



Pumps for Vegetable Oil



Unit with impeller pump NIROSTAR 2000-D and optional pedestal



Unit with side channel pump EP 40 Niro

■ Features

- dry self-priming impeller pump NIROSTAR 2000-D or self-priming side channel centrifugal pump EP 40, both stainless steel
- digital flow meter K600/3
- 1.5 meter suction hose with non-return valve
- 4 m filling hose, Ø 25 mm, G 1" with swivel connection
- nozzle without automatic switch-off
- holder for filling hose and nozzle
- dimensions including pedestal d x w x h:
440 x 390 x 1330 mm (NIROSTAR)
390 x 390 x 1360 mm (EP)

optional:

- **new** - now also available for vegetable oil: nozzle with automatic switch-off
- pedestal

■ Impeller Pump NIROSTAR 2000-D

- flow rate depending on viscosity of the vegetable oil max. 75 L/min. (at about 20°C)
- dry self-priming
- operating pressure: max. 3 bar
- power supply: 230 or 400 Volt
- high capacity even at low temperatures and high viscosity of vegetable oil

■ Side Channel Centrifugal Pump EP 40 Niro

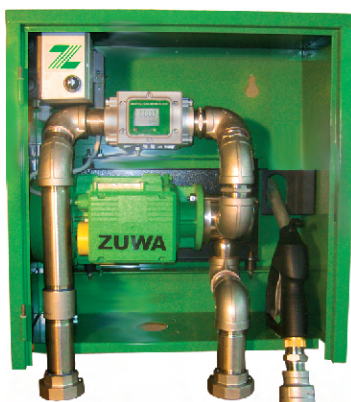
- flow rate depending on viscosity of the vegetable oil max. 75 L/min. (at about 20°C)
- operating pressure: max. 2,2 bar
- power supply: 230 or 400 Volt (optional 24 Volt)

■ Flow Meter K600/3

- high precision ($\pm 0,5\%$)
- digital display (actual dispense volume 4-digit, total dispense volume 6-digit)
- flow rate: max. 100 litre/min.
- operating pressure: max. 30 bar
- connections: 1" internal screw thread

Code	Type	Version
180037	Pump unit for vegetable oil EP 40 Niro	without pedestal, 230 V
180038	Pump unit for vegetable oil EP 40 Niro	without pedestal, 400 V
19002199	Pump unit for vegetable oil NIROSTAR 2000-D	without pedestal, 230 V
19002196	Pump unit for vegetable oil NIROSTAR 2000-D	without pedestal, 400 V
131130	Automatic nozzle for commercial vehicles, 1" internal thread, for vegetable oil	
131030	Automatic nozzle for motorcars, 1" internal thread, for vegetable oil	
12061050	Pedestal for vegetable oil pump unit, blue	

Pump for Vegetable Oil in Steel Box



■ Features

- dry self-priming impeller pump NIROSTAR 2000-D
- motor protection with on/off switch
- digital flow meter K600/4
- nozzle without automatic switch-off
- 5 m filling hose, Ø 38 mm, G 1½" with swivel connection
- heavy-duty steel box with large door
- dimensions steel box d x w x h: 350 x 500 x 550 mm

optional:

- electronic key identification for access control including 10 keys
- **new** -now also available for vegetable oil: nozzle with automatic switch-off

■ Impeller Pump NIROSTAR 2000-D

- flow rate depending on viscosity of the vegetable oil max. 75 L/min. (at about 20°C)
- dry self-priming
- operating pressure: max. 3 bar
- power supply: 230 or 400 Volt
- high capacity even at low temperatures and high viscosity of vegetable oil

■ Flow Meter K600/4

- high precision ($\pm 0,5\%$)
- digital display (actual dispense volume 4-digit, total dispense volume 6-digit)
- flow rate: max. 150 litre/min.
- operating pressure: max. 20 bar
- connections: 1½" internal screw thread

Code	Type	Version
19003192	Pump unit for vegetable oil in steel box with key *	NIROSTAR 2000-D 400 V
19003193	Pump unit for vegetable oil in steel box with key *	NIROSTAR 2000-D 230 V
19003190	Pump unit for vegetable oil in steel box	NIROSTAR 2000-D 400 V
19003191	Pump unit for vegetable oil in steel box	NIROSTAR 2000-D 230 V
131130	Automatic nozzle for commercial vehicles, 1" internal thread for vegetable oil	
131030	Automatic nozzle for motorcars, 1" internal thread for vegetable oil	

* comes with 10 keys



ZUWA-Zumpe GmbH

Pumps for Vegetable Oil SELF SERVICE MC

*modern fuel dispenser for convenient refuelling
with access control and delivery data management*



SELF SERVICE MC

■ Features

- high capacity pump for vegetable oil
 - dispense volume can be preset - pump shuts off automatically when reaching required volume
 - nozzle with or without automatic switch-off (depending on type)
 - nozzle holder with built-in microswitch for pump start and stop
 - 4m filling hose with swivel connection (various lengths available)
 - lockable front door with easy access for maintenance and service
 - electronic flow meter K600, precision 0,5%
 - digital display for output volume and operating instructions
 - access control and data management up to 80 users with access code (PIN) and/or magnetic key (optional)
 - local memory up to 250 dispensing operations (dispense volume, date, time, user and optional vehicle registration number, kilometres)
- optional:
- administration software for PC
 - connection to PC and data export via magnetic key or serial interface
 - magnetic key for access control
 - tank level indicator/-control

Vegetable oil fuel makes high demands on pumps and refuelling systems.

Vegetable oil is characterized by an extremely high viscosity, 19 times higher than diesel fuel. This fact requires elaborated solutions for pumping the oil. The following issues should be taken into account::

- ✓ Length and diameter of suction and delivery line
- ✓ Ambiance temperature
- ✓ Storage of the vegetable oil: Is it stored in IBCs that are frequently changed or in a big storage tank?

Our fuel dispenser Self Service for vegetable oil provides for a complete system, available in two versions, which components fit perfectly for the characteristics of vegetable oil and ensure convenient handling.

We will be pleased to help you in finding the best solution according to your requirements.

■ Technical Details

	Self Service 70 MC NIROSTAR	Self Service 70 MC VISCOMAT
Pump	NIROSTAR 2000-D dry self-priming impeller pump	VISCOMAT 90 self-priming vane pump
Max. flow rate	75 litre/minute at 20°C	60 litre/minute at 20°C
Max. pressure	3 bar	5 bar
Power supply	230 or 400 Volt	230 or 400 Volt
Flow meter	K600/4 precision 0,5%	K600/3 precision 0,5%
Nozzle	without automatic switch-off	with automatic switch-off
Filling hose	1½"	1"
Connections in/out	1½"	1"
Benefits	excellent suction capability, especially suitable for IBCs that are often changed	high operating pressure

■ Order Numbers

Order No.	Type
19002198	Vegetable oil fuel dispenser SELF SERVICE 70 MC NIROSTAR, 230 V
19002197	Vegetable oil fuel dispenser SELF SERVICE 70 MC NIROSTAR, 400 V
19002210	Vegetable oil fuel dispenser SELF SERVICE 70 MC VISCOMAT, 230 V
19002200	Vegetable oil fuel dispenser SELF SERVICE 70 MC VISCOMAT, 400 V
P12709	Magnetic key set (10 x user und 1 x administrator), reader and PC-software
P12495	Magnetic key set user (= 10 keys)