

AquaPro[®]

North America



Single Point Filling System & Accessories
2023 Edition

About Us	1
Technology in Detail	2
Fill Cap	3
Fill Cap	5
Fill Cap	6
Float Know How	7
Float Know How	8
Plug-in coupling	9
Connectors	10
Deonizer	12
Water Basic Knowledge	13
Water Supply	14
E-BOX System	15
Accessories	16
Hydrometer	17



AquaPro Factory was founded in 2016, as a result of a long-standing partnership between Koenigsheim Industribedarf and Rover & Rover GmbH.

Koenigsheim Industribedarf, specializing in product development and prototyping, was founded in 1995. Years of successful production of injection molds and technical plastics articles led to the acquisition of Rover & Rover GmbH.

AquaPro maintains the traditions of German company culture creating products "Made in Germany". The combinations of innovation and craftsmanship enable a company structure that can react quickly to a wide range of market and customer requirements.

A certification according to DIN ISO 9001 is available and actively implemented by our engineering and production employees on a daily basis.

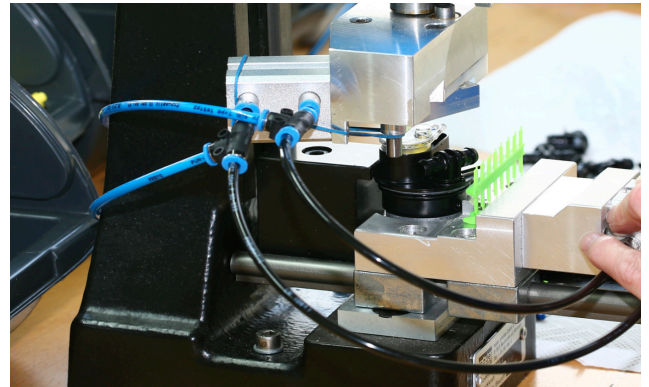
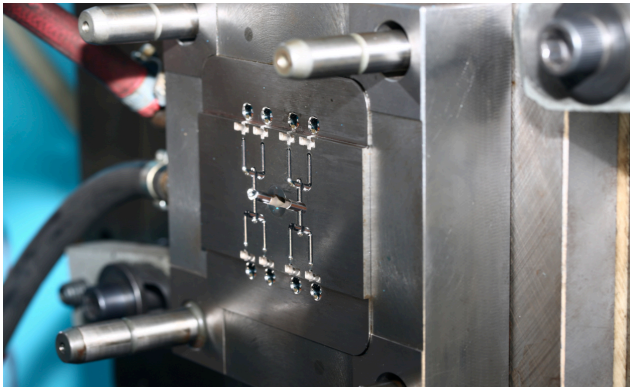
Our strength lies in the ability to canvas the complete product cycle. From design to production, we strive to provide quality assurance and support by developing your products with 3D CAD workstations.

Our internal mold shop allows for periodic modifications and maintenance of our own injection molds. Production of the plastic components is carried out in-house on modern injection molding machines from Demag Sumitomo.

Vision & Mission Statement

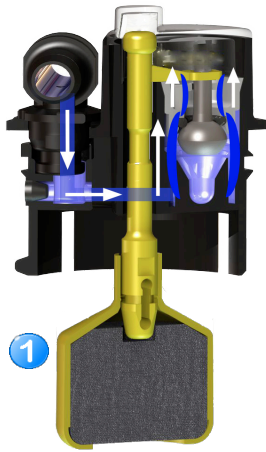
Our vision is to provide users with a family of AquaPro products that improve the safety, cost, and efficiency of flooded industrial batteries.

Our Mission is to be a model of technical advancement by further developing our understanding of end-user needs. Applying our knowledge and experience in developing solutions, expanding and strengthening our distribution network.

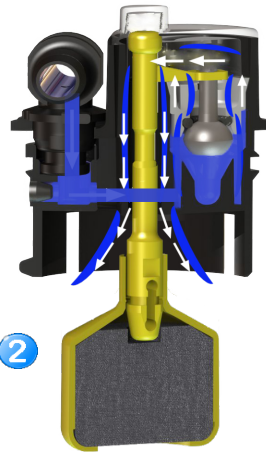


Filling Cap Principle

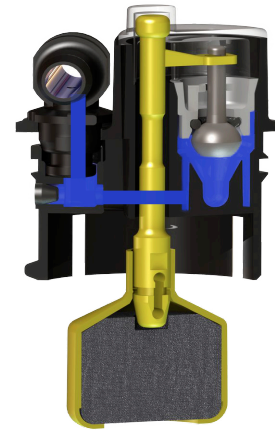
We specialize in the Filling Cap, which was originally created by a French engineer 25 years ago. Since then, we have further developed and improved upon this innovative design by optimizing various details.



Water enters the Tee-piece manifold through the inlet, and then flows around the valve on both sides, resulting in a laminar flow.



As the water current moves through the upper chamber, it is redirected sideways. The water then flows into the battery through the float rod, effectively cleaning the contact points located within the housing.



When the flow changes from laminar to turbulent, the valve is raised to the closed position by the float movement. The water pressure is responsible for closing the valve, and the system operates as a siphon. This is because the water acts as a barrier below the valve, preventing any gases from entering the water supply.

Redesigned protective cap

- Attractive design
- Individual colors (branding possible)

Level Indicator

- Optimal visibility of the fill level
- High contrast between display and housing

Float

- Proven, two-part structure made of a hard outer housing and foam insert



Hydrometer Access

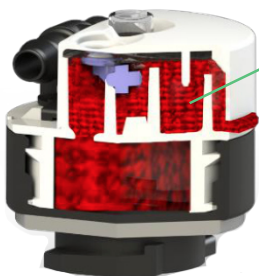
- The fill cap has a self-closing hydrometer access door that can be used without opening the cover, thus preventing any damage.

Robust and Durable

- Outer body made of robust PP material
- Functional parts are made of high quality polycarbonate

Condensation Chamber

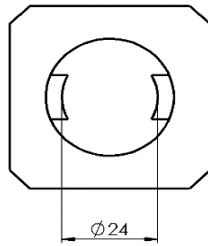
- The vapor produced during the gasing phase is retained through multiple separation stages.
- The outlet opening is covered which prevents any cleaning fluid from entering the cell.



- Pressure range: 2.90 - 50.70 PSI
- Water flow: 750ml/min
- Temperature range: upto +195F
- Acid-resistant plastic
- Exact and even level filling through the hydrodynamic principle

BAYONET

1/4 turn



Aquamatic systems

American design
1/4 turn



Aquamatic system 1/4 turn with float (23mm)

Part no.	Float size	max. depth	Float color
122 252	52	52	black
122 256	56	56	grey
122 260	60	60	yellow
122 266	66	66	blue

Aquamatic system 1/4 turn without float

Part no.	Comment
122C 000	With protective cap
122 000	Without protective cap



Aquamatic system 1/4 turn with float protection & float (18mm)

Part no.	Comment
122C 155	With protective cap
122 155	Without protective cap

Aquamatic system clip-in R24 with float (23mm)

Part no.	Float size	max. depth	Float color
139 252	52	41	black
139 256	56	45	grey
139 260	60	49	yellow
139 266	66	55	blue



Similar to the 1/4 turn system, but only pressed into the cell. This enables a simpler and quicker installation than the bayonet system.

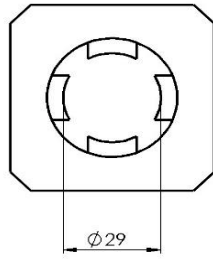


Aquamatic system clip-in R24 without float

Part no.	Comment
139C 000	With protective cap
139 000	Without protective cap



**BAYONET
1/8 turn**



Aquamatic Systems

Japan Design, YUASA
1/8 turn

Aquamatic systems 1/8 turn with float (23mm)

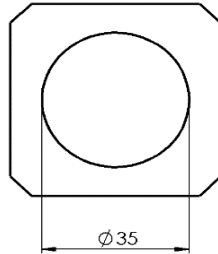
Part no.	Float size	Dimension B	Float color
128 252	52	41	black
128 256	56	45	grey
128 260	60	49	yellow
128 266	66	55	blue

Aquamatic systems 1/8 turn without float

Part no.	Comment
128C 000	With protective cap
128 000	Without protective cap



**PUSH-IN
35 mm**



European Standard

Aquamatic systems 35mm push in with float (23mm)

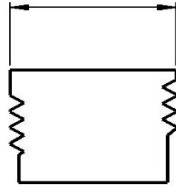
Part no.	Float size	Dimension B	Float color
126 252	52	52	black
126 256	56	56	grey
126 260	60	60	yellow
126 266	66	66	blue

Aquamatic systems 35mm push in without float

Part no.	Comment
126C 000	With protective cap
126 000	Without protective cap



THREAD PLUG



Aquamatic systems

Div. Manufacturers like FIAMM

Aquamatic systems without float



Part no.	Size thread	Comment
137C 000	3/4 Inch Push-in	With protective cap
134C 000	M27	
135C 000	M30	
137 000	3/4 Inch Push-in	Without protective cap
134 000	M27	
135 000	M30	



18 mm Series

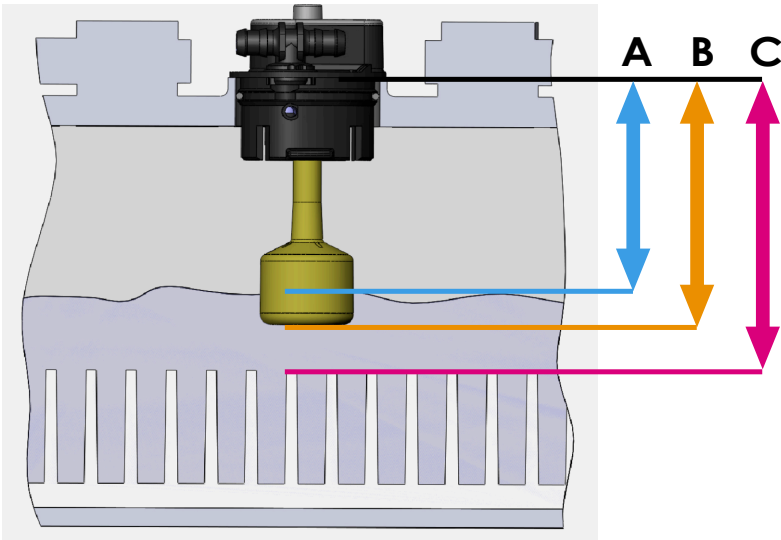
Part no.	Length	Color
000 148	48	green
000 152	52	black
000 156	56	grey
000 160	60	yellow

23 mm Series

Part no.	Length	Color
000 244	44	red
000 248	48	green
000 252	52	black
000 256	56	grey
000 260	60	yellow
000 266	66	blue
000 271	71	orange
000 275	75	purple

Float

- Suitable for all of our aquamatic plugs
- Available in two sizes, 18 and 23 mm
- Color coded
- Length corresponds to dimension "B" according to the table



A = electrolyte level (mm)

The final distance between the electrolyte level and the cell opening.

B = Float lengths (mm)


The distance from the cell opening to the lower end of the float is measured.

C = dimension (mm) from the cell opening to the separator/Moss Shield

This can be measured directly. Either through our float gauge or with a ruler.

Most batteries have a minimum electrolyte level of 3 mm above the separator or a maximum of approx. 30 mm below the cell opening. We therefore recommend keeping the water level below the specified maximum level to prevent "spilling over" when moving the battery.


The distance between the bottom edge of the float and the separator or plate must be at least 5 to 10 mm.



Measurement sheet I

For 35 mm plug (European standard)
The tables are valid for the 18 and 23 mm diameter series.

Measure	Float size							
	44	48	52	56	60	66	71	75
A	31	35	39	43	47	53	58	62
B	44	48	52	56	60	66	71	75
C	49	53	57	61	65	71	76	80



Measurement sheet II

Filling plug with adapter
The tables are valid for the 18 and 23 mm diameter series.
¼ turn (R 24) 1/8 turn (Yuasa Norm) clip-in (R 24) M21-M30 thread

Measure	Float size							
	44	48	52	56	60	66	71	75
A	15	19	23	27	31	37	42	46
B	28	32	36	40	44	50	55	59
C	33	37	41	45	49	55	60	64





- Our floats are available in two diameters and a variety of different lengths.
- Each length is made in its own color, so confusion during installation is minimized.
- The float structure consists of two parts, a colored body with a core of polypropylene foam embedded.

This hybrid design is unsinkable and robust. In addition, the smooth housing minimizes the adherence of oil residues in the electrolyte and ensures trouble-free operation.

Measurement of the float length

1. Remove the battery vent cap. Please note that the electrolyte contains caustic acid.
2. Take a depth measurement from the contact point of the cell opening to the plate separator, and record the value in millimeters.
3. Repeat this process for other cells and form an average. The height of the separators are not always the same and can falsify the measurement result.

The determined value in mm now corresponds to dimension "C"

For safety reasons, the float must be kept at a safe distance.

Subtract approx. 5-10 mm from the determined dimension "C", this value corresponds to dimension B.

Find a value in the following tables that is smaller than your determined measurement

- Dimension sheet I applies to the 35 mm Fill Cap
- Dimension sheet II applies to all other Fill Caps

*Example: The measurement gives a value of **69 mm**.*

*Fill Cap type: 35 mm opening = **dimension sheet I***

*69 mm minus safety distance (5 mm) = **64 mm***

Similar table values are 60 and 66 mm, but for safety reasons the smaller value 60

*Float size then corresponds to: **60 mm yellow***

4. The float diameter is solely dependent on the size of the cell opening that the float must fit into without getting jammed on the side. However, it is recommended to choose larger diameters of 23 mm due to their design.

Use of the aquapro gauge

1. Determine the type of cell opening in your battery:

The opening can be either 35mm, bayonet, or threaded. The gauge is printed on both sides, with each side corresponding to the associated cell opening.

2. Fold the end of the gauge. This is important as it prevents the gauge from slipping between the plates and giving an incorrect measurement.
3. Insert the appropriate side of the gauge and read the value directly for the float. This is achieved by aligning the gauge's markings with the edge of the cell opening and reading the division indicated.

In the example photo, this corresponds to a clear float, 56 mm

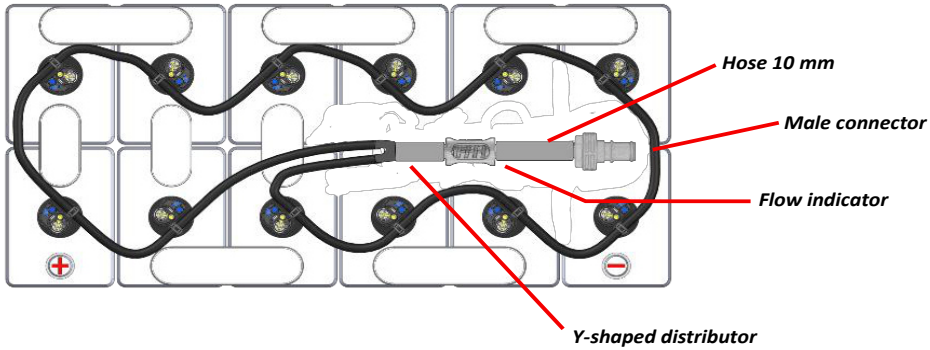


Based on customer feedback, connecting the filter-end (Tee piece, filter, and coupling) has been identified as a significant challenge during installation due to the use of two different hose sizes and clamp rings. Moreover, the filters tend to clog up frequently, causing further complications down the line.

To simplify the battery watering process, Aquapro has developed a unique, durable polycarbonate unit that combines a coupler, valve, filter, flow indicator, and Tee piece. The All-In-One Coupler eliminates the need for multiple connectors and clamps, saving time during installation. Unlike other systems that require users to cut hoses and install separate filters, flow indicators, Tee pieces, and couplers, the All-In-One Coupler is easy to use.

The All-In-One Coupler is designed for ease of use, featuring a simple snap-in and snap-out mechanism. Additionally, its highly visible Flow Indicator is visible from all angles, and its Filter has a large surface area, ensuring a long clog-free life.

Conventional tubing battery with 12 cells



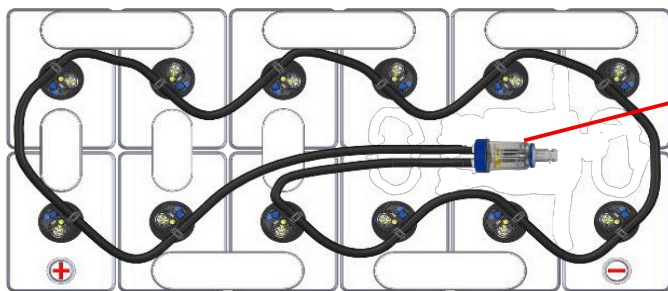
Hose between the cells with 6 mm

Supply line 10 mm hose

- Male connector
- hose 10 mm
- Flow indicator
- T or Y-shaped manifold
- Filter

**More parts and connections mean
More things to break or leak**

Dual tubing battery with 12 cells



Hose between the cells with 6 mm supply line with 2x 6 mm hose.

Aquapro All-In-One connector

With its two ports, the All-In-One Coupler allows for an easy double line or loop configuration.

Coupler, filter and splitter in one unit means less to break or leak and a much faster installation

No need to install additional parts like filter and T-fittings.

Installation advantages

The All-In-One Coupler is ideal for installation with small and medium-sized batteries.

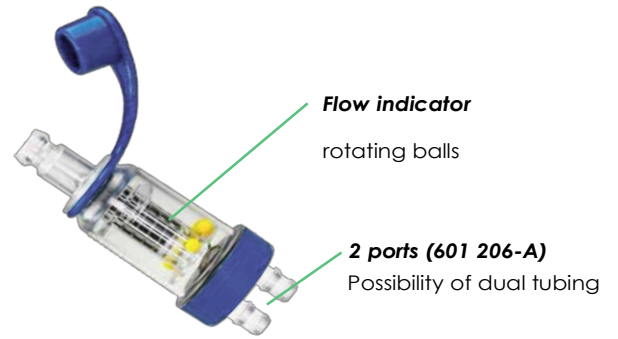
Dual installation is also possible with large batteries and is a sensible alternative to conventional hose technology.



All-In-One Coupler male

- Transparent, high-impact polycarbonate housing.
- Flow indicator integrated so that the smallest flow is still visible.
- Standard dust protection cap made of extremely tear-resistant material
- Integrated filter captures particulate down-to 0.15 mm.
- Design allows for filter to be opened and cleaned.

Coupler Part 601 206 is designed as a double port (6mm), for easier installation on the battery



Part 601 106
Single Port
6mm [1/4"] Hose



Part 601 206
Dual Port
6mm [1/4"] Hose



Part 601 108
Single Port
8mm [5/16"] Hose



Part 601 110
Single Port
10mm [3/8"] Hose



Part 601 116-TH
Single Port
10mm [3/8"] Hose
With external thread M16x1.5

All-In-One Coupler female

- Transparent, high-impact polycarbonate housing.
- Simple plug-in system, without actuator.
- Pressure-resistant housing. The patented locking mechanism automatically disconnects the male connector in the event of Overpressure, above 35 PSI.
- Version B with integrated flow indicator so that the smallest flow is still visible
- Integrated filter captures particulate down-to 0.15 mm.
- Design allows for filter to be opened and cleaned.



Part 602 110-F
Single Port
10mm [3/8"] Hose
With flow indicator

Part 602 110
Single Port
10mm [3/8"] Hose
Without flow indicator

Part no.	Size	Comment
602 106-F	6mm - 1/4"	With flowindicator
602 108-F	8mm - 5/16"	
602 110-F	10mm - 3/8"	
602 106	6mm - 1/4"	Without flowindicator
602 108	8mm - 5/16"	
602 110	10mm - 3/8"	



Visible from 360 °, the yellow rotating spheres signal that water is flowing into the cells. When they stop spinning, all cells have enough water and the filling process is complete!

Deionizer cartridge

Disposable linear filter with large capacity for the production of demineralized water (demineralized water)

The filter consists of a transparent, pressure-resistant housing and has a volume of approx. 10lbs mixed bed resin, which contains a green dye.

The resin filters the water from dissolved suspended matter or prepares normal tap water so that it can be used directly to fill the battery. When the resin has reached its capacity, the color changes from green to purple/or/cream.

The linear filter is connected on one side to the water supply, on the opposite side the cleaned water can be removed directly or a pressure reducer can be connected.



Cartridge part no. 822 005

- Housing approx. 31.5 inches long, 4.5 inches diameter, weight approx. 13 lbs
- Pressure resistant up to approx. 85psi
- 2 quick connections, Gardena compatible
- Provides pure water of 0 μ Siemens, color change takes place at approx. 20 μ Siemens conductance

Water hardness input PPM	Capacity / filter capacity in gallons
50	825
100	415
200	205
300	135
400	100
500	80



Fastening set for wall mounting

The includes a 10 psi pressure reducer so that it is suitable for direct connection to our filling systems.

Part no. 822 555

- 2 PVC wall brackets
- Pressure reducer for direct connection to the linear filter
- Hose package (6ft) with female plug-in coupling, integrated flow Indicator.
- Water hose with gardena compatible coupling (6ft)



Wall bracket



Hose with pressure reducer

Gravity filling

- Simplest solution, no mechanical components
- Placed approx. 6ft above the floor
- Size and volume can be freely selected, but must be removed to fill with fresh water



Direct filling

- The cartridge is connected to a faucet. The water from the pipe flows through the cartridge and is cleaned there.
- At the output there is a pressure reducer so that the batteries can be filled directly with it.



Electric pump, E-BOX

- Comfortable and quick filling
- Portable or fixed system
- Size and volume freely selectable, filling the container is easy



Hand pump

- Portable solution for small and medium batteries
- is brought directly to the battery
- Water is pumped by manual pumping



Interesting facts about water & filling the battery

- Use only distilled or demineralized water. The conductance may be max. 20 $\mu\text{S} / \text{cm}$.
- Refill the battery only after charging. The optimal time is after the weekly equalization process is complete.
- The filling system requires a minimum pressure of approx. 3 psi in order to function, or a container height of at least 6ft above half the battery. The manual pump and our electric pumps deliver a pressure of > 3 psi.
- Observe flow indicator. At the beginning, the balls rotate very quickly, as the battery fills up they slow down to a standstill. If the system is filled and no more flow is visible, remove the water supply within 5 minutes by removing the coupling.
- Avoid filling intervals that are too short or too long. Experience has shown that a period of one week is sufficient. This value may vary depending on the use or charge of the battery. Pay attention to the fill cap level indicator or note the values when / how often you fill.



Gravity water tank

Water tank made of PE plastic with 9ft PVC hose and quick coupling. Mounting by hook or shelf.

Part no.	Size
800 010	2.5 Gal
800 020	5 Gal
800 030	8 Gal
800 060	15 Gal



Manual pump tank

- Ideal solution for facilities with one lift truck
- Allows watering with distilled water
- Portable, no elevation or installation required
- No power source needed

Part no.	Size	Flow per Stroke
804 010	2.5 Gal	1 oz
804 020	5 Gal	5 oz

Hand pump

Hand pump for manual filling

- Fast filling
- No power supply required
- 6ft PVC hose with quick coupling
- Attachment directly to the canister



Part no.	Aperture
810 030	38 mm / 1.49"
812 150	61 mm / 2.40"



Electric pump

Submersible pump 12 volts with 6ft cable and universal plug (Part No. 801 120)

- Comfortable and quick filling, approx. 2.5 gallons per minute
- 6ft PVC hose with quick coupling



E-Box II

Universal submersible pump system for direct Connection to the water tank

- Rotatable closure, so easy to remove from the tank
- Available for 3 tank sizes
- Power supply via side socket
- Illuminated toggle switch
- Robust plastic housing with hose holder
- 6ft PVC hose with quick coupling
- Submersible pump selectable in 2 performance levels



Part no.	Aperture	Pump
810 101-A	61 mm / 2.4 in	Elegant, 2.5 Gal/min
810 111-A	61 mm / 2.4 in	VIP+, 5.8 Gal/min
810 101-B	71 mm / 2.8 in	Elegant, 2.5 Gal/min
810 111-B	71 mm / 2.8 in	VIP+, 5.8 Gal/min
810 101-C	96 mm / 3.8 in	Elegant, 2.5 Gal/min
810 111-C	96 mm / 3.8 in	VIP+, 5.8 Gal/min



Universal cable,
2 m for self-build
Part no. 810 060



wall plug transformer 12V 3A
Part no. 810 050



Plastic box,
300x200x120 mm ABS housing
Part no. EN-6607



E-Box II battery version

E-Box II, with integrated battery compartment for 3s 2P Li-ion battery, Charging socket on the housing with splash protection. Battery compartment splash-proof and screwed

- Fast charging, thanks to Li-Ion technology
- compact design, suitable for a large number of tanks
- High quality 3S 2 P battery approx. 5 Ah = 57 W / h with BMS protection
- Li-Ion charger, 3 A charging current, 120 volt plug
- Battery not included

Article no.	Aperture	Pump
810 300-A	61 mm / 2.4 in	Elegant, 2.5 Gal/min
810 310-A	61 mm / 2.4 in	VIP+ , 5.8 Gal/min
810 300-B	71 mm / 2.8 in	Elegant, 2.5 Gal/ min
810 310-B	71 mm / 2.8 in	VIP+ , 5.8 Gal/min
810-300-C	96 mm / 3.8 in	Elegant, 2.5 Gal/min
810 310-C	96 mm / 3.8 in	VIP+ , 5.8 Gal/min
EN 6900	Li-Ion Akku	Size 3S2P capacity 57 Wh/h
810 010		Charger 2A charging current



PVC & TVP hose

Chemical resistant material.



Part no.	Diameter I.D - O.D	Material	Length
451 006	6mm - 9mm [1/4" - 3/8"]	PVC [Clear]	328 ft
450 510	10mm - 14mm [3/8" - 9/16"]	PVC [Clear]	164 ft
452 006	6mm - 11mm [1/4" - 7/16"]	TVP [Black]	328 ft
450 000	8mm - 11mm [5/16" - 7/16"]	PVC [White]	164 ft

Aquamatic Connectors

Material PP and PE Resin, white

T Piece

Part no.	left	bottom	right
430 610	6mm - 1/4"	10mm - 3/8"	6mm - 1/4"
430 620	6mm - 1/4"	6mm - 1/4"	6mm - 1/4"
430 630	10mm - 3/8"	10mm - 3/8"	10mm - 3/8"

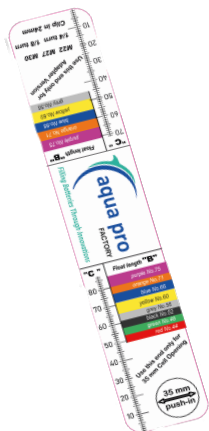
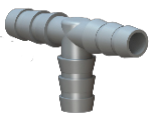
90 deg angle

Part no.	left	right
430 650	6mm - 1/4"	6mm - 1/4"
430 652	6mm - 1/4"	10mm - 3/8"
430 653	10mm - 3/8"	10mm - 3/8"

Cross

Part no.	left	right	bottom	top
430 440	6mm - 1/4"	6mm - 1/4"	6mm - 1/4"	6mm - 1/4"
430 641	6mm - 1/4"	10mm - 3/8"	6mm - 1/4"	10mm - 3/8"
430 642	10mm - 3/8"	10mm - 3/8"	10mm - 3/8"	10mm - 3/8"

Part no.	name	material	packing unit
459 006	6mm-1/4" clamp ring	PP	10 pcs
459 007	10mm-3/8" clamp ring	PP	10 pcs
430 002	End stopper	TPE black	10 pcs



AquaPro float gauge

Ideal for determining our suitable floats

Part no.	design
500 001	flexible
500 003	solid



Hydrometer

- Small suction volume, but large hydrometer - wide spread scale
- Central guidance of the hydrometer. No commuting, no sideways docking
- Safe, fast reading
- For large vehicle batteries and stationary batteries
- Color scale and number scale
- Testing battery acid



Part no. 506 322

- Universal workshop device
- Robust design with plastic cylinder without bulge
- Overall length of the device: 255mm [10"]
- intake pipe length: 130mm [5"]



Part no. 506 520

- Large model with a bulged glass cylinder
- Precise fine reading thanks to large scale and small graduation
- Overall length of the device: 328mm [13"]
- Intake pipe length: 140mm [5.5"]



Part no. 506 620

- Large model with a bulged glass cylinder
- Precise fine reading thanks to large scale and small graduation
- Overall length of the device: 328 mm [13"]
- Intake pipe length: 140 mm [5.5"]
- With built-in thermometer to take into account the temperature from 0 to 60 °C
- For particularly precise determination of the state of charge



1-888-543-1974
www.aquapro-na.com



1-613-686-6363
www.aquapro-na.com



49-8233-7957659
www.aquapro-factory.de