

ET EK EM

Electromagnetic- pumps

**Production Lines
with plug or cable**



 **eckerle**

electronic ballasts

heating pumps – air conditioning – pump systems

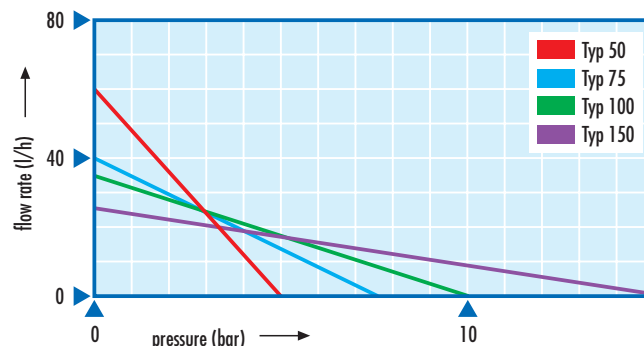
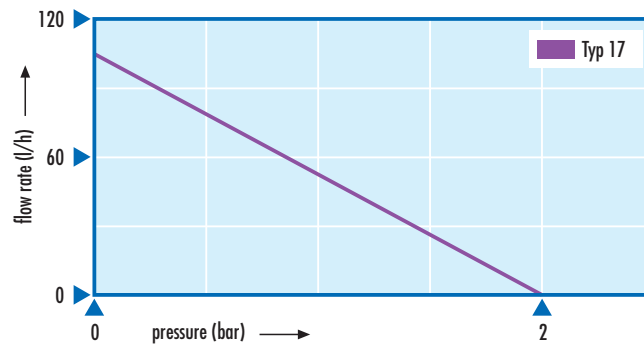
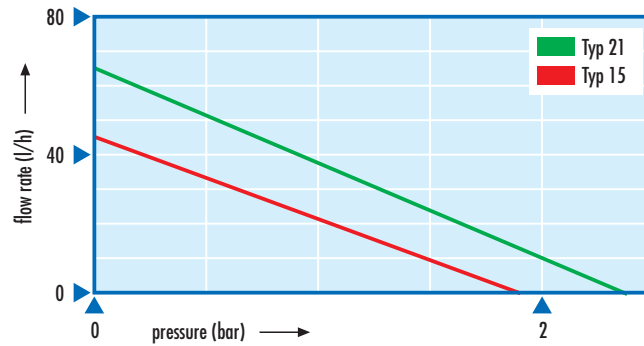
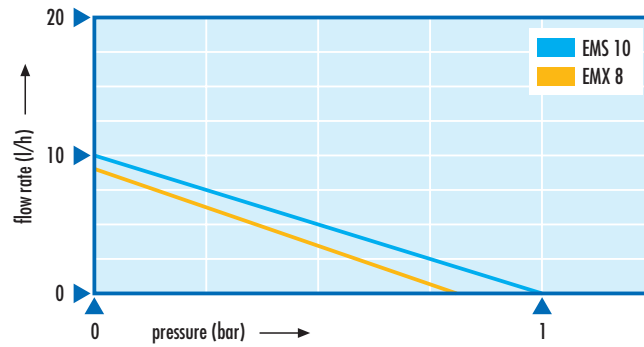
The Original maintenance-free powerful · reliable

Elektromagnetic- Pumps

Eckerle-Elektromagnetic-Pumps were designed to convey neutral and aggressive fluids. These high quality pump systems offer important advantages:

- Pressures up to 15 bar
- Maintenance free
- Selfpriming up to 3 m
- Automatic overpressure limits
- No shaft seal
- Rugged industrial design
- Suitable for continuous operation
- Extremely compact

ET EM-Production Lines with plug



EK Production Line with cable



The above values are measured with water 20 °C. Different materials and fluids may change the pump output.

The Original maintenance-free powerful · reliable

Electromagnetic- Pumps

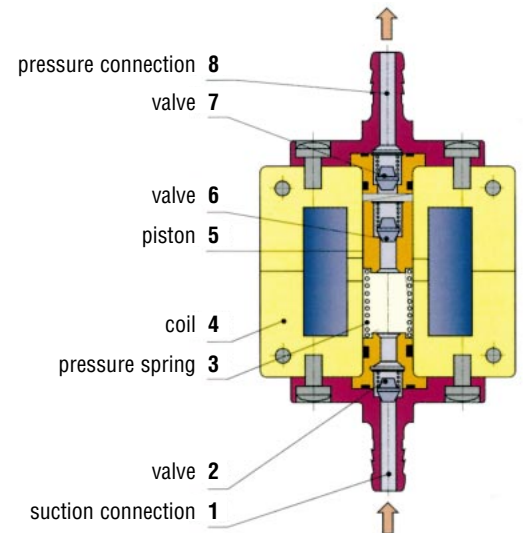
Function mode

The piston (5) is moved by the electromagnetic field generated by the single wave diode rectified current flowing through the coil (4). Each current pulse moves the piston against the pressure spring (3). This movement by reducing the volume in the suction chamber, opens the valve (6) set in the piston to let the liquid run into the pressure side. When the current pulse dies the pressure spring pushes back the piston toward the pressure side. The increase of pressure closes the piston valve and the liquid flows through the valve (7) set in the pressure connection (8) and into the pressure pipe. This movement creates a low pressure in the suction chamber which opens the valve (2) set in the suction connection (1). The liquid is sucked into the pump and the cycle starts again, 50 times per second (at 50 Hz).

The piston size and the length of its displacement define the flow rate. The pressure limits itself automatically. The pump will run without damage when the liquid flow is stopped momentarily.

The pump works not only tied to the standard tension and frequency but can be piloted by a frequency regulation or a pulse control unit.

The ground elements, piston and sleeve, guarantee a minimum wear and high life's duration. By a very large combinability of material the pump can be used with a lot of mediums and a large range of temperatures.



Application fields

Eckerle-Electromagnetic-Pumps are simple designed pumps with high reliability.

They have been used successfully in following application fields:

Air conditioning

- Condensate pump systems

Cleaning technology

- Carpet cleaning equipment, textiles-cleaning, dishwashers

Stage technology

- Smoke machines

Medical technology

- Cleaning, disinfection, sterilization, reverse osmosis

Food technology

- Drink dispensing coffee machines

Fuel oil systems

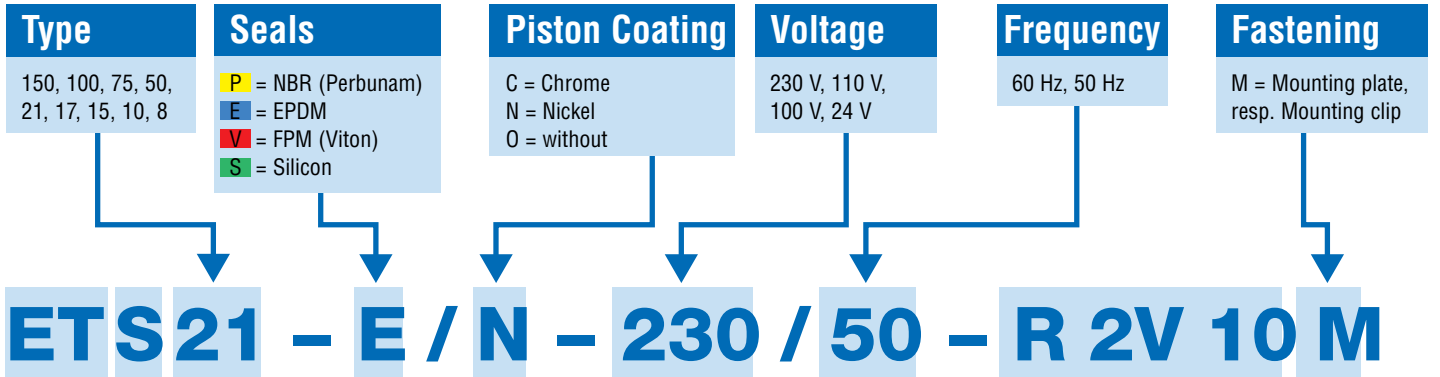
- Fuel oil transfer

Technical Data

Type of pump	8	10	15	17	21	50	75	100	150
Weight ET	95 g	80 g	480/620 g	480/540 g	480/520 g	620/730 g	560/670 g	620/730 g	620/730 g
Weight EK	95 g	–	–	420/480 g	405/445 g	560/670 g	560/670 g	560/670 g	560/670 g
Temperature ET	Ambient 1...50 °C Fluid max.... 55 °C			Ambient 1...50 °C Fluid 1...90 °C					
Temperature EK	Ambient 1...50 °C Fluid max. ...55 °C			Ambient 1...50 °C Fluid 1...70 °C					
Pressure without delivery ET/EK	0.8 bar	1 bar	1.8 bar	2 bar	2.2 bar	5 bar	7.5 bar	10 bar	15 bar
Delivery without load ET/EK	9 l/h	10 l/h	45 l/h	100 l/h	65 l/h	65 l/h	40 l/h	35 l/h	25 l/h
Suction height ET/EK	3 m	3 m	3 m	3 m	3 m	2 m	2 m	2 m	1 m
Viscosity range ET/EK	1 cSt...600 cSt								
Filtering ET/EK	Mesh 100 µm								
Note ET/EK	Fuse and diode necessary								
Kind of current ET/EK	230 V ~ (110 V, 24 V) 50 Hz (60 Hz)								
Power consumption ET/EK	18 VA	18VA	25 VA	40VA	40VA	45 VA	45 VA	45 VA	45 VA
Operating factor ET/EK	100% / 20 °C								
Dimensions (LxWxH) ET	76x42.5x23	76x42.5x23	104x60x47.5	104x60x51.5	104x60x47.5	138x60x51.5	138x60x51.5	138x60x51.5	138x60x51.5
Dimensions (LxWxH) EK	76x42.5x21.5	–	–	104x56x50.5	104x56x50.5	138x56x50.5	138x56x50.5	138x56x50.5	138x56x50.5

The Original
maintenance-free
powerful · reliable

Elektromagnetic-Pumps



Type	Connections
ET = Square coil with pin terminal Brass connections, internal thread G 1/8"	K = Plastic connections, internal thread metric M 10x1
EK = round coil with cable 40 cm Brass connections, internal thread G 1/8"	S = Plastic barbed nipple connections
EMX = Micropump stainless steel barbed nipple connections	G = Stainless steel connections, internal thread G 1/8"
	X = Stainless steel barbed nipple connections
	U = Stainless steel connections, internal thread metric M 10x1

Special Feature

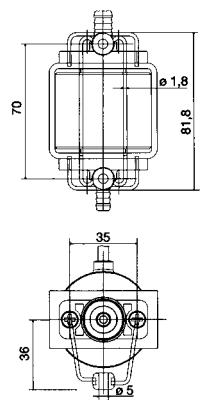
R = Reversed coil
 2V = Two valves
 10 = Limit of flow rate 10l/h (3 GPH)



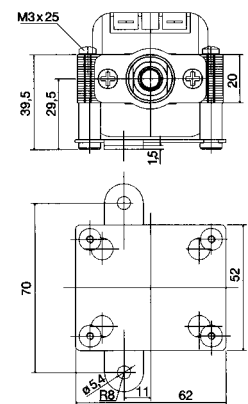
Electronic circuits

DC Voltage		AC Voltage	
DC 50 Hz	DC variable	AC digi	AC digi
Input U = 24 V DC	Input U = 24 V DC	Input U = 230 V/50 Hz	Input U = 24 V/50Hz
Output f = 50 Hz fixed	Output f = 1-50 Hz variable	Output f = 50/n Hz (n=1-10)	Output f = 50/n Hz (n=1-10)
Power = 25 VA	Power = 25 VA		Power = 40 VA

Mounting clip EK-series Mounting plate ET-series

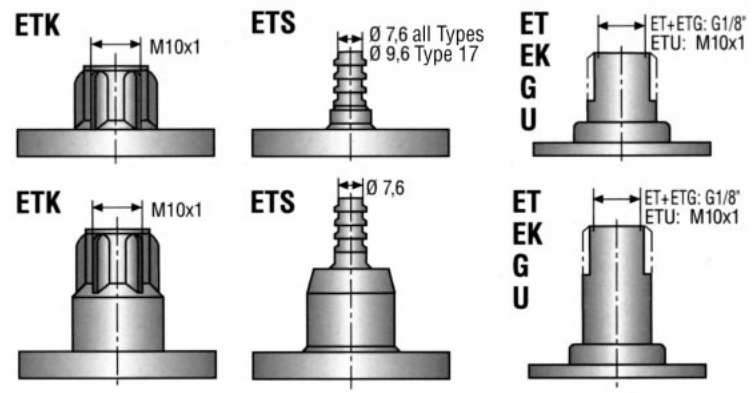


Order no. 104131



Order no. 119726

Connection parts



Long type only pressure side type 50, 75, 100 and 150.