleys. If not installed, do not use Delta sparkless® push and geared trolleys.
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 holist equipment corresponding to the capacity of the beam and hoist equipment 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	Measure the actual width of the beam.
CAUTION	Put the lifting ring in the middle of the axle in a straight line with the runway beam. Assemble the washers <b>equally</b> around the lifting ring to the desired beam width, at least one washer on both sides. The installer must ensure that the side clearance between the wheel flange and beam is about 3~5 mm.
CAUTION	Assemble the remaining washers outside the DELTA SPARKLESS® push and geared trolleys side plate. There must always be at least one washer on the side and the outside of each DELTA SPARKLESS® push and geared trolleys side plate.
CAUTION	After installation, screw the nuts firmly against the washers, then suspend a light load to the trolley to ensure that all four wheels are making contact with the runway beam. If so, use a wrench to tighten the hexagonal nut firmly against the washers, so it cannot go loose.
CAUTION	For Delta sparkless® push and geared trolleys, when assembled at the minimum beam width, the washer will be put on the other side of hand wheel to avoid jamming of the hand chain.
CAUTION	Suspend the maximum safe working load on the Delta sparkless® push and geared trolleys then run the unit slowly along the full length of the Runway to ensure satisfactory and safe operation.
CAUTION	The installation of DELTA SPARKLESS® 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

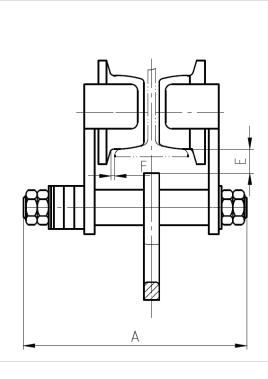


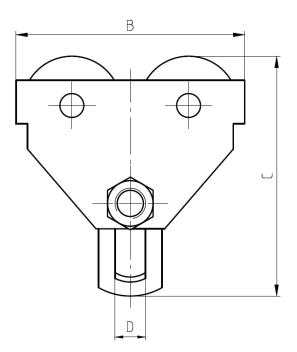
4.2 Operation	
CAUTION	After the correct installation the Delta sparkless® push and geared trolleys, it can be used. Delta sparkless® push and geared trolleys are operated by pulling the hand chain clockwise
CAUTION	Only operate a Delta sparkless® push and geared trolleys when the load is centred directly 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 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 SPARKLESS 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.
CAUTION	It is strictly forbidden to walk or stand under suspended load.
CAUTION	Avoid collision or bumping Delta sparkless® 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 Delta sparkless® push and geared trolleys. This is strictly forbidden and will create dangerous situation when not followed.
	Improper operation of a Delta sparkless® 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 Delta sparkless push and geared trolleys or Delta 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	10	20
Test load (t)		0.625	1.25	2.5	3.75	6.25	12.5	25
Beam width (mm)		64-140	64-140	76-165	76-300	88-300	125-300	136-300
Dimensions	A	230	254	294	344	360	403	447
(mm)	В	212	255	302	344	378	455	642
	C	198.5	231.5	278	338	393	490	622
	D	24	30.5	36	45	60	82	110
	E	28	25	27	32	34	36.5	54
	F	≈ 3	$\approx 3$	≈ 3	≈ 3	≈ 5	≈ 5	≈ 5
Min. Radius (m)		0.6	0.8	1.1	1.4	1	1.3	4.7
Nett. Weight (kg)		7	12	20.5	33	51	86.5	220



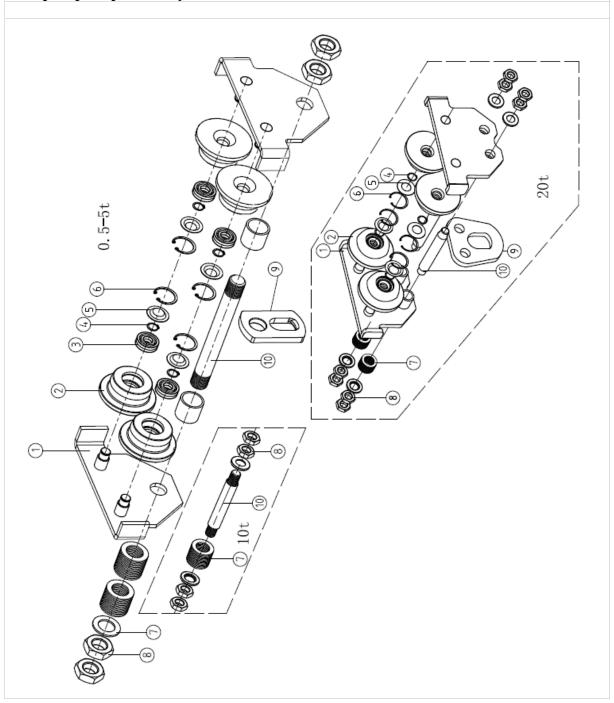
# 5.2 Geared trolley A B O.5-10t D 20-30t B 50t

Capacity (t)		0.5	1	2	3	5	10	20	30	50
Standard operating height (m)		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Test load (t)		0.625	1.25	2.5	3.75	6.25	12.5	25	37.5	62.5
Beam width (mn	n)	64-	64-	76-	76-	88-	125-	136-	250-	170-
		140	140	165	300	300	300	300	300	220
<b>Dimensions</b>	A	308.5	328.5	361.5	428.5	434	487.5	523	570	583
(mm)	В	212	255	302	344	378	455	642	642	1242
	C	198.5	231.5	278	338	393	490	622	622	832
	D	24	30.5	36	45	60	82	110	110	180
	E	28	25	27	32	34	36.5	54	50	35
	F	≈ 3	≈ 3	≈ 3	≈ 3	≈ 5	≈ 5	≈ 5	≈ 5	≈ 5
	G	113	128	152	186	224	276.5	319	315	483
Min. Radius (m)		0.6	0.8	1.1	1.4	1	1.3	4.7	4.7	-
Nett. Weight (kg	()	11.6	17	25.5	39	57	93	247.5	254	520



### 6. Spare parts

### 6.1 Spare parts push trolley



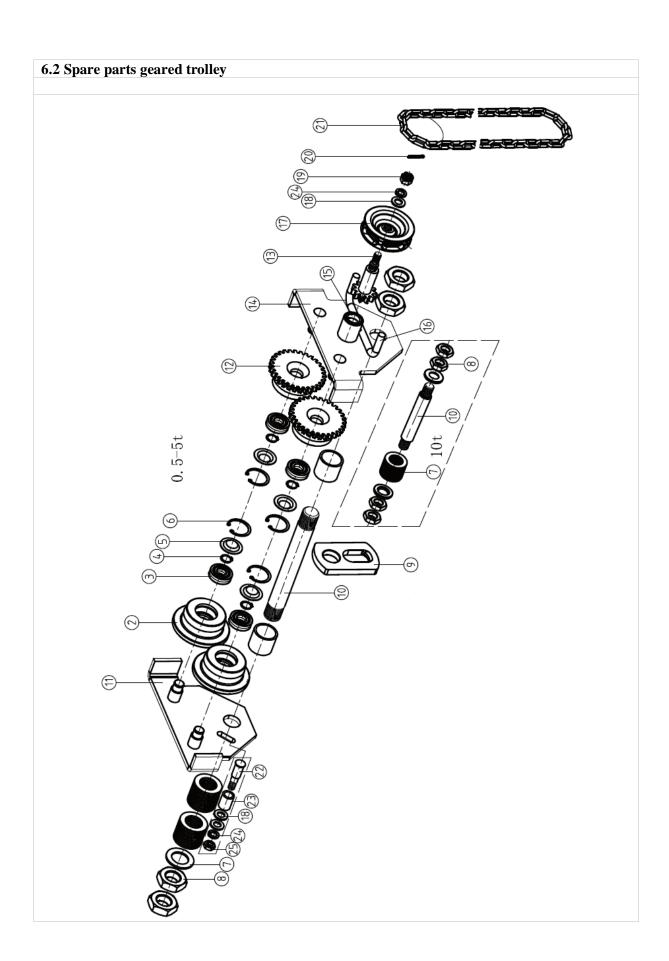


NO	Description
1.	Two gear case
2.	Wheel
3.	Bearing
4.	Axle ring
5.	Bearing ring
6.	Hole ring
7.	Space Washer
8.	Hex nut
9.	Lifting ring
10.	Equalizer pin

# **WARNING**



Use only **DELTA** supplied replacement spare parts.





NO.	Description	NO.	Description
		16.	Catch pin
2.	Wheel	17.	Chain wheel
3.	Bearing	18.	Space washer
4.	Axle ring	19.	Hex castle nut
5.	Bearing ring	20.	Split pen
6.	Hole ring	21.	Hand chain
7.	Space washer	22.	Roll spindle
8.	Hex nut	23.	Roll sleeve
9.	Lifting ring	24.	Spring washer
10.	Equalizer pin	25.	Hex nut
11.	Left side gear case	26.	Elastic Cylindrical pin
12.	Tooth gear	27.	Gear
13.	Driven spindle	28.	Cover Assembly
14.	Right side gear case	29.	Hex bolt
15.	Copper sleeve	30.	Driven shaft components

# **WARNING**



Use only Delta' supplied replacement spare parts.



7. Maintenance									
7.1 Maintenance Push	trolley								
CAUTION	A check-up and examing Regularly inspect Delta	ce requirements depends ation by a professional is r	equired or rolleys fo	on a year or wear, o	ly basis. lamage,				
CAUTION	distortion, cracks and any defects likely to cause a danger. Always before use  If any of the above defects are found remove trolley from service and								
CAUTION	contact your supplier. In case of doubts, pleas	se put the push trolley out							
	supplier.	outo							
CAUTION CAUTION	Only use pare pare pare pare see standard peri	arts. odic maintenance chart be	olow.						
CAUTION	Tiedse see standard peri	odie manitenance chart be	Jow.						
Part	Method	Discard criteria	Solutio	n					
Side Plates Part no. 1	Check visually	Check plates for any kind of damage.		Replace	;				
			Capac (T)	ity D	(mm)				
Axle	Mea	asure:	0.5	<	eplace ≤ 22.8 ≤ 28.5 ≤ 34.5				
Part no. 11	Check the axle for	3 5		≤ 40 ≤ 45.6					
	deform	10		≤ <b>5</b> 7					
			20		<u>≤ 57</u>				
			Capaci ty (T)	A (mm)	B (mm)				
		4	0.5	Replace ≤ 10.5	Replace ≤ 13.5				
			1	≤ 10.5	≤ 13.5				
Suspension plate / Lifting ring									
Nr: 9			3	≤11 ≤19	≤ 18 ≤ 23				
			5	≤ 19 ≤ 24.6	≤23 ≤30				
	Measure	ω	10	≤35.6	≤ 40				
	MEasure		20	≤35.6	≤ 63				



			Capacity (T)	C (mm)				
				Replace				
			0.5	≤ 49.5				
Wheel		J	1	≤ 63				
Part no.: 2			2	≤ 76.5				
			3	≤94.5				
			5	≤ 105.3				
		Measure						
Wheel Part no.: 2	Check visually	Check the wheels for for any kind damage or wear.	Replace					
Hexagon nuts Part no.: 9	Check visually	Check all hexagon slotted nuts are still firmly tightened						
CAUTION		The user / owner is responsible for correct administration / document of these tests, for example log.						
<u>^</u>	Use only 🗸	DELTA® supplied replacem	ent spare par	·ts.				



7.2 Maintenance Gea	red 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 Delita sparkless® 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 DELTA spare parts.					
CAUTION	Only use hand chain					
CAUTION	Please see standard periodic maintenance chart below:					
Part	Method	Discard criteria	Solution			
Side Plates Part no. 1	Check visually  Check plates for any kind of damage.		Replace			
	N	Capacity (T)	D (mm)			
Axle Part no. 11		0.5	Replace ≤ 17 ≤ 20.5			
	Check the axle for	2	≤ 26.5			
	def	formation.	3	≤ 32.5		
			5	≤38		
			Capacity (T)	C (mm)		
		(1)	Replace			
Wheel Part no.: 2		0.5	≤ 49.5			
		1	≤ 63			
_ 3- 3 3 3			2	≤ 76.5		
	Measure		3	≤94.5		
			5	≤ 105.3		
Wheel Part no.: 2	Check visually  Check the wheels for for any kind damage or wear.		Replace			
Hexagon nuts Part no.: 9	Check visually	Check all hexagon slotted nuts are still firmly tightened	Replace			



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

8. Trouble shooting						
TROUBLE	CAUSE AND EXPLANATION	SOLUTION				
trolleys wheels do no move.	<ol> <li>Lack of grease (bearing).</li> <li>Bearing is damaged.</li> </ol>	<ol> <li>Open the bearing cover and grease the components.</li> <li>Change bearing</li> </ol>				
DELTA SPARKLESS® push and geared trolleys trolley runs tilt.	<ol> <li>Wheel are out of position.</li> <li>Beam is uneven.</li> </ol>	<ol> <li>Adjust the wheels and make sure that the wheel flanges are correctly positioned on to the beam by covering enough beam edge surface.</li> <li>Check the beam surface.</li> </ol>				
Wheel flange and beam edge clearance is too large or too small.	<ol> <li>the nut of the equalizer pin is loose.</li> <li>Delta sparkless® push and geared trolleys spacers washers are incorrectly distributed (too much or too less) between the two side plates</li> </ol>	<ol> <li>Tighten the nut.</li> <li>Increase or decrease spacer washer.</li> </ol>				
Hand chain is fixed or pulling force is heavier than usual.	1. Driven shaft is rusted 2. Hand wheel or catch pin is jammed 3. Bearing is damaged 4. Overload 5. Beam is uneven	<ol> <li>Remove rust</li> <li>Try to get catch pin to right position and loosen hand wheel.</li> <li>Replace bearing</li> <li>Check if the DELITA SPARKLESS® trolley is overloaded</li> <li>Check the beam surface.</li> </ol>				
Hand chain climbed	<ol> <li>Serious hand wheel wear</li> <li>Hand chain is deformed</li> </ol>	<ol> <li>Replace the hand wheel</li> <li>Replace the hand chain.</li> </ol>				
The Delta sparkless® push and geared trolleys deviates when used.	<ol> <li>Side plate deformation.</li> <li>Bearing damaged.</li> <li>Beam is uneven</li> </ol>	<ol> <li>Replace the side plate</li> <li>Replace the bearing</li> <li>Check the beam surface.</li> </ol>				





# AFLEID TEST CERTIFICAAT & CONFORMITEITSVERKLARING

Hiermede verklaren wij dat het hieronder vermelde 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:

Minimum,Breeklast:

Met dit certificaat wordt verklaard dat het bovengenoemde product in overeenstemming is met de verligheidsfactor en overige verligheidseisen vande BC Machinerichtlijn 2006/42/BC en overeenkomstig getest door een verantwoordelijke en bevoegd persoon.

Handtekening:

Signed by: M.F. Stam

Functie: Directeur

Position :

Datum: Date:

Factuur nummer: *Invoice no*.

# DERIVED CERTIFICATE OF TEST & DECLARATION OF CONFORMITY

This is to certify that the undermentioned 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.

: MinimumBreaking Load

This Certificate is to certify that these products comply with the requirements of the EC Machinery Directive 2006/42/EC and subsequently examined by a responsible and competent person.



Agenta" - Agenta blue" - Agentaceland" - Agentacontrol" - Agentaton" - Agenta green" Agenta manweilier" - Agenta manweitamel" Agenta silver" - Agentaseling" - Agenta spaniers" prof manwei" - Agentalock" - Manverick" zijn geregisteerde merken en eigendom van DELTA HUSWERKTUIGEN" bv.
Adres: Hiterriik 7, 1505 GW Zamdam, Nederland.





### Address:

Uiterdijk 6-7 1505 GW Zaandam The Netherlands

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SE&O

