

# INSTRUCTIONS AND PARTS MANUAL

**KOOI**<sup>®</sup>

ReachControl

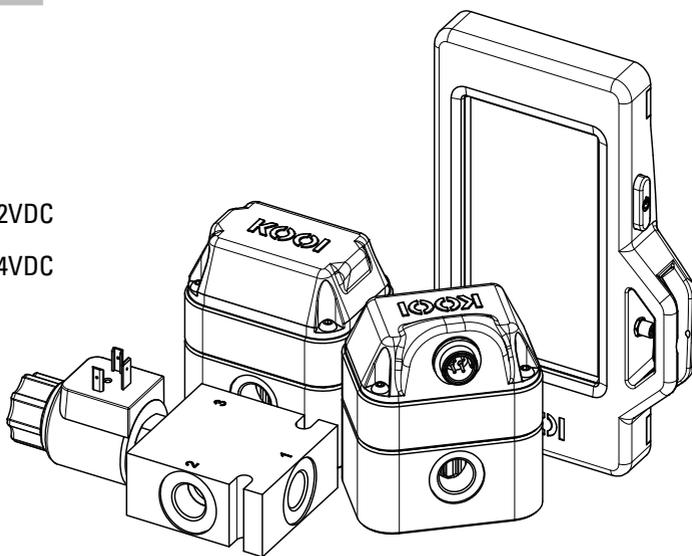
Flow meter BA

Flow meter CA

Autostop valve 12VDC

Autostop valve 24VDC

Controller



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## Note

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## Declaration of Conformity

**Product** : KOOI® ReachControl system  
**Date** : 03/18/2019

**Manufacturer** : Meijer Handling Solutions B.V.      **Address** : Oudebildtdijk 894  
**ZIP code** : 9079 NG      **City** : Sint Jacobiparochie  
**Country** : The Netherlands

Herewith declares that the above named machinery conforms to the provisions as stipulated by the following directives and national statutory legislation implemented in line with these directives:

- Low Voltage Directive 2006/95/EC
- Electromagnetic compatibility Directive 2004/108/EC

The following (parts of) harmonized norms are applied:

- NEN-EN-ISO 12100:2010 Safety of machinery - General principles for design - Risk assessment and risk reduction

**Done at** : Sint Jacobiparochie  
**By** : H. Meijer      **Function** : CEO

**Signature** :



## Icons



Warning. Failure to comply with safety warnings can result in serious injury or death



Caution: Failure to comply with safety cautions can cause injury or property damage.



Note: note, tips or additional information



Tools: required tools for described procedure.

## Safety information

Please read the following safety information before using the KOOI® ReachControl system.



The term 'Controller' refers to the touchscreen unit which can optionally be supplied with your KOOI® ReachControl system.



The term 'device' refers to either the Controller or an Android / iOS device obtained from a party other than the manufacturer of the KOOI® ReachControl system.



The term 'module' refers to all separately sold articles in the KOOI® ReachControl product family, including the Controller and the available app for Android and iOS devices.

## Warning



Do not use damaged power cords and plugs, or loose electrical sockets. Unsecured connection can cause electrical shock or fire.



Do not touch electrical devices, power cords, plugs or electrical sockets with wet hands or other wet body parts. Doing so may cause electric shock.



Do not pull the power cord excessively when disconnecting it. Doing so may cause electric shock or fire.



Do not bend or damage the power cord. Doing so may cause electric shock or fire.



Do not drop or cause excessive impact to the Controller.

- This may damage your Controller or battery, cause the Controller to malfunction, or shorten its lifespan.
- This may also cause overheating, combustion, fire, or other hazards.



Handle and dispose of the Controller with care.

- Never dispose of the battery or Controller in a fire. Never place the battery or Controller on or in heating devices. The Controller may explode when overheated. Follow all local regulations when disposing of used battery or device.
- Never crush or puncture the Controller.
- Avoid exposing the Controller to high external pressure, which can lead to an internal short circuit and overheating.



Protect the Controller, battery and charger from damage

- Avoid exposing your Controller and battery to very cold or very hot temperatures.
- Extreme temperatures can damage the Controller.
- Do not directly connect together the battery's positive and negative terminals and prevent them from coming into contact with metal objects. Doing so may cause the battery to malfunction.
- Never use a damaged battery.



Do not store the Controller in areas with high concentrations of dust or airborne materials.

- The battery may leak.
- Your device may overheat and cause a fire.



Do not handle a damaged or leaking battery.

For safe disposal of your batteries, please follow local law and regulations.



Do not operate a device while driving. Not being focused on driving might lead to collisions and injuries. Always make sure the lift truck is stationary when using the Controller.



Do not operate a device while operating other controls in the lift truck. Not being focused on lift truck controls while using them might lead to collisions and injuries.



When using your own device (e.g. smartphone, tablet) to control the KOOI® ReachControl system, always follow the safety instructions available for you device.



When installing the Controller make sure the operators sight to his/her surroundings is not reduced to the extent that it may result in dangerous situations.



Be aware of a reduced field of vision when using equipment with a Controller installed.

## Caution



Avoid using the Controller within a 15 cm range of a pacemaker, if possible, as the Controller can interfere with the pacemaker.



Electronic devices in your lift truck may malfunction, due to radio interference from your Controller. Contact your supplier for more information.



Do not expose the Controller to heavy smoke or fumes. Doing so may damage the outside of the Controller or cause it to malfunction.



Do not use the Controller near devices or apparatuses that emit radio frequencies, such as sound systems or radio towers. Radio frequencies may cause the Controller to malfunction.



Turn off the Controller in potentially explosive environments

- Always comply with regulations, instructions and signs in potentially explosive environments.
- Do not use your device at refueling points (petrol stations), near fuels or chemicals, or in blasting areas.
- Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the device, its parts, or accessories.



If any part of the Controller is broken, smokes, or emits a burning odor, stop using the device immediately. Use the device again only after it has been repaired at a certified dealer.

- Broken glass or acrylic could cause injury to your hands and face.
- When the device smokes or emits a burning odor, it may result in battery explosion or fire.



Do not remove any parts from the Controller, including the back cover. Removing parts will lead to parts getting damaged.



Do not paint or put stickers on the Controller. It may result in damage to the Controller.



Install mobile devices and equipment with caution.

- Ensure that any mobile devices or related equipment installed in your vehicle are securely mounted.



Do not disassemble, modify, or repair KOOI® ReachControl modules.

- Any changes or modifications made without prior written consent from the manufacturer will void warranty. If any KOOI® ReachControl devices or sensors need servicing, contact your local dealer.
- Exception to the above are part replacement as mentioned in this manual. Follow the instructions in this manual to avoid voiding warranty.



When cleaning the Controller, mind the following:

- Wipe the Controller using a clean towel or microfiber cloth.
- Do not use chemicals or detergents. Doing so may result in discolor or corrosion to the outside of the Controller, or may result in electric shock or fire.



Do not use KOOI® ReachControl devices or sensors for anything other than its intended purpose.



Only qualified personnel, arranged through your local dealer or the manufacturer are allowed to service KOOI® ReachControl devices.



The Control devices contains Wi-Fi functionality. It is only to be used by installed software to connect to the internet or local Wi-Fi network for software updates, license/module activation, or sending log data. Do not use the Controller to access the internet in any other way to prevent malfunction of the KOOI® ReachControl software, malware or virus infections or data loss.



Do not install 3<sup>rd</sup> party software on the Controller. It may lead to malfunction of the KOOI® ReachControl software, malware or virus infections or data loss. It may void warranty.



Do not change settings on the Android OS running on the Controller. It may lead to malfunction of the KOOI® ReachControl software and may void warranty.

## General

The KOOI® ReachControl product family contains modules which can consist of sensors, display and control units used to measure and display various types of information from (forklift) attachments of hydraulic cylinders. The modules are primarily used on lift trucks.

## Training

When using the KOOI® ReachControl system on a forklift truck or other heavy equipment, the operator should have sufficient training in accordance with local laws and regulations. No further specific training is required.

## Modules

Below is a list with the possible modules which are available in the KOOI® ReachControl product family. You may have purchased one or more of them. Please follow the cross references to the page containing the specific information and instructions for your module(s):

If your system contains a *Flow meter with integrated angle sensor* (optional), please continue at page 12.

If your system contains a *Controller* (optional), please continue at page 22.

For information on the *ReachControl app* (required), please continue at page 26.

## Flow meter with integrated angle sensor



The term 'forklift' will be used for any forklift truck, lifter or similar vehicle used for lifting and transporting loads.



The term 'left' and 'right' when used in combination with 'forklift' refer to the left or right as seen from the driver's seat.



The 'KOOI-REACHFORKS®' are hydraulically extendable forklift forks that are sold under this trademark. From here on they are referred to as 'forks'.



The flow meter can be used with virtual any set of hydraulically extendable forks regardless of the manufacturer / brand.



Keep the hose length between flow meter and KOOI-REACHFORKS® / hydraulic cylinder as short as possible to reduce deviation in the measurement system due to expansion of the hoses.

## Application

The flow meter with integrated angle sensor (from hereon the 'flow meter') can be used to measure the length of a cylinder or cylinder controlled system like the KOOI-REACHFORKS®. Furthermore, the angle at which the flow meter is located can also be measured with respect to the ground. A possible application for the angle measurement is as a 'tilt indicator' for a forklift mast.

## Identification

See serial number on flow meter body.

## Specifications

### Hydraulic data

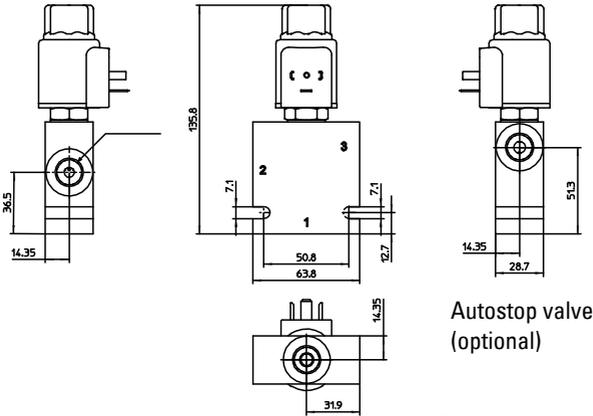
Operating pressure:	max. 250 bar	/	max. 3626 psi
Nominal flow:	max. 25 L/min	/	max. 6.6 gal/min
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner		
Weight:	0.98 kg	/	2.2 lb
Media operating temperature range:	min. 0 °C to max. +100 °C		
Ambient operating temperature range:	min. 0 °C to max. + 60 °C		
Medium	Hydraulic oil (ISO HH, ISO HL, ISO HM or ISO HV)		

### Electrical data

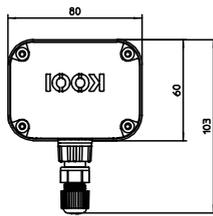
Power supply:	without Autostop	Battery, size A, 3.6V (3.60 Ah)
	with Autostop	Wired 12 or 24 VDC
Current drawn at 20° C (Autostop):	2 A at 12 VDC	
	1.3 A at 24 VDC	
Data connection	Low power Bluetooth®	

Table 1: hydraulic and electrical specifications

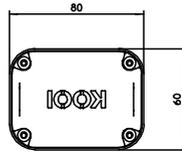
# Dimensions



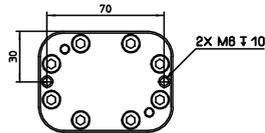
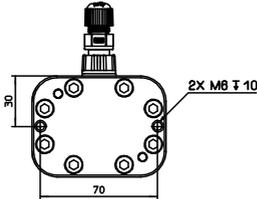
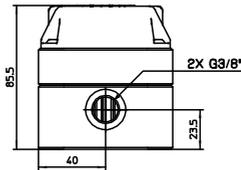
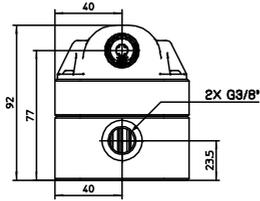
Autostop valve (optional)



Flow meter with Autostop



Wireless flow meter



## Hydraulic installation on KOOI-REACHFORKS®



The flow meter has no dedicated pressure or return ports.

All flow meters and valves are delivered with plugs in the hydraulic ports. Remove these before starting assembly.



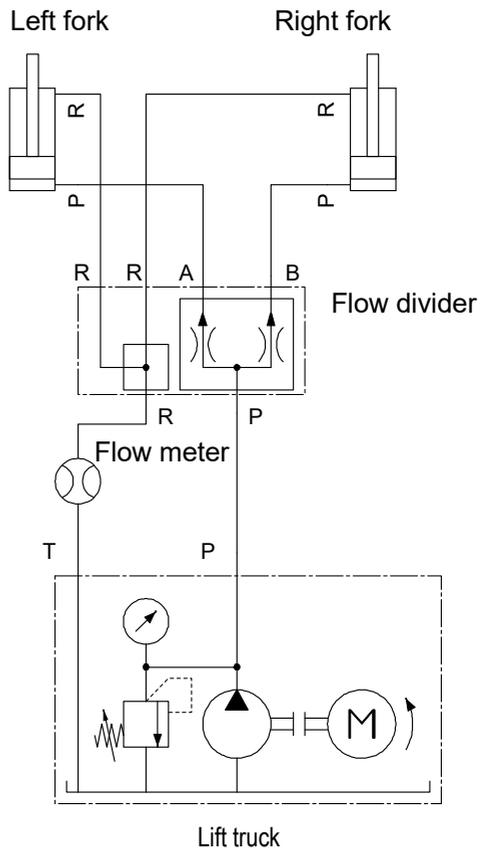
All hydraulic equipment need to be installed by an authorized technician.

### ***Forks with flow divider – flow meter without Autostop***

The flow meter needs to be connected to the return flow of the flow divider. Remove the plugs from the flow meter. Connect one port of the flow meter to the 'R' port on the flow divider.

Connect the other port of the flow meter to the return hose of the lift truck.

Check all connections for leakage before operation. Fully extend and retract the forks five times to remove any air from the hydraulic system.

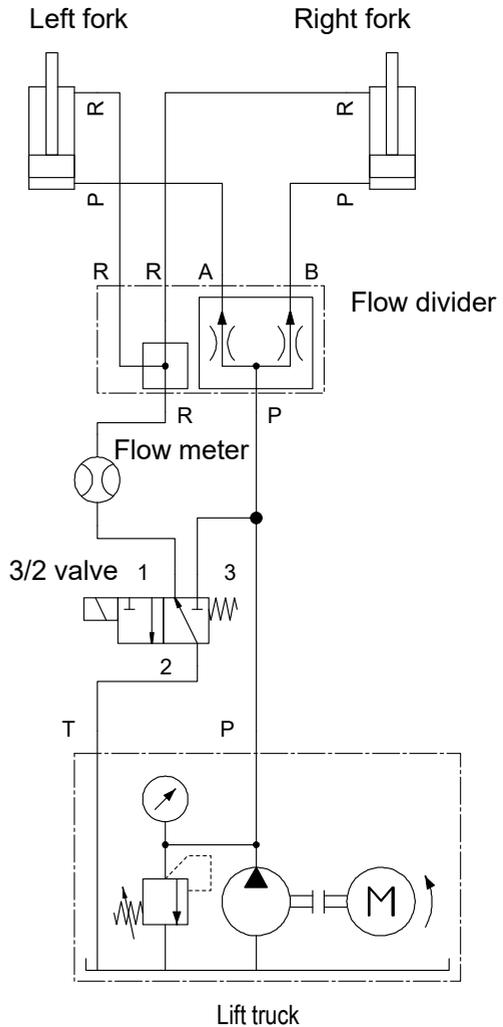


### **Forks with flow divider – flow meter with Autostop**

The flow meter needs to be connected to the return flow of the left fork. Remove the plugs from the flow meter. Connect one port of the flow meter to the 'R' port on the flow divider.

Connect the other port of the flow meter to port '1' of the 3/2 valve for the Autostop function. Connect port '3' of the 3/2 valve with a T-coupling to the 'P' port on the flow divider. Finally connect port '2' of the 3/2 valve to the return hose of the lift truck.

Check all connections for leakage before operation. Fully extend and retract the forks five times to remove any air from the hydraulic system.

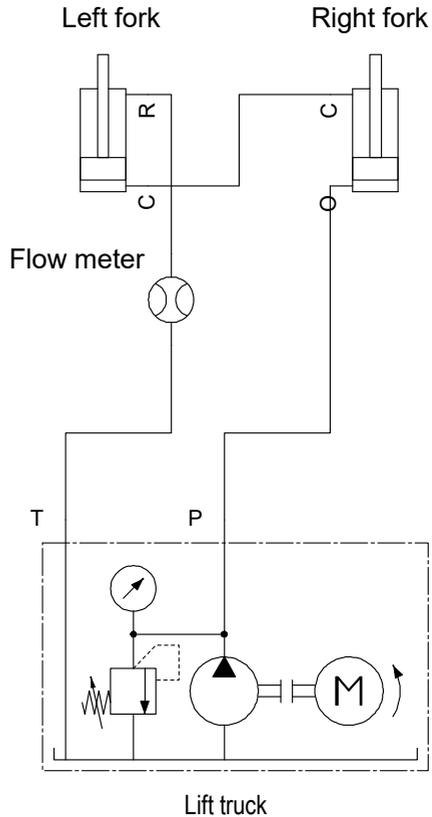


***Forks with master-slave function  
– flow meter without Autostop***

The flow meter needs to be connected to the return flow of the left fork. Remove the plugs from the flow meter. Connect one port of the flow meter to the 'R' port on the left fork.

Connect the other port of the flow meter to the return hose of the lift truck.

Check all connections for leakage before operation. Fully extend and retract the forks five times to remove any air from the hydraulic system.





## Electrical installation

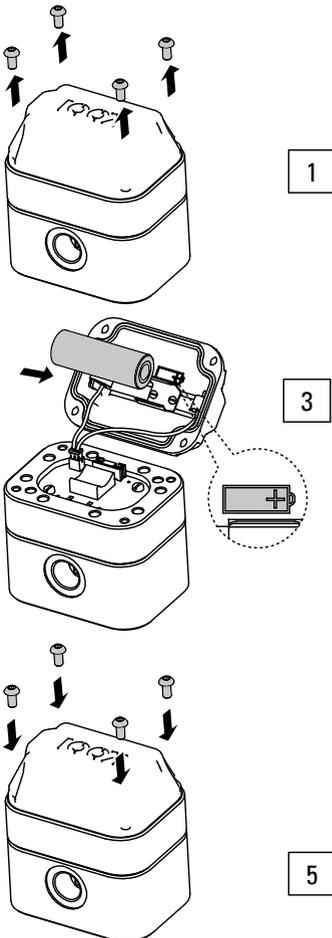
### *Without Autostop – battery (re)placement*



Remove battery insulator tab before first use, using instructions below.



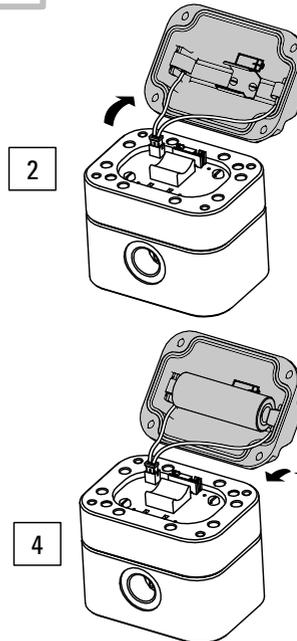
Be careful when removing the cap to prevent damage to wiring. The cap is connected to the flow meter by wiring.



See the replacements parts list at page for battery information.



Allen key 2.5 mm.



## With Autostop



The solenoid connector is not part of the K001® ReachControl package. Connector specs. DIN connector to EN 175301-803 (type 40-1836).

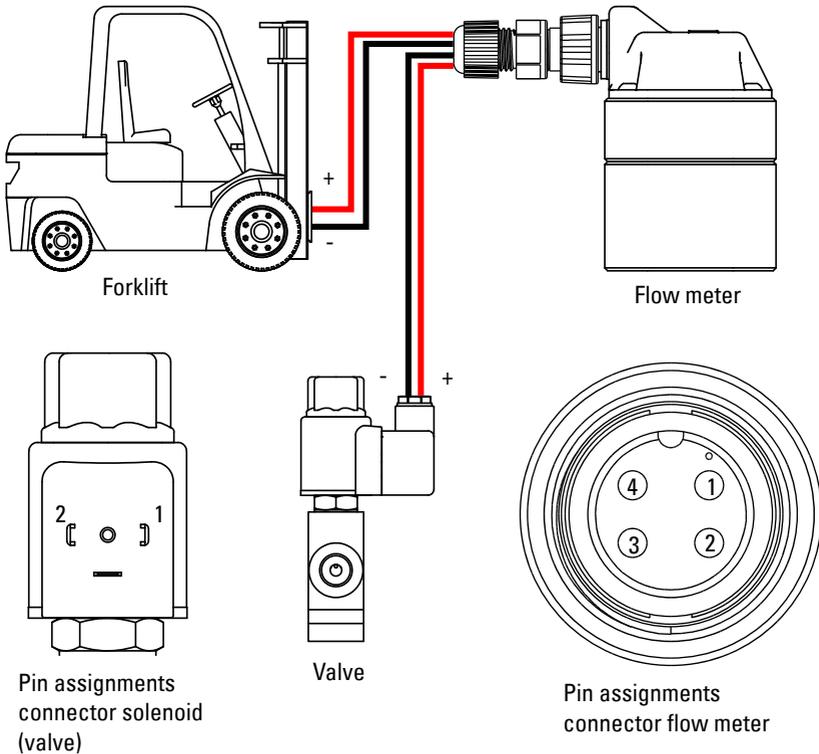


Cables are not part of the K001® ReachControl package. Cable should support the required power supply (see chapter Specifications at page 13).



All cables and connectors need to be assembled by a certified electrician.

Required power supply from the forklift (at 20° C): 2A at 12 VDC or 1.3 A at 24 VDC, depending on the supplied solenoid spool on the Autostop valve. Connect the power supply from the forklift to the flow meter and solenoid connector. See the next image and the pin assignments in Table 2.



### Connector solenoid (valve)

Pin no.	Assignment
1	- (flow meter)
2	+12/24VDC (flow meter)

### Connector flow meter

Pin no.	Assignment
1	- (solenoid)
2	+12/24VDC (solenoid)
3	- (forklift)
4	+12/24VDC (forklift)

*Table 2: Pin assignments*

## Working with the flow meter

When the flow meter and optionally the Autostop valve are installed they are ready for use with either the Controller (continue at chapter Controller, page 22) or the app (continue at chapter ReachControl app, page 26).

## Maintenance

The battery of the flow meter without Autostop requires periodic replacement. The Controller or app will give a 'low battery warning' when replacement is needed. Replace the battery as soon as the 'low battery warning' appears. See chapter Without Autostop – battery (re)placement at page 19 for instructions.

No further maintenance on the flow meter or Autostop valve are required. For attached hoses, cables and equipment please follow maintenance instructions as provided by their suppliers.

# Controller

## Identification

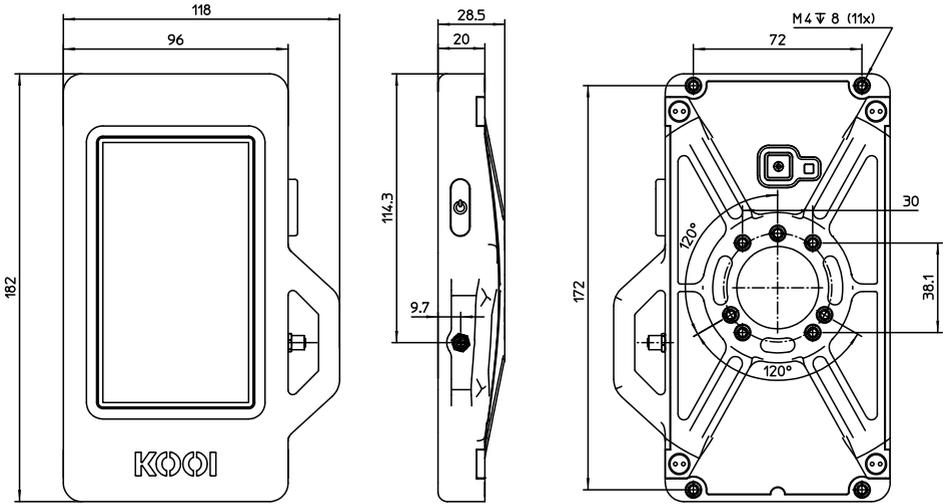
See serial number on outside of Controller housing.

## Specifications

### Electrical data

Power supply:	without Autostop	Wired 12 or 24 VDC
Current drawn at 20° C:		2A
Data connection		Bluetooth®
		Wi-Fi (disabled by default)

## Dimensions



Center hole pattern is compatible with AMPS 4 and RAM® Mounts 3-hole 120° (small) hole patterns.

## Installation

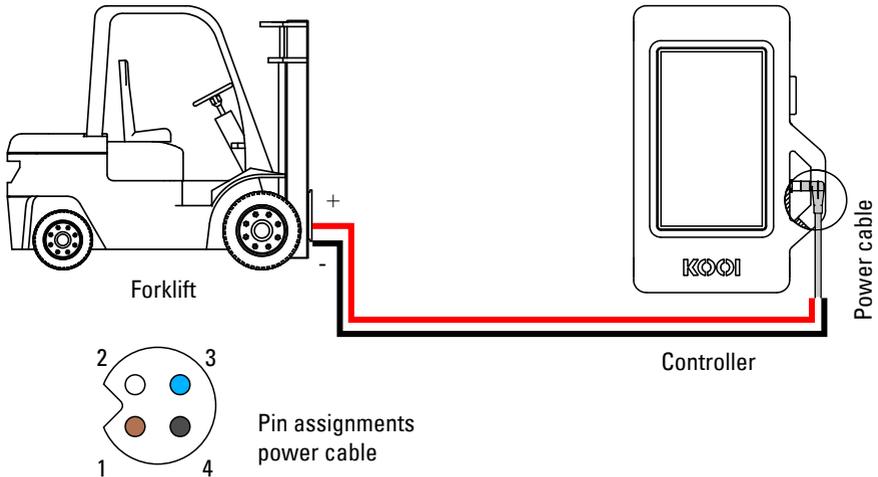


A power cable with attached connector is delivered with the Controller.



All cables and connectors need to be assembled by a certified electrician.

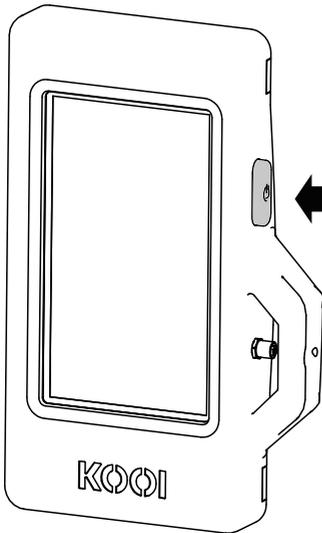
Required power supply from the forklift: 2A at 12 VDC or 24 VDC. Connect the power supply from the forklift to the power cable delivered with the Controller. The power cable may be shortened if required. Then connect the connector of the power cable to the connector of the Controller. See the next image and the pin assignments in Table.



Pin no.	Assignment	Strand color
1	-	brown
2	-	white
3	+ 12/24VDC	blue
4	+ 12/24VDC	black

Table 3: Pin assignments

## Working with the Controller



The Controller contains a hardware on/off button and touch screen for user interaction.

To start up the Controller press the on/off button for 4 seconds. Starting up may take up to 1 minute.

To shut down or restart the Controller press the on/off button for 2-3 seconds until the screen displays three on screen buttons: 'Power off', 'Restart' and 'Emergency mode'. Touch 'Power off' to shut down or 'Restart' to restart the Controller.

Leave 'Emergency mode' off. This is an Android feature not required for the operation of KOOI® ReachControl and may result in slowdown of the Controller functions and communication with sensors.

A short press of the on/off button while the Controller is on will put the Controller in standby mode. Press again to bring the Controller out of standby mode.

All further user interaction will be done through the touch screen, continue in chapter Working with the app at page 27.

## Maintenance

Whenever required remove dirt and grime from the touch screen/Controller using a clean towel or microfiber cloth.

# ReachControl app

## Installation

The installation files for the ReachControl app can be acquired through the Google Play store (Android) or Apple App store (iOS). The app can run offline, but requires a Bluetooth® connection for sensor communication.

### *Android devices*

Visit the Android Play store on your Android device and search for “kooi reachcontrol” or find the app direct via the QR code or link below. Then install the KOOI® ReachControl app.



<https://play.google.com/store/apps/details?id=nl.kooi.reach>

### *iOS devices*

Visit the Apple Play store on your iOS device and search for “kooi reachcontrol” or find the app direct via the QR code or link below. Then install the KOOI® ReachControl app.



<https://apps.apple.com/nl/app/kooi-reachcontrol/id1514110569>

## Working with the app

Before starting the app make sure all the sensors are physically installed according to the instruction in this manual.

Start the ReachControl app. When a Controller is used (see chapter Controller, page 22), depending on the version, the app may start automatically.



The app only supports portrait mode.

### **Getting started**

1. Start the ReachControl app ...
2. Select you preferred language ...
3. Read (optional) the information on the various information screens, tap '>' to continue to the next screen or tap 'skip' to skip the information screens ...
4. Follow the instructions in the 'Action required' popup and tap 'Settings' ...
5. Enable 'Allow modifying system settings', tap the 'back' button or '<' ...
6. Check 'I agree with the terms and conditions' and tap '>' ...
7. Select you hydraulic measurement application ...
  1. Choose 'Cylinder' for a generic, double acting hydraulic cylinder;
  2. Choose KOOI-REACHFORKS® for any hydraulic telescopic lift truck fork;
  3. Choose 'Fork poistioner' for a hydraulic fork positioner attachment;
  4. Choose 'Mast height extension' for mast height extensions (MHEH / LFC) attachment.
8. Tap '>' ...
9. Tap 'ALLOW ONLY WHILE USING THE APP' in the 'Allow ReachControl to access this device's location' pop-up. This permission is required for the app to use the Android Bluetooth signal strength feature ...

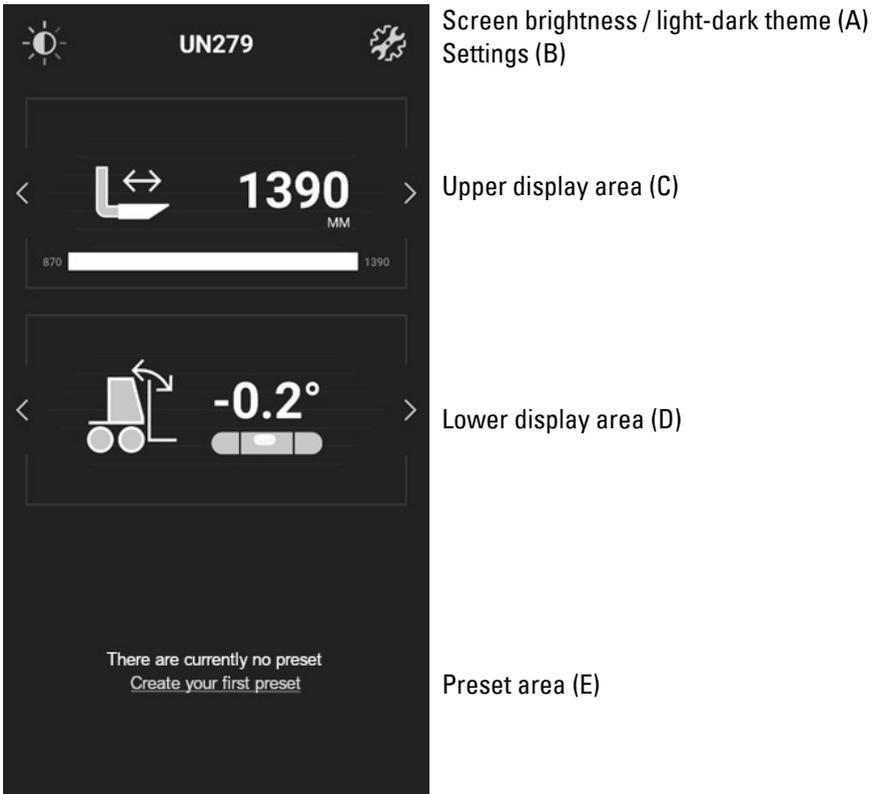
10. Tap 'Ok' in the next pop-up ...
11. If Bluetooth is not yet enabled the 'Bluetooth disabled' pop-up will show. If so, tap 'Enable', else continue to step 12 ...
12. If a 'Connection failed' notice is shown tap 'Try again' until connection is made (make sure Bluetooth on you device is enabled)
13. The 'Select your devices and configure you lift truck' shows a list of detected ReachControl sensors. Check the boxes for the sensors installed on the current equipment. To the right of every device the signal strength of the Bluetooth connection is shown. If multiple sensors are within reach, check the signal strength on the right side to find determine the correct sensor based on proximity. Lower negative numbers means closer sensor (example -85 = strong signal, -35 = weak signal). After selection tap '>' ...
14. Provide a name for the set of sensors (for instance a lift truck number) and tap '>' ...



Multiple sets of sensors can be stored under different names on the same Android or iOS device allowing for use the same device on multiple lift trucks.

15. Tap each sensor in the list in turn to start their calibration wizard. Follow the on screen instructions for calibrating the different sensors. Tap 'Next' after each instruction is completed and input values whenever the wizard asks for it. Each wizard contains fail saves to prevent wrong input from the user and sensor. If an error is give, please restart the calibration wizard. Tap 'Finish' at the end of each wizard to store the calibration data. Make sure all sensors is the list are checked before continuing. Tap 'Start the app'.

## App functions



- A. Tap the 'sun' icon to open the **display settings** screen for adjusting brightness of the app and choosing the dark or light theme.
- B. Tap the 'gear' icon to open the **settings** screen with the following items:
  1. **Bluetooth**: manage sensor sets and re-calibrate sensors;
  2. **Unit**: choose between millimeters of inch measurements;
  3. **Presets**: manage presets for the flow meter length measurement system;
  4. **Language selection**: change the language of the app interface;

5. **Advanced settings:** settings area for problem solving of the system. Only accessible by system manufacturer.
- C. **Upper display area:** area where sensor data is displayed. Tap the yellow '<' and '>' icons to switch between different representations of the sensor data and different sensors.
- D. **Lower display area:** area where sensor data is displayed. Tap the yellow '<' and '>' icons to switch between different representations of the sensor data and different sensors. In combination with the Upper display area data of two different sensors can be displayed simultaneously.
- E. **Preset area:** contains buttons for each preset for the flow meter sensors system. Presets are length dimensions for use with the flow meter sensor. They can for example be used as pallet dimension in combination with telescopic forks to set the forks to the correct length. The app will display the preset length when the flow meter sensor data is shown in the upper or lower display area. When extending the forks beyond the preset the bar indicating the fork length will turn red. Also if a Autostop system is installed, the Autostop will stop the oil flow to the forks for 3 seconds on reaching the preset length value.

Presets can be added by tapping the 'Create your first preset' if none are present or by opening the settings screen and tapping the 'Preset' item. Presets are activated and deactivated by tapping them. Only a single preset can be selected. If another preset is selected the previous preset will be deactivated automatically. Presets can be removed from the settings screen under the 'Preset' item.



It is advised to set you preset dimensions for telescopic fork, 10 mm / 0.4 inch shorter then the pallet size to avoid too long forks due to tolerances in the forks' construction.



To return to the main screen from any other screen in the app, tap the '<' icon in top left corner of the screen or the systems 'back' button.

## Troubleshooting

<b>Symptom</b>	<b>Possible cause</b>	<b>Possible solution</b>
Oil leak near one of couplings	Loose coupling	Tighten coupling
Both angle and length measurements do not change when using the flow meter	Battery sensor empty (without Autostop only)	Replace battery of sensor following instructions in chapter Without Autostop – battery (re)placement at page 19
	No Bluetooth® connection to sensor	Check Bluetooth® icon in app/Controller. If gray following instructions in chapter Error: Reference source not found at page Error: Reference source not found
Both angle and length measurements on display do not change when using the flow meter	Connected to wrong sensor	Connect to correct sensor following instructions in chapter Error: Reference source not found at page Error: Reference source not found
	Flow direction of flow meter not properly calibrated	Follow instructions in chapter Error: Reference source not found at page Error: Reference source not found
	Sensor does not receive power (Autostop only)	Check connection power cable to sensor
The physical length of the forks is not equal to the distance on the display / preset stop distance (with	The flow divider has a tolerance which results in somewhat unequal movement of the forks,	To Reduce the length of the preset by the required margin, see chapter Error: Reference source not

<b>Symptom</b>	<b>Possible cause</b>	<b>Possible solution</b>
flow divider)	resulting in length difference	found at page Error: Reference source not found.
	Tolerances in the forks construction result in differences in length	Difference on display will remain
The physical length of the forks is not equal to the distance on the display / preset stop distance (without flow divider)	Tolerances in the forks construction result in differences in length	Reduce the length of the preset by the required margin, see chapter Error: Reference source not found at page Error: Reference source not found Difference on display will remain
	Tolerances in the forks construction result in differences in length	Restart you Android device and the app (app on 3 <sup>rd</sup> party device only)
		Restart the Controller following instructions in chapter Working with the Controller at page 25 (Controller only)
Cylinder/fork length does not correspond to displayed value	Leakage in hydraulic system	Tighten all hydraulic couplings and check all seals for leakage <sup>1</sup>
	Air in hydraulic system	Bleed the air out of the hydraulic system <sup>1</sup>
	App/Controller not properly calibrated	Follow instructions in chapter Error: Reference source not found at page Error: Reference source not found

<b>Symptom</b>	<b>Possible cause</b>	<b>Possible solution</b>
	Cylinder/fork has not reached it's retracted position for some time	Retract the cylinder/fork completely, the app/Controller will correct the length in the retracted position
Cylinder/fork does not stop at the selected distance (Autostop only)	Distance of the preset does not correspond with Name of the preset	Check preset Name and Distance in settings menu, see chapter Error: Reference source not found at page Error: Reference source not found
Cylinder/fork does not stop at the selected distance (Autostop only) continued ...	App/Controller not properly calibrated	Follow instructions in chapter Error: Reference source not found at page Error: Reference source not found
	Autostop valve not properly connected	Connect the valve following instruction in chapter Hydraulic installation on KOOI-REACHFORKS® at page 15
Controller suddenly shuts down	Controller battery empty and no power connection is available	Connect the Controller to the power cable following instructions in chapter Installation at page 24
Controller does not start		
Controller does not respond	Software malfunction	Restart the Controller following instructions in chapter Working with the Controller at page 25 (Controller only)
Touch screen does not respond (Controller only)		
Controller screen is black (Controller only)	Controller is on standby	Press the power button on the Controller

<b>Symptom</b>	<b>Possible cause</b>	<b>Possible solution</b>
	The brightness setting is set to low	Shield the Controller from direct light and when the interface becomes visible tap the 'sun' icon on the top of the screen once or multiple times to change the brightness settings
ReachControl software crashes with "ReachControl has stopped" notification	Software malfunction	Restart the Controller following instructions in chapter Working with the Controller at page 25 (Controller only) Restart your device (app only)
"Cannot start scan, Bluetooth is not available" notification in lower side screen	Bluetooth cannot be accessed by ReachControl app due to OS or software malfunction	Restart the Controller following instructions in chapter Working with the Controller at page 25 (Controller only) Restart your device (app only)
	Bluetooth disabled on Controller or other device	Enable Bluetooth. Swipe down twice from the top of the screen and tap the Bluetooth® icon once. Proceed once it is lit up (Controller only)
	Previous solutions do not work	Enable Bluetooth Follow the instruction in chapter Clear data and cache for the ReachControl app (Android only) at page

Symptom	Possible cause	Possible solution
		36
Device screen is black (3 <sup>rd</sup> party device only)	Device is on standby The brightness setting is set to low	Get the device out of standby mode
Device screen is black (3 <sup>rd</sup> party device only) continued ...		Shield your device from direct light and when the interface becomes visible tap the 'sun' icon on the top of the screen once or multiple times to change the brightness settings
The app can not be installed (3 <sup>rd</sup> party device only)	Your device is not supported, see chapter Android at page 26 for system requirements	Install the app on an other device or purchase the KOOI® ReachControl Controller device

<sup>1</sup> See the manual of your hydraulic equipment

If the above solutions do not solve your problem or the problem is not mentioned, contact your supplier of the KOOI® ReachControl system.

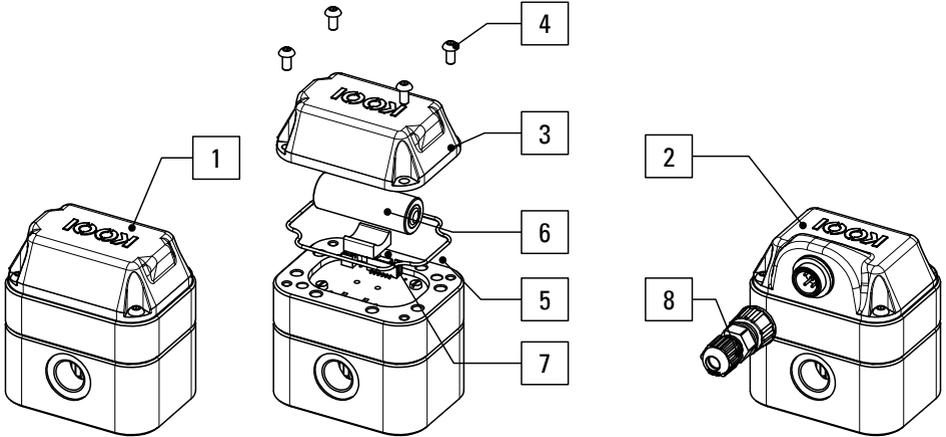
### ***Clear data and cache for the ReachControl app (Android only)***

In rare cases an Android app may no longer function properly because of corruption in its stored data and cache. Below are the instruction for clearing both the data and cache for the ReachControl app:

1. Swipe down at the top of the screen (wide side when in landscape mode, narrow side when in portrait mode) ...
2. Swipe down at the top of the screen a second time (when the KOOI® ReachControl app is running) ...
3. Tap the gear icon in the upper right corner to enter Android Settings ...
4. Scroll downward and tap 'Apps' ...
5. Scroll downward and tap the 'ReachControl' app ...
6. Tap 'FORCE STOP' ...
7. Tap 'FORCE STOP' in the notification screen ...
8. Tap 'Storage' ...
9. Tap 'CLEAR DATA' ...
10. Tap 'DELETE' in the notification screen ...
11. If not grayed out, tap 'CLEAR CACHE' ...
12. Restart the Controller following instructions in chapter Working with the Controller at page 25 (Controller) or restart your device (3<sup>rd</sup> party device) ...
13. Restart the ReachControl app (3<sup>rd</sup> party device, the Controller will restart the ReachControl app automatically).

# Replacement parts lists

## Flow meter

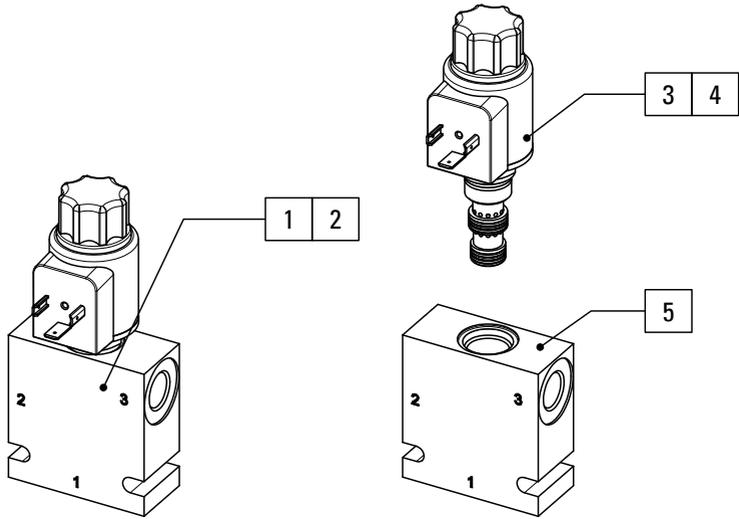


Pos. No.	Description	Used with Autostop	Article No.	No. of parts
1	Flow meter BA		10101209	1
2	Flow meter CA	✓	10094929	1
3	Cover BA		10101214	1
4	Button head screw M4		10092286	4
5	Cover seal		10104767	1
6	Battery, size A, 3.6V (3.60 Ah)		10099365	1
7	Battery support		10101257	1
8	Connector (without cable)	✓	10103838	1



Allen key 2.5 mm

# Autostop valve



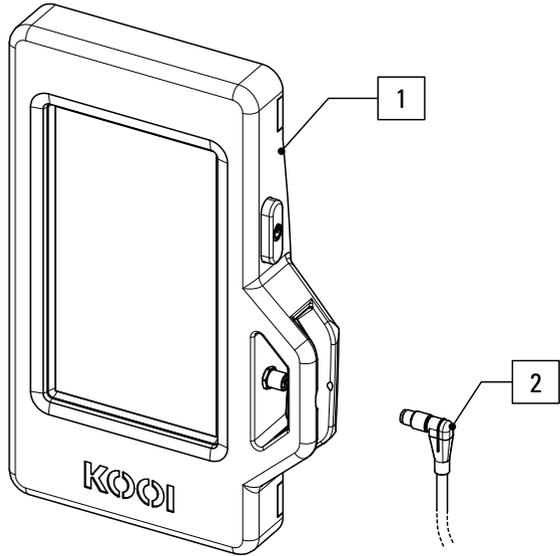
Pos. No.	Description	Article No.	No. of parts
1	Assembly body + 3-2 valve (12VDC)	10102920	1
2	Assembly body + 3-2 valve (24VDC)	10102922	1
3	3-2 Valve (12VDC) <sup>1</sup>	10102921	1
4	3-2 Valve (24VDC) <sup>1</sup>	10102923	1
5	Body	10102919	1



7/8" or adjustable wrench  
vice

<sup>1</sup> Assemble with 25<sup>+5</sup> Nm torque

# Controller



Pos. No.	Description	Article No.	No. of parts
1	KOOI® ReachControl Controller	10101481	1
2	Power cable with connector - 5 meter (or longer)	10121357	1

## ReachControl app

For installation of the ReachControl app see chapter ReachControl app at page 26.

