

SubDrive 30 / 150 - Pressure Controller

NEMA 3R NEMA 4

The SubDrive 30 is designed for three-phase motors to provide constant pressure with three-phase performance using single-phase input power. They have a high starting torque, easy to install, smooth running, just plug and play. Performance ranges from 3/4 hp to 5 hp. Indoor/outdoor NEMA 3R and NEMA 4 enclosure options. The fan kit is easily replaceable.

APPLICATIONS

SubDrive 30 constant pressure controller is designed for use in residential homes, schools, restaurants, car washes, farms, and landscape irrigation systems with a McDonald 1 1/2 HP pump end mounted to a 3 HP, 230 volt A.Y. McDonald three phase motor.

FEATURES

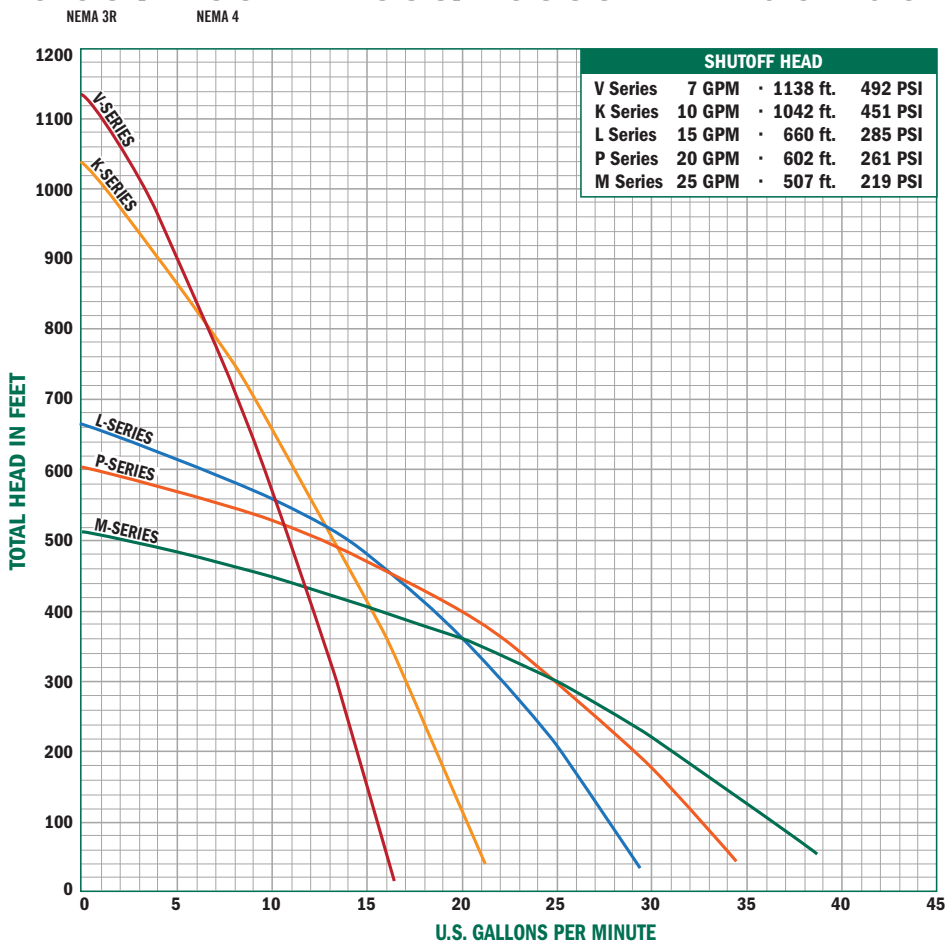
- Constant water pressure with a wide range of settings (0-100 pressure transducer)
- Single-phase input power
- FE Connect Smartphone app for advanced settings and monitoring (NEMA 3R only)
- User-configurable motor frequency range (NEMA 3R only)
- Easy installation
- Soft-start feature prevents water hammer and increases motor life
- Works with small pressure tanks or existing larger tanks
- Advanced filtering to remove radio frequency interference
- UL and cUL listed
- Built-in diagnostics and protection
 - Surge protection
 - Undervoltage
 - Open circuit
 - Overheated controller
 - Underload
 - Locked pump
 - Short circuit
 - Broken pipe detection (NEMA 3R only)



| SubDrive30 (NEMA 3R) - Indoor/Outdoor | | | | | |
|---------------------------------------|--|--|--|-----------------------------------|---|
| Model No. | | A.Y. Model # 6617-436 FE Model # 5870205403C | Pressure Setting | Factory Present | 50 psi (3.4 bar) |
| Input from Power Source | Voltage | 208/230 VAC | Operating Conditions^(A) | Adjustment Range | 25-80 psi (1.7 - 5.5 bar) |
| | Phase In | Single-phase | | Temperature (at 230 VAC input) | -13°F to 122°F (-25°C to 50°C) |
| | Frequency | 60/50 Hz | | Relative Humidity | 20-95%, condensing |
| | Current (max) | 23 Amps | Controller Size^(B) (approximate) | Outer Dimensions Weight | 9 3/4" x 19 3/4" x 5 1/4" (25 x 50 x 13 cm) 26 lbs (11.8 kg) |
| | Power Factor | ~0.95 | | For Use With^(C) | Pump (60 Hz) |
| | Power (idle) | 5 Watts | A.Y. McDonald Motor | | 1 hp single-phase, three-wire 1 1/2 hp single-phase, three-wire 2 hp single-phase, three-wire 1 1/2 hp three-phase, three-wire 2 hp three-phase, three-wire 3 hp three-phase, three-wire |
| | Power (max) | 4.2 kW | | | |
| Wire Gauge Size(s) | Consult Federal, State, and Local codes for branch circuit installations | | | | |
| Output to Motor | Voltage | Adjusts with Frequency | | | |
| | Phase Out | Single-phase (three-wire) OR Three-phase | | | |
| | Frequency Range | 30-78 Hz (1 1/2 hp, 1.1 kW) pump 30-70 Hz (2 hp, 1.5 kW) pump 30-60 Hz (3 hp, 2.2 kW) pump 30-63 Hz (Single-phase Motors) | | | |
| | Current (max) | 10.9 A / phase | | | |
| Wire Gauge Size(s) | #6 - #14* ga. | | | | |

| Controller Rating | Part No. | Model No. |
|--------------------------|----------|--------------|
| NEMA 3R (Indoor/Outdoor) | 6617-436 | SubDrive 30 |
| NEMA 4 (Outdoor) | 6617-155 | SubDrive 150 |

SubDrive 30 / 150 - 21000/23000 E-Z Pac Packages



NOTE: Performance shown does not include friction loss in drop pipe (for flow rates above 25 GPM, larger drop pipe is recommended.)

Pressure Master

No-Lead Brass - 21000 Series

E-Z PAC (N3R)

N1 - (NEMA 3R), 1 1/4" NPT Connection on All Series

| Model No. | Series | GPM | Wt. |
|-------------|--------|-----|-----|
| 21150VCP1EZ | V | 7 | 78 |
| 21150KCP1EZ | K | 10 | 72 |
| 21150LCP1EZ | L | 15 | 69 |
| 21150PCP1EZ | P | 20 | 76 |
| 21150MCP1EZ | M | 25 | 75 |

E-Z PAC (N4)

N4 - (NEMA 4), 1 1/4" NPT Connection on All Series

| Model No. | Series | GPM | Wt. |
|-------------|--------|-----|-----|
| 21150VCP4EZ | V | 7 | 95 |
| 21150KCP4EZ | K | 10 | 85 |
| 21150LCP4EZ | L | 15 | 84 |
| 21150PCP4EZ | P | 20 | 87 |
| 21150MCP4EZ | M | 25 | 86 |

Stainless Steel - 23000 Series

E-Z PAC (N3R)

N1 - (NEMA 3R), 1 1/4" NPT Connection on All Series

| Model No. | Series | GPM | Wt. |
|-------------|--------|-----|-----|
| 23150VCP1EZ | V | 7 | 75 |
| 23150KCP1EZ | K | 10 | 70 |
| 23150LCP1EZ | L | 15 | 72 |
| 23150PCP1EZ | P | 20 | 72 |
| 23150MCP1EZ | M | 25 | 70 |

E-Z PAC (N4)

N4 - (NEMA 4), 1 1/4" NPT Connection on All Series

| Model No. | Series | GPM | Wt. |
|-------------|--------|-----|-----|
| 23150VCP4EZ | V | 7 | 91 |
| 23150KCP4EZ | K | 10 | 83 |
| 23150LCP4EZ | L | 15 | 82 |
| 23150PCP4EZ | P | 20 | 84 |
| 23150MCP4EZ | M | 25 | 80 |

The SubDrive 30 is designed to be part of a system that includes three main components:

1

Subdrive 30 controller
(pressure sensor included)
NEMA 3R - Part No. 6617-436
NEMA 4 - Part No. 6617-155
SubDrive 150



2

A.Y. McDonald 3 HP, 230V
three phase motor
Part No. 3132-514



3

Appropriate pump end
Includes pump end 23150K
For example:
23150KCP1EZ

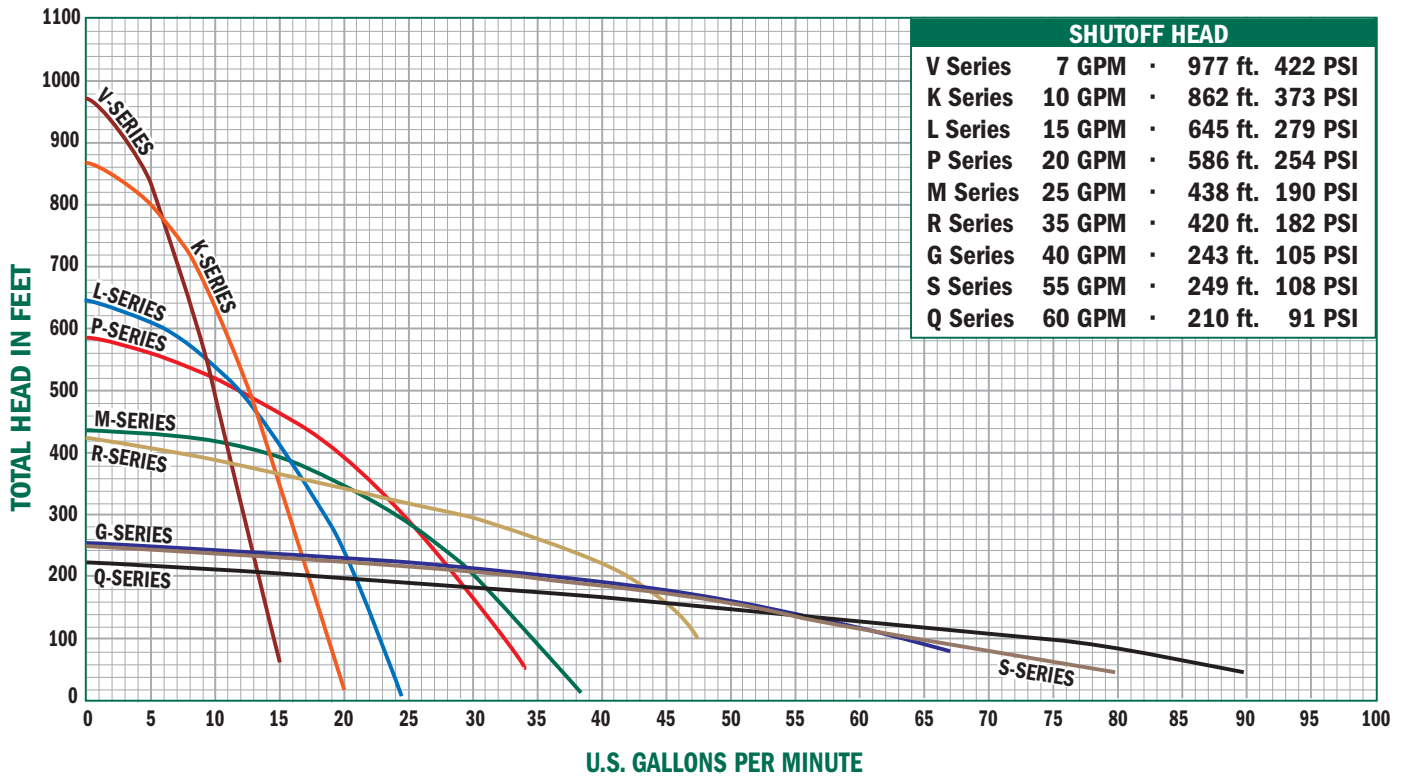


SubDrive 30 / 150 - 24000 E-Z Pac Packages

NEMA 3R

NEMA 4

Pressure Master



NOTE: Performance shown does not include friction loss in drop pipe (for flow rates above 25 GPM, larger drop pipe is recommended.)

Stainless Steel - 24000 Series (7-25 GPM)

E-Z PAC (N3R)

N1 - (NEMA 3R), 1 1/4" NPT Connection on All Series

| Model No. | Series | GPM | Wt. |
|-------------|--------|-----|-----|
| 24150VCP1EZ | V | 7 | 75 |
| 24150KCP1EZ | K | 10 | 70 |
| 24150LCP1EZ | L | 15 | 72 |
| 24150PCP1EZ | P | 20 | 72 |
| 24150MCP1EZ | M | 25 | 70 |

E-Z PAC (N4)

N4 - (NEMA 4), 1 1/4" NPT Connection on All Series

| Model No. | Series | GPM | Wt. |
|-------------|--------|-----|-----|
| 24150VCP4EZ | V | 7 | 91 |
| 24150KCP4EZ | K | 10 | 83 |
| 24150LCP4EZ | L | 15 | 82 |
| 24150PCP4EZ | P | 20 | 84 |
| 24150MCP4EZ | M | 25 | 80 |

Stainless Steel - 24000 Series (35-60 GPM)

E-Z PAC (N3R)

N1 - (NEMA 3R), 2" NPT Connection on All Series

| Model No. | Series | GPM | Wt. |
|-------------|--------|-----|-----|
| 24150RCP1EZ | R | 35 | 72 |
| 24150GCP1EZ | G | 40 | 70 |
| 24150SCP1EZ | S | 55 | 72 |
| 24150QCP1EZ | Q | 60 | 71 |

E-Z PAC (N4)

N4 - (NEMA 4), 2" NPT Connection on All Series

| Model No. | Series | GPM | Wt. |
|-------------|--------|-----|-----|
| 24150RCP4EZ | R | 35 | 81 |
| 24150GCP4EZ | G | 40 | 79 |
| 24150SCP4EZ | S | 55 | 82 |
| 24150QCP4EZ | Q | 60 | 81 |

The SubDrive 30 is designed to be part of a system that includes three main components:

1

Subdrive 30 controller (pressure sensor included)
 NEMA 3R - Part No. 6617-436
 NEMA 4 - Part No. 6617-155
 SubDrive 150



2

A.Y. McDonald 3 HP, 230V three phase motor
 Part No. 3132-514



3

Appropriate pump end
 Includes pump end 24150K
 For example:
 24150KCP1EZ

