# THETF🌼RD

# *TECMA*
## EXCELLENCE ON BOARD

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TECMA TECHNICAL HANDBOOK
a reference guide for designers, builders and operators

## Thetford - Tecma

Thetford has been creating, supplying and caring for its high quality products for more than 50 years. The group is recognized as the world market leader in mobile sanitary systems, refrigerators, cooking equipment and toilet additives. Tecma is the marine sanitation division of Thetford.

Tecma is known worldwide as the manufacturer of the finest china toilets. Known for their beautiful styling, Tecma toilets also feature a quiet, reliable, yet powerful waste transfer system which allows holding tanks and toilets to be placed anywhere on board.

**THETFORD**     **TECMA** EXCELLENCE ON BOARD

## 100% QUALITY

Incoming goods:
• severe quality check on all incoming goods
• quality check on each ceramic components

Assembly testing:
• functional test on each macerator pump sub-assembly
• functional test on each control panel
• functional test on each valve and other sub-assemblies
• functional test on each complete toilet system before packaging
• testing machine assessment for regulation compliance

CE     TÜVRheinland®     MET

# index

# Main system components

The standard system is packed and delivered complete of all three components, ready to be installed with fast and easy plug and play electrical connectors and standard size hose fittings, for clean water inlet and waste water outlet. Accessories or optional features are available and can be ordered in addition.

**China toilet complete** of seat and cover and integrated **macerator pump** for waste pump out

**Control panel** / user interface

**Clean water inlet device** / solenoid or dedicated pump

# How it works

- The water inlet device delivers clean water to the inside of the toilet bowl.
- The macerator pump, integrated in the ceramic toilet, grinds the waste and then moves it to the black water holding tank.
- The flush cycle is activated by pressing the control panel buttons.

CONTROL PANEL

WATER INLET DEVICE SOLENOID OR INLET PUMP

CLEAN WATER

WC

WASTE WATER

TANK

SOLENOID
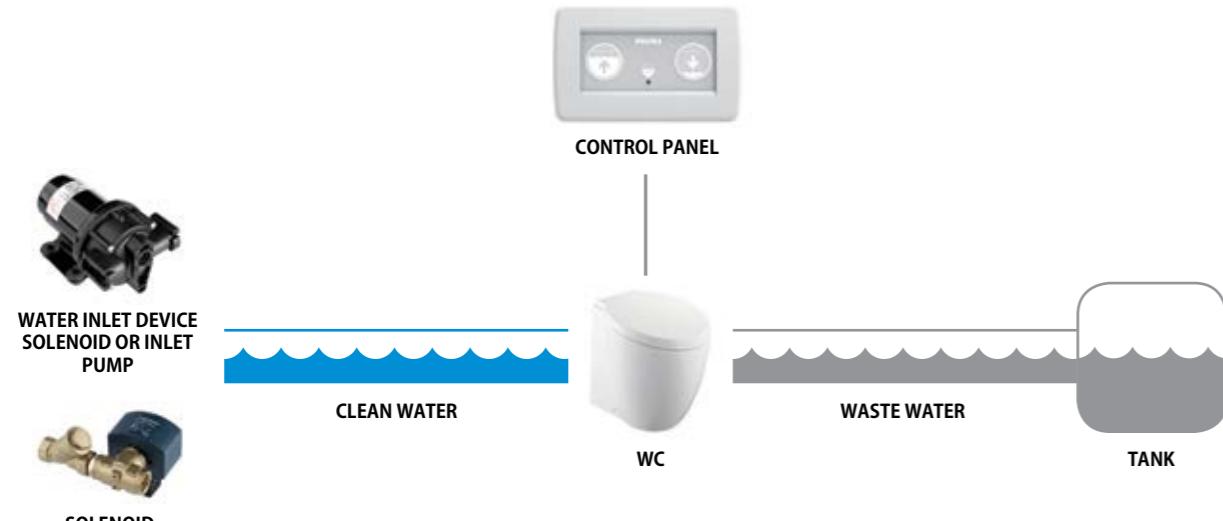
# Tecma system benefits

Top design, quality components and production and an uncompromising attitude and fast response to client needs have given the company its leading position.

- **Award winning products**
- **Experienced design team**
- **High quality components**
- **Reliable operation**
- **Easy and fast installation**
- **Water and power saving**
- **Extremely silent operation**
- **Global service network**

**The cutting blades fragmentize all the waste**
- Macerator chamber before the impeller
- Easier waste treatment process
- No clogs

**Special hoses shape and two "one–way valve" are strategically positioned**
- Water traps of clean water
- Prevents backflow
- NO bad odours

first one-way valve

second one-way valve

**Innovative spray nozzle maximize hygiene**
- High-pressure water jet
- Faster and better cleaning
- 100% bowl coverage

clean water inlet Ø 20 mm

waste water outlet Ø 40 mm

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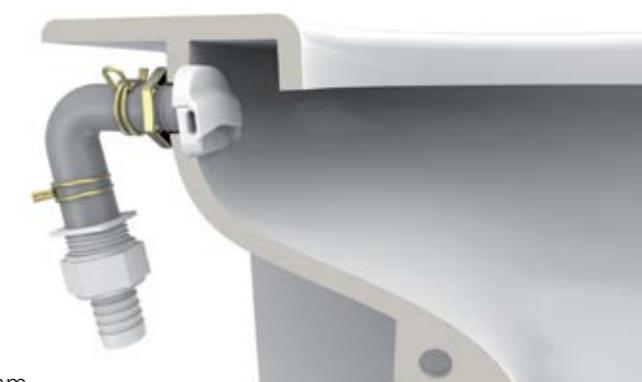
# Single system

The clean water that will flush the toilet is supplied by a dedicated pump that usually is connected either to a fresh water tank or trough-hull. When the control panel is activated the pump will start working to deliver clean water inside the toilet bowl.

**CLEAN WATER**          **WASTE WATER**

**PUMP**
**from tank or raw**                **WC**                          **TANK**
**water**

# Centralized system

The clean water that will flush the toilet, is supplied by a central pumping device or accumulator, that is connected either to a fresh water tank or trough-hull. Each toilet has a dedicated solenoid. When the control panel is activated the solenoid will open the gear to supply clean water inside the bowl.

**CENTRAL PRESSURE**
**PUMP SYSTEM**           **SOLENOID**              **WC**
**(3 BAR)**
                                                                  **TANK**

**SOLENOID**              **WC**
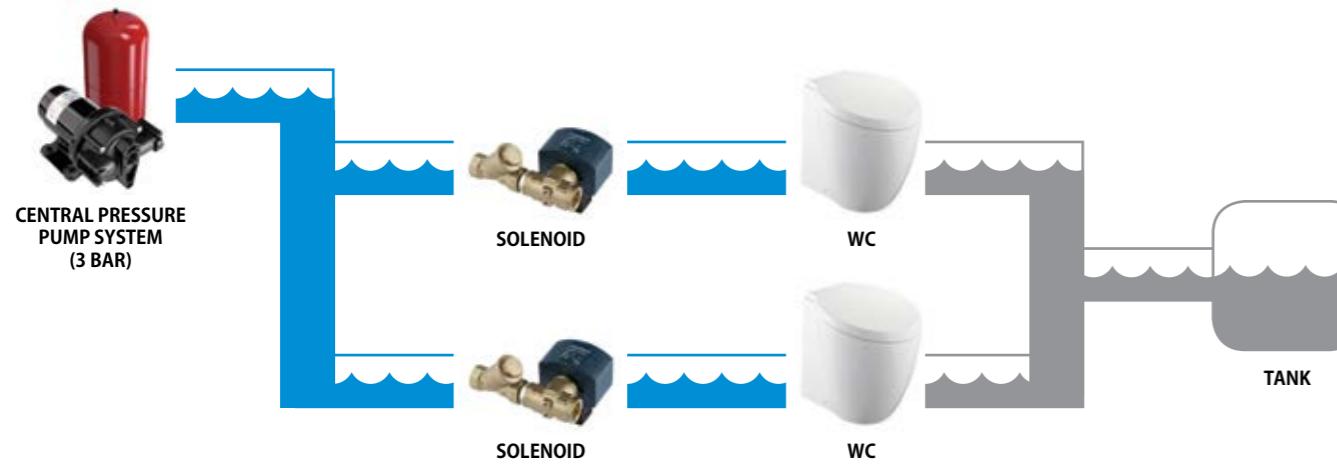
# Product configuration guidelines

This is a simple guideline that will help the configuration process of the product. Tecma offers the possibility of configuring the product to make it fit with the interior of the yacht on which this will be installed. Each component can be configured according to specifications. Follow this scheme and refer to the technical data reported in section 3.0 and section 4.0 for more details.

**1** Choose product range

**2** Choose toilet shape and geometry

**3** Choose macerator pump power supply and check pumping performance

**4** Choose water inlet device

**5** Choose control panel

**6** Choose ceramic color

**7** Choose seat and cover configuration

**8** Choose bidet option and faucet

**9** Choose other system components and accessories

# Overview

|  | MACERATOR PUMP | CONTROL PANEL | WATER INLET DEVICE |
|---|---|---|---|
| **DESIGN RANGE** | Macerator: MAC 11 | standard multiframe argent touch premium premium touch | solenoid brass/ inlet pump |
| **FLEXI RANGE** | | | |
| **COMPACT RANGE** | Macerator: MAC4 Manual | eco/premium/ premium plus | solenoid /inlet pump |
| **PORTABLE RANGE** | Additives | / | / |

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# Design & Flexi range technical details

| MAC 11 outlet pump macerator turbine | 12V dc | 24V dc | 230V ac |
|---|---|---|---|
| Fuse recommended | 40 A | 35 A | 5 A |
| Clean water inlet connection | ¾" ID – 20 mm | | |
| Outlet pipe connection | 1 ½" ID – DN40 | | |
| Pump performance | Max 270 l/min - Max vertical head 11mt - Max horizontal distance 90 mt | | |

Chart:
- power 230 V
- power 24 V
- power 12 V

(y-axis: mt, 0–12; x-axis: lt/min, 0–300)
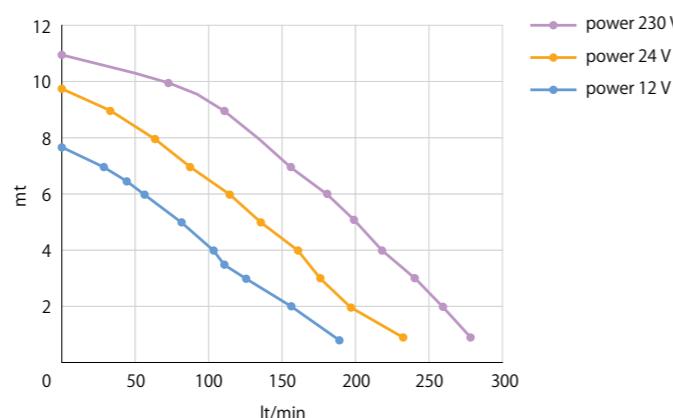
| SOLENOID BRASS inlet solenoid (brass) centralized system | 12V dc | 24V dc | 230V ac |
|---|---|---|---|
| Working pressure reccomended | 3 bar | 3 bar | 3 bar |
| Power | 80 W - 7 A | 80 W - 3 A | 19 VA |

| INLET PUMP inlet pump single system | 12V dc | 24V dc |
|---|---|---|
| Fuse | 8 A | 4 A |
| Pressure | 45 PSI – 3 bar | |
| Water flow | 3.2 US GPM – 12 L/min | |

## Control Panels overview

### STANDARD CONTROL PANELS

**ALL IN ONE**
The switch and the controller are fully contained in a wall mounted box. Standard.

**SPLIT**
The switch is wall mounted and the controller is installed remotely. Multiframe, Argent, Touch.

**ONE BUTTON VERSION**
Flush is activated by a single button "After Use". Toilet refills automatically ready for next use. Tank level monitoring led and water amount trim.

**TWO BUTTONS VERSION**
Flush is activated by two buttons "Before use" and "After Use". Toilet remains empty for navigation. Tank level monitoring led and water amount trim.

### PREMIUM CONTROL PANELS - SMART FLUSH TECHNOLOGY

The smart flush technology is one of the latest patented innovations introduced by Tecma. The system is Split with wall switch and remote controller. It is programmed to "read and adjust" the working condition of the macerator pump. This special feature eliminates any introduction of air in the pump body that usually generates noise cavitation. It also minimizes the consumption of water and power. The wall switch can be an electronic silicon pad or an advanced touch panel.

- **Electronic water amount setup** - press both buttons for more than 7 seconds to trim water
- **Two different operation modes: sailing mode** (similar to two buttons version) **mooring mode** (same function of 1 button version) - press both buttons for more than 3 and less than 7 seconds to switch
- **Water overfill protection** - after 12 seconds (total) water inlet button is deactivated, flush is needed
- **Emergency flush** - press both buttons for less than 3 seconds to flush without adding water
- **Tank monitoring system** - green/yellow/red led indicators show black water tank status
- **System lock and unlock function** - press both buttons twice simultaneously to lock/unlock

### TECMA TOUCH PANEL

This device has been expressly designed for marine environments. It is built with high quality components, it is heavy duty, fully certified and patented.

- **Glass cleaning function** - You can deactivate the panel for 15 sec for cleaning purposes
- **Led Backlight set up** - You can set the led back light always on, always off, proximity sensor

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**STANDARD -** Standard control panel all-in-one.
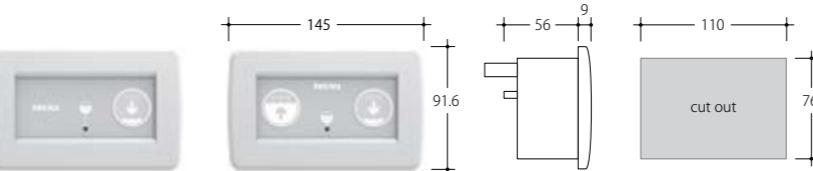
(145, 56, 9, 110, 91.6, cut out, 76)

**Frame color:** ● black  ○ white
**Background color:** ● gray  **Optional:** ○ white  ○ cream

**Note:** compatible with Tecma pneumatic sensor or other N.A. switch type sensor.

**MULTIFRAME -** Compatible with all commercial bezels.

(66.5, 23, 86, 44.5, 54, cut out, 15, 24)
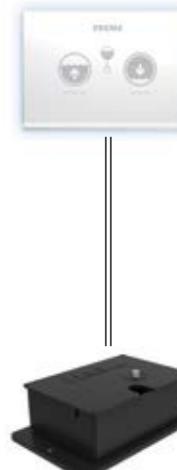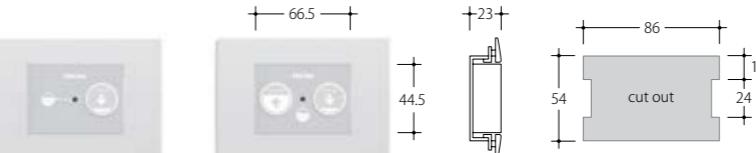
**Frame color:** ○ white
**Background color:** ● gray

**ARGENT -** Elegant metal push button.

(25, 25, 22.5, 25, cut out, 22.5)

One button    Two button
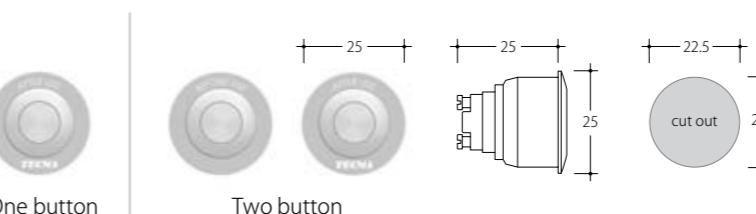
**Background color:** ● gray

**TOUCH -** Ultimate hi-tech glass touch panel.

(118, 8, 21, 70, 84, 48, cut out, 49)
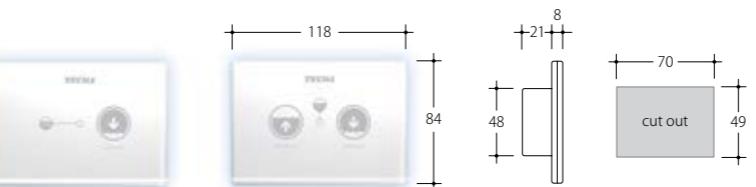
**Background color:** ● black  ○ white

**Note:** compatible with Tecma pneumatic sensor or other N.A. switch type sensor.

**PREMIUM -** Patented silicon pad control panel with software.

(122, 15, 94, 82, cut out, 66, 9)
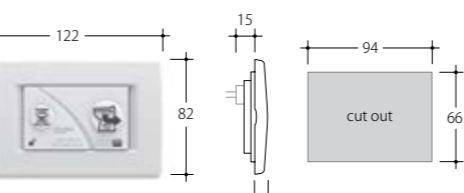
**Frame and background color:** ○ white

**PREMIUM TOUCH -** Ultimate patented hi-tech glass touch panel with software.

***** See **Touch** technical drawing

**Note:** compatible with Tecma pneumatic and inductive sensor or with commercial sensor (see STA adaptor details).

**Note:** all measure are in mm

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# Compact range technical details

| MAC 4 outlet pump macerator turbine | 12V dc | 24V dc |
|---|---|---|
| Fuse recommended | 30 A | 20 A |
| Inlet pipe | ¾" ID – 20 mm | |
| Outlet pipe | 1 ½" ID – DN 40 | |
| Pump performance | Max vertical head 4 mt - Max horizontal distance 40 mt | |



power 24 V
power 12 V

mt / lt/min
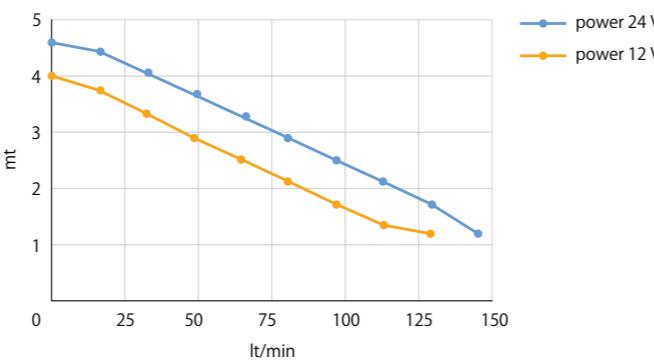
| SOLENOID centralized system | 12V dc | 24V dc |
|---|---|---|
| Power | 10 W - 0.9 A | 80 W - 3 A |
| Pressure recommended | 3 bar | |

| INLET PUMP inlet pump single system | 12V dc | 24V dc |
|---|---|---|
| Fuse | 8 A | 4 A |
| Pressure | 45 PSI – 3 bar | |
| Water flow | 3.2 US GPM – 12 L/min | |

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**ECO -** Standard rocker switch.

64 · 73 · 56 · 46 · cut out · 46 · 46 · 46
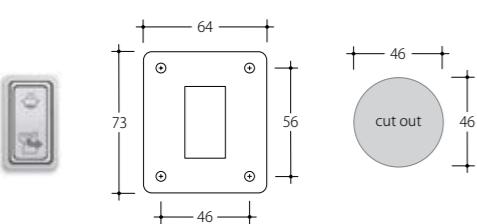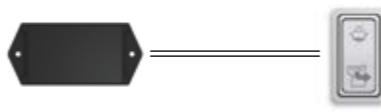
**Color:** ◯ white

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**PREMIUM -** Silicon electronic control panel.

122 · 15 · 82 · 94 · cut out · 66 · 9

**Frame color:** ◯ white    **Background color:** ◯ white

**Note:** no tank monitor.

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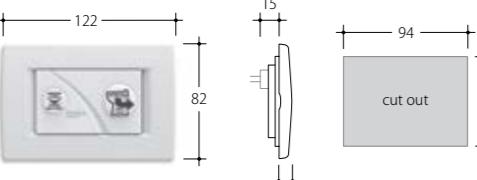
**PREMIUM PLUS -** Silicon control panel with tank monitoring.

122 · 15 · 82 · 94 · cut out · 66 · 9

**Frame color:** ◯ white    **Background color:** ◯ white

**Note:** compatible with Tecma inductive sensor or with commercial sensor.

**Note:** all measure are in mm

# Design range

**>100 ft**

·· X light
·· Privilige
·· Evolution
·· Breeze
·· E-breeze

# X-Light

- WC WEIGHT - 6,6 kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - full carbon fibre
- MATCHING BIDET - yes
- INTEGRATED BIDET - no

- BIDET WEIGHT - 2 kg
- FEATURE - full carbon fibre
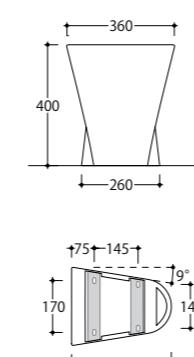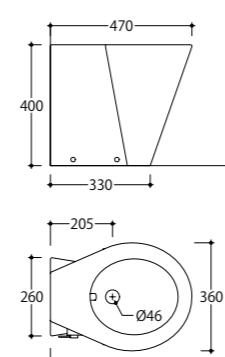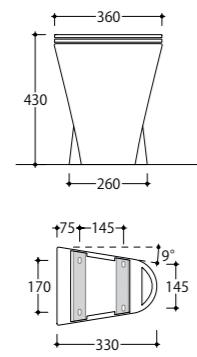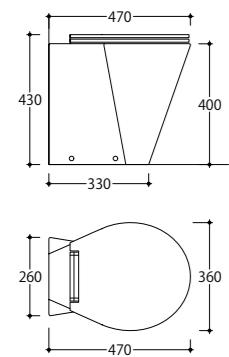
| COLOR (for wc & bidet) | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| carbon look | RAL | carbon look | RAL | 12-24 v MAC11 | 230 v MAC11 | all in one | multiframe/argent/ touch/premium | solenoid brass | inlet pump |

# Evolution

- WC WEIGHT - 27 kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - suspended
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes / wall mounted mixer
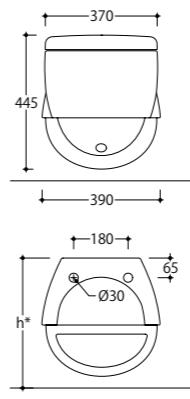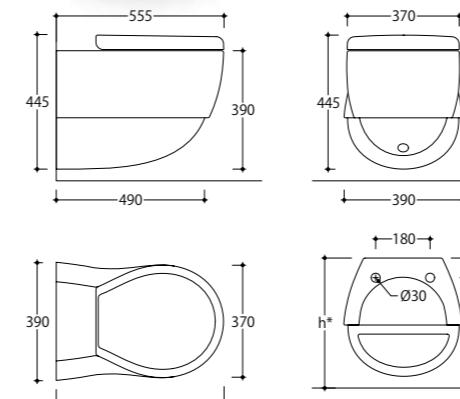
- BIDET WEIGHT - 22 kg
- FEATURE - suspended
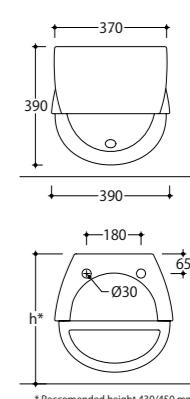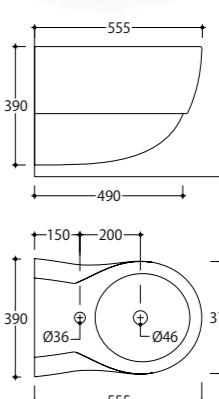
* Reccomended height 430/450 mm

| COLOR (for wc & bidet) | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | pergamon / black | soft closing | | 12-24 v MAC11 | 230 v MAC11 | all in one | multiframe/argent/ touch/premium | solenoid brass | inlet pump |

# Privilege

- WC WEIGHT - 28 kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - ultra design
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes / wall mounted mixer

- BIDET WEIGHT - 22 kg
- FEATURE - ultra design
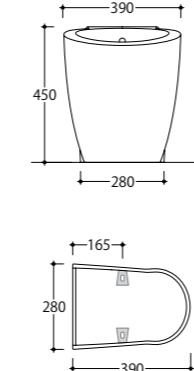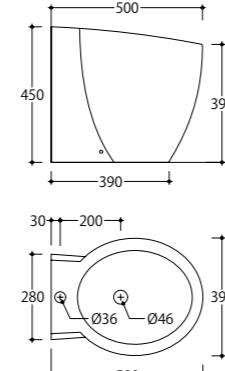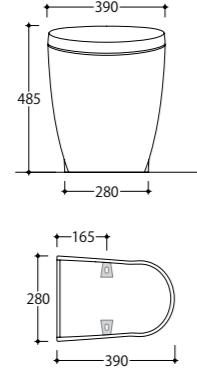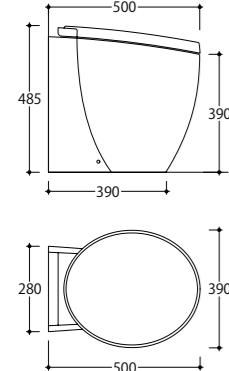
| COLOR (for wc & bidet) | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | standard and special | soft closing | | 12-24 v MAC11 | 230 v MAC11 | all in one | multiframe/argent/ touch/premium | solenoid brass | inlet pump |

# Breeze

- WC WEIGHT - 27 kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - smooth design
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer

- BIDET WEIGHT - 16 kg
- FEATURE - smooth design
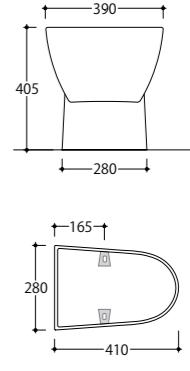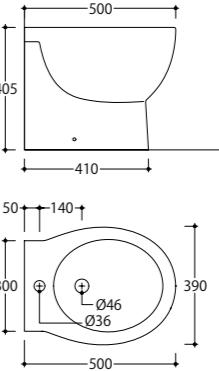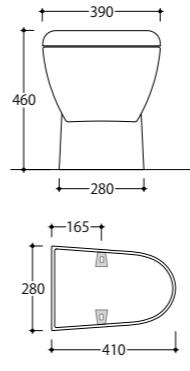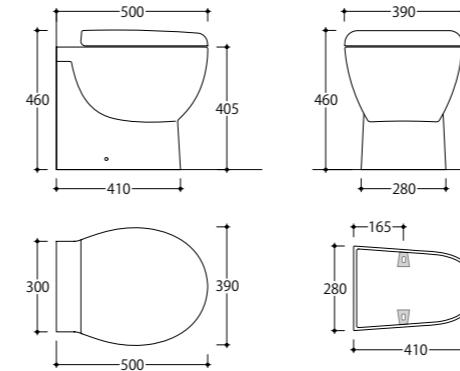
| COLOR (for wc & bidet) | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | pergamon | quick release soft closing | | 12-24 v MAC11 | 230 v MAC11 | all in one | multiframe/argent/ touch/premium | solenoid brass | inlet pump |

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# E-Breeze

- WC WEIGHT - 30 kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - smooth design
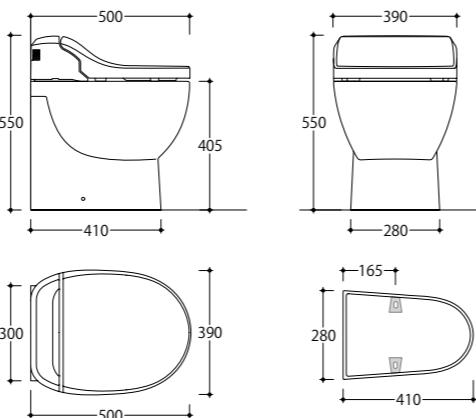
## ELECTRONIC BIDET TECHNICAL DETAILS

| Personalized controls | | Wireless Remote Control – Batteries (AAA x 3) |
|---|---|---|
| Power supply | | AC 220 ~ 240 V    50 Hz |
| Maximum power consumption | | 1160 ~ 1380 W |
| Tap water pressure | | 0.79 - 7.40 Atm |
| Heated seat | Temperature | Adjustable (3 levels) / 34 °C - 40 °C |
| | Safety device | Temp. fuse |
| | Power consumption | 55 ~ 65 W |
| Hygiene | Temperature | Adjustable (3 levels) / 34 °C - 40 °C |
| | Water spray | Adjustable (5 levels - max 1 l/min) |
| | Safety devices | Temp fuse / Thermal switch / Floating switch |
| | Power consumption | 1100 ~ 1309 W |
| Air dryer | Temperature | Adjustable (5 levels) |
| | Safety device | Temp. fuse |
| | Power consumption | 280 ~ 333 W |
| Electricity safety protection | | 15 mA - GFCI |
| Power cord lenght (mm) | | 1800 mm |
| N° of wands | | 2 |
| Degree of Protection: IP 24 | | |

Note:  For Macerator toilet details see Breeze model

## ELECTRONIC BIDET AND COMPONENTS

Nut (2pcs)
Water hose (120cm)
Elbow connector (2pcs 1/2")

T-valve(1/2")   T-valve(3/8")

Remote control      Bracket

Lid
Caution label
Deodorizing filter unit
Power cord
Nozzle for posterior
Nozzle for feminine
Extra operating panel
Far infrared ray typed warm dryer
Occupied sensor
Splash guard
Heated seat
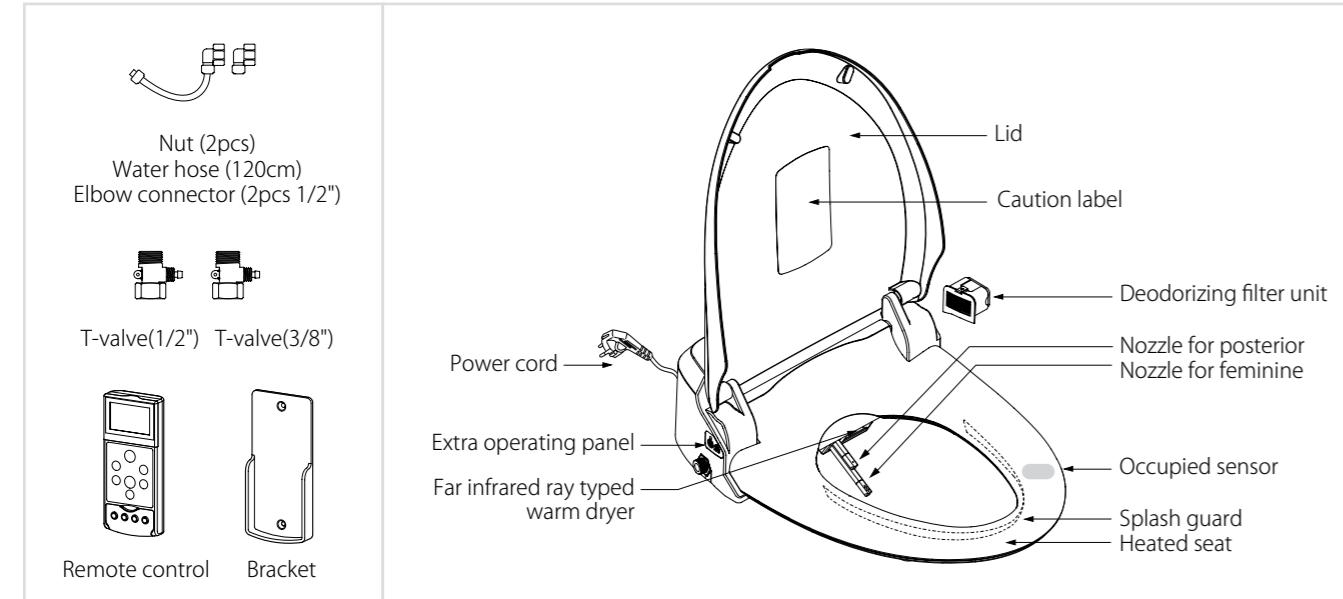
# Flexi range

## 50/100 ft

- ·· Silence Plus
- ·· Silence Plus short
- ·· Saninautico
- ·· Saninautico short
- ·· Elegance
- ·· Elegance cut
- ·· Elegance short
- ·· Elegance cut short
- ·· Prestige 45
- ·· Prestige 50
- ·· Bidet

# Silence Plus

- WC WEIGHT - 26,5 kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - big seat size
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer
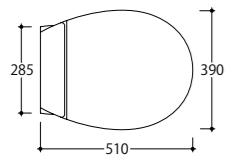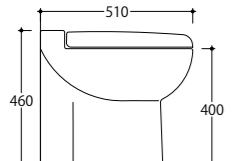
# Silence Plus Short

- WC WEIGHT - 24,5 kg
- WATER USAGE - 1,3 / 2,5 L
- FEATURE - big seat size
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer

| COLOR | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | pergamon / black | thermoset./ polyest. | soft closing / walnut | 12-24 v MAC11 | 230 v MAC11 | all in one | multiframe/argent/ touch/premium | solenoid brass | inlet pump |

# Saninautico

- WC WEIGHT - 23,5 Kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - medium seat size
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer
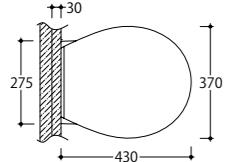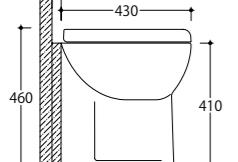
# Saninautico Short

- WC WEIGHT - 20 Kg
- WATER USAGE - 1,3 / 2,5 L
- FEATURE - medium seat size
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer

| COLOR | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | pergamon / black | thermoset./ polyest. | soft closing / walnut | 12-24 v MAC11 | 230 v MAC11 | all in one | multiframe/argent/ touch/premium | solenoid brass | inlet pump |

# Elegance

- WC WEIGHT - 23,5 kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - small seat size
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer

# Elegance Cut

- WC WEIGHT - 23 kg
- WATER USAGE - 1,3 / 2,5 L
- FEATURE - small seat size
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer

# Elegance Short

- WC WEIGHT - 20,5 kg
- WATER USAGE - 0,5 / 2.7 L
- FEATURE - small seat size
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer
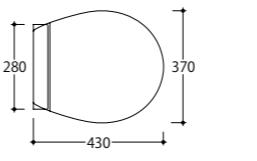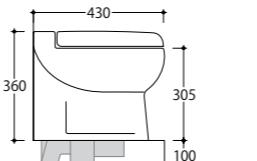
# Elegance Cut Short

- WC WEIGHT - 19,9 kg
- WATER USAGE - 0,5 / 2 L
- FEATURE - small seat size
- MATCHING BIDET - yes
- INTEGRATED BIDET - yes
  integrated mixer

| COLOR | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | pergamon / black | thermoset./ polyest. | soft closing / walnut | 12-24 v MAC11 | 230 v MAC11 | all in one | multiframe/argent/ touch/premium | solenoid brass | inlet pump |

*TECMA*

## Prestige 45

- WC WEIGHT - 22,5 kg
- WATER USAGE - 0,5 / 2 L
- FEATURE - home like
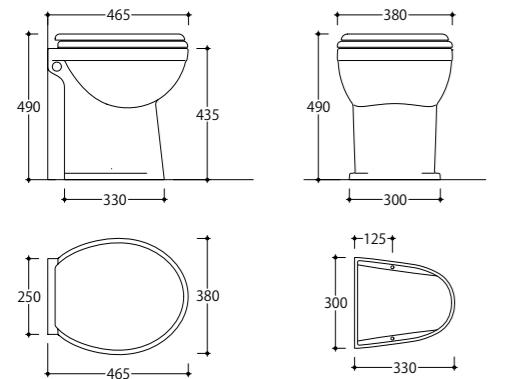
465
490
435
330
250
380
465

380
490
300
125
300
330

## Prestige 50

- WC WEIGHT - 26,8 kg
- WATER USAGE - 0,5 / 2 L
- FEATURE - home like

510
470
420
375
55
350
510

350
470
245
175
245
375

| COLOR | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | | polyester | | 12-24 v MAC11 | 230 v MAC11 | integrated push button | | solenoid | inlet pump |
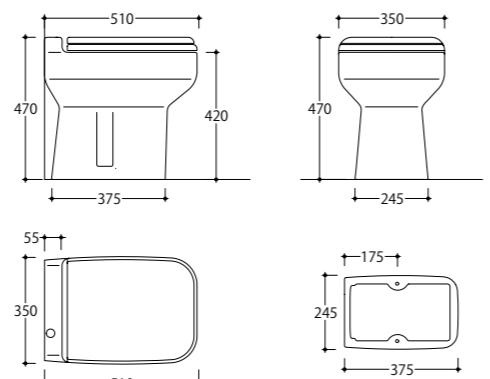
## Bidet Standard

- BIDET WEIGHT - 16,3 kg
- FEATURE - bidet for flexi range
- COLOR / STANDARD - white
- COLOR / OPTIONAL - pergamon

505
315
405
380

370
405
290

35
105
220
370
Ø32
Ø46
Ø36
505

200
130
290
380
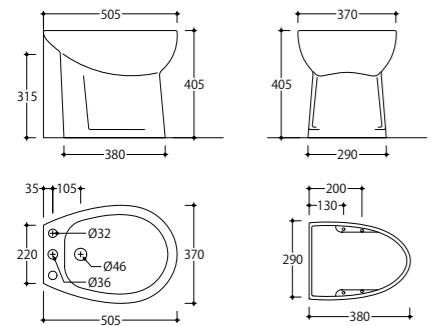
## Bidet Mini

- BIDET WEIGHT - 12,7 kg
- FEATURE - bidet for flexi range
- COLOR / STANDARD - white
- COLOR / OPTIONAL - pergamon

500
310
400
375

325
400
260

40
90
220
325
Ø32
Ø46
Ø37
500

170
120
260
375
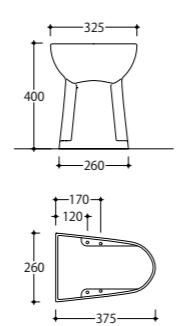
## Bidet Short

- BIDET WEIGHT - 12,7 kg
- FEATURE - bidet for flexi range
- COLOR / STANDARD - white
- COLOR / OPTIONAL - pergamon

450
225
300
350

330
300
275

35
90
200
330
Ø32
Ø46
Ø36
450

120
275
350
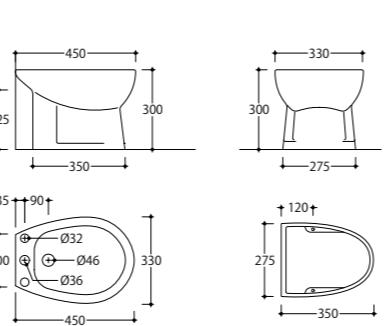
# Compact & Portable range

**30/50 ft**

·· Compass
·· Compass short
·· Easy Fit
·· Easy Fit short
·· Comfortmate

**< 30 ft**

·· Porta Potti Excellence
·· Porta Potti Qube 365
·· Porta Potti Qube 335

# Compass



- WC WEIGHT - 21,5 kg
- WATER USAGE - 0,5 / 2 L
- FEATURE - compact versatile



| COLOR | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | pergamon | soft closing | | 12-24 v MAC4 | | eco | premium / premiumplus | solenoid | inlet pump |
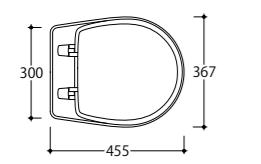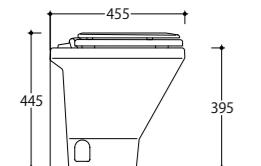
# Compass Short



- WC WEIGHT - 19,5 kg
- WATER USAGE - 0,5 / 2 L
- FEATURE - compact versatile



# Comfortmate



- WC WEIGHT - 11,1 Kg
- WATER USAGE - 0,5 / 2 L
- FEATURE - manual
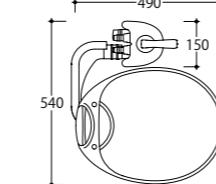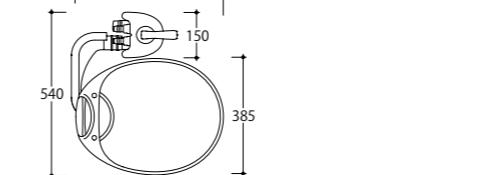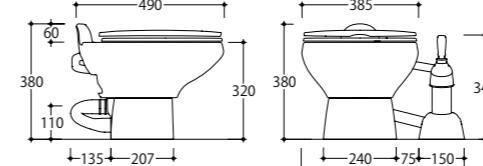


| COLOR | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | | plyester | | MANUAL | | | | | |

# Easyfit



- WC WEIGHT - 21,5 Kg
- WATER USAGE - 0,5 / 2 L
- FEATURE - compact
- MATCHING BIDET -
- INTEGRATED BIDET -



| COLOR | | SEAT AND COVER | | OUTLET PUMP | | CONTROL PANEL | | INLET DEVICE | |
|---|---|---|---|---|---|---|---|---|---|
| standard | optional | standard | optional | standard | optional | standard | optional | standard | optional |
| white | pergamon | polyester | | 12-24 v MAC4 | | eco | premium / premiumplus | solenoid | inlet pump |

# Easyfit Short



- WC WEIGHT - 19,5 Kg
- WATER USAGE - 0,5 / 2 L
- FEATURE - compact
- MATCHING BIDET -
- INTEGRATED BIDET -



# Portable range

## Porta Potti Excellence



- BIDET WEIGHT - 5,3 kg
- FEATURE - chemical
- H448 x W388 x D450 mm

## Porta Potti Qube 365



- BIDET WEIGHT - 4 kg
- FEATURE - chemical
- H430 x W390 x D435 mm

## Porta Potti Qube 335



- BIDET WEIGHT - 3,3 kg
- FEATURE - chemical
- H 327 x W350 x D390

TECMA

# Sanisplit NK





175

470

175    45

270

60
60
90

OUTLET* →
INLET 1* →
INLET 2* ←

* female connections for DN40 pipe
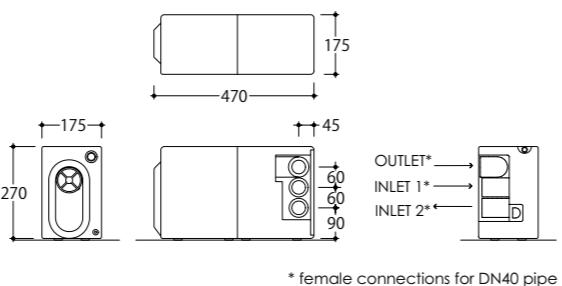
The Sanisplit is an automatic pumping unit which transfers water from the bidet to the collection tank irrespective of gradient so also serves showers and washbasins. The Sanisplit has a powerful and silent centrifugal pump. It is controlled by a pressure switch which starts the pump as soon as the water arrives in the unit's collection tank.

The removable part of the Sanisplit containing the pump and the pressure switch can be rapidly disengaged from the fixed part with collection tank which makes maintenance quick and clean.  A one-way valve prevents the pumped water from returning to the unit.

| SANISPLIT NK | |
| --- | --- |
| Power | Power 12V - 24V - 230V |
| Box material | Plastic |
| Color | White |
| Weight | 8.0 Kg (fully assembled) |

| OUTLET PUMP - MACERATOR TURBINE | 12 V dc | 24 V dc | 230 V ac |
| --- | --- | --- | --- |
| Power consumption | 40 A | 30A | 5A |
| Pump performance | Max 270 l/min - Max vertical head 11mt - Max horizontal distance 90 mt | | |

| OPTIONAL (REMARKS) | |
| --- | --- |
| Features | · Patented SPLIT system: the motor pump can be easily replaced or dismounted without disconnecting the hoses connection.<br>· No submergible (IP55)<br>· Max grey water temperature 100 °C |
| Mounting location | · At least 20 cm of pressure head is required to activate the pressure switch<br>· Install Sanisplit 20 cm below lower edge of shower tray.<br>· Consider 1 Sanisplit for max: 1 sink + 1 bidet + 1 shower |

### MINIMAL HEIGHT REQUIREMENTS



shower tray

to water inlet 2

200

200 mm minimum height from shower tray lowest edge
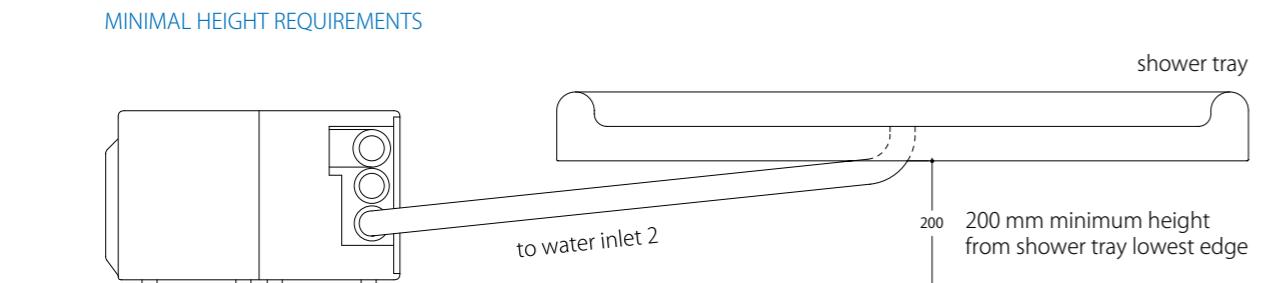
# Accessories and components

| PRODUCT PHOTO | CODE | DESCRIPTION |
| --- | --- | --- |
|  | T-PF.P08 | **INLET VENTILATION VALVE**<br>Siphon break - Hose fitting 3/4 " male |
|  | T-PF.P04 | **OUTLET VENTILATION VALVE**<br>Siphon break - Hose fitting ½" female |
|  | T-PF.P07 | **SINGLE PNEUMATIC TANK SENSOR** |
|  | T-PF.PE81 | **INDUCTIVE FULL TANK SENSOR**<br>Design & Flexi Range |
|  | T-PF.PE82 | **INDUCTIVE MID TANK SENSOR**<br>Design & Flexi Range |
|  | T-PF.PE18 | **INDUCTIVE FULL TANK SENSOR**<br>Compact Range |
|  | T-PF.PE19 | **INDUCTIVE MID TANK SENSOR**<br>Compact Range |
|  | T-PF.P30 | **CLAPET ONE WAY VALVE** |
|  | T-PF.755 | **PRESSURE REGULATOR** |
|  | T-PF.756 | **SHOCK ABSORBER** |
|  | T-PF.P36 | **LEVEL SENSOR 12 V / 24 V**<br>Used  in combination with SANISPLIT NK to monitor eventual overfill of the system.<br>• To be installed directly on the system hoses<br>• Decide mounting location according with system layout<br>• T-connection for DN 40 hoses |

# Single installation

## • Plumbing

**INLET PUMP**

**CLEAN WATER**

**WC**

**WASTE WATER**

**TANK**

## • Wiring

brown

black

**WC**

black

black

red

blue

**STANDARD PANEL**

**INLET PUMP**

red

black

black

gray

**TANK SENSOR (optional)**

+ −
power supply
(fused)
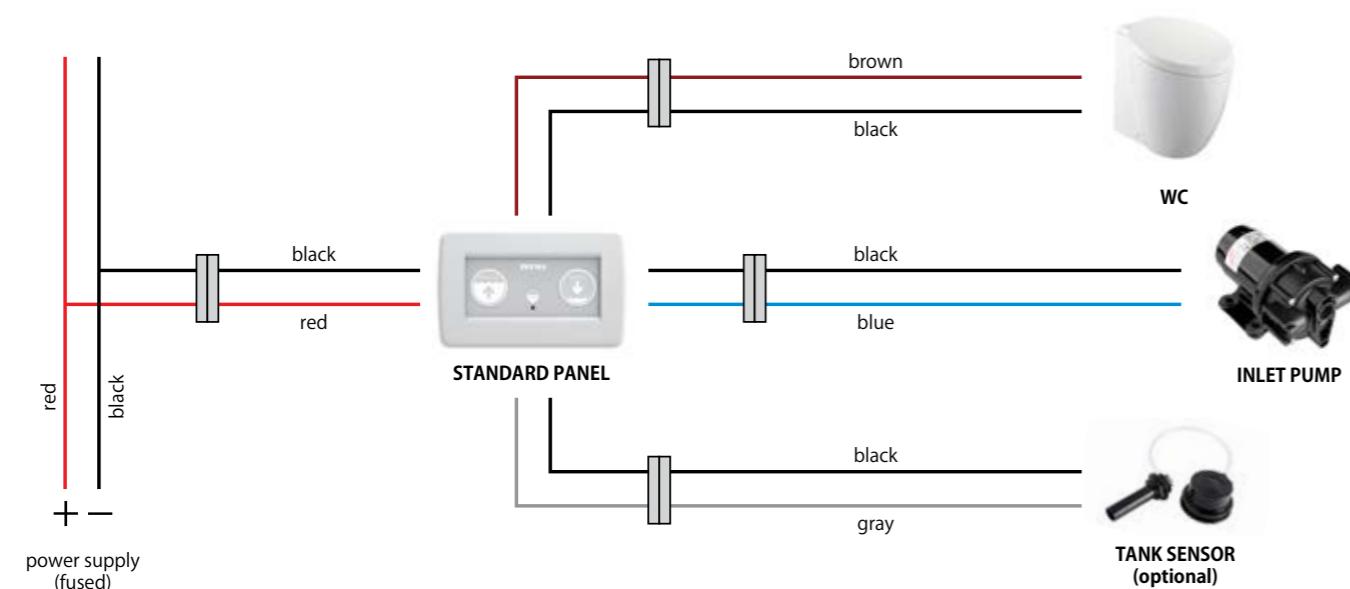
## • When is a siphon break needed?

**Must have** with below water line installation
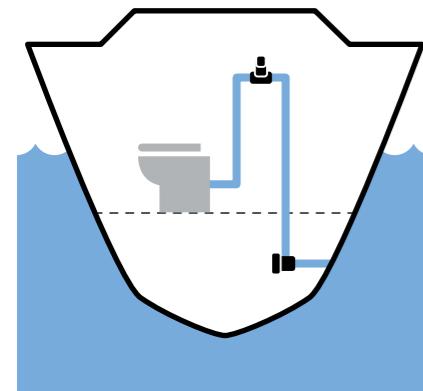
**Must have** for sailing boats
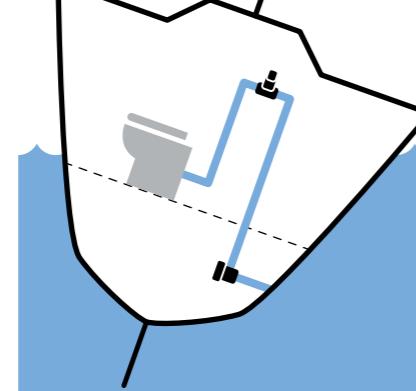
**Reccomended:** multiple connection and long runs of collector hose
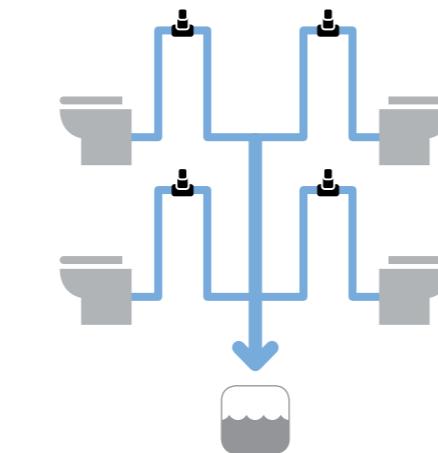
# Centralized installation - raw water

## • Raw water plumbing

**INLET PUMP**

**SOLENOID**

**WC**

**SOLENOID**

**WC**

**TANK**

## • Raw water wiring

brown

black

**WC**

black

black

blue

**RELAY** *

**STANDARD PANEL**

blue

**SOLENOID**

black

black        gray

black

gray

**TANK SENSOR (optional)**

**INLET PUMP** *

red

black

black

blue

**RELAY** *

**STANDARD PANEL**

blue

**SOLENOID**

black

brown

red

black

black

red

+ −
power supply
(fused)

**WC**

* not provided

− +
power supply
(fused)

TECMA
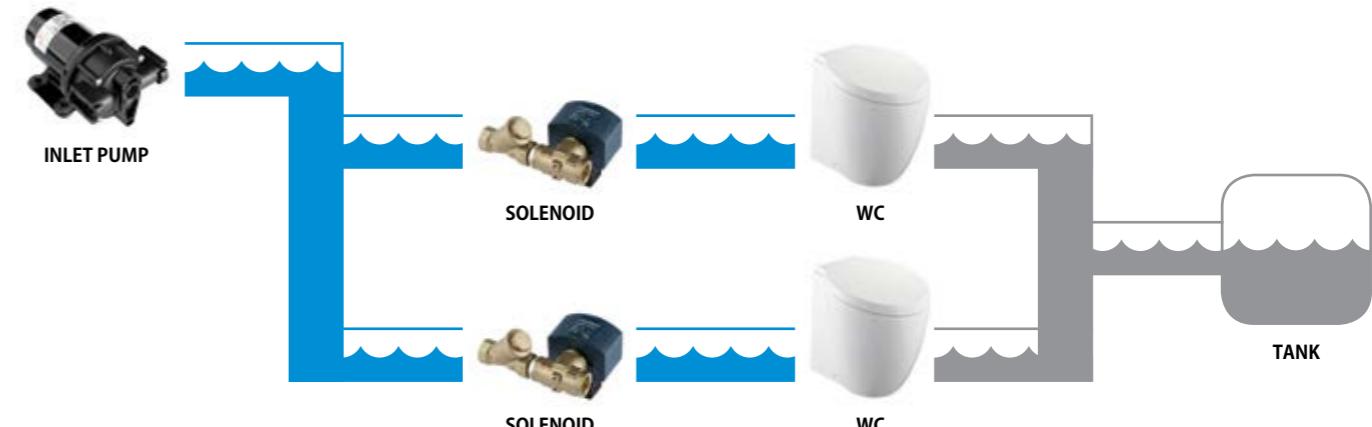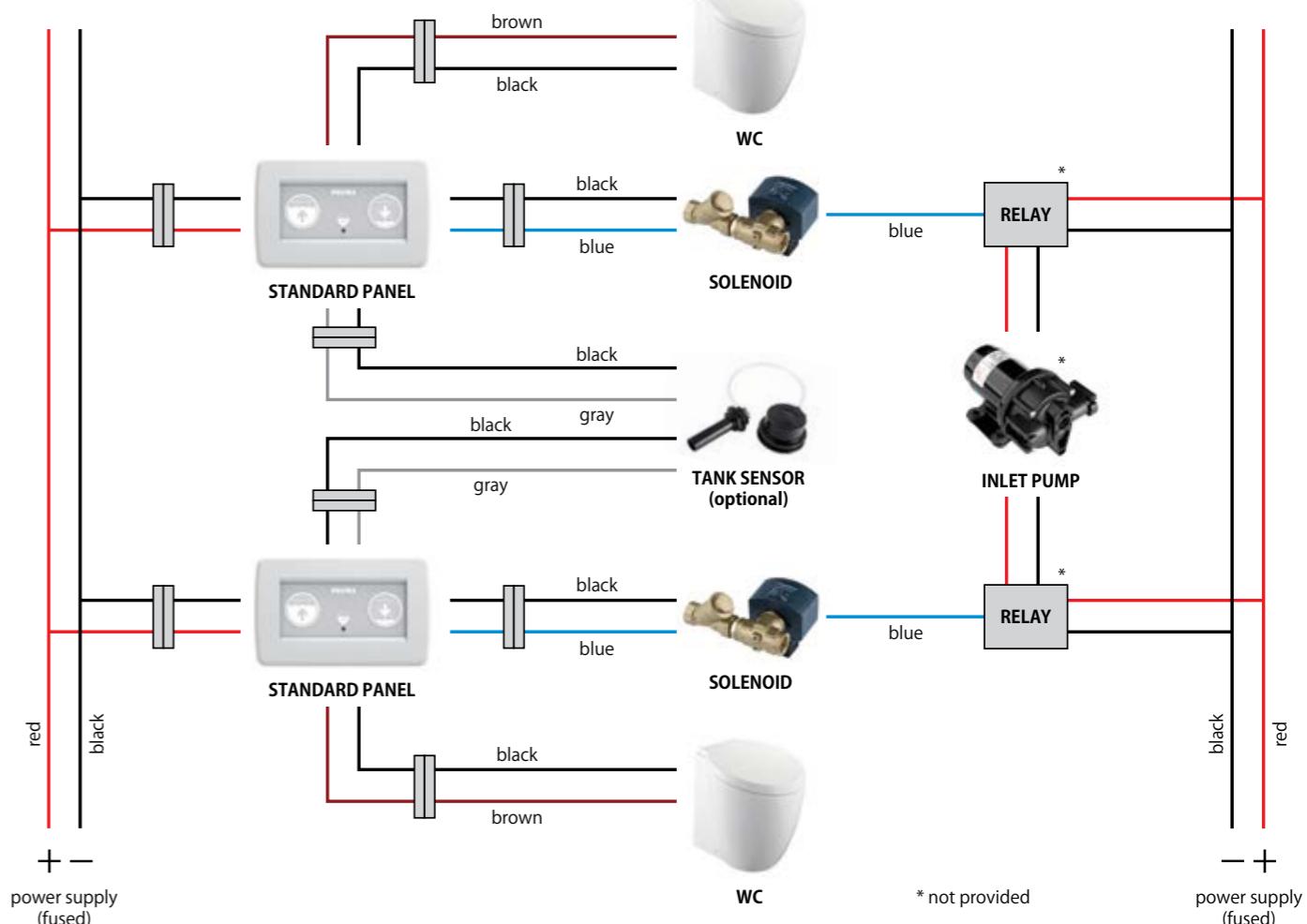
# Centralized installation - fresh water

## • Fresh water plumbing

**CENTRAL PRESSURE PUMP SYSTEM (3 BAR)\***

**SOLENOID**

**WC**

**SOLENOID**

**WC**

**TANK**

· Sinks    · Bidets
· Showers  · others...

\* recommended working pressure 3 bar
  optional shock absorber or pressure regulator are available
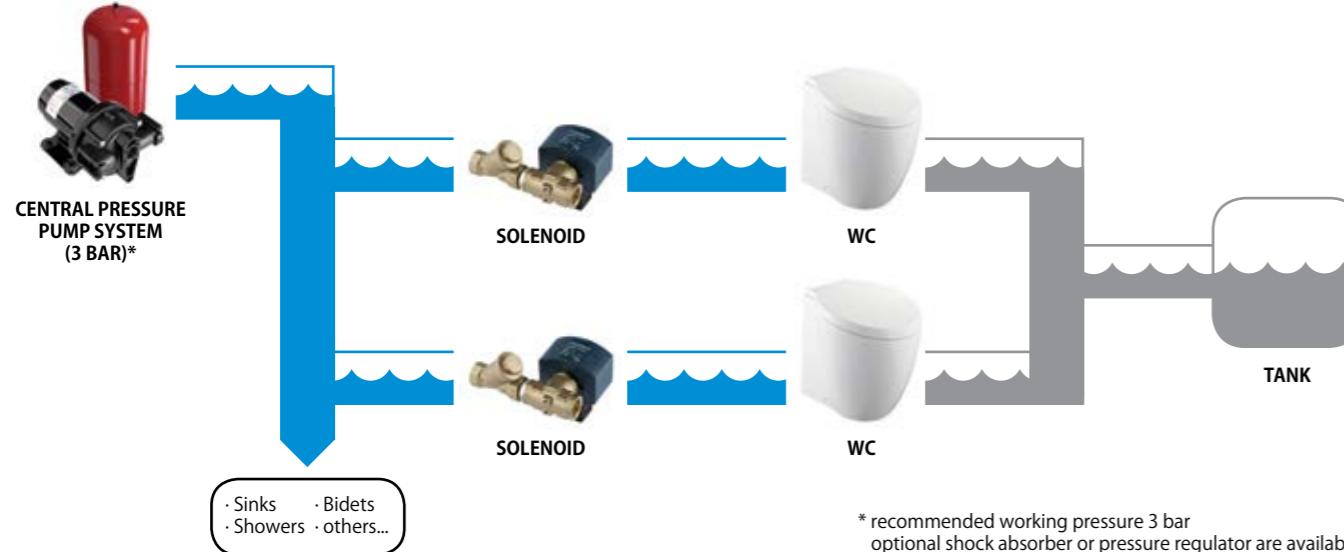
## • Fresh water wiring - Standard panel

brown

black

**WC**

black

red

**STANDARD PANEL**

black

blue

**SOLENOID**

black

black    gray

gray

**TANK SENSOR (optional)**

black

red

**STANDARD PANEL**

black

blue

**SOLENOID**

black

brown

**WC**

red

black

power supply
(fused)
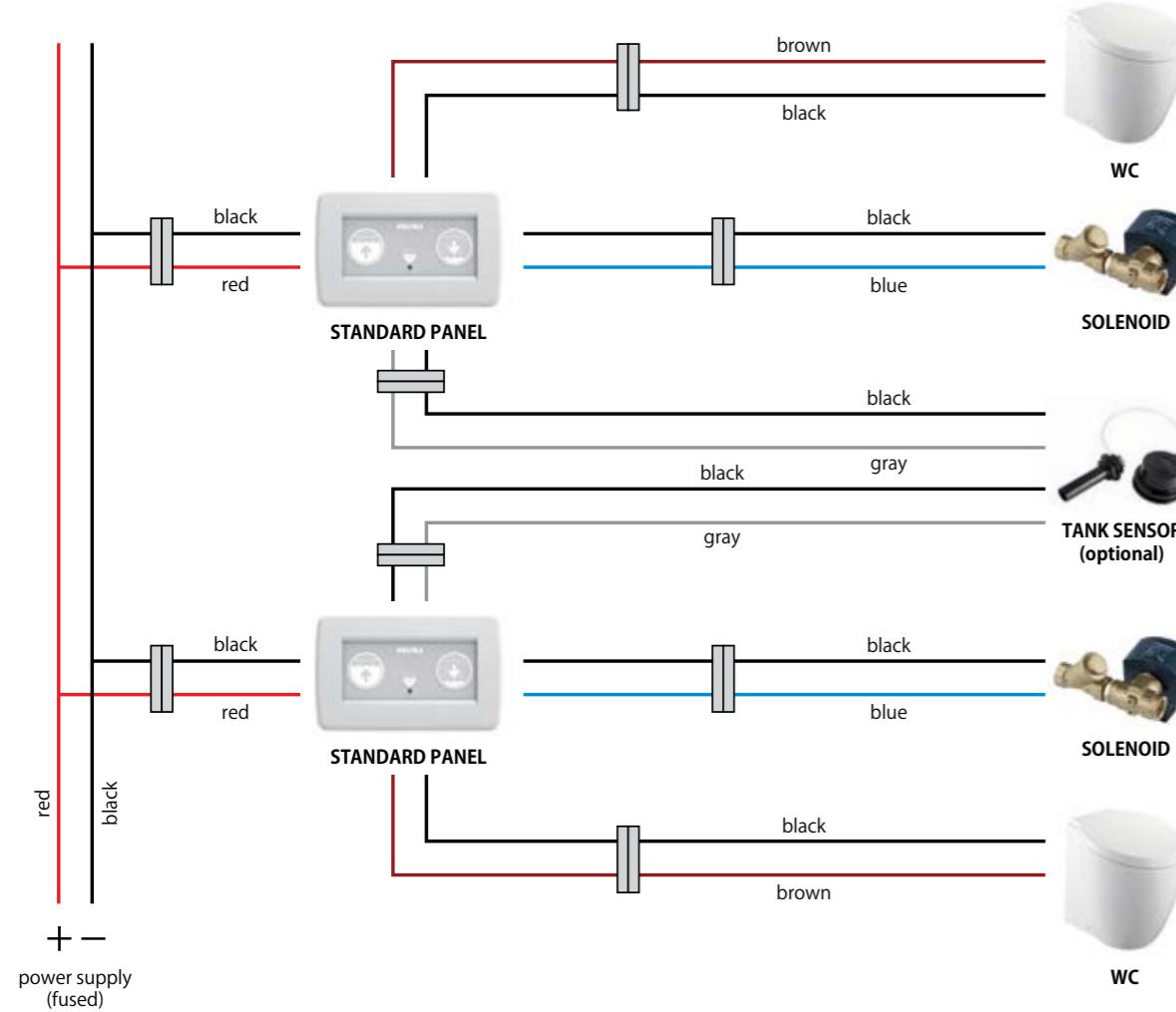
## • Fresh water wiring - Multiframe / Argent / Touch panels

**MULTIFRAME/ARGENT/ TOUCH PANEL**

gray 3 mt

brown

black

**WC**

black

red

**STANDARD CONTROLLER**

black

blue

**SOLENOID**

black

black    gray

gray

**TANK SENSOR**

black

red

**STANDARD CONTROLLER**

black

blue

**SOLENOID**

gray 3 mt

black

brown

**WC**

red

black

power supply
(fused)

**MULTIFRAME/ARGENT/ TOUCH PANEL**

**TECMA**
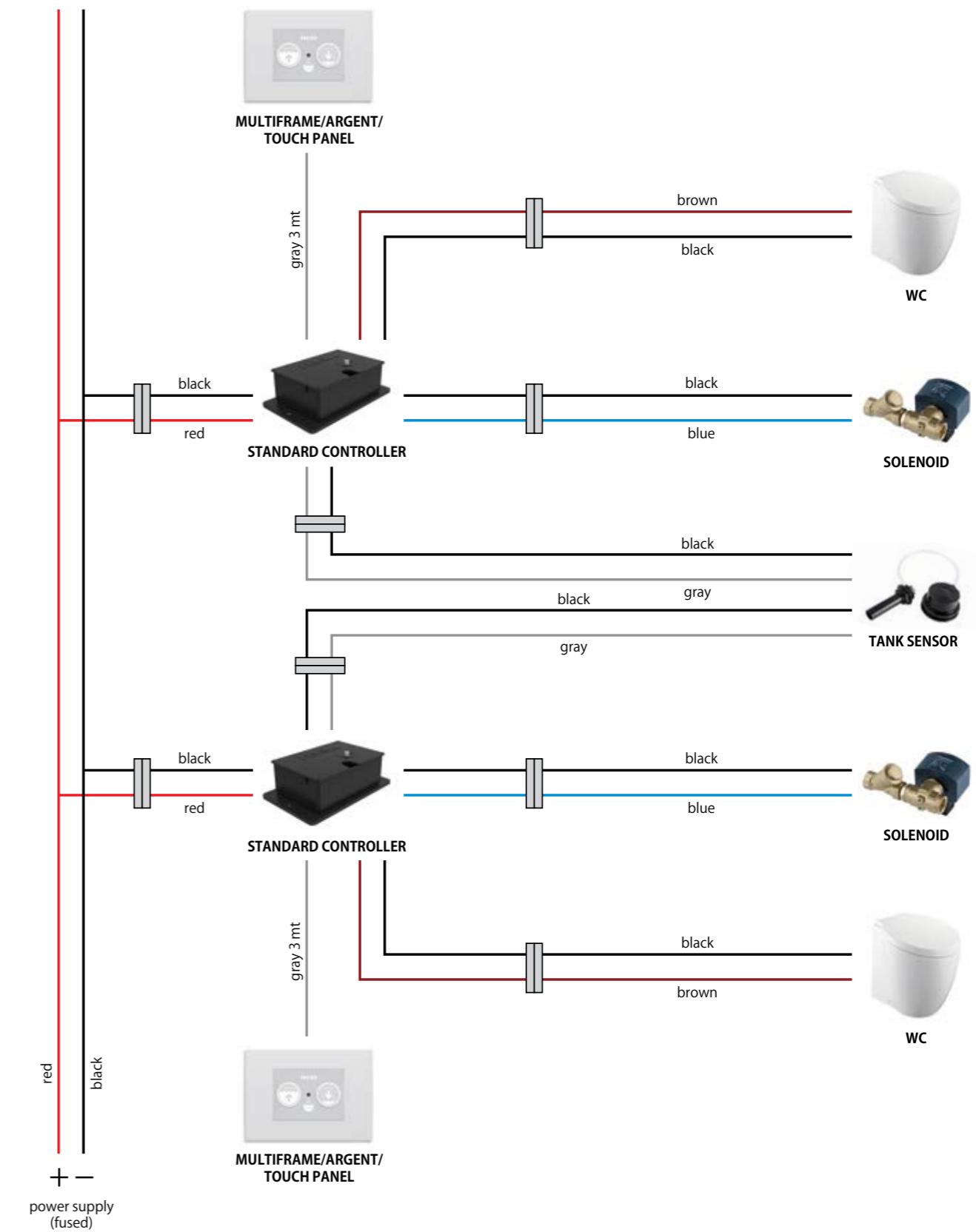
# Centralized installation - fresh water

## • Fresh water wiring - Premium panel
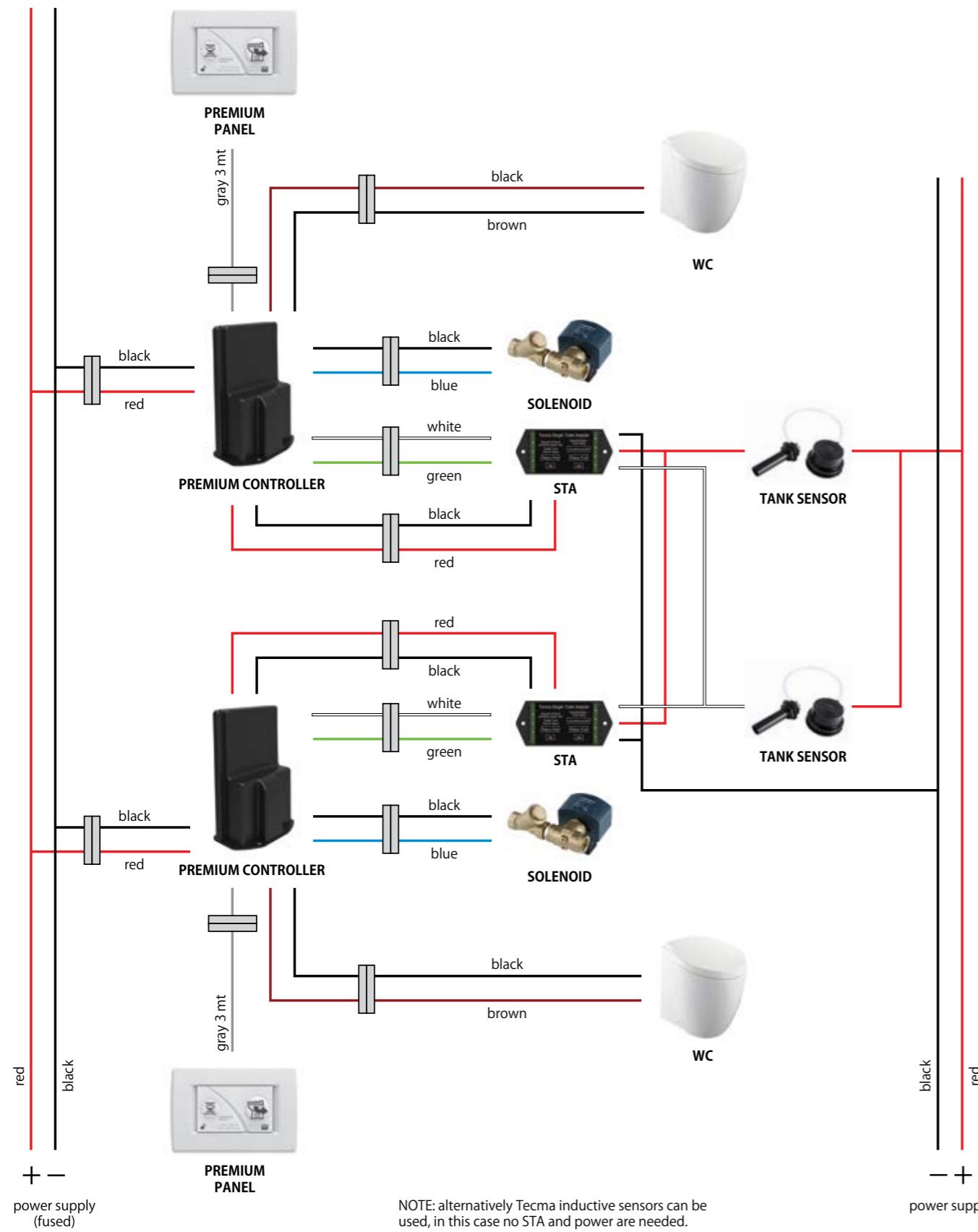
## • Fresh water wiring - Premium Touch panel

**PREMIUM PANEL**

gray 3 mt

black

red

**PREMIUM CONTROLLER**

black

brown

**WC**

black

blue

**SOLENOID**

white

green

**STA**

black

red

**TANK SENSOR**

red

black

white

green

**STA**

black

**TANK SENSOR**

black

blue

**SOLENOID**

**PREMIUM CONTROLLER**

black

red

gray 3 mt

black

brown

**WC**

red

black

black

red

+ −

power supply
(fused)

**PREMIUM PANEL**

power supply

---

**PREMIUM TOUCH PANEL**

black 3 mt

fuse 3A

black

brown

**WC**

black

blue

**SOLENOID**

**PREMIUM CONTROLLER**

white

green

**STA**

black

red

**TANK SENSOR**

red

black

white

green

**STA**

**TANK SENSOR**

black

blue

**SOLENOID**

**PREMIUM CONTROLLER**

fuse 3A

black 3 mt

black

brown

**WC**

red

black

black

red

red

black

+ −

power supply
(fused)

**PREMIUM TOUCH PANEL**

− +

power supply

NOTE: alternatively Tecma inductive sensors can be used, in this case no STA and power are needed.

NOTE: alternatively Tecma inductive sensors can be used, in this case no STA and power are needed.

*TECMA*

# Illustration of 230 V single installation

For centralized systems or other type of control panels the low voltage connections have the same arrangements of 12/24 volts systems

**SOLENOID 230 V**

red

black

white

**SHUCKO PLUG**

**WC 230 V**

red

black

black

brown

black

blue

**STANDARD PANEL**

**TANK SENSOR**

LOW VOLTAGE (Transformer is built in the system)

red

black

**+ −**
230 V
power supply
(fused)
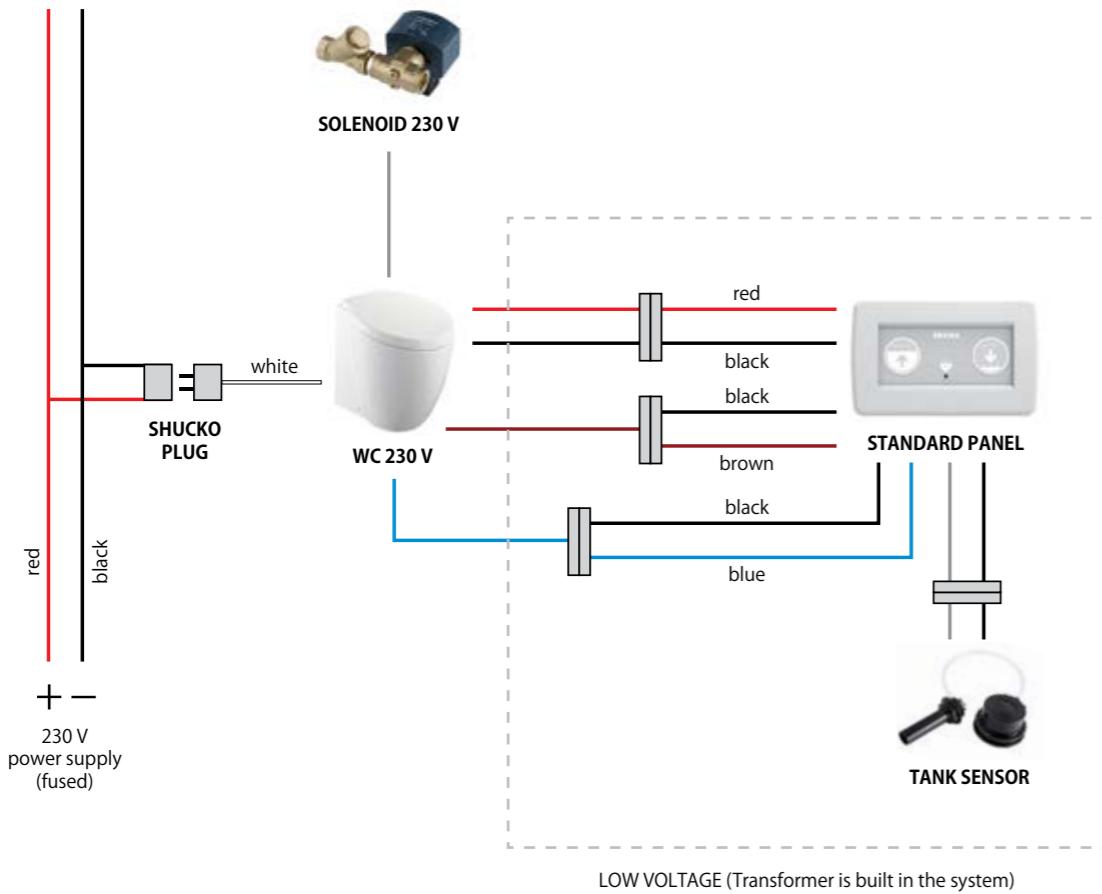
# Compact range wiring

## • Eco
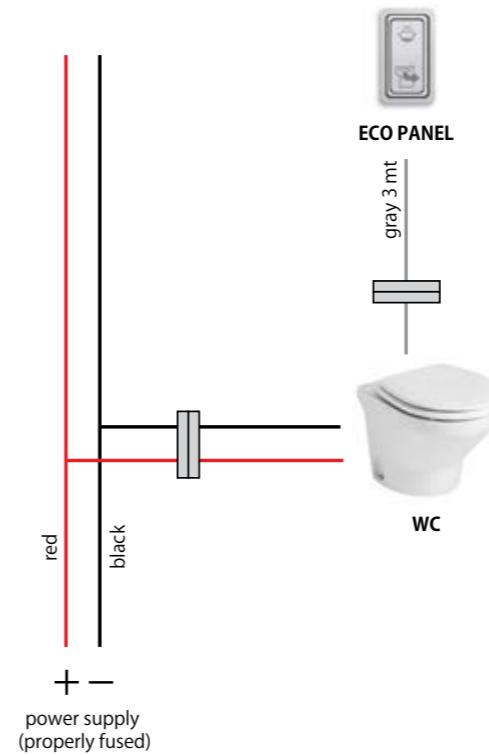
**ECO PANEL**

gray 3 mt

red

black

**WC**

**+ −**
power supply
(properly fused)

## • Premium

**PREMIUM PANEL**

gray 3 mt

red

black

**WC**

**+ −**
power supply
(properly fused)

## • Premium Plus

**PREMIUM PLUS PANEL**

gray 3 mt

red

black

**WC**

black

red

*

**FULL TANK SENSOR**

green

white

**

**MID TANK SENSOR**

**+ −**
power supply
(properly fused)

* **Must** always be installed, any connection failure will affect the correct functioning of the system

** Optional

TECMA
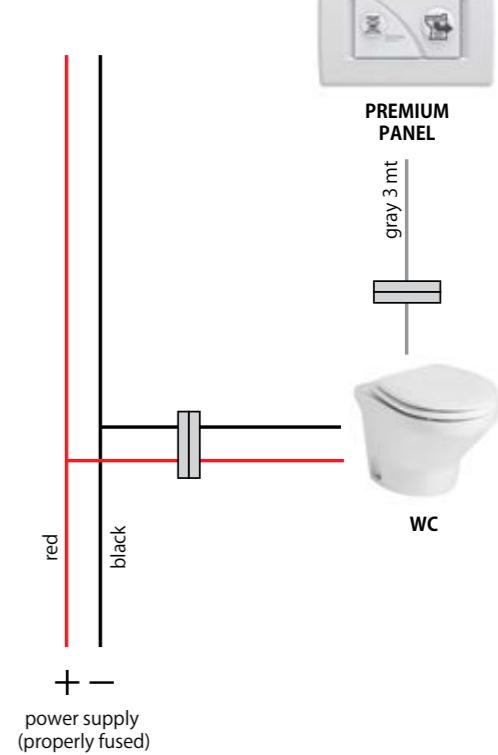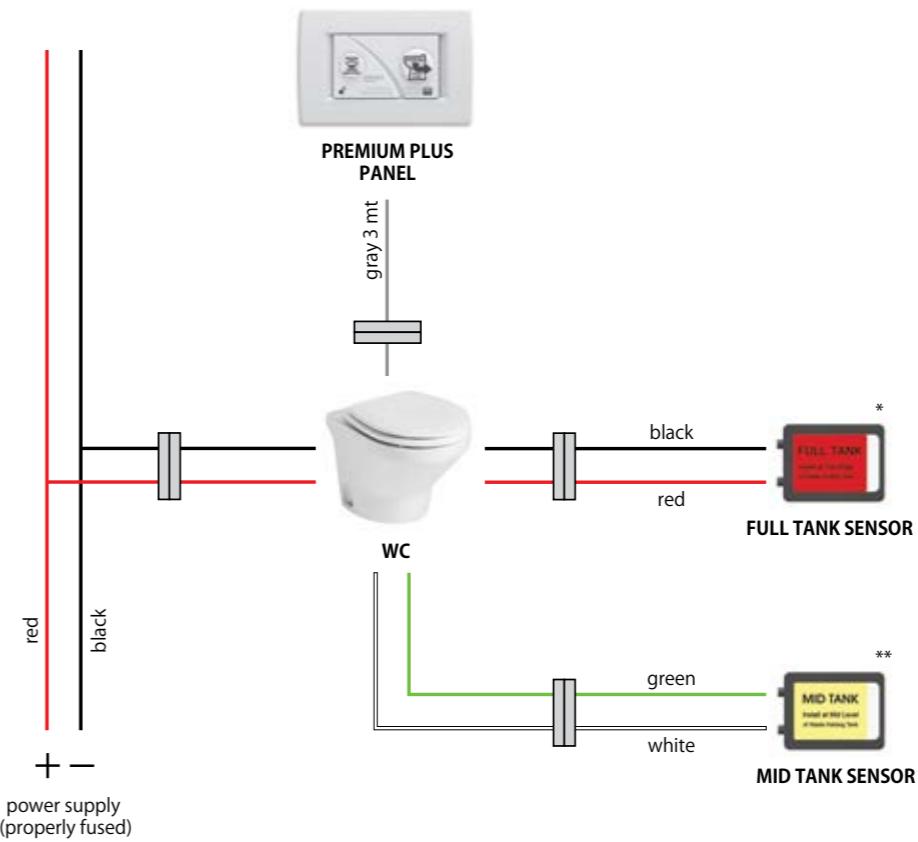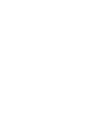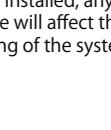
# Design & Flexi range spares



L - lenght of the cover     profile view of **thermosetting**     profile view of **polyester**

T-PF.P50
T-PF.P29/A   T-PF.P13/A
T-PF.P30
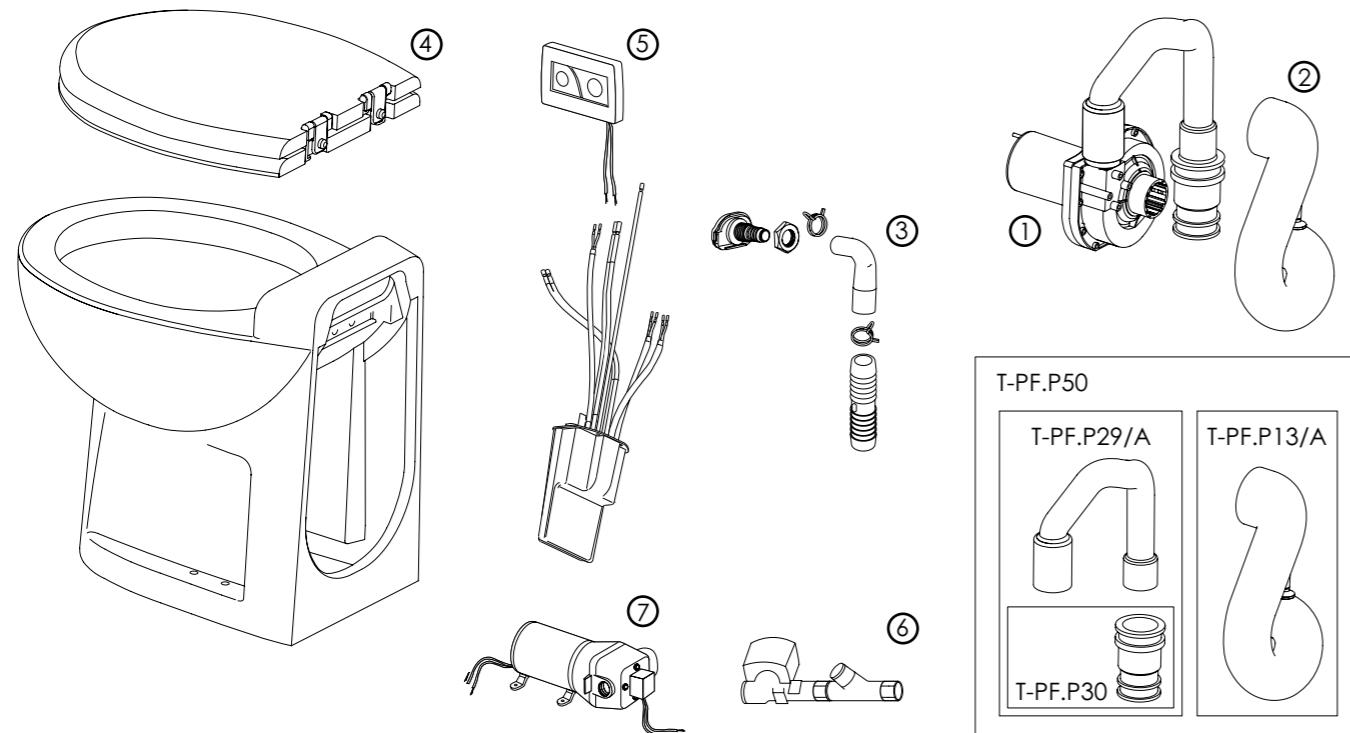
| | | | |
|---|---|---|---|
| 1 | T-PF.P01A | 12 V | MACERATOR PUMP MAC 11 |
| 1 | T-PF.P01B | 24 V | MACERATOR PUMP MAC 11 |
| 1 | T-PF.P64 | 230 V | MACERATOR PUMP MAC 11 |
| 2 | T-PF.P29/A | | DISCHARGE HOSE WITH ONE WAY VALVE |
| 2 | T- PF.P30 | | ONE WAY VALVE |
| 2 | T- PF.P13/A | | STANDARD SIPHONE HOSE |
| 2 | T-PF.P50 | | COMPLETE RUBBER KIT ( TPF.P29/A + t-PF.P13/A) |
| 3 | T-PF.P03/B | | INLET NOZZLE WHITE |
| 3 | T.PF.P03/P | | INLET NOZZLE PERGAMON |
| 3 | T.PF.P03/N | | INLET NOZZLE BLACK |
| 3 | T-PF.P03B/B | | INLET NOZZLE WHITE WITH BIDET SHOWER FUNCTION |
| 3 | T.PF.P03B/P | | INLET NOZZLE PERGAMON WITH BIDET SHOWER FUNCTION |
| 3 | T.PF.P03B/N | | INLET NOZZLE BLACK WITH BIDET SHOWER FUNCTION |
| 5 | T- PF.P11/B | | STANDARD ALL IN ONE 1 BUTTON CONTROL PANEL |
| 5 | T- PF.P11 | | STANDARD ALL IN ONE 2 BUTTONS CONTROL PANEL |
| 5 | T-PF.P11T/T | | PREMIUM  CONTROL PANEL KIT (WALL SWITCH + CONTROLLER + STA) |
| 5 | ON REQUEST | | PREMIUM  CONTROL PANEL KIT  (WALL SWITCH WITH CUSTOM LOGO + CONTROLLER + STA) |
| 5 | T-PF.PE20 | | STA – SINGLE TOILET ADAPTER |
| 6 | T -PF.P14 | 12 V | DIRECT ACTING SOLENOID BRASS |
| 6 | T-PF.P15 | 24 V | DIRECT ACTING SOLENOID BRASS |
| 6 | T-PF.P12 | 230 V | DIRECT ACTING SOLENOID BRASS |
| 6 | T -PF.P14/B | 12 V | PILOT OPERATED SOLENOID BRASS |
| 6 | T- PF.P15/B | 24 V | PILOT OPERATED SOLENOID BRASS |
| 6 | T- PF.P12/B | 230 V | PILOT OPERATED SOLENOID BRASS |
| 7 | T-PF.P27 | 12 V | INLET PUMP |
| 7 | T-PF.P28 | 24 V | INLET PUMP |
| | T-PF.P49 | 12/24 V | PRESTIGE PROGRAMMER |
| | T-PF.P26 | 230 V | PRESTIGE PROGRAMMER |
| | T-PF.P54 | | PRESTIGE RUBBER KIT |
| | T-PF.P56 | | PRESTIGE GENERAL REPARATION KIT |

### 4 - X -LIGHT

| CARBON | PAINTED | | | |
|---|---|---|---|---|
| T-475 | T-684 | | | CARBON FIBRE SEAT AND COVER |

### 4 - PRIVILEGE - L = 48 cm

| WHITE | BONE | BLACK | | |
|---|---|---|---|---|
| T-623 | T-623P | T-623N | | THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |

### 4 - EVOLUTION - L = 39 cm

| WHITE | BONE | | |
|---|---|---|---|
| T-051TBFR | T-051TPFR | | THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |
| T-597/F | | | HINGES EVOLUTION FOR THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |

### 4 - BREEZE - L = 42 cm

| WHITE | | |
|---|---|---|
| T-278TBFR/CN | | THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM AND FAST REMOVING HINGES |
| T-630/B | | HINGES BREEZE FOR THERMOSETTING SEAT AND COVER WITH SOFT CLOSING AND FAST REMOVING HINGES |

### 4 - SILENCE PLUS - L = 41.5 cm

| WHITE | BONE | BLACK | | |
|---|---|---|---|---|
| T-278 | T-278C | T-278N | | POLYESTER SEAT AND COVER |
| | | | T-278L | WOOD SEAT AND COVER – WALNUT FINISHING |
| T-278TB | T-278TP | | | THERMOSETTING SEAT AND COVER |
| T-278TBFR | T-278TPFR | | | THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |
| T-596 | | | | HINGES SILENCEPLUS FOR POLYESTER SEAT AND COVER |
| T-630 | | | | HINGES SILENCEPLUS  FOR  THERMOSETTING SEAT AND COVER |
| T-630/F | | | | HINGES SILENCEPLUS FOR THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |

### 4 - SANINAUTICO - L = 39 cm

| WHITE | BONE | BLACK | |
|---|---|---|---|
| T-051 | T-051C | T-051N | POLYESTER SEAT AND COVER |
| T-051TB | T-051TP | | THERMOSETTING SEAT AND COVER |
| T-051TBFR | T-051TPFR | | THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |
| T-595 | | | HINGES ELEGANCE FOR POLYESTER SEAT AND COVER |
| T-597 | | | HINGES ELEGANCE FOR  THERMOSETTING SEAT AND COVER |
| T-597/F | | | HINGES ELEGANCE FOR THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |

### 4 - ELEGANCE - L = 35 cm

| WHITE | BONE | BLACK | | |
|---|---|---|---|---|
| T-236 | T-236C | T-236N | | POLYESTER SEAT AND COVER |
| | | | T-236L | WOOD SEAT AND COVER – WALNUT FINISHING |
| T-236TB | T-236TP | | | THERMOSETTING SEAT AND COVER |
| T-236TBFR | T-236TPFR | | | THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |
| T-596 | | | | HINGES ELEGANCE FOR POLYESTER SEAT AND COVER |
| T-630 | | | | HINGES ELEGANCE FOR THERMOSETTING SEAT AND COVER |
| T-630/F | | | | HINGES ELEGANCE FOR THERMOSETTING SEAT AND COVER WITH SOFT CLOSING SYSTEM |

### 4 - PRESTIGE 50 - L = 46 cm

| WHITE | BONE | |
|---|---|---|
| T-153 | T-153B | POLYESTER SEAT AND COVER |
| T-632 | | HINGES POLYESTER FOR PRESTIGE 50 SEAT AND COVER |

### 4 - PRESTIGE 45 / PRESTIGE 56 * - L = 42 cm

| WHITE | BONE | |
|---|---|---|
| T-154 | T-154B | POLYESTER SEAT AND COVER |
| T-103 | | HINGES POLYESTER FOR PRESTIGE 56 SEAT AND COVER |

* Order this spares  for old Evolution model  (before 2010)

# Compact range spares
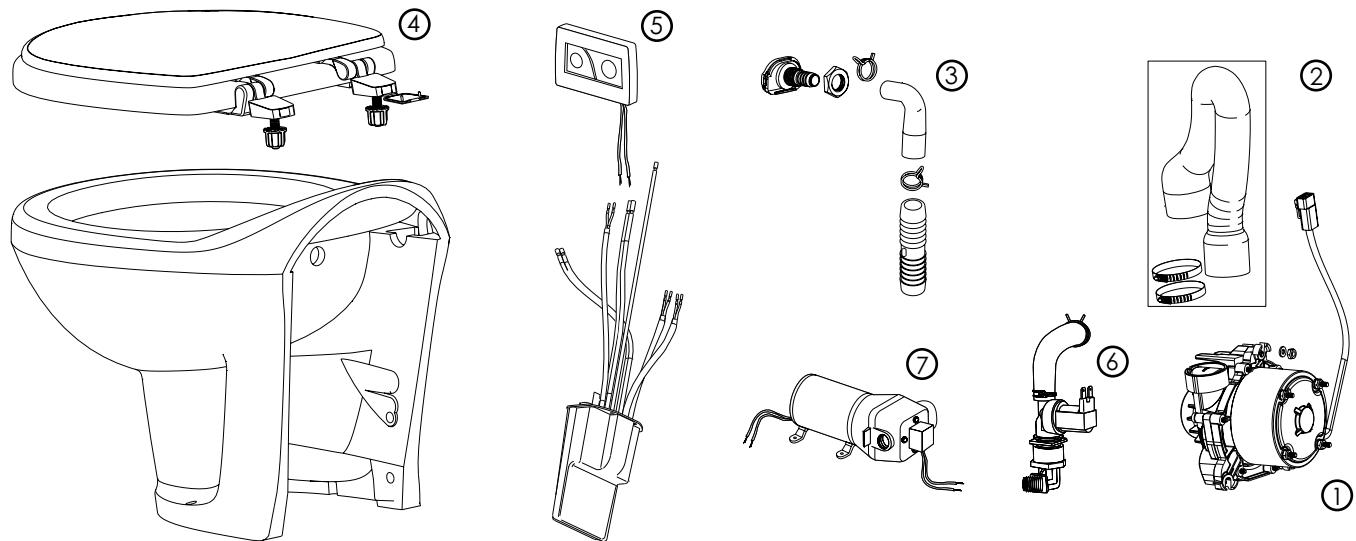


| 1 | T-PF.PE09 | 12 V | MACERATOR PUMP MAC4 |
|---|---|---|---|
| 1 | T-PF.PE10 | 24 V | MACERATOR PUMP MAC4 |
| 2 | T-PF.PE08 | | DISCHARGE TUBE KIT |
| 2 | T-PF.PE15 | | GROMMET KIT |
| 3 | T-PF.P03/B | | WHITE WATER INLET NOZZLE |
| 3 | T-PF.P03/P | | PERGAMON WATER INLET NOZZLE |
| 5 | T-PF.PE13 | | WALL SWITCH PREMIUM PLUS |
| 5 | T-PF.PE07 | | CONTROLLER |
| 5 | T-PF.PE01 | | WALL SWITCH FRAME - BONE |
| 5 | T-PF.PE02 | | WALL SWITCH FRAME - BLACK |
| 5 | T-PF.PE22 | | ECO CONTROL PANEL KIT (SOLENOID+HARNESS + ROCKER SWITCH) |
| 6 | T-614 | 12 V | SOLENOID |
| 6 | T-615 | 24 V | SOLENOID |
| 7 | T-PF.P27 | 12 V | WATER INLET PUMP |
| 7 | T-PF.P28 | 24 V | WATER INLET PUMP |
| | T-PF.PE18 | | FULL TANK INDUCTIVE SENSOR |
| | T-PF.PE19 | | MID TANK INDUCTIVE SENSOR |

| | **EASY FIT** | | |
|---|---|---|---|
| | WHITE | BONE | |
| 4 | T-PF.PE03 | T-PF.PE04 | SEAT AND COVER REPLACING KIT |

# Sanisplit NK spares



| T-PF.SPLITFAS12V | FAS MOTOR NK 12V |
|---|---|
| T-PF.SPLITFAS24V | FAS MOTOR NK 24V |
| T-PF.SPLITFAS230V | FAS MOTOR NK 230V |
| T-PF.P58/NK | FIX PART / WATER INLET - OUTLET |