

Pleuger® Electrical Submersible Pumps and Water-filled Motors

► Maintenance Checklist



⚠ DANGER

Read User Instructions **before** installing, operating or maintaining this pump.
Copies available from Flowserve pump representatives.

Pump End

Pump checklist on nameplate or datacard	
Flow	m ³ /h - gpm
Head	m - ft
Riser pipe connection	threaded/flanged
Shut-off head	m - ft
Pump unit dry running protection	Install dry running sensor 10 m above pump

Submersible Pump Standard



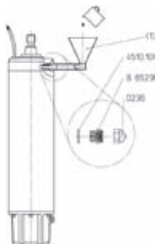
Water-filled Motor

Motor checklist on nameplate or datacard	
Network voltage/ frequency	Check network voltage and frequency with nameplate motor
Motor lubricant water/glycol fluid ¹	If needed, refill with potable clean water only ² (no other liquids are permissible)
Insulation resistance	Minimum insulation value is 150 Mohm at 20°C (new windings)
Cable installation	Protect cable at riser pipes with clamps to ensure safe installation
Connection to power source	Check cable connection to power source (refer to detailed manual 1042.277/7)
Adjust motor current at relay	Set at maximum rated current to guarantee motor protection
Motor and pump rotation	Verify total delivered head of pump

Submersible Motor (pre-filled with water/ glycol on delivery)



1. Motors are pre-filled (65% volume drinking water by 35% volume glycol) on delivery.
2. Re-filling instructions: after re-filling motor, do not install cap 0236. This cap is for motor transport only.



Pump and Motor Cable Connection to Network

Clockwise Rotation

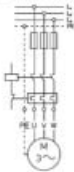


Figure 1

Direct on-line starting – one power supply cable		
	Old	New
U =	black	
V =	light blue	brown
W =	brown	grey
PE =	green/yellow	

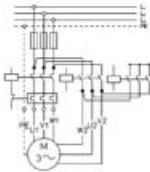


Figure 2

Star-delta starting		
	Old	New
U ₁ /U ₂ =	black	
V ₁ /V ₂ =	light blue	brown
W ₁ /W ₂ =	brown	grey
PE =	green/yellow	

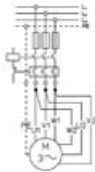


Figure 3

Direct-on line starting – delta connection in control panel		
	Old	New
U ₁ /U ₂ =	black	
V ₁ /V ₂ =	light blue	brown
W ₁ /W ₂ =	brown	grey
PE =	green/yellow	

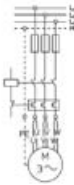


Figure 4

Direct on-line starting – two power supply cable		
	Old	New
U =	black	
V =	light blue	brown
W =	brown	grey
PE =	green/yellow	

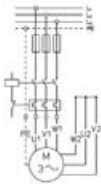


Figure 5

Direct on-line starting – star connection in control panel		
	Old	New
U ₁ /U ₂ =	black	
V ₁ /V ₂ =	light blue	brown
W ₁ /W ₂ =	brown	grey
PE =	green/yellow	

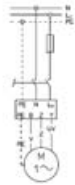


Figure 6

Single-phase motor		
	Old	New
V =	light blue	
UV =	brown	
Z =	black	
PE =	green/yellow	

Maintenance Schedule After Installation

Periodic testing of performance parameters such as head, flow, line voltage, driver current, starting time, etc., is recommended to identify appropriate maintenance schedules. This helps to ensure improved performance and to compensate for the higher recirculation flow in a used pump as compared to a new pump. The scope and frequency of testing can be determined by the customer based on pump operating conditions. If direct or projected periodic test readings indicate reduced shut-off head, maintenance can be planned as follows:

Reduction in Shut-off Head	Maintenance Schedule
By 5%	No maintenance required
By 5% to 10%	Before reduction in shut-off head exceeds 15%

For sales and product information, go to www.flowserve.com.

FPD-1413a (E) Printed in USA. May 2011. © Flowserve Corporation

Pleuger electrical submersible pumps and water-filled motors are manufactured in: Arganda (Spain), Hamburg (Germany), Castlemaine (Australia), Newark (U.K.), Orléans (France) and Taneytown, MD (USA).

USA and Canada
Flowserve Corporation
5215 North O'Connor Blvd.
Suite 2300
Irving, Texas 75039-5421 USA
Telephone: +1 937 890 5839

Europe, Middle East, Africa
Flowserve Corporation
Parallelweg 13
4878 AH Etten-Leur
The Netherlands
Telephone: +31 76 502 8100

Latin America
Flowserve Corporation
Martín Rodríguez 4460
B1644CGN-Victoria-San Fernando
Buenos Aires, Argentina
Telephone: +54 11 4006 8700
Telefax: +54 11 4714 1610

Asia Pacific
Flowserve Pte. Ltd.
10 Tuas Loop
Singapore 637345
Telephone: +65 6771 0600
Telefax: +65 6779 2329