



GLE TROLLEY USER MANUAL

Basic, 3-way valve and iPD versions.

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1. Overview

The GLFTrolley is designed for fluid transfer and filtration.

The portfolio of products offers various models to meet specific customer needs, handling different system flow rates, viscosities, and condition monitoring options.



2. Safety

2.1 General Safety

This equipment is only to be operated by persons trained in the use and handling of pressurised hydraulic systems. Local laws and regulations for installation, operation and servicing of pressurised hydraulic systems must be adhered to. The warranty will be invalidated if any hydraulic or electric component is opened that is not advised in this manual. Prior to operating the unit, hoses should be inspected for damage. If any damage is found, consult with Parker accordingly. Recycling needs to be done for disassembled parts according to local regulations. Please note that wetted path components should be recycled as solid hazardous waste containing oils (EWC 160708).



This operational manual should be read in full before operating the GLFTrolley. It is advised that an equipment operational risk assessment is preformed prior to operation.



Trolley is fitted with an emergency stop button that stops the GLFTrolley. The button conforms to IEC 60204-1 and EN 13850.



Ensure Personal Protective Equipment (PPE) is always used when operating the GLFTrolley.



The GLFTrolley weighs between 62 to 73 kg depending on the variant. Care must be always taken when moving in an upright position. One person is not recommended to lift more than 23kg.

Before operating the GLFTrolley ensure all electrical connections, hoses and fittings are secured. Check all hoses and fittings for wear and or damage. If replacements are required, please contact your local Parker Hannifin representative.

It is recommended that the GLFTrolley operates in an appropriately bunded area to contain any spillage.

Prior to operation ensure that both the inlet and outlet wands are contained within an appropriate container. Pay particular attention to ensure that the inlet wand is below the fluid surface and that the outlet does not pump oil onto the floor surrounding area.



When operating for continuous periods of time take care as some surfaces may become hot to touch i.e. motor and pump.

The warranty will be invalidated if the GLFTrolley is disassembled.



The maximum operating pressure of the GLFTrolley is limited to 10 bar to maintain product safety.

The system must be depressurised prior to servicing or moving.



Do not block suction or pressured lines.

If using the GLFTrolley with a 3-way valve, ensure that the system is depressurised after use and before storing the trolley. (see Section 8.3.).

Always shut down trolley before using the 3-way valve.

Do not leave valve handle in middle positions, always turn full 90 degrees.



Any servicing or repair work must be carried out by a Parker-approved Service Centre. Please contact your local Parker representative (see www.parker.com).

2.2 Laser Information

One of the GLFTrolley variants is fitted with an online particle detector (iPD), which reports cleanliness codes. This device contains an invisible infrared 5mw laser light source and must not be dismantled. This may result in dangerous exposure to laser radiation.



DANGER

INVISIBLE LASER RADIATION WHEN OPEN.

AVOID DIRECT EXPOSURE TO BEAM.

The internal protective housing label which is mounted on the laser module contains the following information:

'This product is a Class 1 laser product which complies with both USA21 CFR 1040.10 & 1040.11 and (BS) EN 608285-1'

2.3 Conformity

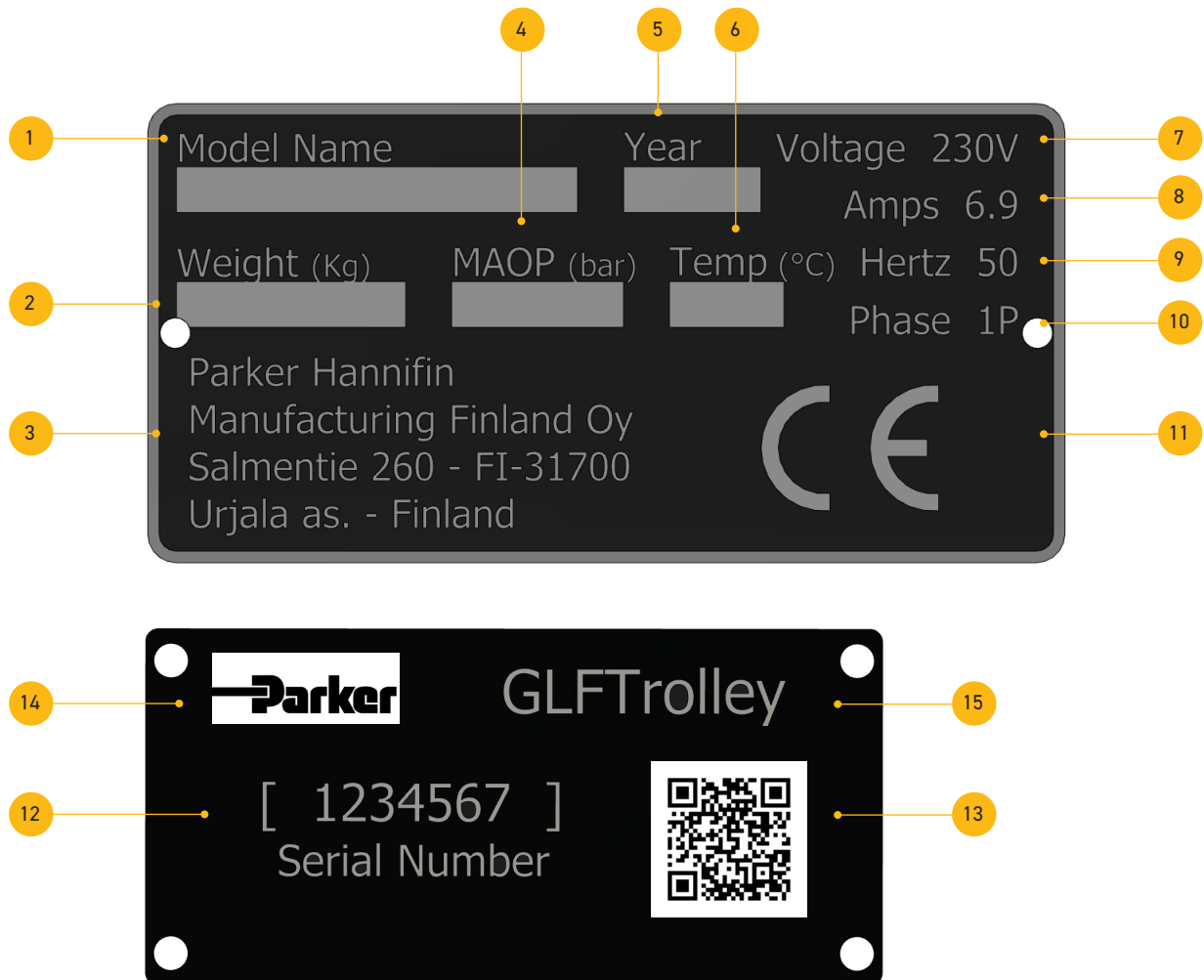
This device complies with the following CE Directives, refer to Annex B for Declaration of Conformity:

- Machinery Directive (MD) (2006/42/EC)
- Electromagnetic Compatibility Directive (EMC) (2014/30/EU)
- The Restriction of Hazardous Substances Directive (RoHS) 2002/95/EC

2.4 Exclusion of Liability

Parker has worked hard to ensure the accuracy of the information contained in this document. Despite these efforts, the possibility of errors cannot be eliminated. Therefore, we cannot accept liability for any errors that may exist, nor for any damage or loss that may result from these errors. Please note that technical specifications may be updated or changed without prior notice.

3. Labelling



KEY

- | | |
|-------------------------------------|---------------------------------|
| 1. Model name/code | 9. Motor frequency |
| 2. Product weight | 10. Motor phase configuration |
| 3. Name and address of manufacturer | 11. CE marking |
| 4. Max operational pressure | 12. Serial number |
| 5. Made in year | 13. QR-code to product web page |
| 6. Max fluid temperature | 14. Parker logo |
| 7. Motor voltage | 15. Product name |
| 8. Motor ampere | |

4. Principles of operation and hydraulic schematics

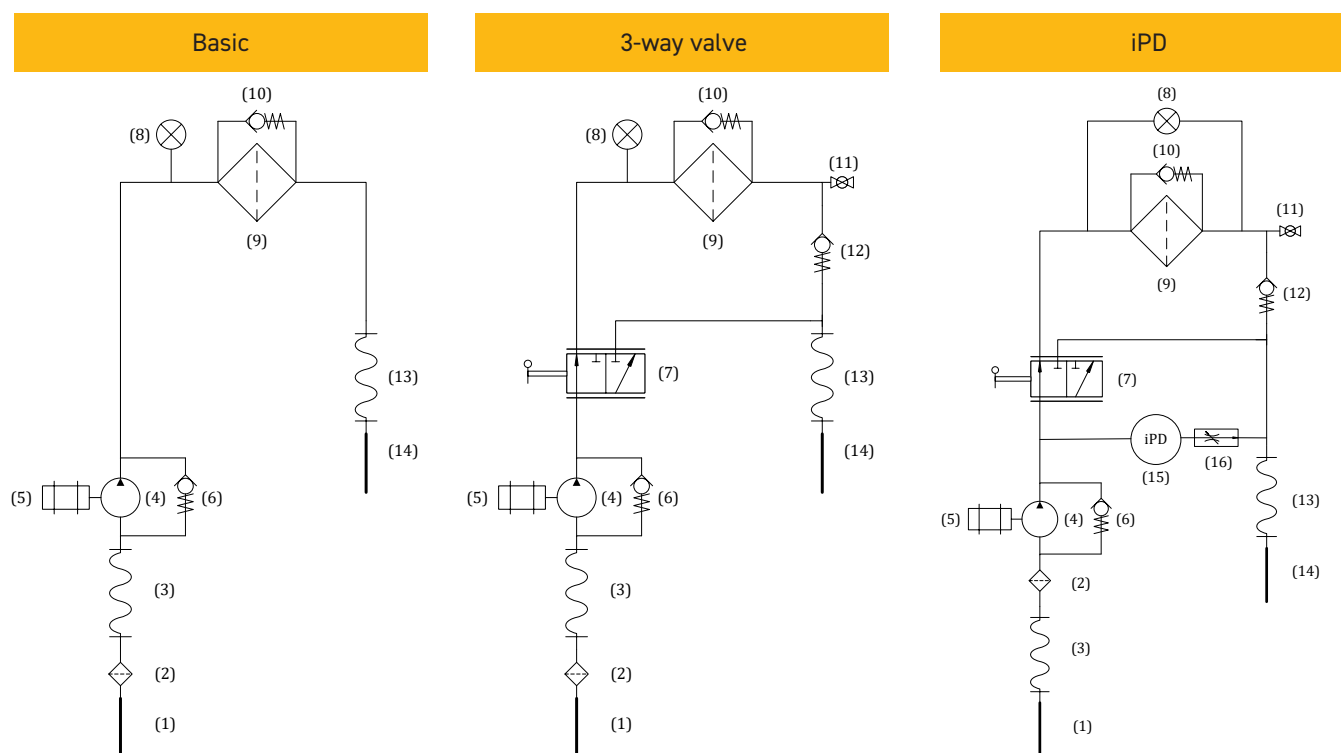
The electric motor (5) on the GLFTrolley powers the gear pump (4), which draws fluid through a flexible intake hose (3) and a prefilter (2) that protects the gear pump. There are two variants of gear pumps available to accommodate different customer flow rate and viscosity requirements.

Depending on product variant, the fluid is either transferred through the main filter (9) or bypassed. Main filter bypass is only available on variants fitted with a 3-way valve (7).

The condition monitored GLFTrolley variant is equipped with an online particle counter, the icountPD (15). This device operates using a laser light source to detect particle size and quantity and reports in ISO cleanliness codes. For more detailed information, please refer to the icountPD manual:

[icountPD User Manual](#) (parker.com).

The hydraulic system is safeguarded against over-pressurisation by pressure relief valves (6), while the electrical circuit is protected from excessive current draw by a motor protection circuit breaker (MCPB). The main filter is equipped with a service indicator (8) that alerts the user when the main filter needs replacement.



KEY

- | | | |
|--------------------------|----------------------|------------------------|
| 1. Intake wand | 7. 3-way valve | 13. Outlet hose |
| 2. Prefilter | 8. Service indicator | 14. Outlet wand |
| 3. Intake hose | 9. Main filter | 15. Particle counter |
| 4. Gear pump | 10. Element by-pass | 16. Flow control valve |
| 5. Electric motor | 11. Drain valve | |
| 6. Pressure relief valve | 12. Check valve | |

5. Product Variants

Variant	Part #	Nominal Flow Rate	Max. Fluid Viscosity	Prefilter	Main Filter	Main Filter By-Pass Valve	Particle Detection
Basic	GLFT2010QIBNN	20 L/min	400 cSt	850 µm	10 µm	No	No
	GLFT4010QIBNN	40 L/min	250 cSt	850 µm		No	No
3-Way valve	GLFT2010QIB3WN	20 L/min	400 cSt	850 µm		Yes	No
	GLFT4010QIB3WN	40 L/min	250 cSt	850 µm		Yes	No
iPD	GLFT4010QIB3WIPD	40 L/min	108 cSt	125 µm		Yes	Yes

Basic Variants



20 lpm

3-Way Valve Variants



20 lpm

iPD variant



40 lpm



40 lpm



40 lpm

6. Technical Specification

General	Max. Working Viscosity / Nominal Flow Rates ¹ / Max. pressure	400 cSt / 20 lpm / 10 bar	GLFT2010QIBNN GLFT2010QIB3WN
		250 cSt / 40 lpm / 10 bar	GLFT4010QIBNN GLFT4010QIB3WN
		108 cSt / 40 lpm / 10 bar	GLFT4010QIB3WIPD
	Particle Detection (GLFT4010QIB3WIPD only)	ISO 4406 Code 7 to 22 Parker iPD used for particle detection ²	
	Fluid Compatibility	Mineral and synthetic oils.	
Environment	Environmental Temperature	0 °C to 45°C	
	Fluid Temperature	Max 70°C (Minimum temperature acc. to maximum working viscosity) ³	
	Ingress Protection	IP55	
	Altitude ¹	0 to 500 m	
Filtration	1 Stage Filtration (Inlet)	850 µm	GLFT2010QIBNN GLFT4010QIBNN GLFT2010QIB3WN GLFT4010QIB3WN
		125 µm	GLFT4010QIB3WIPD
	2 Stage Filtration (Outlet)	10 µm standard	
	Element Bypass Valve	Opens at 3.5 bar	
	Clogging Indicator	Visual indicator 2.5 bar	
	Magnetic Column	Standard	
Electrical	Input Voltage	~ 230 V	
	MPCB set value	~ 5 A	
	Plug	EU (Type F) and UK (Type G)	
Materials	Wetted Flow Path	FKM, NBR, CPE Rubber, Brass, Stainless steel (iPD) Aluminium and Structural steel	
CE Certification	Directives	Machinery Directive (MD) (2006/42/EC) Electromagnetic Compatibility Directive (EMC) (2014/30/EU) The Restriction of Hazardous Substances Directive (RoHS) 2002/95/EC	

¹ Product flow rate will be affected by both altitude and temperature.

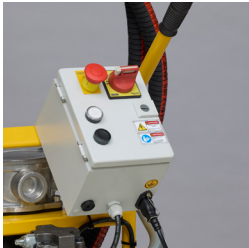
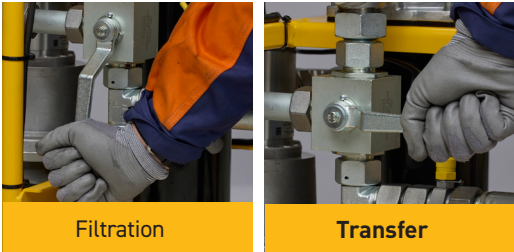
² Refer to iPD manual for product specifics.

³ The product is not recommended to operate outside of this range.

7. Before Starting – Material/Components/Safety

This product is shipped as a complete unit. This consists of the actual GLFTrolley frame, electric motor, pump, piping with valves, flexible hoses and the suction and pressure wands. Those GLFTrolley variants with condition monitoring capability also ship with the icount Particle Detector. All GLFTrolleys are supplied with the appropriate electronics, which includes the electrical control box and power cable. Power cable is equipped with EU and UK plug.

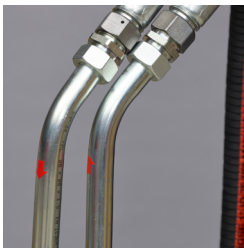
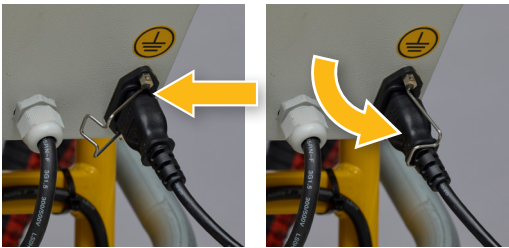
Before powering the GLFTrolley make sure the following things:

Steps	Description	Visual
Step 1	GLFTrolley is standing on a flat surface (stable).	
Step 2	Check hoses and wand in case of damage or block.	
Step 3	No visible leakages in hydraulic line or open connections.	
Step 4	Emergency button is not activated. Turn counterclockwise to release button.	
Next steps for 3-way valve and iPD variants only		
Step 5	Check that system has been depressurized (3-way valve in horizontal position and drain valve open).	
Step 6	Close drain valve if open.	
Step 7	Now you can choose the right valve position for operational mode.	
NOTE! Do not use valve during operation!		

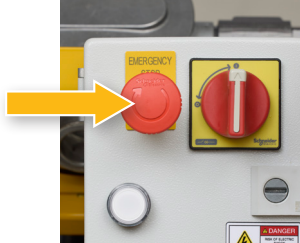
8. Operation

Ensure the power cable is not connected to mains/socket. Connect the Parker-supplied power cable into the indicated socket on the GLFTrolley. Ensure that the cable is securely attached. Use the retaining clip to reduce the chance of the power cable getting unintentionally disconnected from the indicated socket.

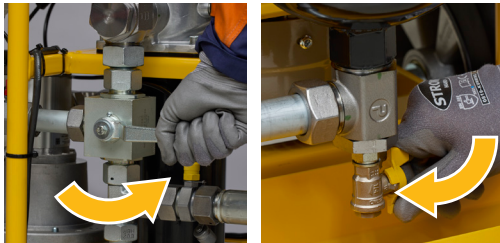
8.1 Powering the GLFTrolley

Steps	Description	Visual
Step 1	Prepare wands for right operational positions - Note intake and outlet line flow arrows (red) - Make sure wands are securely in place.	
NOTE! Pressure will cause movement in wands!		
Step 2	Plug power cable to control box and lock cable plug with retainer.	
Step 3	Plug other end of the cable to main power point and turn on power point. - Make sure main power point is in good condition and produces voltage between 220-240V.	
Step 4	Main switch to ON position.	
Step 5	Push ON button to start operation. Light comes on to white button.	
Step 6	Check that service indicator is at green when using filtration mode.	

8.2 During operation

Steps	Description	Visual
Step 1	Do not leave GLFTrolley operating alone.	
Step 2	During filtration check service indicator is not turned red - If indicator is showing red change new element (see Section 9. Maintenance).	
Step 3	Any critical situation use emergency button to stop trolley.	

8.3 After operation

Steps	Description	Visual
Step 1	Let suction wand suck air few seconds in order to get most of the oil out of the system.	
Step 2	Push black OFF button to stop trolley.	
Step 3	Main switch to OFF (0) position.	
Step 4	Release system pressure (3-way valve and iPD variants) by turning handle horizontal position if not already and by opening drain valve on bottom of the filter.	
Step 5	Drain oil out if necessary, otherwise close drain valve after pressure release.	
Step 6	Remove and clean drip tray of oil (see Section 9.4. Drip tray removal).	
Step 7	Set wands into their support bracket.	
Step 8	Unplug power cable from the main power point.	

9. Maintenance

GLFtrolley operates well when it is maintained properly. GLFtrolley has two filter places, main filter after pump and prefilter before pump. Main filter is same in all variants but there are two different types prefilter, Y-strainer and Inline filter. Following chapters show maintenance for filters.

Main filter has service indicator but pre filters need check regularly as they don't have indicator. Check prefilter element once a year. If pump makes louder noise or flow is reduced check prefilter element and follow maintenance procedure.

GLFtrolley drip tray is made removable to make cleaning easier. During element change it can be taken on the side to hold dirty element or it can be used to drain remaining oil of the filter.

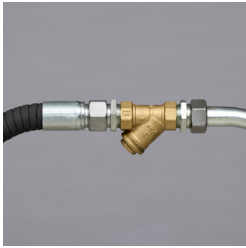
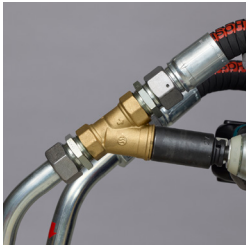
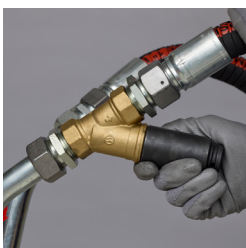


The product must be fully switched off and disconnected from the mains before any maintenance on the main filter is started.

9.1 Main filter service

Steps	Description	Visual
Step 1	Before opening any bolts of the filter make sure the system is depressurized. Drain most of the oil out before starting service if it is not pumped out end of operation.	
Step 2	Use 13 mm wrench to open and remove 4 filter cover bolts.	
Step 3	Remove cover. Note that cover includes magnet bar.	
Step 4	Check magnet bar for metallic particles. Take notes of particles. Clean magnet with rag.	
Step 5	Lift used element out of the bowl. You can use drip tray for the dirty element as oil pan. See section 9.4. Drip tray removal. Note that element might have lot of oil! Change new element (see Section 11. GLFtrolley Spare Parts List).	
Step 6	Install cover back, ensure o-ring is properly in place and tighten 4 bolts with torque wrench (10 Nm±1).	

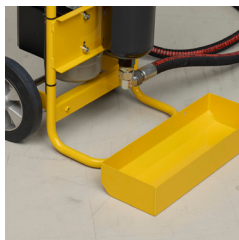
9.2. Y-Strainer (prefilter) Basic & 3-Way Valve Variants Only

Steps	Description	Visual
Step 1	Y-strainer is located right after suction wand.	
Step 2	Use 25 mm socket or wrench to open Y-strainer element.	
Step 3	Carefully take the metal mesh element out. Check the element and clean it.	
Step 4	Screw element back in place by hand and final tightening with wrench. Be careful not to damage o-ring. Do not use excessive force.	

9.3. Inline prefilter (iPD version)

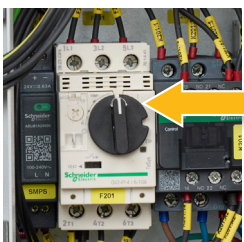
Steps	Description	Visual
Step 1	Inline filter is opened from bottom. Use 22 mm wrench to open filter bowl by turning counterclockwise.	
Step 2	Slowly open the filter by hand and remove the bowl.	
Note that filter has oil inside!		
Step 3	Lift used element out of the bowl and change new one.	
Step 3	Install bowl back to filter head. Use torque wrench to tighten the bowl 12 Nm.	

9.4. Drip tray removal

Steps	Description	Visual
Step 1	Open and remove hand knobs by turning counter clockwise.	
Step 2	Slide drip tray off the trolley.	

10. Troubleshooting

Problem	Possible cause	Suggested solution
Unit not turning on	Power cable not plugged into product or mains socket	Check connection between power cord and mains and power cord and GLFTrolley.
	Emergency button active	Reset emergency stop button.
	Motor protection circuit breaker (MPCB) active	Reset motor protection circuit breaker, see picture below. If MPCB goes off many times and no cause can be detected contact Parker.
	Main switch in 0-position	Turn Main switch on to 1-position.
Poor or no oil flow from outlet wand	Suction wand is not immersed in fluid	Ensure suction wand is submerged in fluid.
	3-way valve not in either "Transfer" or "Filter" mode	Set 3-way valve into either position as per section 7.
	Suction wand blocked	Turn off unit, visually inspect the opening of the suction wand and remove any potential blockage.
	Suction filter is clogging	Clean or replace filter element. See sections 9.2 and 9.3.
	Suction wand open end is too close or in contact to reservoir wall causing blockage	Adjust suction wand orientation in reservoir.
	Pressure relief valve is activated	Fluid viscosity is too high.
icountPD not working	icountPD not powered	Ensure that GLFTrolley is properly powered on. Ensure that electricity wires to icountPD are connected properly and undamaged.
	Fluid outflow is not constant	Check that fluid outflow is constant. Restart GLFTrolley.
		Check suction wand position in reservoir that open end is free of wall contact.
	icountPD not receiving fluid samples	Check that fluid lines to icountPD are connected, not damaged, leaking, or kinked.
Oil is not getting clean	Main filter is clogged	Replace main filter (see Section 9.1.).
	3-way valve is in transfer position	Turn 3-way valve to filter position.
Motor is not staying on	Voltage from mains is not good quality and activates MPCB	Check mains voltage and reset MPCB, see picture below.
Pump is making noise	Air in pump	Check suction wand position that open end is immersed in fluid.



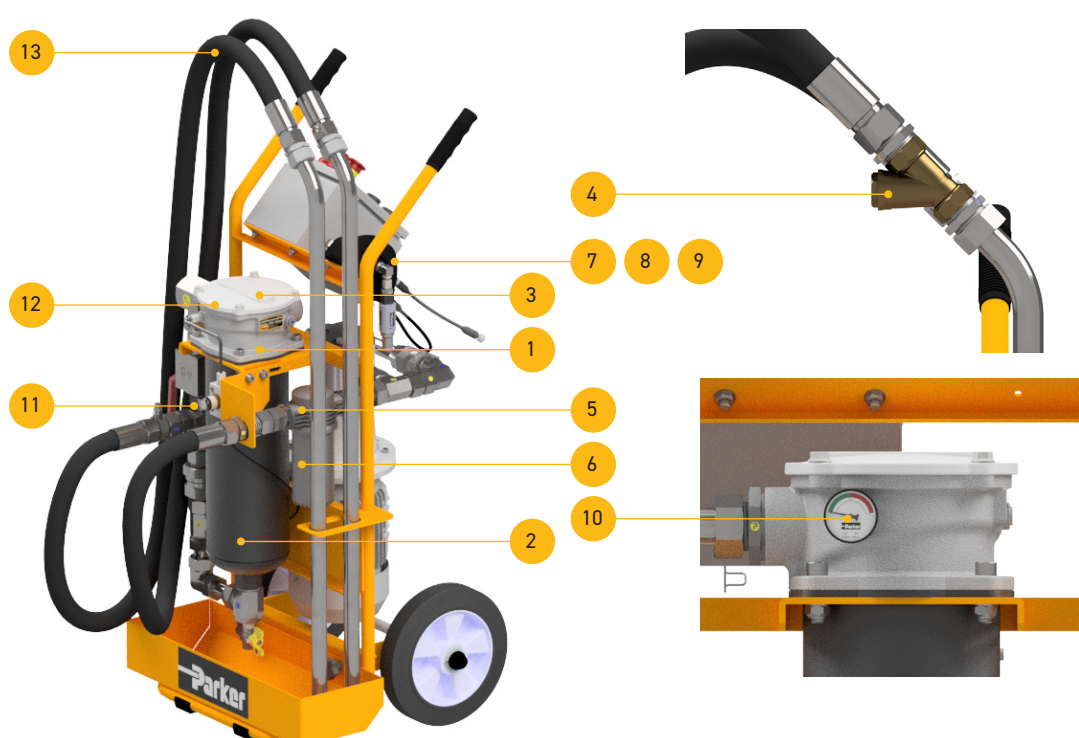
If MPCB has been gone off (0) reset MPCB by turning the switch clockwise to 1.



Before opening control box, ensure main switch is off (0). Changes to components inside control box that are not specified in this manual are prohibited and will void the warranty.

11. GLFTrolley Spare Parts List

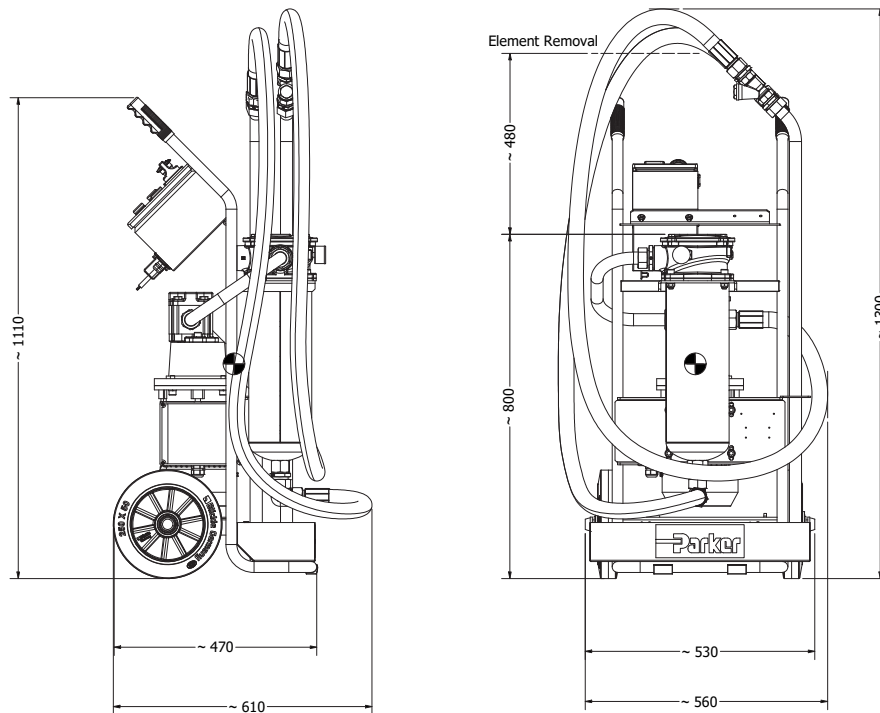
Key	Part No.	Description	Qty
1	GLF3310QIBP2KG20M	Main Filter	1
2	930000372	Main Filter Bowl	1
3	944882Q	Replacement Element Main Filter	1
4	930000373	Y-Strainer (non-IPD Variant)	1
5	IL761151	Prefilter (IPD Variant)	1
6	R.76115	Element for Prefilter IL761151	1
7	IPD12322230	Icount PD	1
8	930000375	Icount Power Cable	1
9	ACC6NH001	Icount Hoses	2
10	FMUG2JBPG02L	Pressure Gauge	1
11	FMUM3KVMU12H	Visual Indicator	1
12	GLFSK300	SEAL KIT GLF3 NBR	1
13	930000374	Hose	2



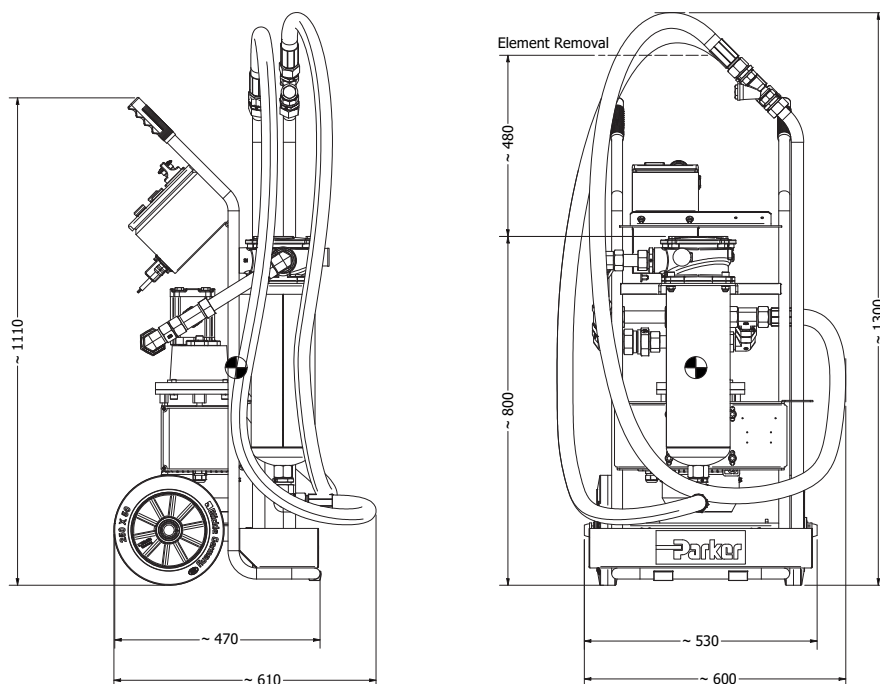
12. Appendices

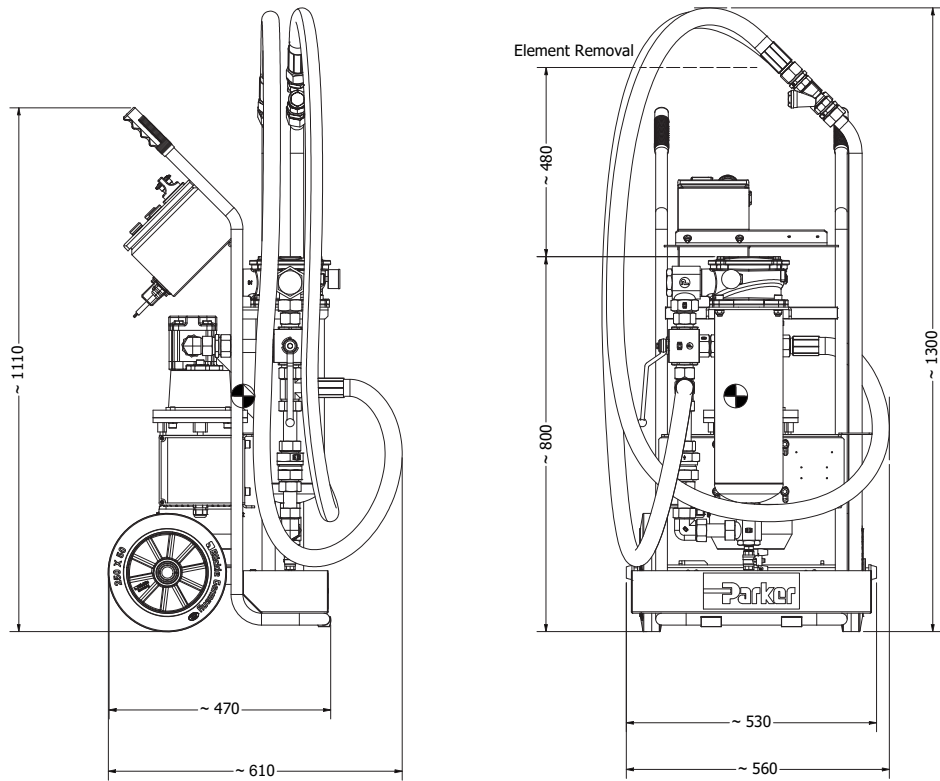
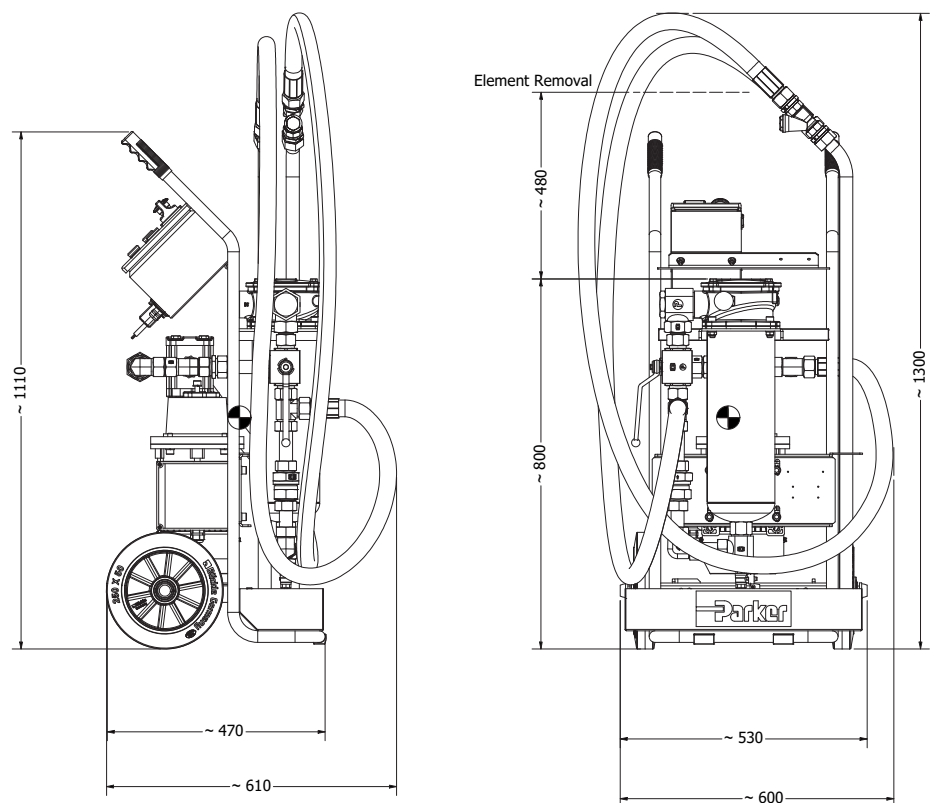
12.1. Appendix A – Eng. Drawing/s (overall dimensions and weight)

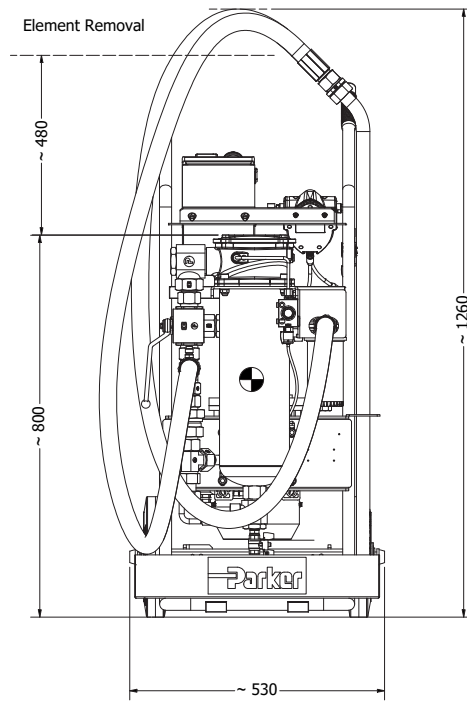
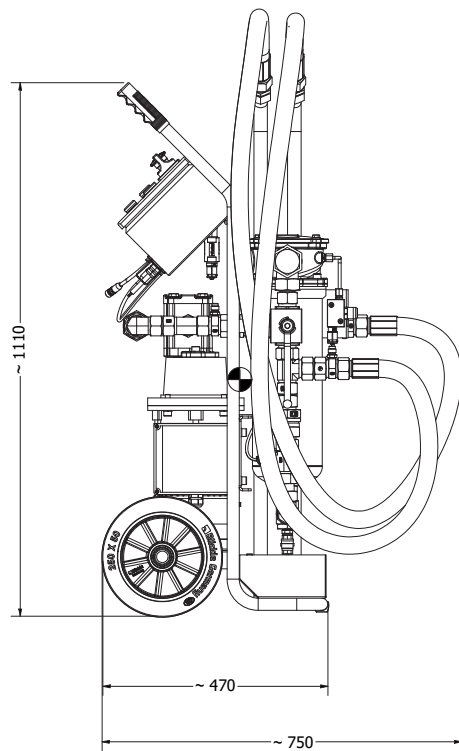
GLFT2010QIBNN 62 KG



GLFT4010QIBNN 64 KG



GLFT2010QIB3WN 68 KG**GLFT4010QIB3WN 70 KG**

GLFT4010QIB3WIPD 73KG

12.2. Appendix B – CE Certificate



EU Declaration of Conformity

Issuer:	Parker Hannifin Manufacturing Finland Oy Hydraulic and Industrial Process Filtration Division EMEA
Address:	Salmentie 260, 31700 Urjala As., Finland
Document No:	U-DOC-9

Product name	GLFTrolley
Models	GLFT4010QIB3WIPD, GLFT4010QIB3WN, GLFT4010QIBNN, GLFT2010QIB3WN, GLFT2010QIBNN

The quality and performance of the product are in accordance with specifications, references, associated drawings, and documents and manufactured according to controls established by a management system that conforms with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.

THIS UNIT IS IN CONFORMITY WITH:

Machinery Directive (2006/42/EC).
Electromagnetic Compatibility Directive (2014/30/EU) (EMC)
The Restriction of Hazardous Substances Directive (RoHS) 2002/95/EC

Applied harmonized standards:

EN 60204-1:2018	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN IEC 61000-6-2:2019	Electromagnetic Compatibility Generic Standard Immunity Industrial Environment
EN IEC 61000-6-4:2019	Electromagnetic Compatibility Generic Standard Emission Industrial Environment
EN IEC 63000:2018	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Technical Construction File: HIFE-URJ-E-2

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Petteri Ruotsalainen, Quality manager

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www.parker.com/hife

omGLFTrolley Date of Issue: 03/25

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