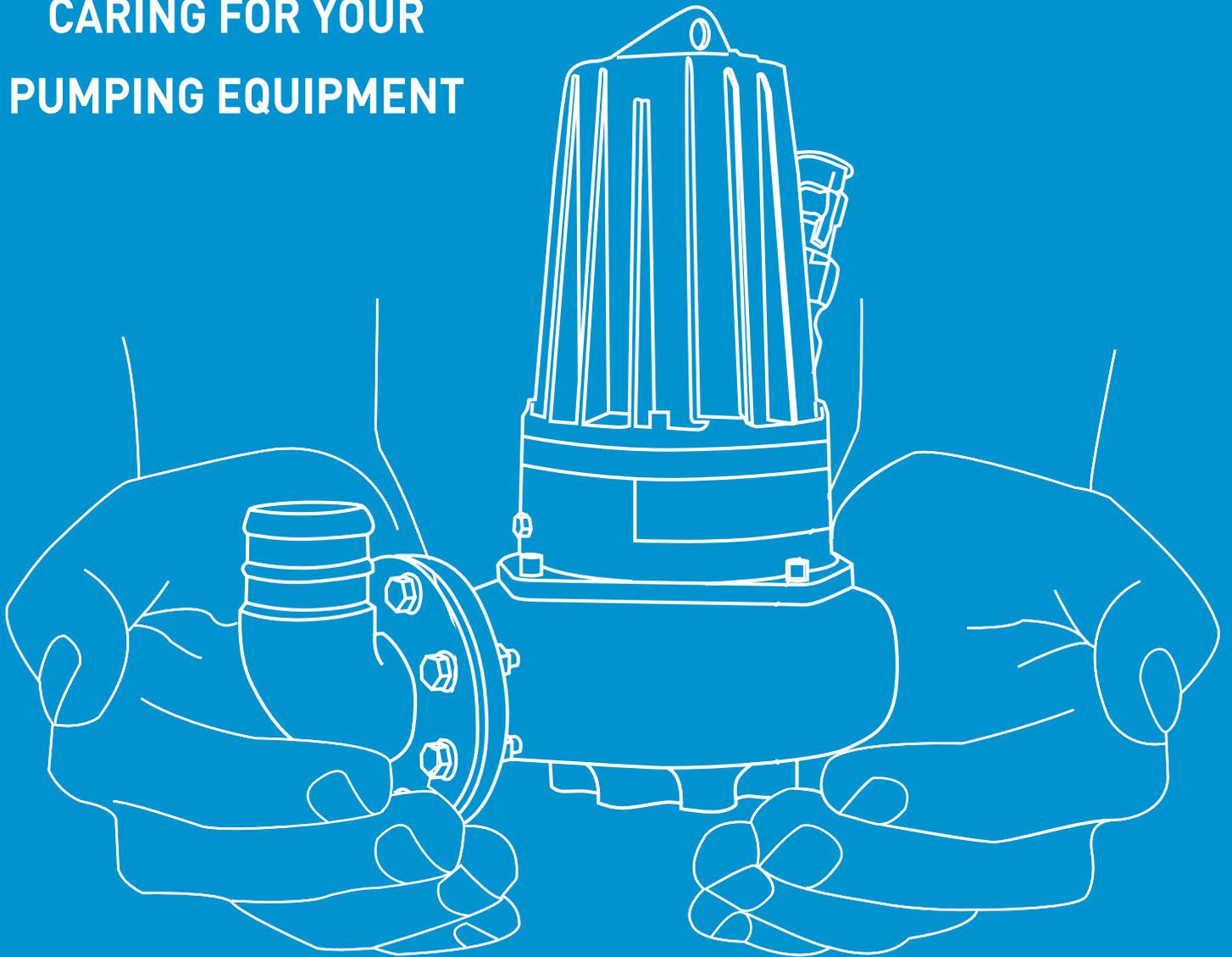


**CARING FOR YOUR  
PUMPING EQUIPMENT**



## T-T SERVICE

### Service Agreements

As an owner or operator of a sewage or drainage pumping station, you will want peace of mind that your pumping station operates efficiently, whilst also being environmentally friendly. Our service agreements help to meet these aims and avoid unexpected and costly breakdowns.

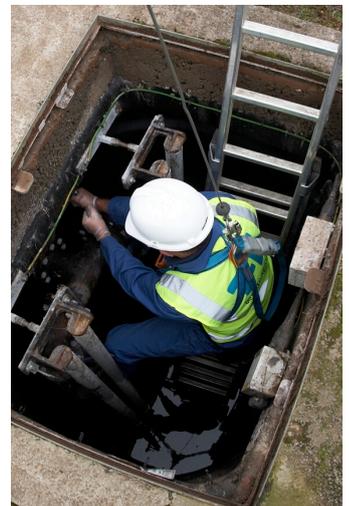
With our skilled in-house group of experts and on-site engineers, we are able to offer a comprehensive after sales service to a large number of customers. Provided by the experienced maintenance team at T-T.

### Duty of Care

Avoid detrimental flooding by ensuring your pumping station is regularly serviced. The owners and operators of pumping stations have a duty of care to ensure minimal environmental damage.



- SERVICE BENEFITS**
- REDUCED RUNNING COSTS INCLUDING ENERGY AND MAINTENANCE
  - GREATER LIFE EXPECTANCY FOR PUMPING EQUIPMENT
  - REDUCED RISK OF BREAKDOWN
  - BETTER PLANT UTILISATION AND RETURN ON CAPITAL
  - IMPROVED ENVIRONMENTAL PERFORMANCE
  - PREFERENTIAL TERMS FOR PARTS AND LABOUR, AND PRIORITY RESPONSE FOR SERVICE ATTENDANCE ON-SITE WHEN YOU HAVE A SERVICE AGREEMENT





### T-T Level 1

The standard package includes two services per year for dual pump pumping stations and one service per year for a single pump pumping station.

### T-T Level 2

This package includes all the standard package benefits plus our Seer monitoring services. Our monitoring service ensures your station is monitored by T-T 24/7.

### T-T Level 3

Our premier agreement includes two services per year, all parts plus one pump per year if required plus two breakdown call outs included.

| Service  | T-T Level 1 | T-T Level 2 | T-T Level 3 |
|--|-------------|-------------|-------------|
| Comprehensive service of pumping equipment as per our example service schedule   | •           | •           | •           |
| Return of any failed pumps to our workshop for quotation of repair or replacement  | •           | •           | •           |
| Full comprehensive service reports   | •           | •           | •           |
| Priority breakdown charged at our standard hourly rate   | •           | •           | •           |
| 15% discount on all T-T products for the site registered on the Service Agreement  | •           | •           | •           |
| Arrangement of tankering with our partners. 15% administrator fee  | •           | •           | •           |
| Monitoring of pumping station, including weekly status reports and advice of failures (subject to conditions of our out of hours contract) |             | •           |             |
| One pump replacement if required   |             |             | •           |
| Two breakdowns, one T-T pump and all T-T parts (only available on T-T installed stations)  |             |             | •           |

## SERVICE SCHEDULE

Each Service visit to your site includes the following checks. These checks ensure optimum uptime of your equipment and are necessary to maintain the correct working condition of the pumping system.

### Checks made during each visit:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Clean pump   | <input checked="" type="checkbox"/> Clean and check level control system |
| <input checked="" type="checkbox"/> Check stator case                                      | <input checked="" type="checkbox"/> Check discharge connection for leaks |
| <input checked="" type="checkbox"/> Check motor insulation/resistance/continuity           | <input checked="" type="checkbox"/> Check pump fixings on guide rail     |
| <input checked="" type="checkbox"/> Check cable condition and security                     | <input checked="" type="checkbox"/> Run pump and check running amps      |
| <input checked="" type="checkbox"/> Check oil (if contaminated renew mechanical seal /oil) | <input checked="" type="checkbox"/> Check high level warning system      |
| <input checked="" type="checkbox"/> Check impeller   | <input checked="" type="checkbox"/> Check earth bonding                  |
| <input checked="" type="checkbox"/> Check wear ring  | <input checked="" type="checkbox"/> Check lifting chains                 |
| <input checked="" type="checkbox"/> Check wear place / suction cover                       | <input checked="" type="checkbox"/> Check valves                         |
| <input checked="" type="checkbox"/> Check volute   | <input checked="" type="checkbox"/> Check telemetry (if fitted)          |
| <input checked="" type="checkbox"/> Run pump and check bearings                            | <input checked="" type="checkbox"/> Monitoring equipment                 |
| <input checked="" type="checkbox"/> Check control panel / contactors / sequence            | <input checked="" type="checkbox"/> General site security & safety       |
|  | <input checked="" type="checkbox"/> General site condition               |

### Equipment status

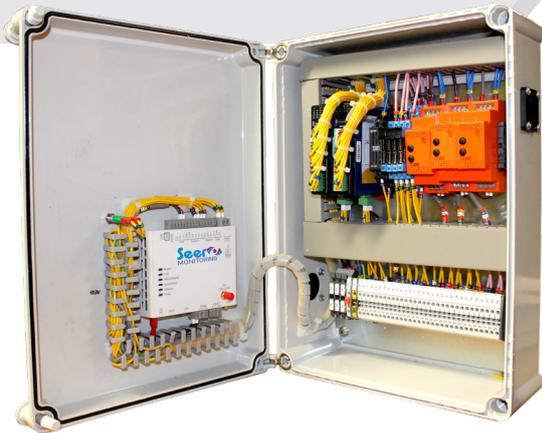
- Pump type
- Serial numbers
- Winding resistance
- Insulation resistance
- Capacitors
- Running amps
- Hours run
- Engineers notes

For details on our Service Agreement terms and conditions please visit [www.ttpumps.com](http://www.ttpumps.com)



## PEACE OF MIND MONITORING

Our monitoring service provides 24/7, 365 days a year monitoring of your pumping equipment, using Seer monitoring units. The Seer units use advanced cloud based monitoring, allowing our in-house pump engineers to continually analyse and monitor your pumping station, ensuring smooth continual running.



# SEER MONITORING

## HOW IT WORKS

### Benefits

#### REDUCED COSTS

Reduced maintenance costs due to less unnecessary site visits

#### MAINTENANCE

Pro-active maintenance

#### MONITORING

Real-time monitoring by a skilled pump engineer

#### SECURE HOSTING

Secure hosting of cloud based technology

#### DATA ANALYSIS

Historical data analysis and performance trending

#### EARLY INTERVENTION

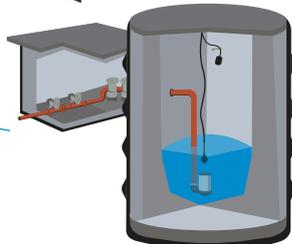
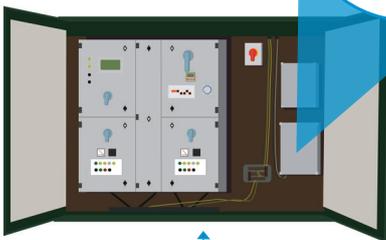
Early intervention to prevent detrimental failures with remote reset and continual monitoring

#### REMOTE RESET

Remote reset functionality with on-site engineer safety feature

### EXAMPLE VARIABLES MONITORED

- Power Supply
- High level
- Pump failure:
- Pump No.1
- Pump No.2
- Voltage monitoring
- Pump current
- Pump operating
- Pump under-load
- Pump seal leak
- Wet well Level
- Remote control
- Trip reset
- Pump start
- Remote control active



**ARGOS CLOUD NETWORK**  
MACHINE TO MACHINE  
INDUSTRIAL SIM

Want to find out more?  
Request a team viewer  
webinar session online

**Service Engineer**

The Service Engineer can get the full history integrated with the Pumping Station history. They can also reset remotely.

**OUT OF HOURS  
DUTY SERVICE TEAMS**

**T-T Service  
Seer Administration**

**DATA TO T-T WEBSITE**

Website  
**ttpumps.com**

**ALARM CONDITION**

Alarm to customer via text or email to multiple recipients or selected people.

**THE CUSTOMER  
CAN VIEW ALL  
SITES UNDER THEIR  
CONTROL**

**Customer**

**T-T SEER**  
Data Collection  
Condition Monitoring  
Alarms  
Service History



## A PROBLEMATIC PUMPING STATION RESOLVED BY SEER MONITORING

“The development of this product has allowed us to assist not only major house builders in providing evidence of efficient working of the pumping station to aid adoption but has also diagnosed many issues within hours of being installed on sites.”

As part of the trialing and testing of the new Seer monitoring range we installed a Seer Advanced unit at a David Wilson Homes site based in Crewe, Cheshire. The 72 property development required an Adoptable Pumping Station due to no gravity sewer network being available.

The Adoptable Sewage Pumping Station provided was compliant with Sewers for Adoption 6<sup>th</sup> Edition (the applicable specification at the time of construction) to United Utilities addendum. The Seer unit provided managed to alert and diagnose an issue on site within 48 hours of installation.

The Adoptable Pumping Station consisted of a 3.0m diameter by 5.3m deep concrete wet well, separate concrete constructed valve chamber, ductile iron pipe work, valves and fittings to full specification compliance along with a T-T Controls manufactured main control panel, plus two 4kW vortex impeller ATEX approved sewage pumps. Installed into the control panel was a Text-Tel Junior SMS text message only monitoring unit, we added the Seer Advanced cloud based unit to enable us to cross correlate any alarms being received.

Within 48 hours of the Seer unit being installed, the monitoring system detected a stuck non-return valve on one of the pump discharge legs, which ordinarily could have continued to be undetected for a considerable amount of time, causing unnecessary wear on the continually running pump and an imbalance in the hours run

on the station. This issue was unknown to both the T-T monitoring department and the site operatives due to the SMS technology being limited to the amount of variables it can monitor. Without the Seer, it would have taken chance to diagnose with an engineer observing on site at the exact time the non-return valve was getting stuck.

In addition we have been able to 'see' for the first time, a typical day in the life of each pumping station, in regards to the empty cycles and peak demands to both inflows and operating cycles. This has enabled us to optimise the performance of each pumping station and when combined with our service and monitoring agreement, we have been able to tailor our service and reaction times to suit.

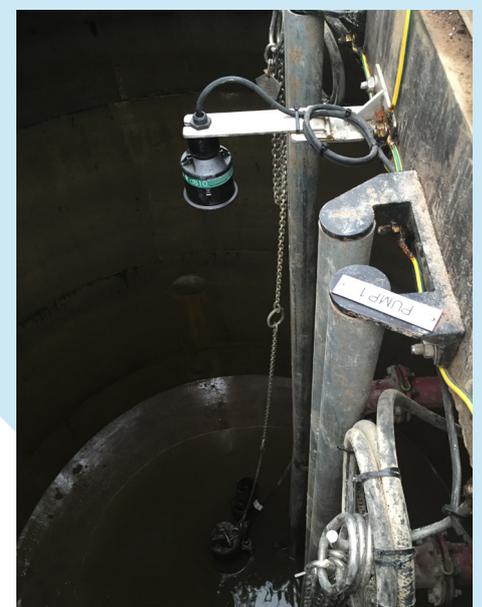
Further to identifying issues specific to the pumping station, the installation of the Seer has allowed us to identify issues, not relating to the equipment provided by T-T but problems with ancillary services, such as issues on the incoming voltage to the pumping station provided by the power supply network and the impact of such issues.

Finally, as well as being a 24/7 real time monitoring and analysis portal, Seer acts as a data logger providing downloadable reports of all data, parameters and alarms.

A document pack can then be produced and supplied to the water authority, as evidence of optimal working conditions to aid with the adoption process.

As this development combined the monitoring equipment, with a T-T service and monitoring agreement we had 24/7 visible data of the pumping station in real time. The categorisation of alarm severity (minor, major and critical) and the ability to visualise the wet well level, continually allowed us to provide a tailored reactive and preventative maintenance package to keep the pumping station in continuous working condition.

The Seer has reduced and will continue to reduce the need for breakdown calls, due to us having the ability to remotely diagnose and reset any issues on site.



|                      |                 |
|----------------------|-----------------|
| Quotation            |                 |
| Customer Name:       |                 |
| Site Address:        |                 |
| Invoice Address:     |                 |
| Pumping Station Ref: | Or description: |
| Pump Type:           |                 |

| Service Requirements | Tick as applicable |
|----------------------|--------------------|
|----------------------|--------------------|

| T-T Level 1 |
|-------------|
|-------------|

We recommend two services per year for stations serving multiple properties or commercial premises and a minimum of one service per year for single domestic properties.

|             |      |               |   |                   |                          |
|-------------|------|---------------|---|-------------------|--------------------------|
| A. Service: | 1 Or | 2 Visits/Year | <input style="width: 50px;" type="text"/> | Per Service Visit | <input type="checkbox"/> |
|-------------|------|---------------|---|-------------------|--------------------------|

| T-T Level 2 |
|-------------|
|-------------|

This package includes all the standard benefits plus our Seer monitoring services. Our monitoring service ensures your station is monitored by T-T 24/7.

|             |                                 |   |          |                          |
|-------------|---------------------------------|---|----------|--------------------------|
| B. Service: | 2 Visits/Year + Seer Monitoring | <input style="width: 50px;" type="text"/> | Per Year | <input type="checkbox"/> |
|-------------|---------------------------------|---|----------|--------------------------|

(Requires C & D. Auto renews annually)

|                |        |   |                      |                          |
|----------------|--------|---|----------------------|--------------------------|
| C. Seer model: | Rental | <input style="width: 50px;" type="text"/> | Rental Cost Per Year | <input type="checkbox"/> |
|----------------|--------|---|----------------------|--------------------------|

(In the event of the rental not being renewed, the Seer unit will be removed by T-T, if the unit can not be returned or is damaged, an additional cost may apply.)

|                                       |   |          |                          |
|---------------------------------------|---|----------|--------------------------|
| D. Annual 24/7/365 Monitoring Service | <input style="width: 50px;" type="text"/> | Per Year | <input type="checkbox"/> |
|---------------------------------------|---|----------|--------------------------|

|                               |                       |                          |                       |                       |                       |                            |
|-------------------------------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|----------------------------|
| E. Monitoring contract period | <input type="radio"/> | 2 Years (Subject to RPI) | <input type="radio"/> | 3 Years (Fixed price) | <input type="radio"/> | 5 Years (Save 5% per year) |
|-------------------------------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|----------------------------|

|                  |   |  |          |                          |
|------------------|---|--|----------|--------------------------|
| F. Seer retrofit | <input style="width: 50px;" type="text"/> |  | Per Year | <input type="checkbox"/> |
|------------------|---|--|----------|--------------------------|

If Seer equipment is not fitted before the pumping station is installed the retrofit charge will apply.

| T-T Level 3 |
|-------------|
|-------------|

Our premier agreement includes two services per year, all parts plus one pump per year if required plus two breakdown call outs included.

|                                  |   |          |                          |
|----------------------------------|---|----------|--------------------------|
| G. Level 3 Service without Seer: | <input style="width: 50px;" type="text"/> | Per Year | <input type="checkbox"/> |
|----------------------------------|---|----------|--------------------------|

|                               |   |          |                          |
|-------------------------------|---|----------|--------------------------|
| H. Level 3 Service With Seer: | <input style="width: 50px;" type="text"/> | Per Year | <input type="checkbox"/> |
|-------------------------------|---|----------|--------------------------|

(Requires C & D as above. Auto renews annually)

| Emergency Contacts | Mobile Tel. No | Email |                    |
|--------------------|----------------|-------|--------------------|
| Name:              |                |       | Priority Contact   |
| Name:              |                |       | Secondary Contacts |
| Name:              |                |       |                    |

**Acceptance of Service and Monitoring Agreement**

|       |  |       |  |
|-------|--|-------|--|
| Sign: | <input style="width: 90%;" type="text"/> | Date: | <input style="width: 90%;" type="text"/> |
|-------|--|-------|--|

|             |  |               |  |
|-------------|--|---------------|--|
| Print Name: | <input style="width: 90%;" type="text"/> | On behalf of: | <input style="width: 90%;" type="text"/> |
|-------------|--|---------------|--|

| Contact Details |            |         |
|-----------------|------------|---------|
| Name:           | Telephone: | Mobile: |
| Address:        |            |         |

## TANKERING

We can assist in getting your pumping station tankered and jetted with our tankering partners.

Let us take the stress out of arranging and co-ordinating this for you. T-T only work with professional companies who we have built up good working relationships with and who we trust.

We liaise with the company, book visit, raise purchase orders and pay invoices. We charge a 15% admin fee on top of the tankering company invoice.

Please note: we are unable to give accurate quotes for this service, as it depends on time on site and disposal amounts.



## WATER TESTING

We carry out full water testing backed by full certification for TVC22C, TVC37C, E.coli, Conliforms, Pseudomonas and Legionella.

## RETROFIT & COMPLETE PACKAGES

1. Purchase your pumping stations from us
2. Have it installed by our fully trained mechanical and electrical engineers
3. Take the worry out of maintaining a pumping station by taking out a T-T Service Agreement



## SEWAGE TREATMENT PLANTS

At T-T, we have British Water accredited sewage treatment plant engineers who can service your sewage treatment plant, ensuring it is in optimal working condition.

What are the benefits of having your sewage treatment plant regularly serviced?

- Trouble-free operation
- Avoid the risk of pollution and potential fines
- Minimise smells
- Reduce energy and running costs
- Improved plant utilisation and return on investment



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