Project Technical Note

Project:	Lower Hare Farm, Whitestone, EX4 2XW
Project Client:	GRS Stone Supplies Limited
Project Reference:	213189/PTN/SS/001
Date:	18/02/26
Subject:	**Temporary Drainage Silt Control**

1. Overview

The drainage system approved under the planning regime and as presented in the Detailed Drainage Design and Maintenance report[1] by Teign Consult Limited has been constructed. In accordance with the design, the permanent system is supplemented by a large temporary lagoon for the control of suspended solids during construction.

Whilst the system is reducing suspended solid concentrations in site runoff, monitoring has shown the fine silt and clay fraction remain in suspension at concentrations above the permit threshold of 50 mg/l.

Supplemental controls to manage suspended solid concentrations flowing from the permanent lagoon are being implemented for the land engineering works phase. This includes discharging water from the lagoons via settlement tank(s). This technical note details what is being implemented.

2. Additional Suspended Solid Settlement Tanks

To reduce suspended solids, GRS Stone Supplies are supplementing the discharge from the constructed lagoon system with settlement tanks. The tank specification is attached in Appendix A and an indicative configuration is presented in drawing 213189/EP/SS/001. At least one tank will be maintained on site at all times during the land formation works.

The settlement tanks are designed to promote the removal of suspended silts. It is anticipated that up to a maximum of two tanks maybe deployed at any time in series, maximising the removal of suspended solids without the use of any chemical additives.

The system includes a bespoke real time monitoring system installed on the outflow pipe, prior to point of discharge. The system includes a real time MCERT flowmeter (Siemens) in line with permit requirements and a probe detecting the suspended solids (easyprobe 30). Details of the meters are presented in Appendix B.

3. Application of Flocculants

In the event that the water maintains high concentrations of suspended solids and no further upstream controls can be implemented, it is proposed that flocculants may be applied during land engineering works to clarify the water. This would only be implemented after trials on effectiveness and water quality.

It is anticipated that the Environment Agency would impose an Improvement Condition in a varied Environmental Permit requiring the use of any flocculant to be approved prior to use. The improvement condition would require details of the flocculant supported by quantitative analysis on waters from Lower Hare Farm demonstrating that there would be no detrimental impact on the quality of the water environment.

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[1] Report ref 514A/2023/DDMS Rev E

DRAWINGS

Rev.	Details	Drawn / Chkd.	Date

Project

213189
Lower Hare Farm

Title

Suspended Solids Treatment System

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Scale	Date	Drg. No.	Rev.
1:100@A3	Jan'26	213189/EP/SS/001	A
	Drawn: ML / Chkd.: EB		

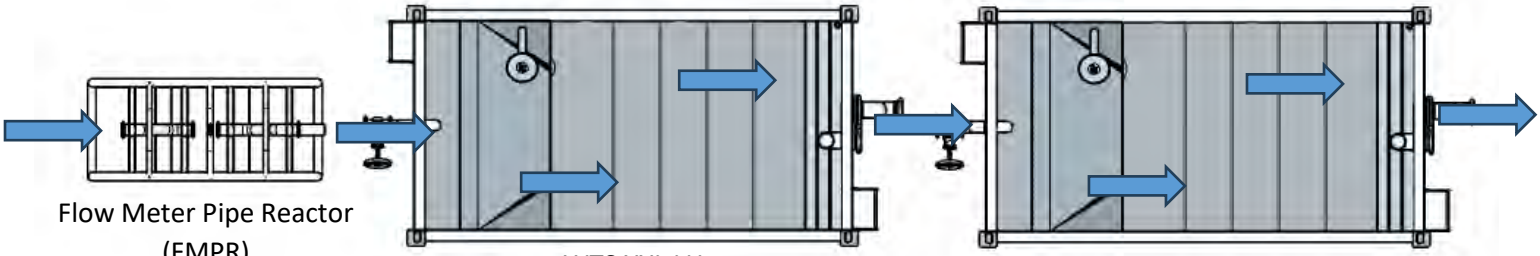
APPENDIX A
Tank Specification

KELLY TANKS LTD
RAWNSLOW FARM
SANDON BANK
STAFFORD
ST18 9TE
01889 508944

Jan 2026

GRS Stone Supplies Limited Proposal

Proposed Equipment



Flow Meter Pipe Reactor (FMPR)

WTS XXL LH

WTS XXL LH

1. Water Gravity feeds from existing pond to FMPR, where flow is monitored and flocculant is automatically, proportionately dosed directly into flowing water.

   Alternatively, if liquid flocculant is not dosed via the FMPR, flocculant blocks can be placed in the initial cage of the WTS XXL LH for basic flocculation.

2. The flocculated water then gravity feeds into 1st WTS XXL LH, wherein light hydrocarbons can be removed by the adjustable skimmer, solids are separated, aided by the coalescing/lamella media and solids settle in the hopper of the system.
3. Water then gravity feeds into the 2nd WTS XXL LH for further separation. In the final compartment of the 2nd WTS XXL LH, immediately prior to outlet, a Remote Monitoring System will monitor pH & TSS levels which will be viewable onsite and remotely, online where data can be logged. Water is then gravity discharged.

KELLY TANKS

WTS WATER TREATMENT

Universal treatment tanks with interchangeable coalescing media to suit all applications

Ideal solution when dewatering and dealing with stubborn suspended solids. The coalescing/lamella media provides a huge settling area and encourages settlement of all types of silt. Silt and Sludge is collected in the hopper and can be easily removed via the dump valve. Systems can be used with or without Flocculant. Media can be provided with varying diameter openings making the WTS the perfect system for any application. System can also be fitted with remote water quality monitoring systems and/or auto desludging pumps.

- Lamella Coalescing media, can be used with Flocculant
- Oil Skimmer & optional Hydrocarbon filter pads
- Simple to set up, simple to empty, simple to operate
- Solids emptied via dump valve for easy cleaning

AVAILABLE FOR HIRE OR PURCHASE

Dims (mm)/ Weight approx.	**WTS** 2880 (L) 1560 (W) 1510 (H) / 820kg **WTS XL** 4020 (L) 1830 (W) 2140 (H) / 1320kg **WTS XXL** 4940 (L) 2370 (W) 2260 (H) / 2200kg **WTS XXL LH** 4210 (L) 2210 (W) 3250 (H) / 3200kg
Optimum Max Flowrate	**WTS** 15m^3/hr **WTS XL** 25m^3/hr **WTS XXL** 30-40m^3/hr **WTS XXL LH** 50-60m^3/hr
Power Required	NOT REQUIRED* *110V required if dosing or remote monitoring
Consumables	Flocculant Block (optional) Hydrocarbon Filter Pads (optional)

For further information contact KELLY TANKS on 01889 508944 or email info@kellytanks.co.uk

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LAMELLA/COALESCING

DOSING & DESLUDGING

SETTLEMENT TANKS

PH CONTROL

FLOCCULANT DOSING

REMOTE MONITORING

STORAGE TANKS

BESPOKE FABRICATION

ALSO AVAILABLE FOR PURCHASE OR HIRE, PUMPS, PIPEWORK, FITTINGS & MORE...

Real time monitoring and data logging equipment to measure and log pH and TSS levels in water.

REMOTE MONITORING SYSTEMS

FLOW METER WITH PROPORTIONAL INLINE DOSING

- Proportionally dose flocculants
- Accurately monitor flow rate
- Quick & Easy Set Up
- Lifting Points & Fork Pockets
- Robust, Easy to Use Meter

For further information contact KELLY TANKS on 01889 508944 or email info@kellytanks.co.uk

SCAN ME

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APPENDIX B
Waste Monitoring Meters

*Easy*Probe™

Model 5001 Data Sheet

The *Easy*Probe™
Model 5001

Two EasyProbe options are available from Solinst Eureka, both offering high-performance water quality monitoring at a low cost.

The *Easy*Probe20 includes a multiprobe with temperature, dissolved oxygen, conductivity, and pH/ORP sensors in a 1.95" (50 mm) diameter instrument, a weighted sensor guard, a tool and maintenance kit, and a soft carrying case.

The *Easy*Probe30 includes the same as the *Easy*Probe20 plus a turbidity sensor with wiper in a 2.95" (75 mm) diameter instrument and optional battery pack for self-powered logging.

The *Easy*Probes are also available with the following options and accessories: depth (level) sensors, USB adapter and data cable for connection to a Windows PC, 5, 10, 20, 30, 40, and 50 m underwater cables, integrated SDI-12 and MODBUS output for connection to third-party devices, *Bluetooth*®-equipped tablet (Apple® and Android™) with waterproof case, flow cell, copper anti-fouling kit, pipe kit, telemetry kit, and calibration solutions.

Get Quote

Applications for the *Easy*Probe

The *Easy*Probe is a simple option for the following water quality monitoring applications:

- spot-checking
- unattended logging
- remote telemetry
- wastewater
- education and research
- aquaculture
- lakes, rivers, estuaries
- process control
- laboratory research
- groundwater monitoring

Why Choose an *Easy*Probe?

- **Reliability.** Solinst Eureka multiprobes are so well suited for demanding field conditions that Solinst Eureka is the only manufacturer providing a three year warranty that includes all sensors. Superior sensors mean you can trust your data.
- **Fitness for Purpose.** Solinst Eureka uses the best sensors and materials to meet all field conditions. Multiprobe construction and operation have been tested in thousands of demanding applications over several decades.
- **Lifetime Cost.** Not only does the *Easy*Probe have a highly competitive purchase price, but it also has the lowest maintenance costs in the industry.
- **Service After Sale.** If you run into a problem, Solinst Eureka Customer Support responds immediately to e-mails and phone calls and does not rest until your problem is solved.
- **Ease of Use.** *Easy*Probes are easy to calibrate and deploy. Our hallmark software is so simple you can walk through it in just a few minutes. Easily access the software on our Downloads Page.
- **Warranty.** Industry-leading three-year warranty.

Connectivity is Easy with the *Easy*Probe

The *Easy*Probe communicates using the underwater cable connected to the mantaMobile™. SD1-12 and MODBUS are available to connect to dataloggers, controllers, telemetry, and other third-party devices.

The mantaMobile is a rechargeable, high-capacity lithium battery with Bluetooth transceiver in a water-resistant case. The mantaMobile communicates via Bluetooth to Android or Apple display devices, including tablets and phones. The mantaMobile will power an *Easy*Probe for eight hours or more.

MantaLink™ is the software app used to access the functions and data from your *Easy*Probe. Installing MantaLink on your display device takes just a few minutes. Connecting the *Easy*Probe to your display device takes just a few seconds.

Use MantaLink's simple menu structure to perform basic functions like data capture, calibration, and sensor parameter selection. The email feature allows quick transfer of field data to your home computer. Advanced features like geofencing make your sampling job even easier. With MantaLink's black background and large, white letters, your data device is easily read in sunlight.

Bluetooth®

Download on the App Store

GET IT ON Google play

*Easy*Probe Specifications

Multiprobe specification charts often come with footnotes stating qualifications such as "accuracy specification good at the time and temperature of calibration" or "all values within 1 standard deviation" or "SC accuracy applies only at the calibration point".

To avoid eyestrain from reading small print, the *Easy*Probe specification chart has "lab accuracy" and "field accuracy" columns. The latter gives you a more realistic idea of how your multiprobe performs, over time, under common field conditions.

Parameter, Units	Range	Resolution	Lab Accuracy	Field Accuracy
temp, ºC	-5 to 50	0.01	0.1	0.1
pH, units	0 to 14	0.01	0.1	0.2
ORP, mV	-999 to 999	1	20	40
SC, uS/cm	0 to 200,000	four digits; maximum of one decimal	1% of reading +/-1	1% of reading +/-1
Value DO, % Sat	0 to 200	0.1	2	3
	200 to 500	-	4	6
Value DO, mg/l	0 to 50	0.1	Corresponds with % Sat	
turbidity, FNU, NTU	0 to 1,000	four digits; maximum of two decimals	0.3 or 2% of reading	0.5 or 3% of reading
	1,000 to 4,000		4% of reading	5% of reading
Value depth, m	0 to 25	0.01	0.2	0.2
BP, mmHg	400 to 900	0.1	1.5	1.5
TDS, g/l	0 to 65	0.01	5% of reading	5% of reading
Sal, PSS (practical salinity units)	0 to 70	0.01	0.1	0.2

Dimensions including weighted sensor guard:

- EP20 - 1.95" (50 mm) diameter, 18.8" (47.8 mm long), 1.8 lbs (0.82 kg)
- EP 30 - 2.95" (75 mm) diameter, 18.8" (47.8 mm long), 3.6 lbs (1.63 kg)

*Easy*Probe20

*Easy*Probe30

Solinst Eureka LLC. www.solinst.com/eureka
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Overview

The SITRANS FMS500 is a magnetic flow meter sensor suitable for volume flow measurement of liquids (conductive) and is the ideal product for applications in water abstraction, wastewater treatment, water distribution networks, and irrigation.

The rugged, fully welded design supports direct burial, constant flooding and to stand up a wide range of harsh chemicals found in water-based applications in many different industries.

Designed for highly accurate measurement in low-flow conditions, these meters can measure from very low velocities up to 10 m/s, giving it a very wide measurement range.

Combined with a flow meter transmitter it is a traditional externally powered electromagnetic flow meter system

Benefits

- Zero Up and Zero Down installation capabilities
- NBR rubber liner for all water and wastewater applications
- EPDM liner specifically for drinking water applications requiring special approvals
- Soft elastomer facing provides high abrasion resistance
- Increased low flow accuracy for water leak detection
- Rugged construction with no moving parts for maintenance-free operation over many years.
- Simple on-site upgrade to IP68 of a standard sensor allowing underground installation, permanent immersion or underwater installation
- Integrated grounding electrodes – no grounding rings required for many applications
- Short delivery time
- Built-in length according to ISO 20456 (up to DN 400 mm)
- SENSORPROM™ Technology provides an automatic upload of start-up settings and calibration data for easy commissioning
- Designed to allow in-situ verification for easy performance check
- In conformity with ISO 4064, OIML R49 and EN 14154

Application

The SITRANS FMS500 with its NBR or EPDM soft rubber lining is a flow meter sensor for all kinds of water applications such as ground water, potable water, cooling water, wastewater, sewage, or sludge applications.

Connected to the compatible transmitter SITRANS FMT020, either mounted remotely or as a compact unit, it forms the magnetic flow meter system SITRANS FM520 which can be used in almost all general-purpose water applications.

SITRANS FM520

Perfect match for a cost-effective solution for all water and wastewater applications. Measuring accuracy ±0.4% of flow rate, optional ± 0.2% of flow rate available.

Selection and ordering data

Sensor SITRANS FMS500	Article No. 7ME653-												
	•	-	•	•	•	•	•	-	2	•	A	•	
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.													
Transmitter variant													
No transmitter (sensor only)	0												
Transmitter SITRANS FMT020	2												
Diameter													
DN 15, 1/2 inch			1	V									
DN 25, 1 inch			2	D									
DN 40, 1 1/2 inch			2	R									
DN 50, 2 inch			2	Y									
DN 65, 2 1/2 inch			3	F									
DN 80, 3 inch			3	M									
DN 100, 4 inch			3	T									
DN 125, 5 inch			4	B									
DN 150, 6 inch			4	H									
DN 200, 8 inch			4	P									
DN 250, 10 inch			4	V									
DN 300, 12 inch			5	B									
DN 350, 14 inch			5	D									
DN 400, 16 inch			5	H									
DN 450, 18 inch			5	K									
DN 500, 20 inch			5	R									
DN 600, 24 inch			5	Y									
DN 700, 28 inch			6	B									
DN 750, 30 inch			6	D									
DN 800, 32 inch			6	H									
DN 900, 36 inch			6	K									
DN 1000, 40 inch			6	R									
DN 1050, 42 inch			6	Y									
DN 1100, 44 inch			7	D									
DN 1200, 48 inch			7	H									
Process connection													
EN 1092-1 PN 10 flanges					B								
EN 1092-1 PN 16 flanges					C								
EN 1092-1 PN16 flanges, non-PED version					D								
ANSI B16.5 Class 150 flanges					J								
AWWA C-207 Class D flanges					M								
AS 4087 PN 16 flanges					S								
Process connection material													
Carbon steel ASTM A 105 with corrosion-resistant coating acc. to EN ISO 12944 grade C4						0							
Carbon steel ASTM A 105 with corrosion-resistant coating acc. to EN ISO 12944 grade C5 (300 µm)						1							
Liner material													
EPDM (soft rubber)							2						
NBR (soft rubber)							3						
Electrode material													
Hastelloy C276 / 2.4819									2				
Transmitter mounting & enclosure type													
No transmitter (sensor only)										A			
Compact design (integral mount), plastic enclosure										G			
Remote design, plastic enclosure (wall-mounting unit and sensor terminal board included)										J			
Power supply													
None (sensor only)												0	
24 V DC												2	
100 ... 240 V AC, 50/60 Hz												3	

Selection and ordering data (continued)

Additional information	Order code
Please add "**-Z**" to Article No. and specify Order code(s) and plain text.	
Cable glands	
Without cable glands (blind plugs)	A00
M20x1.5 cable glands, material polyamide	A02
1/2 inch NPT cable glands, material polyamide	A05
Certificates	
Declaration of compliance with the order 2.1 (EN 10204)	C00
Inspection certificate 3.1 (EN 10204) - Material of pressure-containing and wetted parts	C12
Test report 2.2 (EN 10204)	C14
Inspection certificate 3.1(EN 10204) - Pressure test	C18
High accuracy calibration	
High accuracy factory calibration 0.2%, DN ≤ 200, ≤ 8 inch	D01
High accuracy factory calibration 0.2%, DN 250 ... 600, 10 ... 24 inch	D02
High accuracy factory calibration 0.2%, DN 700 ... 1200, 28 ... 48 inch	D03
5-point calibration	
5-point factory calibration, DN ≤200, ≤ 8 inch	D10
5-point factory calibration, DN 250 ... 600, 10 ... 24 inch	D11
5-point factory calibration, DN 700 ... 1200, 28 ... 48 inch	D12
10-point calibration	
10-point factory calibration, DN ≤ 200, ≤ 8 inch	D15
10-point factory calibration, DN 250 ... 600, 10 ... 24 inch	D16
10-point factory calibration, DN 700 ... 1200, 28 ... 48 inch	D17
Default matched-pair calibration	
Default matched-pair factory calibration, DN ≤ 200, ≤ 8 inch	D20
Default matched-pair factory calibration, DN 250 ... 600, 10 ... 24 inch	D21
Default matched-pair factory calibration, DN 700 ... 1200, 28 ...48 inch	D22
5-point matched-pair calibration	
5-point, matched-pair factory calibration, DN ≤ 200, ≤ 8 inch	D25
5-point, matched-pair factory calibration, DN 250 ... 600, 10 ... 24 inch	D26
5-point, matched-pair factory calibration, DN 700 ... 1200, 28 ... 48 inch	D27
10-point matched-pair calibration	
10-point, matched-pair factory calibration, DN ≤ 200, ≤ 8 inch	D30
10-point, matched-pair factory calibration, DN 250 ... 600, 10 ... 24 inch	D31
10-point, matched-pair factory calibration, DN 700 ... 1200, 28 ...48 inch	D32
Accredited ISO/IEC 17025 calibration	
ISO/IEC 17025 accredited, 5-point, matched-pair factory calibration, DN ≤ 200, ≤ 8 inch	D35
ISO/IEC 17025 accredited, 5-point, matched-pair factory calibration, DN 250 ... 600, 10 ...24 inch	D36
ISO/IEC 17025 accredited, 5-point, matched-pair factory calibration, DN 700 ... 1200, 28 ... 48 inch	D37
General safety	
CSA General Purpose	E06

Additional information	Order code
Country of origin	
France	E90
Communication	
HART with 4 ... 20 mA output, active or passive	F01
Modbus RTU / RS485	F04
PROFINET	F07
EtherNet/IP	F09
Device options	
Sensor terminal board factory mounted	J00
Sensor cables factory mounted	J01
Factory preconfigured for transmitter mounting in compact design (integral mount)	J02
Type of protection (IP)	
IP68 (NEMA 6P) protection class for sensor in remote design, without potting (to 2 m depth, 10 days)	L50
IP68 (NEMA 6P) protection class for sensor in remote design, factory potted (to 10 m depth, continuously)	L51
Sensor cables	
Cable kit with coil and electrode cable, standard type (3 × 1.5 mm²), PVC-jacket	
• 5 m (16 ft)	T00
• 10 m (33 ft)	T01
• 20 m (65 ft)	T03
• 30 m (98 ft)	T05
• 40 m (131 ft)	T06
• 50 m (164 ft)	T07
• 60 m (197 ft)	T08
• 100 m (328 ft)	T11
• 150 m (492 ft)	T14
• 200 m (656 ft)	T16
• 500 m (1640 ft)	T18
Cable kit with coil cable standard type (3 × 1.5 mm²) and electrode cable special type (3 × 0.25 mm²), PVC-jacket	
• 5 m (16 ft)	T50
• 10 m (33 ft)	T51
• 15 m (49 ft)	T52
• 20 m (65 ft)	T53
• 25 m (82 ft)	T54
• 30 m (98 ft)	T55
• 40 m (131 ft)	T56
• 50 m (164 ft)	T57
• 60 m (197 ft)	T58
• 100 m (328 ft)	T61
• 150 m (492 ft)	T64
• 200 m (656 ft)	T66
• 500 m (1640 ft)	T68
Device settings	
Measuring range: Upper range value (Q_{max}), unit	Y01
Current output damping	Y02
Current output signal range	Y03
Low flow cut off	Y04
Flow direction (Default setting: Positive)	Y05

Selection and ordering data (continued)

Additional information	Order code
Empty pipe detection (Default setting: On)	Y06
Mains frequency (Default setting: 50 Hz)	Y07
Operation language display (default setting English)	Y24
Device identification	
Location designation (TAG), device parameter and stainless-steel plate for transmitter (max. 32 characters)	Y11
Measuring point description, device parameter and stainless-steel plate for transmitter (max. 32 characters)	Y12
Location designation (TAG), device parameter and adhesive label for transmitter (max. 32 characters)	Y13
Measuring point description, device parameter and adhesive label for transmitter (max. 32 characters)	Y14
Location designation (TAG), device parameter and stainless-steel plate (max. 32 characters)	Y15
Measuring point description, device parameter and stainless-steel plate (max. 32 characters)	Y16
Location designation (TAG), device parameter and adhesive label (max. 32 characters)	Y18
Measuring point description, device parameter and adhesive label (max. 32 characters)	Y19

Additional information	Order code
Totalizer 1 settings	
Preset value	Y30
Unit	Y31
Direction	Y32
Failure mode	Y33
Decimal point	Y34
Totalizer 2 settings	
Preset value	Y35
Unit	Y36
Direction	Y37
Failure mode	Y38
Decimal point	Y39
Totalizer 3 settings	
Preset value	Y40
Unit	Y41
Direction	Y42
Failure mode	Y43
Decimal point	Y44
Pulse output settings	
Volume per pulse	Y50
Pulse width	Y51

Technical specifications

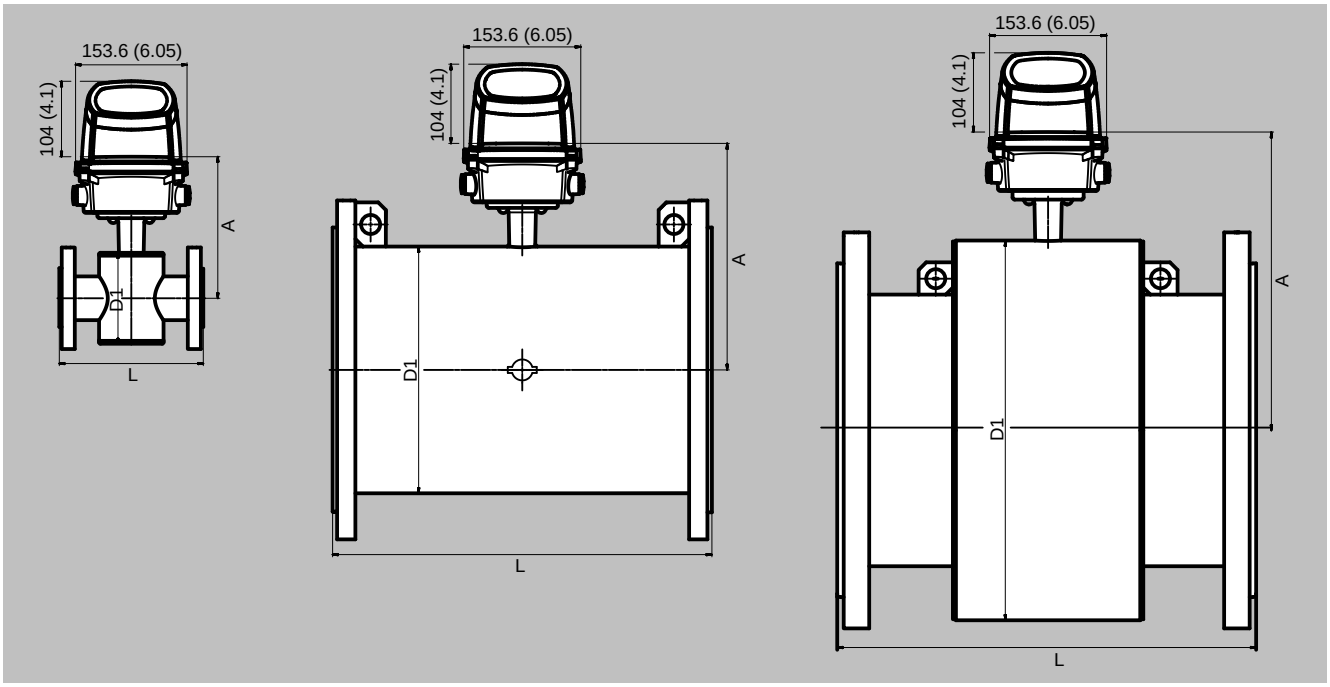
SITRANS FMS500 flowmeter sensor	
Product characteristic	For demanding applications in the water & wastewater industry
Measurement of	Volume flow, flow velocity, electrical conductivity
Nominal diameter	• Coned sensor (octagon liner): DN 15 ... 40 (½" ... 1½") • Coned sensor: DN 50 ... 300 (2" ... 12") • Full bore sensor: DN 350 ... 1200 (14" ... 48")
Mode of operation	
Measuring principle	Electromagnetic induction
Medium conductivity	Liquids with an electrical conductivity ≥ 5 µS/cm.
Excitation frequency (mains supply: 50 Hz / 60 Hz)	• DN 15 ... 65 (1/2" ... 2 1/2"): 12.5 Hz / 15 Hz • DN 80 ... 150 (3" ... 6"): 6.25 Hz / 7.5 Hz • DN 200 ... 300 (8" ... 12"): 3.125 Hz / 3.75 Hz • DN 350 ... 1200 (14" ... 48"): 1.5625 Hz / 1.875 Hz
Process connection	
Flanges [1]	
• EN 1092-1	PN 10 (145 psi) Flat face DN 200 ... 300 (8" ... 12") PN 10 (145 psi) Raised face DN 350 ... 1200 (14" ... 48") PN 16 (232 psi) Flat face DN 50 ... 300 (2" ... 12") PN 16 (232 psi) Raised face DN 350 ... 1200 (14" ... 48") PN 40 (580 psi) Flat face DN 15 ... 40 (½" ... 1½")
• ANSI B16.5	Class 150 Flat face ½" ... 12" Class 150 Raised face 14" ... 24"
• AWWA C-207	Class D Flat face 28 ... 48"
• AS/NZS 4087	PN 16 (232 psi) Flat Face DN 50 ... 300 (2" ... 12") PN 16 (232 psi) Raised face DN 350 ... 1200 (14" ... 48")
• JIS B 2220:2004	10K DN 15 ... 600 (1" ... 24")
Rated operating conditions	
Ambient temperature	
• Sensor	-20 ... +70 °C (-40 ... +158 °F)
• Compact with transmitter	-20 ... +65 °C (-40 ... +149 °F)
Operating pressure (abs) (maximum operating pressure depending on flange type)	DN 15 ... 40 (1/2" ... 1 1/2"): 0.01 ... 40 bar (0.15 ... 580 psi) DN 50 ... 300 (2" ... 12"): 0.03 ... 20 bar (0.44 ... 290 psi) DN 350 ... 1200 (14" ... 48"): 0.01 ... 16 bar (0.15 ... 232 psi)
Protection class	
• Standard	IP66/67, NEMA 4X/6
• Optional	IP68 and NEMA 6P (2m, 10 days) for sensor in remote design IP68 and NEMA 6P (10m, continuously) for sensor in remote design
Mechanical load (vibration)	
• Integral mount / compact version	Vibration, sinusoidal according to IEC 60068-2-6 • 2 ... 4 Hz, 3.5 mm peak • 8.4 ... 500 Hz, 1 g peak Vibration broad-band random, according to IEC 60068-2-64 • 10 ... 200 Hz, 0.003 g2/Hz • 200 ... 500 Hz, 0.001 g2/Hz • Total: 1.54 g rms
• Remote version	Vibration, sinusoidal according to IEC 60068-2-6 Sensor: • 2 ... 8.4 Hz, 7.5 mm peak; • 8.4 ... 500 Hz, 2 g peak Transmitter: • 2 ... 8.4 Hz, 1.5 mm peak; • 8.4 ... 500 Hz, 0.7 g peak Vibration broad-band random, according to IEC 60068-2 64 Sensor: • 10 ... 200 Hz, 0.01 g2/Hz; • 200 ... 500 Hz, 0.003 g2/Hz; • Total: 1.54 g rms Transmitter: • 10 ... 200 Hz, 0.003 g2/Hz; • 200 ... 500 Hz, 0.001 g2/Hz; • Total: 1.54 g rms
Process temperature	

Technical specifications (continued)

SITRANS FMS500 flowmeter sensor	
• NBR liner	-10 ... +70 °C (14 ... 158 °F)
• EPDM liner	-10 ... +70 °C (14 ... 158 °F)
Pressure drop	DN 15 and 25 (½" and 1"): Max. 20 mbar (0.29 psi) at 1 m/s (3 ft/s) DN 40 ... 300 (1½" ... 12"): Max. 25 mbar (0.36 psi) at 3 m/s (10 ft/s) DN 350 ... 1200 (14" ... 48"): Insignificant
Test pressure	1.5 × PN (where applicable)
Design	
Dimensions	See dimensional drawings
Weight	See dimensional drawings
Material	
• Housing and flanges	Carbon steel ASTM A 105 with corrosion resistant coating of class C4 or C5 (durability up to 15 years) EN ISO 12944
• Measuring electrode	Hastelloy C276 / 2.4819
• Grounding electrode	Hastelloy C276 / 2.4819
• Measuring pipe [2]	Stainless steel AISI 304 / 1.4301
• Terminal box	Polycarbonate
Cable entries	4 x metric thread (size M20 x 1.5)
Pressure equipment	Conforming with 97/23 EC
Electromagnetic compatibility	Conforming with 2004/108/EC
Calibration	
Standard	Zero-point, 2 × 25 % and 2 × 90 %
Optional	• 5-point calibration: 20 %, 40 %, 60 %, 80 %, 100 % of factory Qmax • 10-point calibration: ascending and descending at 20 %, 40 %, 60 %, 80 %, 100 % of factory Qmax • Matched pair calibration: default, 5-point or 10-point • ISO/IEC 17025 accredited, 5-point, matched-pair calibration
Certificates and approvals	
General purpose	CE (LVD, PED, EMC, RoHS), UKCA
Drinking water	• WRAS (WRc, BS 6920 material approval for cold water, GB) • NSF/ANSI Standard 61 (Cold water, US) • ACS listed (France) • DVGW W270 (Germany) • Belgaqua (Belgium) • AS/NZS 4020 (Australia/New Zealand) • GB/T 5750 (China)
Others	• Environmental Product Declaration (EPD) • EAC (Kazakhstan)

[1] DN 750, DN 1050 and DN 1100 (30", 42" and 44") not available with EN 1092-1 (PN 10 and PN 16) and AS 4087 flanges
[2] DN > 300 (12")

Dimensional drawings



SITRANS FMS500 Sensor: version 7ME6530 DN 15 ... 40 (½" ... 1½") (left), version 7ME6530 DN 50 ... 300 (2" ... 12") (middle) and version 7ME6530 DN 350 ... 1200 (14" ... 48") (right)

Sensor SITRANS FMS500 (7ME653)									
Nominal diameter		A		D1		L1)		Weight 2)	
[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[kg]	[lbs]
15	½	170	6.7	77	3.0	200	7.9	5	11
25	1	180	7.1	96	3.8	200	7.9	6	13
40	1½	195	7.7	127	5.0	200	7.9	9	20
50	2	181	7.1	76	3.0	200	7.9	10	22
65	2½	187	7.4	89	3.5	200	7.9	12	26
80	3	193	7.6	102	4.0	200	7.9	13	29
100	4	200	7.9	114	4.5	250	9.8	17	37
125	5	210	8.3	140	5.5	250	9.8	20	44
150	6	225	8.9	168	6.6	300	11.8	27	60
200	8	250	9.8	219	8.6	350	13.8	39	86
250	10	277	10.9	273	10.8	450	17.7	56	123
300	12	303	11.9	324	12.8	500	19.7	72	159
350	14	375	14.8	451	17.8	550	21.7	115	254
400	16	400	15.7	502	19.8	600	23.6	143	315
450	18	431	17.0	563	22.2	600	23.6	177	390
500	20	456	18.0	614	24.2	600	23.6	222	489
600	24	507	20.0	715	28.2	600	23.6	321	708
700	28	557	21.9	816	32.1	700	27.6	331	730
750	30	584	23.0	869	34.2	750	29.5	-	-
800	32	609	24.0	927	36.5	800	31.5	386	851
900	36	656	25.8	1032	40.6	900	35.4	482	1063
1000	40	707	27.8	1136	44.7	1000	39.4	672	1482
1050	42	707	27.8	1136	44.7	1000	39.4	-	-
1100	44	758	29.8	1238	48.7	1100	43.3	-	-
1200	48	813	32.0	1348	53.1	1200	47.2	1116	2460

1) Tolerances on built-in length: DN 15 ... 200 (½" ... 8"): +0/-3 mm (+0/-0.12"), DN 250 ... 400 (10" ... 16"): +0/-5 mm (+0/-0.20"), DN 450 ... 600 (18" ... 24"): +5/-5 mm (+0.20/-0.20"), DN 700 ... 1200 (28" ... 48"): +10/-10 mm (+0.39/-0.39")

2) Weights in kg/lbs are for PN 40 DN ≤40, PN 16 DN >40 without transmitter. With transmitter FMT020 installed, weight is increased by approximately 1.0 kg (2.2 lb).