Pexgol

Dynapumps®

Installation instructions for boreholes

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Smarter Bore Pump Solutions

Dynapumps is proud to partner with Pexgol Australia to deliver a complete bore package solution designed to reduce installation time, lower lifetime costs, and maximise operational reliability. If you're looking to cut downtime and simplify bore pump riser installations, Pexgol rising mains offer a proven alternative to traditional steel and HDPE systems.

Why choose the Dynapumps + Pexgol bore package?

Faster installation

- Supplied in long, continuous pipe lengths
- Fewer joints, faster deployment, and reduced crane time

Lower total installed cost

- Lightweight and flexible compared to steel
- Reduced labour, transport, and handling requirements

Reduced downtime – installation & retrieval

- Designed for damage-free installation and extraction
- Ideal for pump maintenance and future upgrades

Designed for deep bore performance

- Withstands the full weight of the water column
- Minimal elongation and excellent dimensional stability

Energy-efficient operation

- Ultra-smooth internal bore minimises friction losses
- Reduced pump energy consumption over the life of the bore

Improved hygiene & flow reliability

- Smooth internal surface limits scale, biofilm, and product build-up
- Maintains consistent hydraulic performance over time

Long-term reliability

- Corrosion, abrasion, and crack resistant
- Fewer connections = fewer leak points and lower maintenance risk

Together, **Dynapumps and Pexgol** deliver a bore solution that's faster to install, safer to handle, and built to perform for decades - protecting both your system and your investment.

When it comes to bore installations, think Dynapumps. Think Pexgol.

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Boreholes

Pexgol pressure pipes for boreholes were developed more than 30 years ago. Pexgol rising main pipes are flexible and are provided in diameters of up to 315 mm, designed and manufactured for a **minimum lifespan of 50 years**.

How Pexgol can help you reducing OPEX & CAPEX:

- Using Pexgol pipes results in a dramatic reduction of pumping costs. Special plastic discharge heads guarantee no corrosion and scale build-up.
- Pipes in the system can be pulled out and retrieved for preventive maintenance (pump plus motor) as many times as required, without damage.
- Pexgol long sections facilitate a faster installation and reduce fitting costs.

Advantages & Characteristics:

- Installation is simple and quick-it takes only a few hours, reducing the use of manpower and heavy equipment.
- Available in a single piece up to 300 m with electrofusion and mechanical connectors ensuring leakage--free use.
- Supports total system weight: heavy pump, motor, water column, cables and its own weight.
- Pexgol doesn't require threaded connections.
- 50 years operational lifetime.

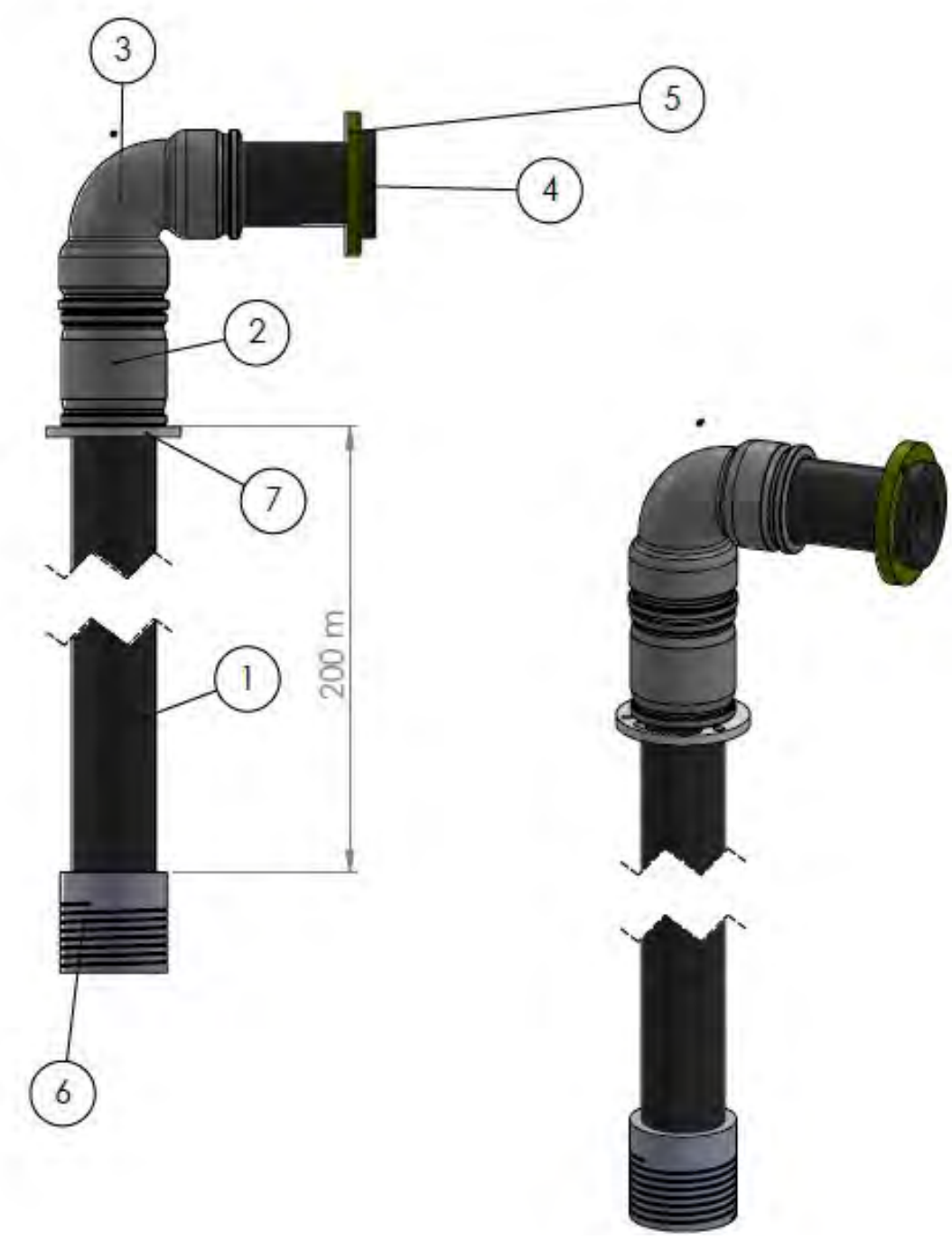
The advantage of the Pexgol one pipe Borehole System

Comparison between Pexgol and other pipe materials (0 impossible // 10 very easy)

	Pexgol	Steel	PE	Hose
Pipe easy to install and retrieve	8	1	6	10
End fittings easily installed	9	3	6	1
Low friction losses	10	2	9	6
Easy to transport	7	8	4	10
High flexibility	8	0	6	10
Does not require support cables	10	10	5	10
Power cable attachment system	8	0	5	8
Easy attachment of accessories	8	2	5	2
One continuous length	10	0	4	10
Totally corrosion resistant	10	0	10	10
Retrieval with water inside	10	0	0	0
Easy preventive maintenance	10	0	4	2
Reinstallation without refurbishing	10	0	4	3
Negligible elongation problems	8	10	0	0
Foolproof system	10	4	5	3
High working pressure	8	10	3	8
High service temperature over 40°C	8	10	0	0
Low surge wave velocity (water hammer)	10	0	8	8
Potable water approved	10	0	10	10
Long operational life	10	1	4	5
Resistance to twisting due to multiple pump restarts	10	10	6	0
Fatigue resistance	10	6	3	2
Scratch resistance	10	7	2	0
Installation depth - over 50 meters	8	10	0	8
No ballooning near the pump	10	10	4	0

Pexgol boreholes versatile system is compatible with all the leading pump manufacturers:
Grundfos, K.S.B., Pleuger, Wilo-Salmson, DAB, EMU, EMS and others.

Scheme and connections



References

1. Pexgol Pipe
2. Electrofusion coupler
3. Electrofusion elbow
4. Flared End
5. Flanged connection ASA 150
6. Flanged connection NPT
7. Discharge head support plate

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1. Pexgol pipe

2. Electrofusion Coupler

The electrofusion coupler pass through entirely in the pipe and it's used as to support the pipe, pump, cables and the water column.

The electrofusion coupler can be factory welded (as long as the borehole of the well is known) or it can be field welded once the pipe has been lowered down the well.

3. Electrofusion discharge elbow

The electrofusion elbow serves the function of connecting the well pipe at one end and connecting a flanged stub end at the other end.
The electrofusion coupler can be factory welded (as long as the depth of the well is known) or it can be field welded once the pipe has been lowered down the well.

4 y 5. ANSI 150 flanged connection

A flange stub end can be electrofused at one end of the elbow, or a section of the pipe can be electrofused to later connect a GP Flange Coupling.
In this case, a stub end with flange will be supplied. It can be connected to a valve, another pipe or whatever is required.

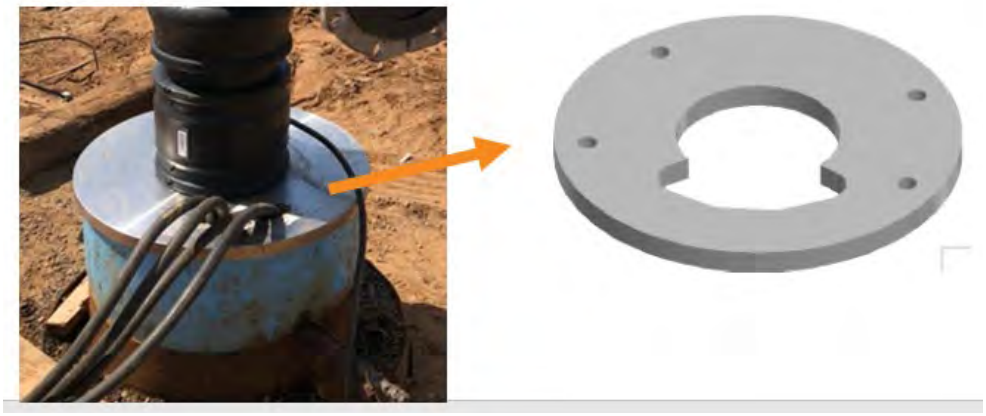
6. Connection to the pump

Stainless steel nipple: the fitting is factory installed on one end of the pipe. NPT or BSTD threads can be ordered or ANSI flange if necessary.

Hela connector: For pipes from 63 mm to 160 mm, it is also possible to supply Hela accessories. The advantage of this accessory is that it can be installed in the field, without the need for special tools. The connectors can be supplied in brass or stainless steel with BSPT or NPT threads.

7. Discharge head support plate

The discharge head plate rests on the caising. It must be introduced into the pipe before performing the electrofusions. It is important to verify the diameter and number of cables that the pump requires to prepare the hole in the plate before installation. The main hole of this plate is designed so that the pipe can pass through but not the electrofusion coupling that is used as a support.



Unloading the pipe on the borehole

A. Uncoiling & Connecting the GP Hela accessory to the submersible pump valve

1. The first step in the installation should be to uncoil the pipe until it is completely laid out.
2. Apply the following compound to the external thread of the GP Hela connection fitting: “Loctite sealing and locking compound” according to the manufacturer’s instructions.
3. Screw the GP Hela fitting onto the inner thread of the check valve.

B. Pexgol pipe connection to GP Hela fitting

1. Cut the end of the pipe vertically with a suitable tool.
2. Bevel the inside edge of the tube with a hand bevel tool.
3. Insert the Hela GP fitting ring on the outside of the pipe.
4. Using winches, pull the pipe towards the pump to insert it into the GP Hela fitting.
5. Place the ring on the GP Hela accessory and tighten the screw until the ring is completely closed.

C. Pipe lifting preparation

1. Place the first clamp on the pipe at a distance from the pump equivalent to the length of the boom of the hydraulic crane.
2. Place the hydraulic crane sling between the first clamp and the pump.
3. Raise the pipe with the hydraulic crane until the pump is in a vertical position.
4. Then insert the pump into the well.

Note: Once the pipe has been laid, it must not be fixed to the floor, it must be left loose so that the crane can carry out the maneuver of lifting the pipe and inserting it into the well.

D. Fixing the electric cable to the Pexgol pipe

1. Locate and centralize the cable ties according to the following table:

Meters from pump	Fastener + centralizer
0.1	1
5	2
10	3
20	4

The rest of the fasteners must be installed at a distance of 10 meters from one another.
If necessary, a centralizer can be installed under each fastener. Companies like Mekorot (Israel) place fasteners and centralizers every 2.5 meters.

How to compensate for pipe elongation?

Due to the elongation of the pipe over time (approximately 3% to 5%), Golan Plastic recommends that the cables have an excess length of 15%.

How to distribute the excess length?

Between fasteners 1 and 2, one meter should be added in a "U" shape.
For the rest of the fasteners, approximately 100 mm should be added between one and the other. 15% of the total length should be left on the surface.

E. Unloading the pipe on the borehole

1. After the electrical cable and secondary pipe have been attached to the Pexgol pipe, the entire assembly can be lowered into the well. While the electrical cable and secondary pipe are being attached, the Pexgol flexible pipe should be lowered slowly into the well until the tie is near the upper end of the well.
2. The second clamp should be placed on the pipe near the upper end of the well. Make sure that the clamp is not pinching the electric cable or the secondary pipe.
3. The Pexgol pipe must be lowered slowly until it is supported by the second clamp. This way the clamp can be removed.
4. The first clamp must also be removed.
5. Tie the lifting rope in the section immediately above.
6. Position the safety clamp near the lifting rope at a higher level.
7. Raise the pipe slightly to be able to remove the second clamp that acts as a support.
8. Lower the pipe slowly following the instructions to secure the electric cable and secondary pipe.
9. Use both clamps alternately until the entire pipe is inserted.

F. Connecting the Pexgol pipe to the discharge head

1. Place the discharge head in the pipe according to point 5. Insert the electric cable and the secondary pipe through the plate of the discharge head of the well.
2. Tie the lifting rope to the discharge head and slightly lift the pipe.
3. Remove the stocks.
4. Lower the pipe until the discharge head is in the correct position.
5. Connect the discharge head as usual.

Option 1

1. Connect the GP Hela accessory to the discharge head as described in point 4.
2. Position the clamp near the end of the Pexgol pipe and lower until the clamp supports the weight of the pipe.

Option 2

1. Pass through the head plate through the Pexgol tube and connect the pipe.
2. Pass through an electrofusion coupling completely through the pipe and weld.
3. Weld an electrofusion elbow or any accessory to connect to what is required according to the system.

G. Disassembly in case of preventive maintenance of the pump

1. Remove the bolts from the discharge head and lift the pipe with a lifting rope attached to the discharge head.
2. The Pexgol pipe can support it's own weight, including the water column and the pump.
3. Proceed in reverse order of what was explained to lower the pipe.

H. Pipe Storage

1. The pipe can be left exposed to the sun as it has UV resistance, there is no special requirement for its storage.
2. The connection accessories come in wraped inside boxes, these if it is advisable to store them indoors with no temperature restriction.

Pexgol PE-Xa Pipes

Pexgol PE-Xa cross-linked polyethylene pipe has many characteristics that make it an excellent and cost-effective alternative to other pipe materials:

- Excellent chemical and corrosion resistance (chemical agents, slurries, toxic materials, radioactive materials).
- Reduced installation costs with long-length coils/spools.
- Improved flow capacity due to smooth interior surface.
- High resistance to abrasion and UV exposure.
- Wide working temperature range.

PEXGOL
X-LINKED PIPING SOLUTIONS

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