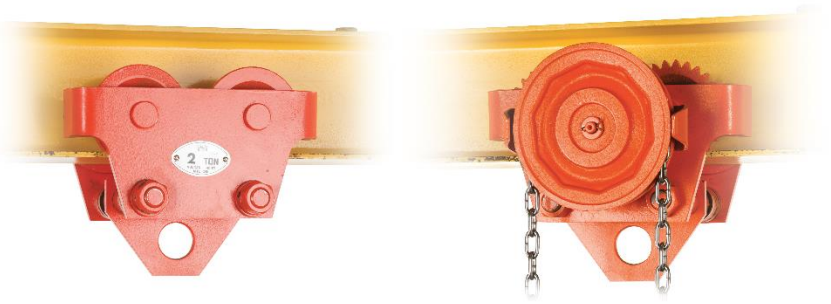
VULCAN
HOIST - PALAN

OPERATOR'S MANUAL

VPT & VGT – Vulcan Push & Gear Trolley



WARNING

DO NOT INSTALL, USE OR REPAIR THIS EQUIPMENT BEFORE READING THIS MANUAL IN ITS ENTIERETY. FAILURE TO READ AND FOLLOW THE INSTRUCTIONS DESCRIBED IN THIS MANUAL COULD RESULT IN SERIOUS INJURY, DEATH AND/OR MATERIAL DAMAGES

WARNING

All persons involved in using, inspecting, maintaining or repairing this equipment must be thoroughly familiar with the contents of this manual and follow the recommended instructions and procedures to avoid injury or property damage.

WARNING

The equipment described in this manual is not designed to lift or move people nor to lift or move loads over people and must therefore not be used for such applications.

WARNING

Do not use this trolley in areas containing flammable vapors, liquids, gasses or combustible dust or fibers. Do not use this trolley in highly corrosive, abrasive, wet environments or in temperatures below -10°C or above 50°C.

NOTICE

Please visit Vulcan's website www.vulcanhoist.com for the latest manual version or any other questions regarding the equipment.

Safety and Warnings

Dangerous Practices to be Avoided
DO NOT use the trolley before reading the manual
DO NOT let an unqualified person use or repair the trolley
DO NOT exceed the rated capacity of the trolley
DO NOT use the trolley to grab, secure or lift the load
DO NOT use as a "below-the-hook" lifting device
DO NOT install trolley on beams of unknown capacity
DO NOT use the trolley in temperatures below -10°C or above 50°C
DO NOT use a damaged or malfunctioning trolley
DO NOT lift people nor carry loads over people
DO NOT stay in the "fall zone" when lifting a load
DO NOT lift if the trolley is not firmly tightened and adjusted on the beam width with the necessary clearance
DO NOT lift unbalanced loads or loads that are not centered
DO NOT leave the load supported by the trolley unattended
DO NOT shock load or side load
DO NOT allow the load to swing
DO NOT allow a welding electrode to touch the beam trolley
DO NOT use the trolley as ground for welding
DO NOT remove or obscure labels
DO NOT use if nameplate or safety and warning labels are missing or illegible

WARNING

Use the trolley ONLY to attach or suspend a load underneath a fixed, stationary and rated for that purpose beam.

DO NOT use the trolley to grab, secure or lift the load. The trolley is not designed as a "below-the-hook" lifting device and must not be used as one.

WARNING

DO NOT attempt to modify this equipment or use it in a manner different than described in this manual. Use only Vulcan authorized replacement parts in the service and maintenance of this equipment. Failure to comply with the above limitations will void the warranty and may result in property damage, injury or death.

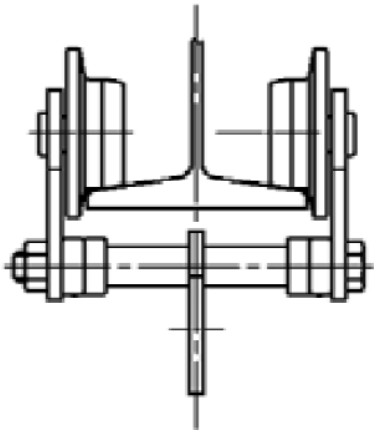
Installation

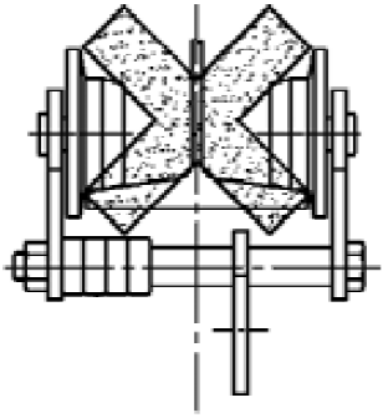
Installation Procedures	
1	Measure the width of the runway beam
2	Loosen the hex nuts on the stay bolts and remove the side plate
3	Adjust the width of the trolley to match the beam width by using the appropriate number of washers to spread apart the side plates
4	Leave a slight clearance of about 1/8 inch between the edge of the beam flange and the wheel flange
5	Make sure the suspension plate is centered and you have equal number of washers on each side of it
6	Put the remaining washers on the outside of the side plates. On gear trolleys, the equalizer pin must be offset as to not interfere with the chain wheel. Do so by putting more washers on the side opposite to the chain wheel
7	Reassemble the trolley on the beam and tighten slightly by hand
8	Make sure all wheels are in contact with the beam flange
9	Tighten the hex nuts to the torque specified in the table below
10	Install stoppers on the runway beam or other means of preventing the trolley from rolling off unintentionally

Push model	Gear model	Stay bolt tightening torque Nm (ft-lb)
VPT1/2T	VGT1/2T	138 (102)
VPT1T	VGT1T	138 (102)
VPT1.5T	VGT1.5T	138 (102)
VPT2T	VGT2T	239 (176)
VPT3T	VGT3T	239 (176)
VPT5T	VGT5T	475 (350)

WARNING

DO NOT use the trolley unless the load plate is centered.

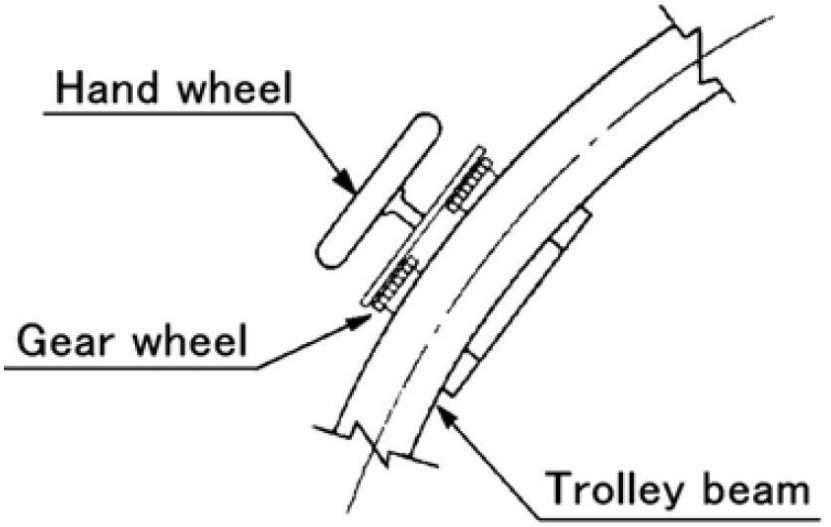




ATTENTION

When installing the trolley on curved beams, orient trolley with the gear wheels and the chain wheel on the outside of the curve.

Refer to the table below for the minimum radii of curvature compatible with each model as measured on the inside of the curved beam.



Push model	Gear model	Minimum radius of curvature (in)
VPT1/2T	VGT1/2T	32
VPT1T	VGT1T	40
VPT1.5T	VGT1.5T	44
VPT2T	VGT2T	48
VPT3T	VGT3T	60
VPT5T	VGT5T	60

Operation

Operation Procedures	
1	Prior to lifting, make sure the lift can be performed safely and the lift path is clear
2	Ensure the beam is of suitable capacity for the load and will not be damaged by the trolley rolling on the flange
3	Make sure the beam is fitted with stops at both ends to prevent the trolley from rolling off
4	Make sure the load is properly centered below the trolley
5	Verify that all lifting devices used (including the trolley) are properly fastened and of suitable working load limit
6	While performing the lift, do not let people to stay in or cross the "fall zone" under the trolley
7	While performing the lift, do not allow the load to swing or to move briskly
8	If using a push trolley, push the load from behind to move it
9	If using a gear trolley, steadily pull down on the hand chain to move the load
10	At the end of the travel path slow down the load gently and do not allow the trolley to hit the stoppers

WARNING

NEVER stay or pass through the "fall zone" under the trolley.

ALWAYS keep your hands and feet away from the "fall zone" under the trolley.

Inspection and Maintenance

ATTENTION

The trolley must be inspected by the operator daily. If any deficiencies are noted, stop using the trolley until it is repaired or replaced.

Suggested Daily Inspection List	
1	Check for cracks or distortions in the structural frame, welds or mechanical components
2	Check for loose or missing fasteners or other components
3	Check if trolley rolls smoothly
4	Check for signs of heat damage or weld splatter
5	Check for excessive wear on load bearing parts like, but not limited to the wheels, the suspension pin, the thread, etc.
6	Make sure the nameplate and the warning labels are present and legible

ATTENTION

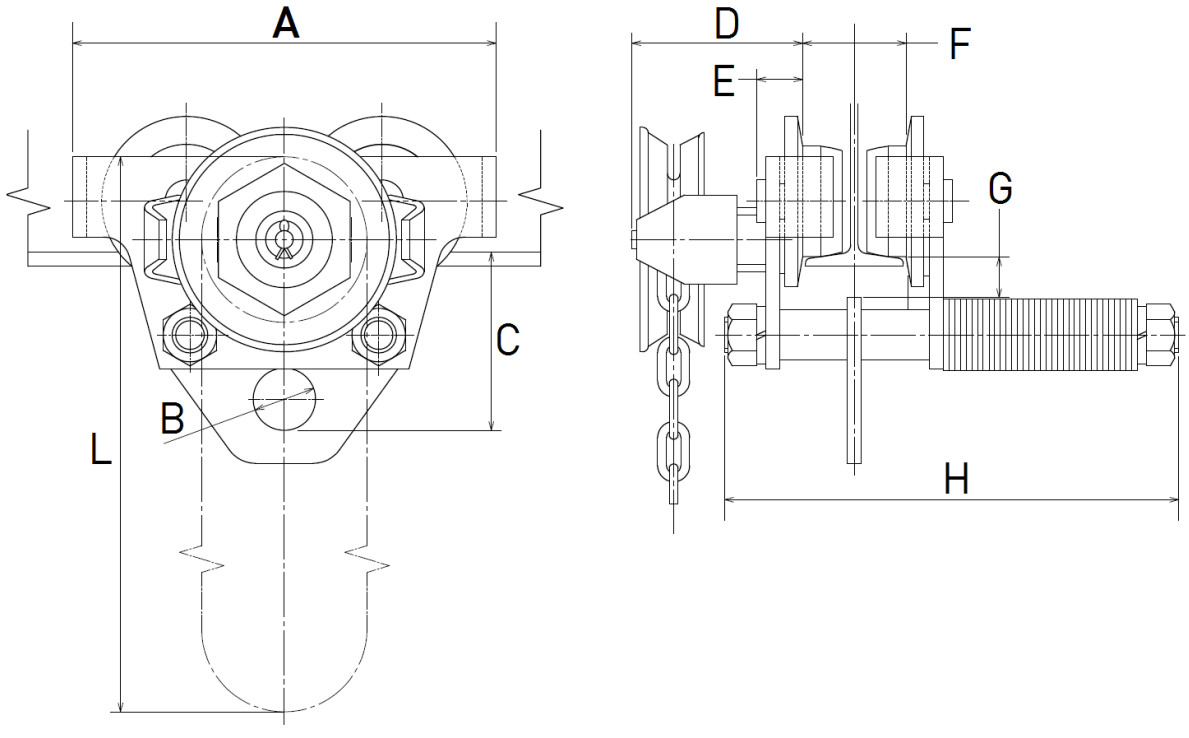
A qualified person must inspect regularly and in depth the trolley and its components to ensure the equipment is safe for use. These inspections may vary in frequency and detail according to the intensity of the equipment use but must include at least the daily inspection procedure.

The user is responsible for keeping dated records of all periodic inspections and maintenance procedures as means of continuously monitoring the condition of the equipment.

Suggested Inspection Frequency	
Initial	Initial installation, re-installation, altered, repaired or modified equipment
Functional	Beginning of each shift
Frequent	Normal service – monthly Heavy service – weekly to monthly Severe service – daily to weekly
Periodic	Normal service – yearly Heavy service – semi-annually Severe service - quarterly

ATTENTION

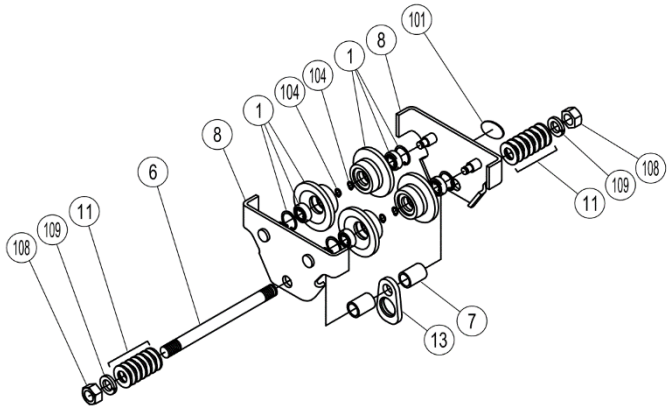
Keep the moving components clean and well lubricated to protect against premature wear.


A
C
B
L
D
E
F
G
H

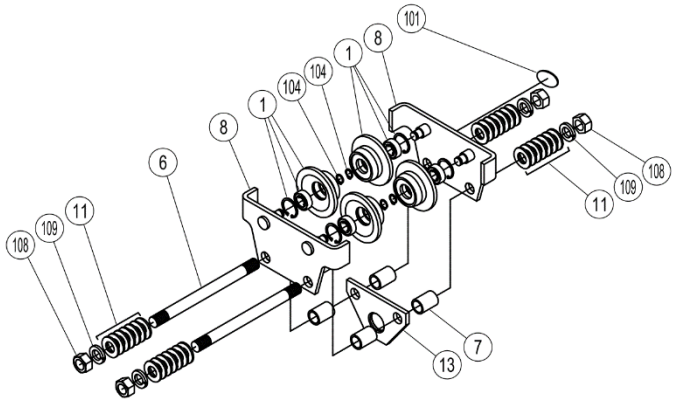
Push model	Gear model	WLL (lbf)	Weight[1] (lbs)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	L[2] (ft)	R[3] (in)
VPT1/2T	VGT1/2T	1100	16 (25)	8.6	1.26	3.7	2.8	1.0	2.50 – 6.00	.82	10.0	10	32
VPT1T	VGT1T	2200	23 (34)	9.4	1.38	3.8	3.8	1.0	3.00 – 5.50	.91	10.0		40
VPT1.5T	VGT1.5T	3300	29 (40)	10.2	1.57	4.2	3.8	1.1	3.00 – 5.50	1.17	11.0		44
VPT2T	VGT2T	4400	45 (58)	12.2	1.77	5.0	4.2	1.3	3.38 – 6.50	1.16	11.5		48
VPT3T	VGT3T	6600	64 (78)	14.3	2.20	5.1	4.2	1.4	3.94 – 6.50	1.20	12.0		60
VPT5T	VGT5T	11000	111 (124)	15.0	2.56	5.9	5.5	3.0	4.50 – 7.25	1.38	13.8		60

[1] Push trolley weight (Gear trolley weight with standard chain length)
[2] Standard length for gear trolleys. Custom lengths available on demand
[3] Minimum beam radius of curvature

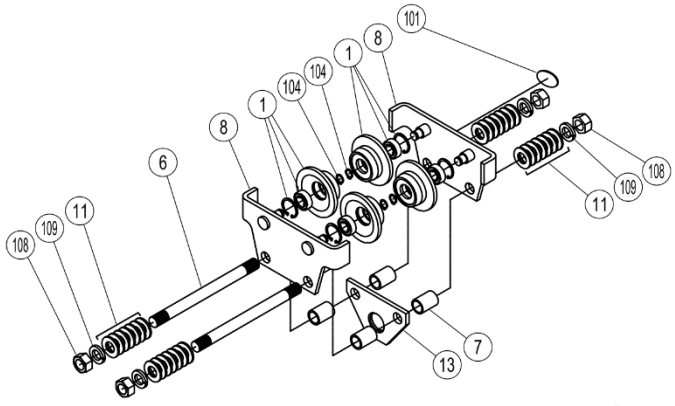
VPT1/2T



VPT1T
VPT1.5T
VPT2T
VPT3T

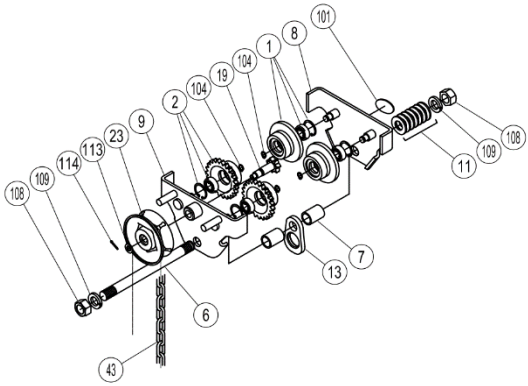


VPT5T

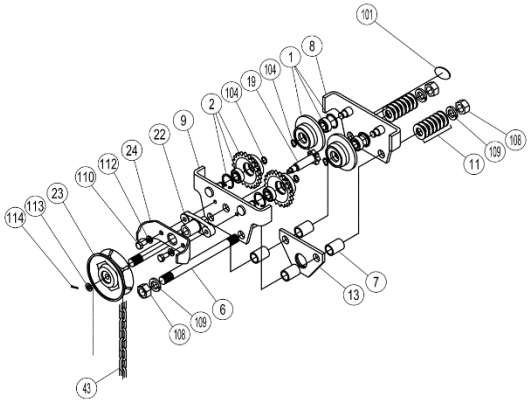


Item	Description	VPT1/2T	VPT1T	VPT1.5T	VPT2T	VPT3T	VPT5T
1	Plain wheel asm	4	4	4	4	4	4
3	Wheel pin	-	-	-	-	-	4
6	Stay bolt	1	2	2	2	2	2
7	Stay pipe	2	4	4	4	4	4
8	Plain-side plate	2	2	2	2	2	2
11	Adjustable collar	34	68	78	48	38	34
13	Hanging plate	1	1	1	1	1	1
101	Name plate	1	1	1	1	1	1
104	Retaining ring	4	4	4	4	4	4
105	Wheel pin nut	-	-	-	-	-	4
108	Stay bolt nut	2	4	4	4	4	4
109	Spring washer	2	4	4	4	4	4

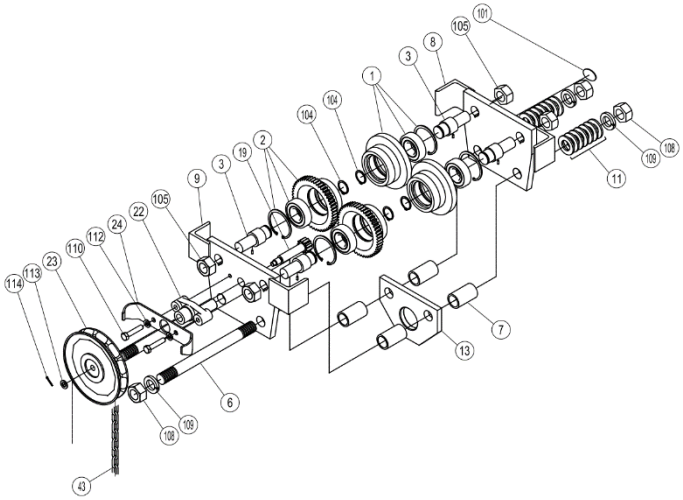
VGT1/2T



VGT1T
VGT1.5T
VGT2T
VGT3T



VGT5T



Item	Description	VGT1/2T	VGT1T	VGT1.5T	VGT2T	VGT3T	VGT5T
1	Plain wheel asm	2	2	2	2	2	2
2	Gear wheel asm	2	2	2	2	2	2
3	Wheel pin	-	-	-	-	-	4
6	Stay bolt	1	2	2	2	2	2
7	Stay pipe	2	4	4	4	4	4
8	Plain-side plate	1	1	1	1	1	1
9	Gear-side plate	1	1	1	1	1	1
11	Adjustable collar	34	68	78	48	38	34
13	Hanging plate	1	1	1	1	1	1
19	Pinion shaft	1	1	1	1	1	1
22	Pinion shaft metal	-	1	1	1	1	1
23	Hand wheel	1	1	1	1	1	1
24	Hand chain guide	-	1	1	1	1	1
43	Hand chain	1	1	1	1	1	1
101	Name plate	1	1	1	1	1	1
104	Retaining ring	4	4	4	4	4	4
105	Wheel pin nut	-	-	-	-	-	4
108	Stay bolt nut	2	4	4	4	4	4
109	Spring washer	2	4	4	4	4	4
110	Pinion shaft bolt	-	2	2	2	2	2
112	Spring washer	-	2	2	2	2	2
113	Plain washer	1	1	1	1	1	1
114	Split pin	1	1	1	1	1	1

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ACCESSORIES

BEAM CLAMP

Beam Clamp (NBC)
1T to 10T

* Nova lifting clamps and beam clamp have a 1-year warranty.

NOVA LIFTING CLAMPS

CDE Vertical Clamp (NVC)
0.8T to 5T

Lifting Clamp (NLC)
1T to 5T

Universal Clamp (NUC)
0.8T to 5T

Horizontal Plate Clamp (NHJ)
1T to 2T

Horizontal Plate Clamp (NHP)
0.75T to 2T

Drum Lifter (NDL)
1T

SUPER LIFTING CLAMPS

Screw Cam Clamp (SCC)
0.5T to 3T

Screw Cam Clamp Double Eye (SDC-S)
0.5T to 5T

Srew Cam Clamp with Universal Shackle (SUC)
0.5T to 3T

Lateral Lifting Clamp (HLC-H)
1T to 6T

Vertical Lifting Clamp (SVC-H)
0.5T to 5T

Vertical Lifting Clamp with Universal Link (SVC-E)
0.5T to 2T

Vertical Lifting Clamp with Remote Control Liver and Rope (SVC-L)
0.5T to 3T

Vertical Lifting Clamp with Stopper (SVC)
1T to 5T

* Super lifting clamps have a 2-year warranty.

HOOKS

Hook (STD)

0.25 to 1T | 1.5T | 2T to 3T | 5T | 10T

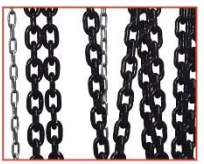
Self-locking hook (SLH)

0.25 to 1,5T | 2T to 3T | 5T

Eye hook (WIU)

0.25T to 5T

CHAIN IN BULK



Many options available at vulcanhoist.com