



AGENDA – Administration Committee

Thursday, November 20, 2025

6:15 PM

- I. Roll Call
- II. Approval of the October 16, 2025 Administration Committee Minutes

RECOMMENDED MOTION: To approve the Minutes of October 16, 2025 Administration Committee Meeting of the DuPage Water Commission.

- III. Request for Board Action: Travel and related expenses for two (2) Commission employees for Factory Valve QA/QC Testing for High Lift Pump Cone Valve Rebuilds in York Pennsylvania, travel and related expenses for three (3) Commission employees to attend the annual Underground Corrosion Short Course, travel and related expenses for two (2) Commission employees to attend the annual AMPP Conference, and travel and related expenses for five (5) Commission employees to attend the annual Illinois section AWWA conference in Peoria.
- IV. Resolution No. R-85-25: A Resolution Reviewing/Releasing certain Executive Session Minutes.
- V. Resolution No. R-89-25: A Resolution approving employee insurance benefits for plan year beginning January 1, 2026 and ending December 31, 2026.
- VI. Resolution No. R-96-25: Authorization to execute a wheeling agreement between the Village of Oak Brook and Aqua Illinois, Inc as a third-party beneficiary

RECOMMENDED MOTION: To recommend approval of Items 2 through 5 of the Administration Committee Report section of the Commission meeting agenda.

- VII. Old Business
- VIII. New Business
- IX. Executive Session

RECOMMENDED MOTION: To go into Executive Session to discuss security procedures pursuant to 5 ILCS 120/2(c)(8), to discuss matters related to personnel pursuant to 5 ILCS 120/2(c)(1) and (2), to discuss acquisition of real estate pursuant to 5 ILCS 120/2(c)(5), to discuss the setting of a price for sale or lease of property owned by the DuPage Water Commission 5 ILCS 120/2(c)(6), to discuss pending, probable, or imminent litigation pursuant to 5 ILCS 120/2(c)(11), and/or to discuss minutes of closed meetings

pursuant to 5 ILCS 120/2(c)(21) (Roll Call).

RECOMMENDED MOTION: To come out of Executive Session (Voice Vote).

X. Adjournment

Minutes of a Meeting
of the

ADMINISTRATION COMMITTEE

DuPage Water Commission
600 E. Butterfield Road, Elmhurst, Illinois

October 16, 2025

- I. Commissioner Romano called the meeting to order at 6:15 PM.

Commissioners in attendance: S. Greaney, A. Honig, K. Romano, D. Van Vooren, J. Zay
(6:16PM)

Commissioners absent:

Also in attendance: P. May, D. Mundall

- II. Commissioner Romano asked for a motion to approve the Minutes of the September 18, 2025 Administration Committee Meeting. Commissioner Honig moved, seconded by Commissioner Greaney, unanimously approved by a voice vote. All aye, motion carried.

- III. Commissioner Romano asked for a motion to approve Request for Board Action - Authorizing the Approval of Requisition No. 81217 to Hexagon for Annual Maintenance Renewal, at a cost of \$64,000. Commissioner Van Vooren moved, seconded by Commissioner Greaney, unanimously approved by a voice vote, all aye, motion carried.

- IV. Old Business
No Old Business was offered.

- V. New Business
Health Insurance will be brought forward at the November meeting, premiums are up 15%.
Website updates are ongoing.

- VI. Executive Session
No Executive Session was required.

- VII. Adjournment

Chairman Zay moved to adjourn the meeting at 6:19 PM, seconded by Commissioner Honig, unanimously approved by a voice vote. All aye, motion carried.

Meeting adjourned at 6:20 PM.



Resolution #: RFBA

Account: 01-60-613301, 01-60-613200

Approvals: *Author / Manager / Finance / Admin*

RCB RCB CAP PDM

REQUEST FOR BOARD ACTION

Date: 11/13/2025

Description: Travel and related expenses for two (2) Commission employees for Factory Valve QA/QC Testing for High Lift Pump Cone Valve Rebuilds in York Pennsylvania, travel and related expenses for three (3) Commission employees to attend the annual Underground Corrosion/Certification Course, travel and related expenses for two (2) Commission employees to attend the annual AMPP Conference, and travel and related expenses for five (5) Commission employees to attend the annual Illinois section AWWA conference

Agenda Section: Administration Committee

Originating Department: Administration

- Factory Valve Testing – Each of the high-lift pumps is equipped with a hydraulically-operated Cone Valve to develop and regulate necessary pumping discharge head pressure when initiating operator start-up command to an HLP. Resolution R-2-24 approved the removal and reconditioning of each individual Cone Valve. Upon completion of each valve reconditioning, it is imperative that each valve be inspected and tested at the repair facility in York Pennsylvania prior to shipment back to Elmhurst for reinstallation and commissioning. This request is for DWC staff to travel to the repair facility, inspect and witness test the valves scheduled for reconditioning. The program is budgeted in the FY-25/26 budget and the intention is to carry the program through the next several fiscal years.
- Underground Corrosion Short Course – This annual conference and training provide the opportunity to gain advanced insight and hands-on skills in corrosion management, support continuous professional growth and expertise, and provide professional development hours to maintain AMPP Cathodic Protection certifications and Professional Engineering licensure.
- AMPP Annual Conference – This annual conference provides the opportunity to meet with cathodic protection experts (corrosion and coatings professionals), industry leaders, subject matter experts. The program provides over 600 hours of technical content in materials protection and performance, the ability to explore innovative technologies, and gain insights into the materials protection industry through education and provides professional development hours to maintain Cathodic Protection certifications and licensure.
- IL AWWA Water Conference (WaterCon) – This annual conference provides the opportunity to meet with waterworks industry leaders and other subject matter experts. The program provides up to 14 hours of technical to maintain Cathodic Protection certifications and Professional Engineering licensure. DWC staff is on the technical agenda as presenters and will provide a discounted registration cost.

Dates	Location/Event Description	Attendees	Budgeted/Estimated Expenditure
December-January Dates TBD	Factory Valve Testing for High Lift Pump Cone Valve Rebuilds – York Pennsylvania	[Redacted] Manager of Water Operations [Redacted] Pipeline Coordinator	Estimated at \$3,3000 (includes Lodging, Transportation and per diems)
February 24-26, 2026	Annual Underground Corrosion Short Course – Ft. Wayne IN.	[Redacted] Pipeline Supervisor [Redacted] Pipeline Coordinator [Redacted] Project Engineer	Estimated at \$4,800 (includes Registration, Lodging, Transportation and per diems)
March 15-19, 2026	AMPP Annual Conference – Houston TX.	[Redacted] Pipeline Coordinator [Redacted] Pipeline Technician	Estimated at \$7,800 (includes Registration, Lodging, Transportation and per diems)
April 13-16, 2026	Illinois State AWWA WaterCon – Peoria IL	[Redacted] General Manager [Redacted], Manager of Water Operations [Redacted], Engineering Manager [Redacted] IT Supervisor [Redacted], Sr. Instrumentation Technician	Estimated at \$7,900 (includes Registration, Lodging, Transportation and per diems)

Recommended Motion:

To authorize Business-Related Travel Expenses for two (2) Commission employees for Factory Valve QA/QC Testing for High Lift Pump Cone Valve Rebuilds in York Pennsylvania, at an estimated expense of \$3,300, travel and related expenses for three (3) Commission employees to attend the annual Underground Corrosion Short Course at an estimated expense of \$4,800, travel and related expenses for two (2) Commission employees to attend the annual AMPP Conference at an estimated expense of \$7,800, and travel and related expenses for five (5) Commission employees to attend the annual Illinois section AWWA conference at an estimated expense of \$7,900, as included in the FY-25/26 Management Budget and as listed above.

**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	[REDACTED]
Job Title	Manager of Water Operations
Department	Administration

Purpose of Travel>	Factory Witness testing of Re-built High-Lift Pump Control Valve
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Destination	York, PA
Date of Departure	TBD
Date of Return	TBD

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$800.00
Rental Car:	\$350.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$0.00
Lodging:	\$350.00
Registration (including reference materials):	\$0.00
Meals and Tips:	\$150.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,650.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	[REDACTED]
Job Title	Pipeline and Remote Facilities Coordinator
Department	Pipeline and Remote Facilities

Purpose of Travel>	Factory Witness testing of Re-built High-Lift Pump Control Valve
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Destination	York, PA
Date of Departure	TBD
Date of Return	TBD

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$800.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$0.00
Lodging:	\$350.00
Registration (including reference materials):	\$0.00
Meals and Tips:	\$150.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,300.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	[REDACTED]
Job Title	Pipeline and Remote Facilities Supervisor
Department	Pipeline and Remote Facilities

Purpose of Travel>	Underground Corrosion Short Course – This annual conference and training provide the opportunity to gain advanced insight and hands-on skills in corrosion management, support continuous professional growth and expertise, and provide professional development hours to maintain AMPP Cathodic Protection certifications and Professional Engineering licensure.
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Destination	Fort Wayne, IN
Date of Departure	February 24, 2026
Date of Return	February 26, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$0.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$0.00
Lodging:	\$900.00
Registration (including reference materials):	\$400.00
Meals and Tips:	\$300.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,600.00

**Explanation of Miscellaneous if included in estimates above:*

[REDACTED]

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	
Job Title	Assistant Pipeline and Remote Facilities Coordinator
Department	Pipeline and Remote Facilities

Purpose of Travel>	Underground Corrosion Short Course – This annual conference and training provide the opportunity to gain advanced insight and hands-on skills in corrosion management, support continuous professional growth and expertise, and provide professional development hours to maintain AMPP Cathodic Protection certifications and Professional Engineering licensure.
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Destination	Fort Wayne, IN
Date of Departure	February 24, 2026
Date of Return	February 26, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$0.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$0.00
Lodging:	\$900.00
Registration (including reference materials):	\$400.00
Meals and Tips:	\$300.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,600.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	
Job Title	Project Engineer
Department	Engineering

Purpose of Travel>	Underground Corrosion Short Course – This annual conference and training provide the opportunity to gain advanced insight and hands-on skills in corrosion management, support continuous professional growth and expertise, and provide professional development hours to maintain AMPP Cathodic Protection certifications and Professional Engineering licensure.
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Destination	Fort Wayne, IN
Date of Departure	February 24, 2026
Date of Return	February 26, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$0.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$0.00
Lodging:	\$900.00
Registration (including reference materials):	\$400.00
Meals and Tips:	\$300.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,600.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	
Job Title	Pipeline and Remote Facilities Coordinator
Department	Pipeline and Remote Facilities

Purpose of Travel>	AMPP Annual Conference – This annual conference provides the opportunity to meet with cathodic protection experts (corrosion and coatings professionals), industry leaders, subject matter experts. The program provides over 600 hours of technical content in materials protection and performance, the ability to explore innovative technologies, and gain insights into the materials protection industry through education and provides professional development hours to maintain Cathodic Protection certifications and Professional Engineering licensure.
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Destination	Houston, TX
Date of Departure	March 15, 2026
Date of Return	March 19, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$600.00
Rental Car:	\$400.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$0.00
Lodging:	\$1,600.00
Registration (including reference materials):	\$1,100.00
Meals and Tips:	\$375.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$4,075.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	[REDACTED]
Job Title	Pipeline Technician
Department	Pipeline and Remote Facilities

Purpose of Travel> AMPP Annual Conference – This annual conference provides the opportunity to meet with cathodic protection experts (corrosion and coatings professionals), industry leaders, subject matter experts. The program provides over 600 hours of technical content in materials protection and performance, the ability to explore innovative technologies, and gain insights into the materials protection industry through education and provides professional development hours to maintain Cathodic Protection certifications and Professional Engineering licensure.

Destination	Houston, TX
Date of Departure	March 15, 2026
Date of Return	March 19, 2026

Please indicate the estimated amount for each applicable expense:

Air Fare:	\$600.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$0.00
Lodging:	\$1,600.00
Registration (including reference materials):	\$1,100.00
Meals and Tips:	\$375.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$3,675.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	[REDACTED]
Job Title	Engineering Manager
Department	Engineering

Purpose of Travel>	IL AWWA Water Conference (WaterCon) – This annual conference provides the opportunity to meet with waterworks industry leaders and other subject matter experts. The program provides up to 14 hours of technical to maintain Cathodic Protection certifications and Professional Engineering licensure. DWC Staff is on the technical agenda as presenters and will provide a discounted registration cost.
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Destination	Peoria, IL
Date of Departure	April 13, 2026
Date of Return	April 16, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$0.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$30.00
Lodging:	\$750.00
Registration (including reference materials):	\$650.00
Meals and Tips:	\$150.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,580.00

**Explanation of Miscellaneous if included in estimates above:*

[REDACTED]

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	
Job Title	General Manager
Department	Administration

Purpose of Travel>	IL AWWA Water Conference (WaterCon) – This annual conference provides the opportunity to meet with waterworks industry leaders and other subject matter experts. The program provides up to 14 hours of technical to maintain Cathodic Protection certifications and Professional Engineering licensure. DWC Staff is on the technical agenda as presenters and will provide a discounted registration cost.
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Destination	Peoria, IL
Date of Departure	April 13, 2026
Date of Return	April 16, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$0.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$30.00
Lodging:	\$750.00
Registration (including reference materials):	\$650.00
Meals and Tips:	\$150.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,580.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	
Job Title	Manager of Water Operations
Department	Administration

Purpose of Travel>	IL AWWA Water Conference (WaterCon) – This annual conference provides the opportunity to meet with waterworks industry leaders and other subject matter experts. The program provides up to 14 hours of technical to maintain Cathodic Protection certifications and Professional Engineering licensure. DWC Staff is on the technical agenda as presenters and will provide a discounted registration cost.
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Destination	Peoria, IL
Date of Departure	April 13, 2026
Date of Return	April 16, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$0.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$30.00
Lodging:	\$750.00
Registration (including reference materials):	\$650.00
Meals and Tips:	\$150.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,580.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:

Department Head:		Date:	
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**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	
Job Title	Systems Engineer/IT Supervisor
Department	Systems and Information Technology

Purpose of Travel>	IL AWWA Water Conference (WaterCon) – This annual conference provides the opportunity to meet with waterworks industry leaders and other subject matter experts. The program provides up to 14 hours of technical to maintain Cathodic Protection certifications and Professional Engineering licensure. DWC Staff is on the technical agenda as presenters and will provide a discounted registration cost.
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Destination	Peoria, IL
Date of Departure	April 13, 2026
Date of Return	April 16, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$0.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$30.00
Lodging:	\$750.00
Registration (including reference materials):	\$650.00
Meals and Tips:	\$150.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,580.00

**Explanation of Miscellaneous if included in estimates above:*

Recommendations for Approval:	
Department Head:	Date:

**DUPAGE WATER COMMISSION - PROFESSIONAL DEVELOPMENT
OVERNIGHT/OUT OF STATE TRAVEL REQUEST**

Request Date	November 13, 2025
Name of Attendee	[REDACTED]
Job Title	Senior Instrumentation Technician
Department	Operations & Instrumentation

Purpose of Travel>	IL AWWA Water Conference (WaterCon) – This annual conference provides the opportunity to meet with waterworks industry leaders and other subject matter experts. The program provides up to 14 hours of technical to maintain Cathodic Protection certifications and Professional Engineering licensure. DWC Staff is on the technical agenda as presenters and will provide a discounted registration cost.
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Destination	Peoria, IL
Date of Departure	April 13, 2026
Date of Return	April 16, 2026

Please indicate the estimated amount for each applicable expense:	
Air Fare:	\$0.00
Rental Car:	\$0.00
Other Transportation (Mileage/Parking/Shuttles/Taxi/Rideshare):	\$30.00
Lodging:	\$750.00
Registration (including reference materials):	\$650.00
Meals and Tips:	\$150.00
*Miscellaneous (describe below):	
Total Estimated Expense:	\$1,580.00

**Explanation of Miscellaneous if included in estimates above:*

[REDACTED]

Recommendations for Approval:

Department Head:		Date:	
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Resolution #: R-85-25

Account: N/A

Approvals: *Author / Manager / Finance / Admin*

DM - CAP PDM

REQUEST FOR BOARD ACTION

Date: 11/13/2025

Description: **A Resolution Reviewing/Releasing certain Executive Session Minutes**

Agenda Section: Administration Committee

Originating Department: Administration

Pursuant to the Open Meetings Act, the Board is required to periodically review its closed meeting minutes to determine if they are eligible for release to the public.

Schedule A:

Staff recommends that the minutes of a closed meeting of the April 17, 2025 Regular Meeting, May 15, 2025 Regular Meeting, June 19, 2025 Regular Meeting, August 21, 2025 Regular Meeting and September 18, 2025 Regular Meeting not be released to the public at this time. In staff's view, these minutes contain information requiring continued confidential treatment. (See copies attached to Schedule A in Executive Session packet).

Recommended Motion:

To adopt Resolution R-85-25, a Resolution Reviewing/Releasing certain Executive Session Minutes.

DUPAGE WATER COMMISSION

RESOLUTION NO. R-85-25

A RESOLUTION REVIEWING/RELEASING
CERTAIN EXECUTIVE SESSION MINUTES

WHEREAS, the Commission was formed and exists pursuant to the Water Commission Act of 1985, 70 ILCS 3720/0.01 et seq., and Division 135 of Article 11 of the Illinois Municipal Code, 65 ILCS 5/11-135-1 et seq., for the purpose of securing an adequate source and supply of water for its customers; and

WHEREAS, as required by the Act, the Clerk has kept written minutes of all such closed sessions; and

WHEREAS, on November 20, 2025 the Board of Commissioners of the DuPage Water Commission met to review the minutes of all such closed sessions that have not heretofore been made available for public inspection as required by Section 2.06(d) of the Act; and

WHEREAS, the Board of Commissioners of the DuPage Water Commission determined that the need for confidentiality still exists as the minutes of the closed session meetings set forth in Schedule A attached hereto and by this reference incorporated herein and made a part hereof; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the DuPage Water Commission as follows:

SECTION ONE: Recitals. The foregoing recitals are incorporated herein as if fully set forth.

SECTION TWO: No Release. The minutes of the closed session meetings set forth in Schedule A attached hereto, being the only minutes of closed session meetings of the Board that have not heretofore been made available for public inspection as required by Section 2.06(d) of the Act, continue to contain information requiring confidential treatment and shall not be released at this time.

SECTION THREE: This Resolution shall be in full force and effect from and after its adoption.

	Aye	Nay	Absent	Abstain
Cuzzone, N.				
Fennell, J.				
Greaney, S.				
Honig, A.				
Noonan, T.				
Novotny, D.				
Pruyn, J.				
Romano, K.				
Russo, D.				
Saverino, F.				
Suess, P.				
Van Vooren, D.				
Zay, J.				

ADOPTED THIS _____ DAY OF _____, 2025.

James F. Zay, Chairman

ATTEST:

Danna Mundall, Clerk

Board/Resolutions/2025/R-85-25.docx

SCHEDULE A

April 17, 2025

May 15, 2025

June 19, 2025

August 21, 2025

September 18, 2025



Resolution #: R-89-25

Account: 0-60-612200

Approvals: *Author / Manager / Finance / Admin*

CAP - CAP PDM

REQUEST FOR BOARD ACTION

Date: 11/3/2025

Description: **A Resolution approving employee insurance benefits for plan year beginning January 1, 2026 and ending December 31, 2026**

Agenda Section: Administration Committee

Originating Department: Administration

The Commission annually determines employee insurance benefits to be provided, which commence January 1st of each year.

In consultation with Dato Pistorio Financial Group, Inc., staff is recommending that the Commission retain current coverage at the levels previously provided through its current carrier, Blue Cross Blue Shield (BCBS), and continue paying 80 percent of the premiums for eligible employees' coverage and for eligible employees' dependent coverage.

Staff is recommending that employees continue to be offered a selection from the same four ACA Metallic Alternate Health Plans as in prior years. These alternatives included the Blue Platinum PPO Plan (P503PPO), Blue Gold HSA Plan (G533PPO), Blue Choice Preferred PPO Plan (G530BCE) and the Blue Precision HMO Plan (P506PSN).

With respect to Vision, Dental, and Life Insurance, staff recommend that coverage continue to be with MetLife, as in previous years.

Staff recommends that the Commission contribute the same amounts to the Health Savings Accounts as was contributed the prior year. For employees that elect self-only coverage under the Blue Cross Blue Shield HSA-Qualified High-Deductible Health Plan, the Commission shall contribute, via electronic funds transfer, the sum of \$2,700. For employees that elect employee and spouse/child (employee + 1) coverage under the Blue Cross Blue Shield HSA-Qualified High-Deductible Health Plan, the Commission shall contribute, via electronic funds transfer, the sum of \$4,500. For employees that elect family (employee + 2 or more) coverage under the Blue Cross Blue Shield HSA-Qualified High-Deductible Health Plan, the Commission shall contribute, via electronic funds transfer, the sum of \$6,700.00.

To further restrain future healthcare costs, staff recommend that the Commission continue to offer the HealthiestYou program. HealthiestYou is a telehealth solution which complements our current benefit plans. Employees will have access 24/7 to more than 2,300 licensed physicians via the phone. The cost to the Commission would be \$9.93 per employee per month. This program has been well-utilized by Commission employees.

Please note: Compared to the healthcare insurance costs presented last year, the Commission's costs for healthcare will increase between 9.1% to 19.0% for 2026. Employees' cost for healthcare will also increase by those percentages, and deductibles and out-of-pocket limits will also increase compared to last year. Costs for the dental rates, vision rates, and the costs for the HealthiestYou program will remain the same as last year. These costs are summarized in Exhibit 1 of the attached Resolution.

The Commission will also continue to offer Envision Flexible Spending Account to employees that would like to participate. The Commission pays a small monthly administration fee for this service.

A summary of the employee insurance benefits recommended by staff and associated premiums and administrative costs to be paid by the Commission are summarized in Exhibit 1 to Resolution No. R-89-25. A more detailed summary of benefits and comparison to current costs is attached to this Request for Board Action.

Resolution No. R-89-25 would approve Plan Year 2026 eligible employee insurance benefits and associated premiums and administrative costs to be paid by the Commission as recommended by staff.

Recommended Motion:

To Approve Resolution R-89-25 for Employee Insurance Benefits for Plan Year beginning January 1, 2026 and ending December 31, 2026

DuPAGE WATER COMMISSION

RESOLUTION NO. R-89-25

A RESOLUTION APPROVING EMPLOYEE INSURANCE BENEFITS
FOR PLAN YEAR BEGINNING JANUARY 1, 2026 AND ENDING DECEMBER 31, 2026

WHEREAS, the Commission's Healthcare Plans renewal and deductible dates terminate at the end of the calendar year; and

WHEREAS, the Commission annually determines employee insurance benefits to be provided commencing January 1 of each year; and

WHEREAS, in consultation with Dato Pistorio Financial Group, Inc., Commission staff recommends approval of the employee insurance benefits for the year beginning January 1, 2026 and ending December 31, 2026 (Plan Year 2026) summarized in Exhibit 1 attached hereto and by this reference incorporated herein.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the DuPage Water Commission as follows:

SECTION ONE: The foregoing recitals are incorporated herein and made a part hereof as findings of the Board of Commissioners of the DuPage Water Commission.

SECTION TWO: The Plan Year 2026 employee insurance benefits and associated premium costs and administrative fees to be paid by the Commission, all as summarized in Exhibit 1 attached hereto, shall be and they hereby are approved for the Plan Year 2026. The General Manager shall be and hereby is authorized and directed to provide the insurance coverages and pay the associated premium costs and administrative fees to be paid by the Commission as summarized in Exhibit 1 attached hereto without further act of the Board of Commissioners.

SECTION THREE: Notwithstanding any restrictions contained in Resolution No. R-27-90, as modified by Resolution Nos. R-34-90, R-34-96 as amended, R-46-04 as amended, R-5-05 as amended, R-6-08 as amended, R-54-08, and as amended by Resolution No. R-14-00, which prohibit, except in specified circumstances, the wire transfer of Commission funds to financial institutions not listed on the approved Depository List and to accounts not held in the name of the Commission, the Chairman, the Treasurer, the Finance Committee Chairman, the General Manager, or the Financial Administrator shall be and they hereby are authorized to direct the electronic transfer of Commission funds out of any Account held in the name of the Commission for the remittance of the Commission's contributions to the Health Savings Accounts established by the Commission for eligible employees that elect coverage under the Blue Cross Blue Shield HSA-Qualified High Deductible Health Plan as provided in Exhibit 1 attached hereto. In furtherance thereof, the General Manager shall be and hereby is authorized and directed to execute any agreements required to establish the Health Savings Accounts for eligible employees that elect coverage under the Blue Cross Blue Shield HSA-Qualified High Deductible Health Plan as provided in Exhibit 1 attached hereto as well as any agreement required to effectuate the electronic transfers hereinabove provided for. Upon execution by the General Manager, the agreements, and all things provided for therein, shall be deemed accepted by the DuPage Water Commission without further act.

SECTION FOUR: This Resolution shall be in full force and effect from and after its adoption, the Board of Commissioners of the DuPage Water Commission having determined, by a two-thirds majority vote, to suspend the purchasing provisions of the Commission's By-Laws.

SECTION FIVE: This Resolution shall be in full force and effect from and after its adoption.

	Aye	Nay	Absent	Abstain
Cuzzone, N.				
Fennell, J.				
Greaney, S.				
Honig, A.				
Noonan, T.				
Novotny, D.				
Pruyn, J.				
Romano, K.				
Russo, D.				
Saverino, F.				
Suess, P.				
Van Vooren, D.				
Zay, J.				

ADOPTED THIS ___ DAY OF _____, 2025.

James F. Zay, Chairman

ATTEST:

Danna Mundall, Clerk
Board/Resolutions/2025/R-89-25.docx

EXHIBIT 1

THE PLAN YEAR BEGINNING JANUARY 1, 2026 AND
ENDING DECEMBER 31, 2026 EMPLOYEE INSURANCE BENEFITS

Plan Year 2026 Health Insurance Plans

The following health insurance plans or significantly similar plans shall be made available to Eligible Commission Employees/Retirees for Plan Year 2026 at the following rates:

Blue Cross Blue Shield Blue Platinum PPO Plan P503PPO with Prescription Drug benefit
\$15/\$25/\$65/\$105/\$250/\$350

Employee	\$1,317.20
Employee & Spouse	\$2,634.40
Employee & Child	\$2,436.82
Family	\$3,754.02

Blue Cross Blue Shield Blue Gold HSA Plan G533PPO with Prescription Drug benefit
80%/80%/70%/60%/60%/50% after deductible

Employee	\$1,087.09
Employee & Spouse	\$2,174.18
Employee & Child	\$2,011.12
Family	\$3,098.21

Blue Cross Blue Shield Blue Choice Preferred PPO G530BCE with Prescription Drug benefit
\$15/\$25/\$65/\$105/\$250/\$350

Employee	\$875.67
Employee & Spouse	\$1,751.34
Employee & Child	\$1,619.99
Family	\$2,495.66

Blue Cross Blue Shield Blue Precision Platinum HMO P506PSN with Prescription Drug benefit
\$5/\$15/\$60/\$110/\$250/\$350

Employee	\$752.12
Employee & Spouse	\$1,504.24
Employee & Children	\$1,391.42
Family	\$2,143.54

The Commission’s contribution for health insurance for Plan Year 2026 shall be 80% of the premium for eligible employees and their covered dependents for the selected health insurance plan.

Employees shall continue to pay 20% of the selected health insurance plan premium for themselves and their covered dependents.

For each eligible employee selecting the High-Deductible Health Plan \$3,500/\$7,000/\$10,500 HSA Plan, the Commission shall establish a Health Savings Account funded in the following amounts:

Employee	\$2,700.00
Employee & Spouse or Child	\$4,500.00
Employee & Children	\$6,700.00
Family	\$6,700.00

The Commission shall not establish, nor contribute to, Health Savings Accounts for retirees selecting the High-Deductible Health Plan HSA Plan.

The Commission-established Employee Health Savings Accounts shall be administered by HealthEquity, Inc. as the Commission’s third-party administrator for Plan Year 2026 at a rate not-to-exceed \$5.00/account/month. Due to the uncertainty as to how many employees will elect this option, the Commission’s annual not-to-exceed cost is \$5,000.00.

Plan Year 2026 Life Insurance

The life insurance and the AD&D benefit program for Eligible Commission Employees shall be through MetLife for Plan Year 2026 at a rate of \$0.263 x per \$1,000 of coverage per employee per month. The life insurance benefit is in the amount of one and one-half times the eligible employee’s annual base pay rounded to the nearest \$1,000. The premium shall be paid in full by the Commission.

Plan Year 2026 Dental Insurance and Vision Insurance

The dental and vision insurance benefit program or significantly similar programs for Eligible Commission Employees shall be through MetLife for Plan Year 2026 and are as follows:

Please note: Dental rates and Vision rates have both remained unchanged from last year.

Coverage	Dental	Vision
Employee	\$59.69	\$9.91
Employee & Spouse	\$123.98	\$19.86
Employee & Children	\$119.02	\$16.82
Family	\$189.21	\$27.73

The Commission’s contribution for dental and vision insurance for Plan Year 2026 shall be 80% of the dental and vision insurance plan premiums for eligible employees and their covered dependents.

Employees shall continue to pay 20% of the dental and vision insurance plan premiums for themselves and their covered dependents.

The Commission’s contribution for the program called the HealthiestYou for Plan Year 2025 shall remain unchanged at \$9.93 per employee per month. HealthiestYou is the most innovative telehealth solution on the market and complements our current benefit plans. Employees will have access 24/7 to more than 2300 licensed physicians via the phone.



Resolution #: R-96-25

Account: 01-80-852010

Approvals: *Author / Manager / Finance / Admin*

PDM - CAP PDM

REQUEST FOR BOARD ACTION

Date: 11/10/2025

Description: **Authorization to execute a wheeling agreement between the Village of Oak Brook and Aqua Illinois, Inc as a third-party beneficiary**

Agenda Section: Administration Committee

Originating Department: Administration

In 2022, the Village of Oak Brook transferred ownership over a portion of their water delivery assets which served five distinct unincorporated areas to Aqua Illinois. An Interim Delivery Agreement was agreed to by all parties at that time which allowed Oak Brook to wheel water to the unincorporated areas through existing Oak Brook infrastructure. That process has worked well to date.

The attached document formalizes the approval of this practice for a twenty-year period and prescribes the conditions. DWC is a third-party beneficiary to this document.

Recommended Motion:

To adopt Resolution R-96-25.

DUPAGE WATER COMMISSION

RESOLUTION NO. R-96-25

A RESOLUTION AUTHORIZING THE APPROVAL OF A DELIVERY AGREEMENT BETWEEN THE VILLAGE OF OAK BROOK AND AQUA ILLINOIS, INC.

WHEREAS, the DuPage Water Commission (the “Commission”) was formed and exists pursuant to the Water Commission Act of 1985 (70 ILCS 3720/1 *et seq.*) and Division 11 of Article 135 of the Illinois Municipal Code (65 ILCS 5/11-135-1 *et seq.*) (collectively the “Act”) for the purpose of financing, constructing, and operating a water supply system to serve its Charter Customers and other customers in DuPage County with a common source of supply of water from Lake Michigan; and

WHEREAS, the Commission owns and maintains a transmission and distribution system as a supplier of potable water to Charter Customers that contract for such service (“Commission’s Waterworks System”); and

WHEREAS, the Commission and Village of Oak Brook (the “Village”) are parties to a Water Purchase and Sale Contract dated as of January 18, 2024 (“Village – Commission Contract”); and

WHEREAS, the Village owns and operates a water distribution system serving the incorporated areas of the Village (the “Village System”) and is a customer of the Commission for the Village System; and

WHEREAS, the Commission and Aqua Illinois, Inc. (“Aqua”) are parties to that certain Water Purchase and Sale Contract dated as of January 18, 2024 as amended by that Addendum to Water Purchase and Sale Contract dated February 15, 2024; and

WHEREAS, Aqua and the Village (and Commission as signatory for the purposes stated therein) are parties to an Interim Delivery Agreement dated November 29, 2022 (“Interim Delivery Agreement”); and

WHEREAS, Aqua owns and operates a water distribution system that currently serves five (5) discrete and non-contiguous service areas, referred to as Unincorporated Oak Brook Zones (“Aqua System”); and

WHEREAS, the Aqua System is adjacent to the Village System, and the Aqua System is currently supplied Commission water through the Village System pursuant to the Interim Delivery Agreement; and

WHEREAS, the Village System and the Aqua System are hydraulically connected, and the Village System is currently serving and is capable of continuing to serve the Aqua System with water from the Commission’s Waterworks System through the Village System; and

WHEREAS, Aqua and the Village desire to enter into a water transmission and delivery agreement for the delivery of Commission water from the Village’s System to the Aqua System; and

WHEREAS, for the above reasons, the Village and Aqua have each determined that it is in their best interests to enter into a Delivery Agreement in substantially the form attached hereto and by this reference incorporated herein and made part of as Exhibit 1; and

WHEREAS, pursuant to the Village – Commission Contract, the Commission must approve the wheeling of water sold by the Commission to wholesalers; and

WHEREAS, the Commission has determined that it is in its best interests to approve the Delivery Agreement in substantially the form attached hereto and by this reference incorporated herein and made part of as Exhibit 1.

NOW, THEREFORE, BE IT ORDAINED, by the Board of Commissioners of the DuPage Water Commission, as follows:

SECTION ONE: The foregoing recitals are hereby incorporated herein as findings of the Board of Commissioners of the DuPage Water Commission.

SECTION TWO: A Delivery Agreement between the Village of Oak Brook and Aqua Illinois, Inc., in substantially the form attached hereto as Exhibit A, is hereby approved.

SECTION THREE: An Interim Water Supply Agreement between the DuPage Water Commission, the Village of Oak Brook and Aqua Illinois, Inc., in substantially the form attached hereto as Exhibit 1, is hereby approved.

SECTION FOUR: The Chairman of the DuPage Water Commission shall be and hereby is authorized to and directed to execute the Delivery Agreement between the Village of Oak Brook and Aqua Illinois, Inc. attached hereto as Exhibit 1 to show the DuPage Water Commission's approval of the Delivery Agreement between the Village of Oak Brook and Aqua Illinois, Inc.

SECTION FIVE: Upon execution by the Chairman, the Delivery Agreement and all other things provided for therein, shall be deemed accepted by the DuPage Water Commission without further action.

SECTION SIX: This Resolution shall be in full force and effect from and after its adoption by a majority affirmative vote of all the Commissioners including the affirmative vote of at least one-third (1/3) of the Commissioners appointed by the County Board Chairman and forty percent (40%) of the Commissioners appointed by the Mayors.

	Aye	Nay	Absent	Abstain
Cuzzone, N.				
Fennell, J.				
Greaney, S.				
Honig, A.				
Noonan, T.				
Novotny, D.				
Pruyn, J.				
Romano, K.				
Russo, D.				
Saverino, F.				
Suess, P.				
Van Vooren, D.				
Zay, J.				

ADOPTED this _____ day of _____, 2025

James F. Zay, Chairman

ATTEST:

Danna Mundall, Clerk

Board/Resolutions/2025/R-96-25docx

EXHIBIT A

MEMORANDUM

TO: DuPage Water Commission Board of Commissioners
Paul D. May, P.E., General Manager

FROM: Phillip A. Luetkehans, Luetkehans, Brady, Garner & Armstrong, LLC

SUBJECT: Aqua/Oak Brook Delivery Water Agreement

DATE: November 12, 2025

As some of you recall, in 2019, the Village of Oak Brook (“Oak Brook”) approached the Commission to seek input on Oak Brook’s plan to sell off certain portions of Oak Brook’ Water System outside of the municipal limits to the privately owned utility company, Aqua Illinois. Oak Brook and Aqua Illinois previously entered into an Asset Purchase Agreement for Oak Brook’s equipment and lines in these areas. In late 2022, the Commission entered into an Interim Water Supply Agreement which allowed these areas to be continually served by Oak Brook until such time as Aqua Illinois connected these areas to the Commission’s Waterworks System or successfully negotiated with an existing contract customer to supply water to these areas and disconnect from Oak Brook’s Water System.

Since then, Aqua Illinois and Oak Brook have been negotiating a delivery agreement which would allow Oak Brook to wheel water to Aqua Illinois for these same areas (the “Delivery Agreement”). In summary, the Delivery Agreement allows Oak Brook to sell water that it receives from the Commission to Aqua Illinois to serve the areas in question. While the Commission is not a party to the Delivery Agreement, the Commission still has to approve any of the municipal customers wheeling or selling water to any other wholesaler under the Charter Customer Agreement.

The Commission’s Purchase and Water Sale Agreement with Oak Brook will still be in effect and none of the terms in the Delivery Agreement modify those obligations in any way that is detrimental to the Commission. Oak Brook would still be purchasing the water for these areas directly from the Commission and it would then proceed to sell that water to Aqua Illinois at their agreed upon rates. Under the Delivery Agreement, the Commission will be indemnified by both Aqua Illinois and Oak Brook, and the Commission is an intended third-party beneficiary of the Delivery Agreement. This will allow the Commission to enforce the terms of the Delivery Agreement, even though it is not an official party to the Delivery Agreement .

The Delivery Agreement is in substantially the same form as the prior wheeling agreements that the Commission has entered into with its municipal customers over the past decades. In sum, the Commission is not waiving any rights and it just allowing Aqua Illinois to receive water from Oak Brook which it will then sell to its customers in the unincorporated areas involved.

DELIVERY AGREEMENT
AMONG THE VILLAGE OF OAK BROOK AND AQUA ILLINOIS, INC

This Delivery Agreement (the "Agreement"), dated as of October 28, 2025, by and between the VILLAGE OF OAK BROOK, a municipal corporation of the State of Illinois existing by virtue of its creation consistent with the Illinois Municipal Code set forth in 65 ILCS 5/1-1-1 *et seq.* (the "Village"), and AQUA ILLINOIS, INC, an Illinois Corporation ("Aqua"), a public utility regulated by the Illinois Commerce Commission within the meaning of Section 3-105 of the Public Utilities Act, 220 ILCS 511-101 *et seq.* DuPAGE WATER COMMISSION, DuPage, Cook, and Will Counties, State of Illinois, a county water commission and public corporation under Division 135 of Article 11 of the Illinois Municipal Code, 65 ILCS 5/11-135-1 *et seq.*, and the Water Commission Act of 1985, 70 ILCS 3720/0.01 *et seq.* (the "Commission"), is a signatory to this Agreement as to form approving the arrangement and as an intended third party beneficiary of this Agreement.

WITNESSETH:

WHEREAS, the Commission owns and maintains a transmission and distribution system as a supplier of potable water to member customers that contract for such service ("Commission's Waterworks System"); and

WHEREAS, the Commission and Village are parties to that certain *Water Purchase and Sale Contract* dated as of January 18, 2024 ("Village – Commission Contract"); and

WHEREAS, the Village owns and operates a water distribution system serving the incorporated areas of the Village (the "Village System") and is a customer of the Commission for the Village System; and

WHEREAS, the Commission and Aqua are parties to that certain *Water Purchase and Sale Contract* dated as of January 18, 2024 as amended by that *Addendum to Water Purchase and Sale Contract* dated February 15, 2024 ("Aqua - Commission Contract"); and

WHEREAS, Aqua and Village (and Commission as signatory for the purposes stated therein) are parties to that certain *Interim Delivery Agreement* dated November 29, 2022. (“Interim Delivery Agreement”); and

WHEREAS, Aqua owns and operates a water distribution system that currently serves five discrete and non-contiguous service areas, referred to as Unincorporated Oak Brook Zones (“Aqua System”)

WHEREAS, the Aqua System is adjacent to the Village System and the Aqua System is currently supplied Commission water through the Village System pursuant to the Interim Delivery Agreement; and

WHEREAS, the Village System and the Aqua System are hydraulically connected and the Village System is currently serving and is capable of continuing to serve the Aqua System with water from the Commission's Waterworks System through the Village System; and

WHEREAS, Aqua and the Village desire to enter into a water transmission and delivery agreement for the delivery of Commission water from the Village’s System to the Aqua System (“Wheeling”) in the form of this Agreement; and

NOW, THEREFORE, in consideration of the foregoing recitals and of the mutual covenants and agreements herein contained, Aqua, the Village (and the Commission to the extent stated herein) hereby agree as follows:

Section 1. The Interim Delivery Agreement is replaced and abrogated in its entirety by the terms hereof as of the Effective Date.

Section 2. Agreement to Deliver. Effective December 1, 2025, (the “Effective Date”) and throughout the Term of this Agreement, subject to the terms hereof, the Village agrees to transmit and deliver water from the Commission through the Village System to the Aqua System subject to availability of such water from the Commission. Subject to the terms and conditions of this Agreement, the Village will deliver the full water supply to the Aqua System through existing interconnection points. The interconnections points between the Village System and the Aqua System (“Interconnections”) are as shown on Exhibit A. Notwithstanding any requirement of the

Aqua - Commission Agreement to the contrary, title to all water supplied by the Commission shall remain in the Commission to the point of delivery to the Village System and thereupon shall pass to the Village and then Aqua as their interests may appear.

Section 3. Aqua System Interconnection to Village.

The Interconnections shall be metered as follows:

1. The Interconnections are at the locations as shown on Exhibit "A".
2. The Interconnections are currently metered by meters shown on Exhibit "B". The Parties agree to such Interconnections and meters as are currently in place and acceptable to each.

No later than 18 months days following the execution of this Agreement, Aqua shall design, construct, operate, own, and thereafter maintain a two-way flow meter near the Drury Lane subject to the Village's review and approval; such approval not to be unreasonably withheld. Additionally, Aqua shall, when necessary at its cost (unless the Parties agree otherwise) further design, construct, operate, maintain, and replace the Interconnections at the existing locations or different proposed locations ("Interconnection Modifications") to the extent such are necessary or convenient for obtaining or measuring the flow of water from the Village System to the Aqua System. The further Interconnection Modifications shall be subject to the Village's reasonable approval.

Subject to normal operating constraints, adequate delivery, and pressure of the supply of water delivered to Village, Village will supply water at the Delivery Points at a reasonably constant pressure.

Village agrees and hereby grants to Aqua the right to use any Right of Way to lay and repair any pipe, main or facilities of any part of the Interconnection that is within the Village right of way. If any further Interconnections or mains to an Interconnection are necessary or convenient, for the Aqua System, upon request of Aqua to the Village the Village agrees that it will allow the use of Village right of way, subject to the Village's reasonable review of such use. Aqua's use of the Village Right of Way shall be, subject to generally applicable permitting requirements of the Village.

Section 4. Metering / Station Access.

Aqua shall provide access to the Flow Meters, which have been installed at the Interconnections, to the Village and Commission at reasonable times for purposes of examination, inspection, and verification of meter readings, but the readings of each meter for billing purposes, calibration, and adjustment of the equipment therein shall be done only by the employees or agents of Aqua.

Aqua shall inform the Village of any replacement of the Flow Meters. Any change in the type of the Flow Meters shall be subject to the Village's reasonable approval.

Section 5. Meter Readings. Aqua shall read the Flow Meters at the Interconnection on a monthly basis corresponding to the Commission readings for the Village System and shall provide the Village with copies of the readings. Such readings shall establish the volume of water from the Village to the Aqua System (the "Aqua System Volume").

During the term of this Agreement, Aqua and the Village shall jointly submit to the Commission by January 15 of each year a notarized statement with the amount of gallons delivered from the Village to Aqua for the previous calendar year.

Section 6. Prices; Terms of Payment.

A. Aqua's Payments to the Village.

Aqua shall pay the Village on monthly basis based on the volume of water determined by the Flow Meter readings in Section 4 at the same volumetric rate the Village pays the Commission plus the Wheeling Rate set out in Subsection 6C.

Aqua shall allow the Village to audit all Flow Meter readings, end user customer volume reports or any other reasonable reports, readings or data used to determine Aqua System Volume, including, upon reasonable advance notice by the Village to Aqua, allowing access to any Flow Meters for physical inspection by the Village's representatives.

B. Village's Payments to the Commission.

The Village shall make all required payments to the Commission in accordance with the terms of the Village Customer Contract without any deduction for the volume of water delivered to the Aqua System.

C. Village Wheeling Rate.

Village will charge Aqua a wheeling rate of \$1.95 per 1,000 gallons of water ("Wheeling Rate"). Beginning January 1, 2026 this Wheeling Rate will increase 3% annually on January 1st of each subsequent year throughout the Term of this Agreement.

Section 7. Water Storage Capacity.

The Village shall maintain, during the entire term of this Agreement and any renewal or extension of it, effective water storage capacity equal to the water storage capacity required by the Charter Customer Contract for the Village System.

Section 8. Water Allocation Permit Operation.

A. The Village currently serves water to the Aqua System pursuant to that certain Allocation Permit No. 2009-142 ("Village Permit") issued by the Illinois Department of Natural Resources ("IDNR") under 17 Ill. Adm. Code 3730, *Allocation of Water from Lake Michigan* ("Allocation Regulations"). The Village shall continue to provide water to the Aqua System pursuant to the Village Permit until Aqua has received its own allocation from IDNR for the Aqua System.

B. Aqua shall use data collected by the existing Flow Meters to apply to the IDNR for issuance of allocation permits under the Allocation Regulations for the Aqua System which are independent of the Village Permit ("Aqua System Permits"). The applications for the Aqua System Permits shall be based on metered usage data for the Aqua System and shall include only such amount as is attributable to such Aqua System pursuant to the Allocation Regulations. Upon Aqua's submittal of any such request, the Village agrees to file with the IDNR separate modification applications that are necessary to reflect a corresponding reduction in the allocation

allowed by the Village Permit.

C. Until the IDNR's issuance of the Aqua System Permits, the Village, as the named permittee of the Village Permit:

1. shall continue to be responsible to comply with all legal and regulatory requirements of the Village Permit and the Allocation Regulations that are applicable to the Aqua System; and
2. shall continue to be responsible for, and submit to, the IDNR all required LMO-2 data on an annual basis, as required by the Village Permit then in effect.

D. Aqua shall indemnify and hold harmless the Village pursuant to subsections 10 (E) and 10 (F) for any non-compliance with the Village Permit or the Allocation Regulations that is caused by or attributable to the Aqua System and for any reporting violation attributable to Aqua's failure to provide requested existing data for the LMO-2 data reports to the IDNR.

E. Aqua shall provide to the Village, when requested, all usage and water loss information for the Aqua System necessary to complete the LMO-2 data reports to the IDNR.

F. Aqua shall provide the Village a license to access portions of the Aqua System that are reasonably necessary for the Village to comply with its obligations pursuant to subsection (C) hereof, and the Village agrees to coordinate such access with Aqua.

Section 9. Limitations on Supply of Water.

A. Curtailment. If at any time it becomes necessary for the Commission to limit generally its delivery of Lake water to its customers for any reason, then the Village and Aqua together shall take all reasonable and appropriate actions to provide that such Lake water as is delivered by the Commission is shared by the Village and Aqua on a pro rata basis.

B. Limitation on Supply to Village. If at any time it becomes necessary for the Commission to limit its delivery of Lake water to the Village System (but not to the Aqua System) for any reason pursuant to the Commission – Village Contract and specifically related to the Village, then the Village shall take all reasonable and appropriate actions, including without limitation the

imposition of water use limitations on customers of the Village System, to limit the use of Lake water in the Village System so that the Lake water to which the portion of the Aqua System serving the Aqua System is entitled is delivered by the Village to the Aqua System.

C. Limitation on Supply to Aqua. If at any time it becomes necessary for the Commission to limit its delivery of Lake water to the Aqua System (but not to the Village System) for any reason specifically related to Aqua, then Aqua shall take all reasonable and appropriate actions, including without limitation the imposition of water use limitations on customers of the Aqua System, and the Village shall, and shall be entitled to, make all necessary and appropriate adjustments to the Village System, to assure that the appropriate amount of Lake water to which the Village System is entitled is delivered to the Village System during such period of curtailment to Aqua.

D. No Liability of Commission. Aqua and the Village each hereby acknowledge and agree that the Commission shall not be obligated to enforce the provisions of this Section 9 but may do so in its sole discretion and that the Commission shall not be liable either to Aqua or to the Village for any damages occasioned by or in any way related to any limitation on, or delay in, the delivery of Lake water to them or to either one of them.

Section 10. Releases and Indemnification.

A. Indemnification of the Commission by Aqua. To the fullest extent permitted by law, Aqua hereby releases the Commission, and its respective officers, agents and employees, from and agrees that the Commission, and its respective officers, agents and employees, shall not be liable for, and agree to indemnify and hold the Commission, and its respective officers, agents and employees, harmless from: (1) any liabilities for any loss or damage to property or any injury to, or death of, any person that may be occasioned by or related to any cause whatsoever pertaining to the construction, installation, removal, relocation, replacement, extension, improvement, maintenance, or operation of the Aqua System or the Alternate Connection Facilities, (2) any liabilities, losses, or damages, or claims therefor, arising out of the failure, or claimed failure, of Aqua to comply with its covenants or obligations contained in this Agreement, or (3) the failure to supply Lake Water or for any interruption of the Lake Water supply, including, in each such case, any attorneys' fees.

B. Indemnification of the Commission by the Village. To the fullest extent permitted by law, the Village hereby releases the Commission and its respective officers, agents and employees from, and agrees that the Commission and its respective officers, agents and employees shall not be liable for, and agrees to indemnify and hold the Commission and its respective officers, agents and employees harmless from (1) any liabilities, losses, or damages, or claims therefor, arising out of the failure, or claimed failure, of the Village to comply with its covenants or obligations contained in this Agreement, (2) any liabilities, losses, or damages, or claims therefor, arising out of the failure, or claimed failure, of Aqua to comply with its covenants or obligations contained in this Agreement, or (3) the failure of the Village to supply Lake Water to Aqua or any interruption of the Lake Water supply to Aqua, in any case caused by the Village.

C. Indemnification of the Commission by Aqua and the Village. Unless otherwise prohibited by law, Aqua and the Village agree to indemnify and hold the Commission, and its respective officers, agents and employees, harmless to the fullest extent permitted by law from any losses, costs, charges, expenses (including attorneys' fees), judgments, and liabilities incurred by the Commission, and its respective officers, agents and employees, in connection with any action, suit, or proceeding instituted or threatened by any third party in connection with this Agreement.

D. Indemnification Claims Made by the Commission. If any such claim provided for in subsections (A), (B) or (C), is asserted, the Commission shall give prompt notice to Aqua or the Village or both, as applicable, and Aqua or the Village or both, as applicable, if requested by the Commission, shall assume the defense thereof, it being understood, however, that neither Aqua nor the Village shall settle or consent to the settlement of any such claim without the written consent of the Commission. In connection with any such claims, litigation or liabilities, the Commission and its respective officers, agents, employees, representatives and assigns shall have the right to defense counsel of their choice. Aqua and the Village, as applicable, shall be solely liable for all costs of such defense and for all expenses, fees, judgments, settlements and all other costs arising out of such claims, litigation, or liabilities. Aqua and the Village, as applicable, shall have the right to participate in the defense of any such claim, or litigation and, upon the request of the Commission as stated above, shall assume the defense of the Commission, and its respective officers, agents and employees.

E. Indemnification of the Village by Aqua. Other than in the case of intentional misconduct by the Village, Aqua hereby releases and holds harmless the Village, and its respective officers, agents and employees, from, and agrees that the Village, its respective officers, agents or employees, shall not be liable for, any damages resulting from failure to supply Lake water or for any interruption of the Lake water supply to the fullest extent allowed by law; provided that the foregoing shall not excuse the Village from using its good faith efforts to comply with its respective obligations pursuant to Section 1 of this Agreement. Aqua hereby agrees to indemnify, save, and hold harmless the Village, and its respective officers, agents and employees, from and against all claims, litigation, and liability, including legal defense costs and expenses and attorneys' fees, asserted against the Village, or any of its respective officers, agents or employees, from any liabilities for any loss or damage to property or any injury to, or death of, any person that may be occasioned by or related to any cause whatsoever pertaining to the construction, installation, removal, relocation, replacement, extension, improvement, maintenance, or operation of the Aqua System or the Alternate Connection Facilities to the fullest extent allowed by law.

F. Indemnification Claims Made by the Village. If any such claim provided for in subsection (E), is asserted, the Village shall give prompt notice to Aqua and Aqua, if requested by the Village, shall assume the defense thereof, it being understood, however, Aqua shall not settle or consent to the settlement of any such claim without the written consent of the Village. In connection with any such claims, litigation or liabilities, the Village and its respective officers, agents, employees, representatives and assigns shall have the right to defense counsel of their choice. Aqua shall be solely liable for all costs of such defense and for all expenses, fees, judgments, settlements and all other costs arising out of such claims, litigation, or liabilities. Aqua shall have the right to participate in the defense of any such claim, or litigation and, upon the request of the Village, as stated above, shall assume the defense of the Village, as well as its respective officers, agents, employees, representatives and assigns.

Section 10. Interpretation: Compliance with Existing Contracts. This Agreement shall be deemed to be a separate written contract between the Village, the Commission and Aqua. Except where expressly provided in this Agreement, nothing in this Agreement shall be construed to be, or applied in any manner, inconsistent with the terms of the Village – Commission Contract or the Aqua - Commission Contract (the "Prior Contracts"), and if there is any conflict or inconsistency

between the terms of this Agreement and the terms of either one or both of those Prior Contracts, then the terms of those Prior Contracts shall control.

The Village shall at all times comply with all terms and conditions of this Agreement and the Village – Commission Contract, and Aqua shall at all times comply with all terms and conditions of this Agreement and the Aqua - Commission Contract , including without limitation the making of all payments due thereunder or hereunder promptly to the Commission. Under no circumstances shall any dispute of any nature under this Agreement or Aqua’s inability to receive water through the Interconnections provided by this Agreement, excuse, delay, or in any other way affect the Village’s or Aqua’s performances under such Prior Contracts or this Agreement, including without limitation the making of all such payments.

Section 11. Term / Bond / Payment Remedies.

- A. The term of this Agreement shall be from the Effective Date for a period of twenty (20) years. This Agreement may be renewed for three additional ten-year terms upon mutual written agreement of the Parties hereto prior to the expiration of the then applicable term.
- B. Aqua shall, within thirty (30) days of the execution of the Agreement, furnish a bond in the amount of one million eight hundred thousand dollars and zero cents (\$1,800,000.00) representing the approximated amount of twelve months of volumetric payments by Aqua to the Village pursuant to Section 6(A) to guarantee the faithful performance of the payment obligations to be performed pursuant to this Agreement. The bond shall be issued by an admitted surety insurer, authorized to act as a surety in the State of Illinois. This bond shall be renewed and adjusted bi-annually for the entire term of the Agreement and subsequent amendments to extend the Agreement.
- C. In addition to, and without any limitation of Aqua’s indemnification obligations to the Village , any other rights or remedies at law or in equity of the Village contained in this Agreement, in the event Aqua fails to pay the Village for any undisputed amounts owed pursuant to Section 6(A) above, Aqua agrees: (i) the Village shall be entitled to reimbursement of all fees and costs, and expenses, including attorney’s fees, to secure such payment; (ii) to waive trial by jury in any legal proceeding initiated by the Village to secure such payment; and (iii) the Village may seek, s any reasonable deposits

customarily given in the utility industry to secure adequate assurance of future payments, as an appropriate equitable remedy.

Section 12. Governing Law. This Agreement shall be construed exclusively under the applicable laws of, but not the conflict of law rules of, the State of Illinois.

Section 13. Amendment. This Agreement shall not be modified, revised, amended, or annulled in any way except in writing approved by all parties hereto.

Section 14. Notices. All notices or communications provided for herein shall be in writing and shall be delivered in person or by certified United States mail, return receipt requested, postage prepaid, addressed as follows:

To the Village:

Village Manager
Village of Oak Brook
1200 Oak Brook Road
Oak Brook, Illinois 60523

To Aqua:

Aqua Illinois, Inc.
President
1000 S. Schuyler Avenue
Kankakee, IL 60901

To the Commission:

General Manager
DuPage Water Commission
600 East Butterfield Road
Elmhurst, IL 60126

until and unless other addresses are specified by notice given in accordance herewith.

Section 15. Legal Authority. Each party represents and warrants to the others that it has full legal authority to enter this Agreement; that the officers and representatives signing this Agreement have been duly authorized to sign by their respective party; that entering this Agreement will not conflict with or violate the terms of any other agreement or obligation to which each respective party hereto is obligated or bound.

Section 16. Regulatory Approval. This Agreement is subject to all governmental authorizations needed for, including, but not necessarily limited to, adoption and approval from Illinois Commerce Commission.

Section 17. Cooperation. The parties agree to cooperate with each other and to use commercially reasonable efforts in the implementation of this Agreement, and to sign or cause to be signed, in a timely fashion, any and all necessary instruments, documents and petitions, and to take such other actions as may be reasonably necessary in order to effectuate the purposes of this Agreement.

Section 18. Execution in Counterparts. This Agreement may be executed in any number of counterparts (including by means of email or other electronic signature), each of which shall be deemed to be an original, but all of which together shall constitute but one and the same instrument. Execution and delivery by facsimile or in any electronic (i.e., "pdf" or "tif") format shall be effective as delivery of a manually executed counterpart of this Agreement. To the extent applicable, the foregoing constitutes the election of the parties to invoke any applicable law authorizing electronic signatures.

Section 19. Third-Party Beneficiary. For all purposes of this Agreement, the Commission shall be expressly deemed an intended third-party beneficiary of this Agreement, and as such shall be entitled to rely upon and shall have the express right to enforce the terms and conditions of this Agreement to the extent it affects the Commission. Further, this Agreement may not be modified, amended or terminated without the consent of the Commission in its sole discretion.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the Village and Aqua have caused this Agreement to be properly signed and attested to by their respective officers, and their seals affixed hereto, all as of the day and date first hereinabove set forth.



VILLAGE OF OAK BROOK

By: [REDACTED]

Name: GREG SUMMERS

Title: VILLAGE MANAGER

(Corporate Seal)

ATTEST:

Village Clerk [REDACTED]

AQUA ILLINOIS, INC

By:



Name: David C Carter

Title: President

Approved as to form approving the arrangement pursuant to the Aqua Customer Contract and as an intended third-party beneficiary of this Agreement pursuant to Section 19.

DUPAGE WATER COMMISSION

By:

Name:

Title:

(Corporate Seal)

ATTEST:

Clerk

EXHIBIT A – Approximate Metering Points

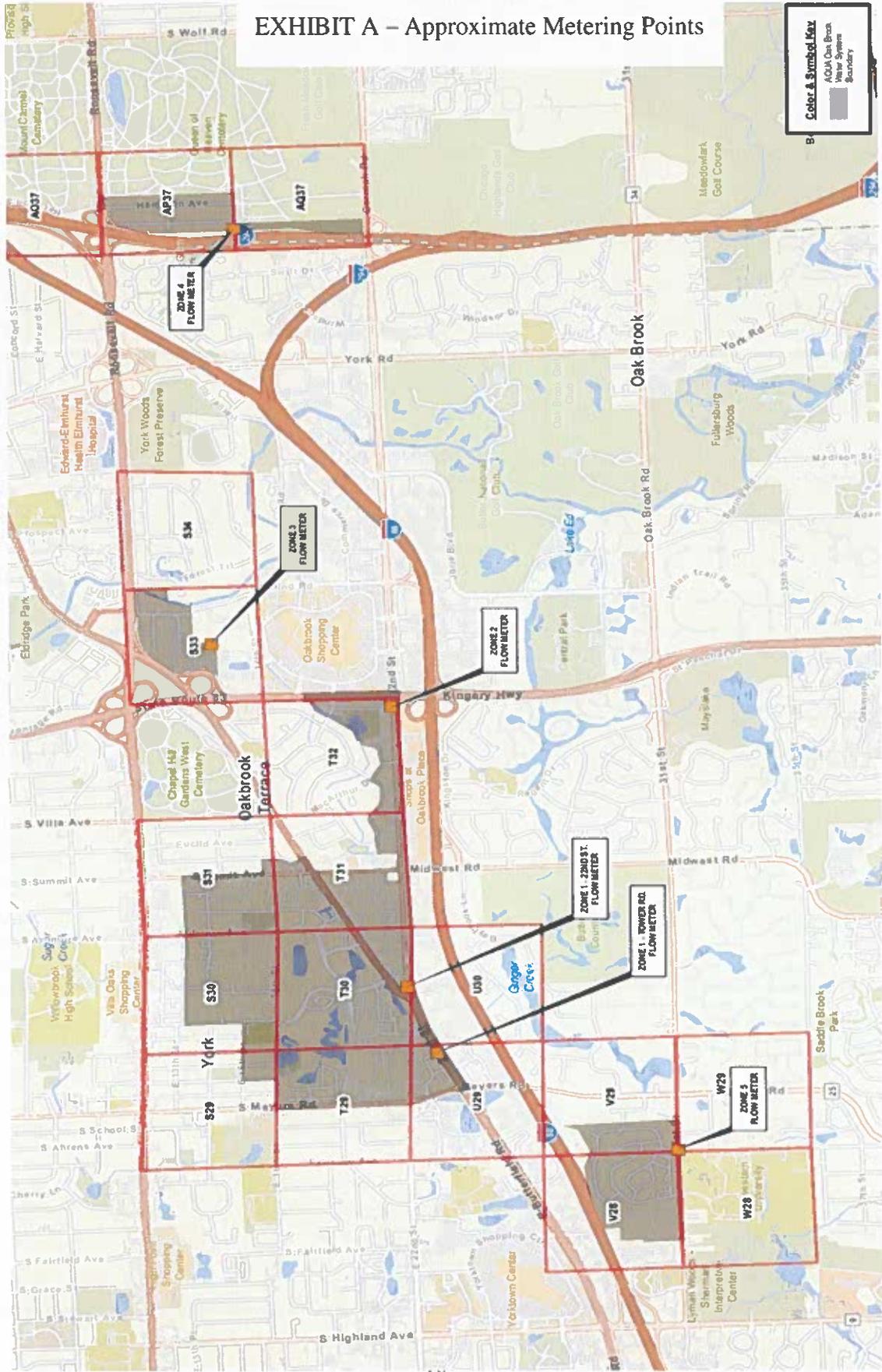


EXHIBIT B
Meter Information

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Overview



MAG 8000 is a comprehensive meter which intelligent information and high performance measurement as well as the easy to install concept take cost of ownership and customer service to a new level for water meter.

Benefits

Easy to install

- Compact or remote solution with factory mounted cable and customer setting from factory
- IP68/NEMA 6P enclosure. Sensor can be buried
- Flexible power supply - internal or external battery pack or mains power supply with battery back-up possibilities

Superior measurement

- Down to 0.2% maximum uncertainty
- OIML R 49 type approval
- Bi-directional measurement

Long lasting performance/Low cost of Ownership

- Verification according to Directive 2004/22/EC of the European Parliament and Council of March 31, 2004 on measuring instruments (MID), Annex MI-001
- No moving parts means less wear and tear
- 6 years maintenance-free operation in typical revenue application
- Robust construction build for the application

Intelligent information, easy to access

- Advanced information on site
- Data logger
- Advanced statistics and diagnostics
- Add-on communication modules

Application

MAG 8000 has been developed as a stand alone water meter for applications within:

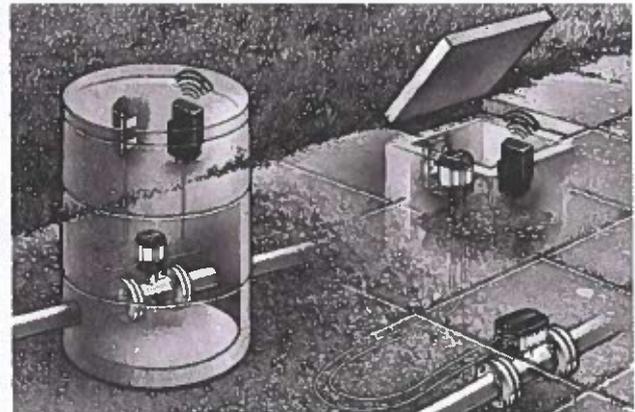
- Abstraction
- Distribution network
- Revenue and bulk metering
- Irrigation

Design

MAG 8000 is designed according to OIML R 49 and CEN EN 14154 water meter standards with focus on minimized power consumption.

The product program consists of

- Basic and advanced version
- A Custody Transfer version for water billing, with type approval after OIML R 49 and verified according to MI-001 for DN 50 to DN 300 (2" to 12") pending up to DN 600 (24")
- Sensor sizes from DN 25 to 1200 (1" to 48")
- Compact and remote installation in IP68/NEMA 6P enclosure and factory-mounted cable
- SIMATIC PDM and Flow Tool PC configuration softwares



Add-on communication module (left), PC-IrDA connection (right)

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Function

MAG 8000 is a microprocessor-based water meter with graphical display and key for optimum customer operation and information on site. The transmitter drives the magnetic field in the sensor, evaluates the flow signal from the sensor and calculates the volume passing through. It delivers the required information via the integrated pulse output or communication interfaces as part of a system solution. Its intelligent functionality, information and diagnostics ensure optimum meter performance and information to optimize water supply and billing.



MAG 8000 and MAG 8000 CT can be ordered as a Basic or an Advanced version. Both versions are configured to achieve 6 years battery operation in typical revenue applications.

Features / Version	MAG 8000 Basic	MAG 8000 Advanced
Measuring frequency in battery power mode (Manually selected)	1/15, 1/30 or 1/60 Hz	from 6.25 to 1/60 Hz depending of sensor size
Output MAG 8000/MAG 8000CT	2 FW/RV/AI/CA (max. 50 Hz pulse rate)	2 FW/RV/AI/CA (max. 100 Hz pulse rate)
Communication	Add-on	Add-on
Data logger	Yes	Yes
Insulation test	No	Yes
Leakage detection	No	Yes
Meter utilization	No	Yes
Statistics	No	Yes
Tariff	No	Yes
Settle date (Revenue)	No	Yes

In MAG 8000 CT revenue parameters and data are protected against manipulation. Verification and sealings is used to obtain the MI-001 approval (MID).

Some information is accessible via the display whereas all information is accessible via the IrDA communication interface with the PDM software. Data and parameters are registered in a EEPROM. They can all be read, but changing the information demands a software password or a hardware key attached to the printed circuit board.

The SIMATIC PDM tool gives the possibility of testing and verifying the flowmeter on site and creating a printed "Qualification

Certificate" with all specific data that define the quality status of the measurement.

The Qualification Certificate consists of two pages with information about the actual status of the sensor:

PART 1 provides general settings, sensor and battery info, totalizer values and pulse output settings.

Part 2 provides detailed information about electronic and sensor functionality and a main parameter list for evaluating the functionality of the MAG 8000 water meter.



SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Technical specifications

Meter	MAG 8000 (7ME6810)	MAG 8000 CT (7ME6820)
Accuracy	Standard calibration: ±0.4% of rate ±2 mm/s Extended calibration DN 50 ... DN 300 (2" ... 12"): ±0.2 % of rate ±2 mm/s	OIML R 49 for DN 50 ... DN 300 (2" ... 12"), Class 1 and 2 with turn down up to Q3/Q1 = 400 at Q2/Q1 = 1.6 MI-001 verification for DN 50 ... DN 300 (2" ... 12"), Class 2 with turn down ratio Q3/Q1 = 250, Q3/Q1 = 200 or Q3/Q1 = 160 at Q2/Q1 = 1.6
Media conductivity	Clean water > 20 µs/cm	
Temperature		
Ambient	-20 ... +60 °C (-4 ... +140 °F)	-20 ... +60 °C (-4 ... +140 °F)
Media	0 ... +70 °C (32 ... +158 °F)	0.1 ... +50 °C (32 ... +122 °F)
Storage	-40 ... +70 °C (-22 ... +158 °F)	-40 ... +70 °C (-22 ... +158 °F)
Enclosure rating	IP68/NEMA 6P; Cable glands mounted requires Sylgard potting kit to remain IP68/NEMA 6P, otherwise IP67/NEMA 4 is obtained; Factory-mounted cable provides IP68/NEMA 6P	
Drinking water approvals	<ul style="list-style-type: none"> • NSF/ANSI Standard 61 (cold water) USA • WRAS (BS 6920 cold water) UK • ACS Listed France • DVGW W270 Germany • Belgaqua (B) • MCERTS (GB) 	<ul style="list-style-type: none"> • NSF/ANSI Standard 61 (cold water) USA • WRAS (BS 6920 cold water) UK • ACS Listed France • DVGW W270 Germany • Belgaqua (B) • MCERTS (GB)
Custody transfer approval	• OIML R 49 approval	• OIML R 49 and OIML R49 MAA approval • MI-001 approval (Number: DK-0200-MI-001-002)
Conformity	<ul style="list-style-type: none"> • PED: 97/23EC • EMC: EN 61000-6-3, EN 61000-6-2, EN 61326-1 	<ul style="list-style-type: none"> • CEN EN 14154, ISO 4064 • PED: 97/23EC • EMC: EN 61000-6-3, EN 61000-6-2, EN 61326-1
Sensor version	DN 25 ... 1200 (1" ... 48")	DN 50 ... 600 (2" ... 24") in preparation up to DN 600
Measuring principle	Electromagnetic induction	Electromagnetic induction
Excitation frequency		
Basic version		
• Battery-powered	DN 25 ... 150 (1" ... 6"): 1/15 Hz DN 200 ... 600 (8" ... 24"): 1/30 Hz DN 700 ... 1200 (28" ... 48"): 1/60 Hz	DN 50 ... 150 (2" ... 6"): 1/15 Hz DN 200 ... 600 (8" ... 24"): 1/30 Hz
• Mains-powered	DN 25 ... 150 (1" ... 6"): 6.25 Hz DN 200 ... 600 (8" ... 24"): 3.125 Hz DN 700 ... 1200 (28" ... 48"): 1.5625 Hz	DN 50 ... 150 (2" ... 6"): 6.25 Hz DN 200 ... 600 (8" ... 24"): 3.125 Hz
Advanced version		
• Battery-powered	DN 25 ... 150 (1" ... 6"): 1/15 Hz (adjustable up to 6.25 Hz; reduced battery lifetime) DN 200 ... 600 (8" ... 24"): 1/30 Hz (adjustable up to 3.125 Hz; reduced battery lifetime) DN 700 ... 1200 (28" ... 48"): 1/60 Hz (adjustable up to 1.5625 Hz; reduced battery lifetime)	DN 50 ... 150 (2" ... 6"): 1/15 Hz (adjustable up to 6.25 Hz; reduced battery lifetime) DN 200 ... 600 (8" ... 24"): 1/30 Hz (adjustable up to 3.125 Hz; reduced battery lifetime)
• Mains-powered	DN 25 ... 150 (1" ... 6"): 6.25 Hz DN 200 ... 600 (8" ... 24"): 3.125 Hz DN 700 ... 1200 (28" ... 48"): 1.5625 Hz	DN 50 ... 150 (2" ... 6"): 6.25 Hz DN 200 ... 600 (8" ... 24"): 3.125 Hz

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Meter	MAG 8000 (7ME6810)	MAG 8000 CT (7ME6820)
Flanges		
EN 1092-1 (DIN 2501)	DN 25 and DN 40 (1" and 1½"); PN 40 (580 psi) DN 50 ... 150 (2" ... 6"); PN 16 (232 psi) DN 200 ... 1200 (8" ... 48"); PN 10 or PN 16 (145 psi or 232 psi)	DN 50 ... 150 (2" ... 6"); PN 16 (232 psi) DN 200 ... 300 (8" ... 12"); PN 10 or PN 16 (145 psi or 232 psi) up to DN 600 (24") in preparation
ANSI 16.5 Class 150 lb	1" ... 24": 20 bar (290 psi)	2" ... 12": 20 bar (290 psi) up to DN 600 (24") in preparation
AWWA C-207	28" ... 48": PN 10 (145 psi)	
AS 4087	DN 50 ... 1200 (2" ... 48"): PN 16 (232 psi)	DN 50 ... 300 (2" ... 12"); PN 16 (232 psi) up to DN 600 (24") in preparation
Liner	EPDM	EPDM
Electrode and grounding electrodes	Hastelloy C276	Hastelloy C276
Grounding straps	Grounding straps are premounted from the factory on each side of the sensor	Grounding straps are premounted from the factory on each side of the sensor
Transmitter	Compact (integral)	
Installation	Remote with factory-mounted cable (5, 10, 20 or 30 m)	
Enclosure	Stainless steel top housing (AISI 316) and coated brass bottom. Remote wall mount bracket in stainless steel (AISI 304).	
Cable entries	2 x M20 (one gland for one cable of size 6 ... 8 mm (0.02 ... 0.026 ft) is included in the standard delivery)	
Display	Display with 8 digits for main information. Index, menu and status symbols for dedicated information	
Flow unit	Volume in m ³ and flow rate in m ³ /h	
Europe	Volume in Gallon and flow rate in GPM	
US	Volume in Ml and flow rate as Ml/d	
Australia		
Optional display units	Volume: m ³ x 100, l x 100, G x 100, G x 1000, MG, CF x 100, CF x 1000, AF, Al, kl Flow: m ³ /min, m ³ /d, l/s, l/min, GPS, GPH, GPD, MGD, CFS, CFM, CFH	
Digital output	2 passive outputs (MOS), individual galvanically isolated Maximum load ± 35 V DC, 50 mA short circuit protected	
Output A function	Programmable as pulse volume – forward – reverse – forward/net – reverse/net	
Output B function	Programmable as pulse volume (like output A), alarm	
Output	Max. pulse rate of 50 Hz (only Basic version) and 100 Hz (only Advanced version), pulse width of 5, 10, 50, 100, 500 ms	
Communication	IrDA: Standard integrated infrared communication interface with MODBUS RTU protocol	
Add-on modules	<ul style="list-style-type: none"> • RS 232 serial interface with MODBUS RTU (Rx/Tx/GND), point to point with max. 15 m cable • RS 485 serial interface with MODBUS RTU (+/-GND), multidrop with up to 32 devices with max. 1000 m cable • Encoder interface module (for Itron 200WP) "Sensus protocol" 	
Power supply	Auto detection of power source with display symbol for operation power.	
Internal battery pack	2 D-Cell 3.6 V/33 Ah	
External battery pack	4 D-Cell 3.6 V/66 Ah	
Mains power supply	<ul style="list-style-type: none"> • 12 ... 24 V AC/DC (10 ... 32 V) 2 VA • 115 ... 230 V AC (85 ... 264 V) 2 VA Both mains power supply systems are upgradable for battery backup via internal D-Cell (3.6 V 16.5 Ah) or external battery pack.	
Cable	3 m (9.8 ft) for external connection to mains supply (without cable plug)	

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Technical specifications

Transmitter

Installation MAG 8000/
MAG 8000CT

Integral (compact) or remote with factory mounted cable in 5, 10, 20 or 30 m lengths with IP68/NEMA 6P connectors. Connection is made at the transmitter bottom.

Enclosure

Stainless steel top housing (AISI 316) and coated brass bottom. Remote wall mount bracket in stainless steel (AISI 304).

Cable entries

2 x M20 (one gland for one cable of size 6 ... 8 mm (0.24 ... 0.31 ") is included in the standard delivery)

Display and key

- Display with 8 digits for main information. Index, menu and status symbols for dedicated information
- Key for toggling through the information and reset customer totalizer and call-up function
- Selectable default information and accessible menus:
 - Operator
 - Meter
 - Service
 - Data Logger
 - Statistic and leakage (only Advanced version)
 - Revenue and Tariffs (only Advanced version)
- Totalized information can be displayed with 1, 2, 3 decimals or automatic adjustment for maximum resolution

Flow unit MAG 8000

- Europe std.
- US std.
- Australian std.

Volume in m³ and flow rate in m³/h

Volume in Gallon and flow rate in GPM

Volume in MI and flow rate as MI/d

Other units selectable:

- Volume: m³ x 100, l x 100, G x 100, G x 1000, MG, CF x 100, CF x 1000, AF, AI, KI
- Flow: m³/min, m³/d, l/s, l/min, GPS, GPH, GPD, MGD, CFS, CFM, CFH
- Other units are ordered from factory or manually configured on-site by sticking a label on the display and changing the scaling factors

Flow unit MAG 8000 CT

- Europe std.

Volume in m³ and flow rate in m³/h

Digital output MAG 8000/
MAG 8000CT

- 2 passive outputs (MOS), individual galvanically isolated
- Maximum load ± 35 V DC, 50 mA short circuit protected
- Output A function
Programmable as pulse volume
- forward - reverse - forward/net - reverse/net
- Output B function
Programmable as pulse volume (like output A), alarm or call-up
- Output
Max. pulse rate of 50 Hz (only Basic version) and 100 Hz (only Advanced version), pulse width of 5, 10, 50, 100, 500 ms

Communication

IrDA: Standard integrated infrared communication interface with MODBUS RTU protocol

Add-on modules:

- RS 232 serial interface with MODBUS RTU (Rx/Tx/GND), point to point with max. 15 m cable
- RS 485 serial interface with MODBUS RTU (+/-/GND), multi-drop with up to 32 devices with max. 1000 m cable

MODBUS RTU protocol is an open protocol (further information available on request)
Serial speed 1200, 2400, 4800, 9600, 19200, 38400 Baud

- Encoder interface (for Itron 200WP) "Sensus protocol" for fixed network

Power supply

Auto detection of power source with display symbol for operation power.

Internal battery pack: 2 D-Cell 3.6 V/33 Ah

External battery pack: 4 D-Cell 3.6 V/66 Ah

Mains Power supply:

- 12 ... 24 V AC/DC (10 ... 32 V) 2 VA
- 115 ... 230 V AC (85 ... 264 V) 2 VA

Both mains power supply systems are upgradable for battery backup via internal D-Cell (3.6 V 16.5 Ah) or external battery pack. The power supply has 3 m (9.8 ft) power cable for external connection to mains supply (without cable plug)

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Features	
Application identification	Tag number up to 15 characters
Time and date	Real time clock
Totalizer	
MAG 8000/ MAG 8000CT	2 totalizer: Forward, Reverse, Bidirectional netflow calculation and free selectable start value. 1 customer totalizer, following totalizer 1 setting and resettable via display key or software with logging of date and time
Measurement	
Low flow cut-off	0.05% of Q_n (Q3) or free adjustable
Empty pipe detection	Symbolised in display
Data logger	Logging of 26 records: selectable as daily, weekly or monthly logging
Alarm	Active alarm is indicated on the display
Monitoring	Total hours an alarm has been active Numbers of times the alarm has been activated First time an alarm appears Last time the alarm disappears
Fatal faults	Signal insulation – Flow signal immunity is influenced (only Advanced version) Coil current – Fault in driving magnetic sensor field Amplifier – Fault in signal circuit Check sum – Fault in calculation or handling of data
Warning faults	Low Power – customer selectable battery alarm level or power drop out Flow overflow – Flow in sensor exceeds Q_{max} (Q4) (125% Q_n (Q3)) Pulse overflow on output A and B – Selected pulse volume is too small compared to actual flow rate and max. output pulse rate. Consumption – saved data logger consumption exceeds customer selected limit on high or low consumption Leakage – Leakage detected based on customer settings (only Advanced version) Empty pipe – no water in the pipe / sensor Low impedance - measured electrode impedance below customer low impedance level Flow limit – actual flow exceeds selected high flow limited
Meter status (tamper monitoring of revenue data)	Changing totalizers 1 and 2 Changing Tariff totalizer Changing Tariff settings Changing date and time Alarm has been active (see alarm log for details) Fault log has been reset Hardware parameter protection has been broken Meter has been repowered

Data protection	All data stored in an EEPROM. Totalizers 1 and 2 are backed up every 10 min, statistic every hour and power consumption and temperature measurement every 4 hour. Password protection of all parameters and hardware protection of calibration and revenue parameters.
Battery power management	Optimal battery information on remaining capacity. Calculated capacity includes all consuming elements and available battery capacity is adjusted related to change in ambient temperature. Numbers of power-ups Date and time registered for first and last time power alarm.
Diagnostic	
Continuous self test including	Coil current to drive the magnetic field Signal input circuit Data calculation, handling and storing
Alarm statistics and logging for fault analyzing	Electrode impedance to check actual media contact Flow simulation to check pulse and communication signal chain for correct scaling Number of sensor measurements (excitations) Transmitter temperature (battery capacity calculation) Low impedance alarm for change in media Flow alarm when defined high flow exceeds Verification mode for fast measure performance check
Insulation test (only Advanced version)	Test of signal immunity against disturbance and bad installation. Test interval is selectable and measurement is interrupted during the test period of 4 min.
Leakage detection (only Advanced version)	Monitoring the lowest flow or volume during selected time window within 24 hours. Leakage is detected over a selectable period where monitored value exceed the possible leakage level. Min and max values are stored with date registration. Last store value visible on the display.
Meter Utilization (only Advanced version)	6 registers for monitoring total time the meter has operated in different flow intervals. Registered intervals are free selectable as % of Q_n (Q3)
Tariff (only Advanced version)	6 tariff registers count the volume delivered within the selected tariff windows, based on time of day or flow rates or a combination. Tariff can also be used for consumption profile where consumption is related to different time intervals or flow rates. Tariff values visible on the display.

SITRANS F flowmeters SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Settling date (only Advanced version)	On a predefined date the totalizer 1 index value is stored. Old values are stored to show the latest two totalized 1 index values. Settling values visible on the display.
Statistic (only Advanced version)	Min. flow rate with time and date registration Max. flow rate with time and date registration Min. daily consumption with date registration Max. daily consumption with date registration Latest 7 days total and daily consumption Actual month consumption Latest month consumption
PC Configuration Software PDM	<ul style="list-style-type: none"> • Meter configuration – online and offline mode • Own parameter settings • Parameter documentation • Print and export of data and parameters PDM 6.0 Service Pack 2 – Basic and Online version

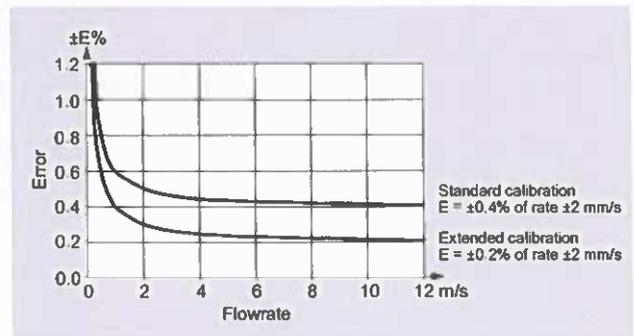
MAG 8000 water meter uncertainty

To ensure continuous accurate measurement, flowmeters must be calibrated. All measuring instrumentation, used in the calibration of the flowmeters, has either been calibrated by a UKAS or DANAK accredited laboratory or has been calibrated against certified master sensors. This provides an unbroken chain of measurement-traceability to national standards.

Siemens Flow Instruments can provide accredited calibration in the flow range from 0.0001 m³/h to 4350 m³/h.

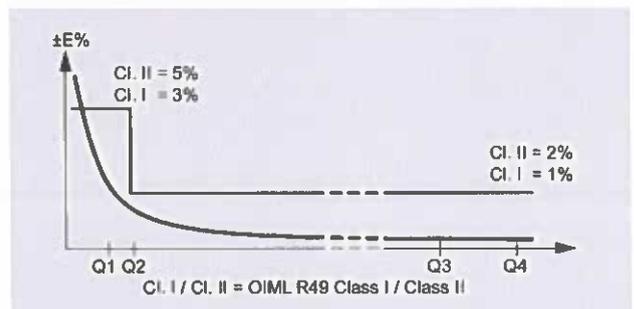
The accreditation bodies DANAK and UKAS have signed the ILAC MRA agreement (International Laboratory Accreditation Corporation - Mutual Recognition Arrangement). Therefore the accreditation ensures international traceability and recognition of the test results in 39 countries world wide, including the US (NIST traceability).

The selected calibration determines the accuracy of the meter. A standard calibration results in max. ±0.4 % uncertainty and an extended calibration ±0.2 %. A calibration certificate follows every sensor and calibration data are stored in the meter unit.



MAG 8000 CT (Revenue program) water meter type approval

MAG 8000 CT program is type approved and verified according to international water meter standard OIML R 49. The Custody Transfer program is approved as Class I and Class II, for the sensor program from DN 50 to DN 300, at different Q3 and Q3/Q1. Q2/Q1 = 1.6 and follows OIML R 49 specification.



SITRANS F flowmeters

SITRANS F M

Battery-operated water meter MAG 8000/MAG 8000 CT

OIML R 49 Pattern approval specification for Class I (1%)¹⁾

Size	50 (2")	65 (2½")	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")	250 (10")	300 (12")
„R“ Q3/Q1	250	250	250	250	250	250	250	250	160
Q4 [m³/h]	78.75	125	200	312.5	500	787.5	1250	2000	2000
Q3 [m³/h]	63	100	160	250	400	630	1000	1600	1600
Q2 [m³/h]	0.40	0.64	1.00	1.60	2.50	4.00	6.40	10.0	16.0
Q1 [m³/h]	0.25	0.40	0.63	1.00	1.60	2.50	4.00	6.40	10.0

OIML R 49 Pattern approval specification for Class II (2%)¹⁾

Size	50 (2")	65 (2½")	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")	250 (10")	300 (12")
„R“ Q3/Q1	400	400	400	400	400	400	400	400	250
Q4 [m³/h]	78.75	125	200	312.5	500	787.5	1250	2000	2000
Q3 [m³/h]	63	100	160	250	400	630	1000	1600	1600
Q2 [m³/h]	0.25	0.40	0.63	1.00	1.60	2.50	4.00	6.40	10.0
Q1 [m³/h]	0.16	0.25	0.40	0.63	1.00	1.60	2.50	4.00	6.40

¹⁾ The product will be delivered according to requested specifications, which may deviate from the specifications of the approval frame described in tables below.

MAG 8000 CT (Revenue program) MI-001

MAG 8000 CT program is type approved according to international water meter standard OIML R 49. Since the first November 2006 the MI-001 water meter directive is in force, which means that all water meters can be sold across the EU borders if the water meters contain a MI-001 label.

The MAG 8000 CT MI-001 verified and labeled products are a Class II approval according to Directive 2004/22/EC of the European Parliament and Council of March 31, 2004 on measuring instruments (MID), Annex MI-001 in the sizes from DN 50 to DN 600.

The MID certification is obtained as a B + D module approval according to the above mentioned directive.

Module B : Type approval according to OIML R 49

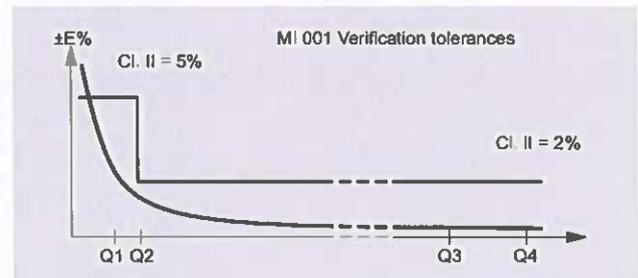
Module D : Quality insurance approval of production

MAG 8000 CT MI-001 verified and labeled products at a given Q3 and Q3/Q4 = 1.25 and Q2/Q1 = 1.6 measuring ranges see below table:

DN	50 (2")	65 (2½")	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")	250 (10")	300 (12")
„R“ Q3/Q1	25	25	25	25	25	25	25	25	25
Q4 [m³/h]	18.75	31.25	50	78.75	125	200	312.5	500	750
Q3 [m³/h]	15	25	40	63	100	160	250	400	600
Q2 [m³/h]	0.96	1.60	2.60	4.03	6.40	10.24	16.00	25.60	38.4
Q1 [m³/h]	0.60	1.00	1.60	2.52	4.00	6.40	10.00	16.00	24.0

DN	50 (2")	65 (2½")	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")	250 (10")	300 (12")
„R“ Q3/Q1	63	63	63	63	63	63	63	63	63
Q4 [m³/h]	18.75	31.25	50	78.75	125	200	312.5	500	750
Q3 [m³/h]	15	25	40	63	100	160	250	400	600
Q2 [m³/h]	0.38	0.63	1.02	1.60	2.54	4.06	6.35	10.20	15.24
Q1 [m³/h]	0.24	0.40	0.63	1.00	1.59	2.54	3.97	6.35	9.52

DN	50 (2")	65 (2½")	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")	250 (10")	300 (12")
„R“ Q3/Q1	80	80	80	80	80	80	80	80	80
Q4 [m³/h]	18.75	31.25	50	78.75	125	200	312.5	500	750
Q3 [m³/h]	15	25	40	63	100	160	250	400	600
Q2 [m³/h]	0.31	0.50	0.80	1.20	2.00	3.20	5.00	8.00	12.0
Q1 [m³/h]	0.19	0.31	0.50	0.75	1.25	2.00	3.13	5.00	7.5



SITRANS F flowmeters

SITRANS F M

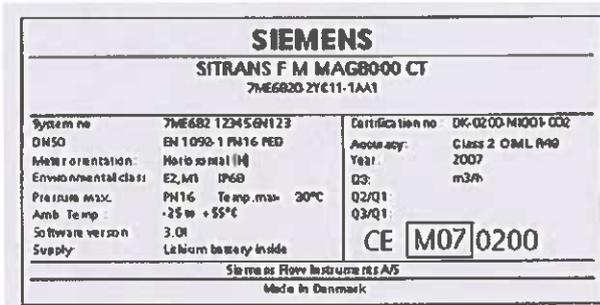
Battery-operated water meter
MAG 8000/MAG 8000 CT

DN	50 (2")	65 (2½")	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")	250 (10")	300 (12")
„R“ Q3/Q1	160	160	160	160	160	160	160	160	160
Q4 [m³/h]	50	78.75	125	200	312.5	500	787.5	1250	2000
Q3 [m³/h]	40	63	100	160	250	400	630	1000	1600
Q2 [m³/h]	0.40	0.63	1.00	1.60	2.50	4.00	6.30	10.00	16.00
Q1 [m³/h]	0.25	0.39	0.63	1.00	1.56	2.50	3.94	6.30	10.00

DN	50 (2")	65 (2½")	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")	250 (10")	300 (12")
„R“ Q3/Q1	200	200	200	200	200	200	200	200	200
Q4 [m³/h]	50	78.75	125	200	312.5	500	787.5	1250	2000
Q3 [m³/h]	40	63	100	160	250	400	630	1000	1600
Q2 [m³/h]	0.32	0.50	0.80	1.28	2.00	3.20	5.00	8.00	12.60
Q1 [m³/h]	0.20	0.32	0.50	0.80	1.25	2.00	3.15	5.00	8.00

DN	50 (2")	65 (2½")	80 (3")	100 (4")	125 (5")	150 (6")	200 (8")	250 (10")	300 (12")
„R“ Q3/Q1	250	250	250	250	250	250	250	250	250
Q4 [m³/h]	50	78.75	125	200	312.5	500	787.5	1250	2000
Q3 [m³/h]	40	63	100	160	250	400	630	1000	1600
Q2 [m³/h]	0.26	0.40	0.64	1.02	1.60	2.56	4.00	6.40	10.24
Q1 [m³/h]	0.16	0.25	0.40	0.64	1.00	1.60	2.52	4.00	6.40

The Label is placed on the side of the encapsulation. An example of the product label is shown below:

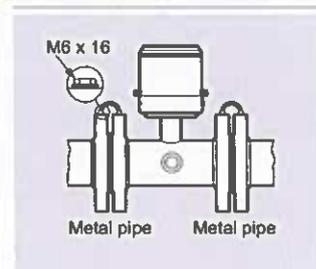


Installation conditions

Please refer to "System information SITRANS F M electromagnetic flowmeters".
MAG 8000 CT has to be mounted in Integral (compact) and horizontal position only, to obtain the MI-001 certification.
Battery packs must be installed with the top part in upwards direction to reach maximum capacity.

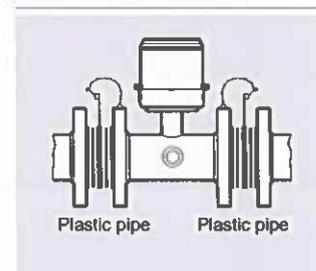
Bonding and grounding

The sensor body must be grounded using grounding/bonding straps and/or grounding rings to protect the flow signal against stray electrical noise and/or lightning. This ensures that the noise is carried through the sensor body and a noise-free measuring area within the sensor body.



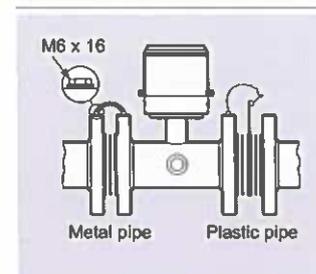
Metal pipelines

On metal pipelines, connect the straps to both flanges.



Plastic pipelines

On plastic pipelines and lined metal pipes, optional grounding rings must be used at both ends.
Grounding rings has to be ordered separately see „grounding ring KIT“



Combination of metal and plastic pipelines

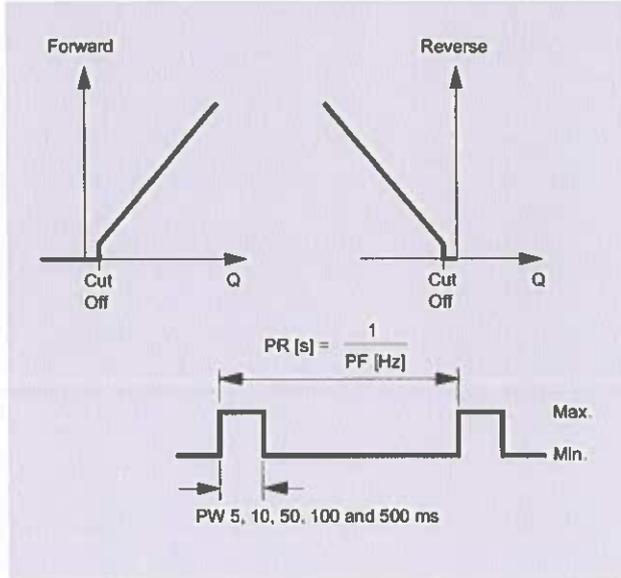
A combination of metal and plastic requires straps for metal pipeline and grounding rings for plastic pipeline.

SITRANS F flowmeters

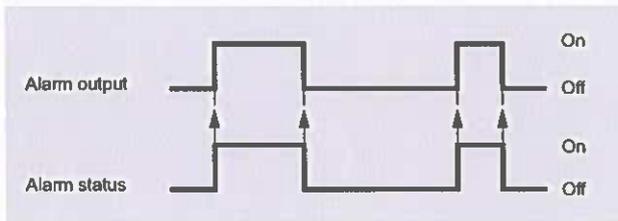
SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Output configuration MAG 8000



Pulse volume: Output A/B configured as volume per pulse, the output delivers a pulse when the preset volume has passed the selected direction, calculated on forward/reverse or Net forward/reverse flow. The volume per pulse is freely scalable, from 0.0001 to 10 000 meter-unit per pulse. PR = pulse rate and PF = pulse frequency.



Alarm: The alarm will follow the internal alarm status.

Output configuration MAG 8000 CT

MAG 8000 CT has same out put functionality as MAG 8000, due to MI-001 is only forward flow (output A predefined) and output B as Alarm output available).

Battery lifetime (subject to the assumptions mentioned above)

Excitation frequency (24 h operation)		1/60 Hz	1/30 Hz	1/15 Hz	1/5 Hz	1.5625 Hz	3.125 Hz	6.25 Hz
Two D-Cell battery 33 Ah Internal battery pack	DN 25 ... 200 (1" ... 8")	8 years	8 years	6 years	40 months	8 months	4 months	2 months
	DN 250 ... 600 (10" ... 24")	8 years	6 years	4 years	20 months	4 months	2 months	NA
	DN 700 ... 1 200 (28" ... 48")	6 years	4 years	2 years	1 year	2 months	NA	NA
Four D-Cell battery 66 Ah External battery pack	DN 25 ... 200 (1" ... 8")	N/A	10 years	10 years	80 months	16 months	8 months	4 months
	DN 250 ... 600 (10" ... 24")	N/A	10 years	10 years	40 months	8 months	4 months	NA
	DN 700 ... 1 200 (28" ... 48")	10 years	8 years	4 years	2 years	4 months	NA	NA

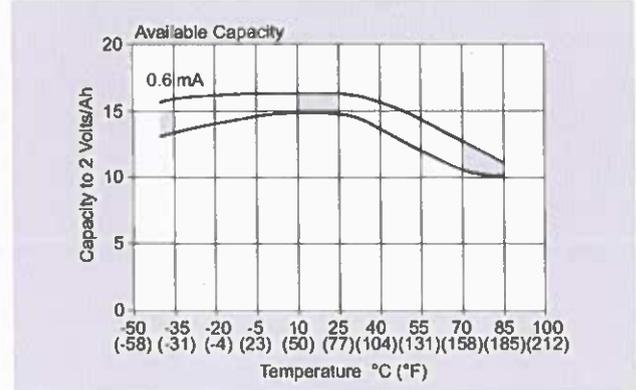
External battery pack can be used as battery backup for mains power supply.

Serial RS 232/RS 485 add-on communication modules are designed for mains powered systems as the battery operation time will be reduced. At 1 hour communication per month (all meter

Battery operation time and calculation

The battery operation time depends on the connected battery pack as well as the operation condition of the meter.

MAG 8000 calculates the remaining capacity every 4 hours and includes all consuming elements. Calculation compensates for temperature influence on battery capacity (drawing).



The effect from other temperatures can be seen from the figure. A variation in temperature from 15 °C to 55 °C (59 to 131 °F) reduces the capacity by 17% in the table from 15 Ah to 12.5 Ah.

At typical revenue scenario of expected battery operation time can be seen in the table.

The measurement for calculating the rest capacity of the battery life time is only completed if the system has no active fatal faults or the empty pipe is active. Maximum battery specification is 10 years operation.

Scenario - Revenue application

Output A	Pulse rate max. 10 Hz
Output B	Alarm or call-up
Meter dialog	1 hour per month
Add-com	None
Temperature profile	<ul style="list-style-type: none"> • 5% at 0 °C (32 °F) • 80% at 15 °C (59 °F) • 15% at 50 °C (122 °F)

data collected 2 times per day) and the module is connected, the operation time is reduced to:

- RS 232 at low excitation frequency to 10% and at high excitation frequency to 80% of calculated operation time
- RS 485 at low excitation frequency to 50% and at high excitation frequency to 90% of calculated operation time

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Selection and Ordering data	Order No.
SITRANS F M MAG 8000 water meter	7ME6810 -
■■■■■ - ■■■■	
Diameter	
DN 25 (1")	2 D
DN 40 (1½")	2 R
DN 50 (2")	2 Y
DN 65 (2½")	3 F
DN 80 (3")	3 M
DN 100 (4")	3 T
DN 125 (5")	4 B
DN 150 (6")	4 H
DN 200 (8")	4 P
DN 250 (10")	4 V
DN 300 (12")	5 D
DN 350 (14")	5 K
DN 400 (16")	5 R
DN 450 (18")	5 Y
DN 500 (20")	6 F
DN 600 (24")	6 P
DN 700 (28") ¹⁾	6 Y
DN 750 (30") ¹⁾	7 D
DN 800 (32") ¹⁾	7 H
DN 900 (36") ¹⁾	7 M
DN 1000 (40") ¹⁾	7 R
DN 1050 (42") ¹⁾	7 T
DN 1100 (44") ¹⁾	7 V
DN 1200 (48") ¹⁾	8 B
Flange norm and pressure rating	
EN 1092-1	
PN 10 (DN 200 ... 1200 (8" ... 48"))	B
PN 16 (DN 50 ... 1200 (2" ... 48"))	C
PN 16 none PED (DN 700 ... 1200 (28" ... 48"))	D
PN 40 (DN 25 ... 40 (1" ... 1½"))	F
ANSI B16.5	
Class 150	J
AWWA C-207	
Class D (28" ... 48")	L
AS4087	
PN 16 (DN 50 ... 1200 (2" ... 48"))	N
Sensor version	
EPDM liner and Hastelloy electrodes	3
Calibration	
Standard ± 0.4% of rate ± 2 mm/s	1
Extended ± 0.2% of rate ± 2 mm/s DN 50 ... 300 (2" ... 12")	2
Region version	
Europe (m ³ , m ³ /h, 50 Hz)	1
USA (Gallon, GPM, 60 Hz)	2
Australia (ML, l/h, 50 Hz)	3
Transmitter type and installation	
Basic version integral on sensor	A
Basic version remote, 5 m (16.4 ft) mounted cable on sensor with IP68/NEMA 6P plugs	B
Do - 10 m (32.8 ft)	C
Do - 20 m (65.6 ft)	D
Do - 30 m (98.4 ft)	E
Advanced version integral on sensor	K
Advanced version remote, 5 m mounted cable on sensor with IP68/NEMA 6P plugs	L
Do - 10 m (32.8 ft)	M
Do - 20 m (65.6 ft)	N
Do - 30 m (98.4 ft)	P

Selection and Ordering data	Order No.
SITRANS F M MAG 8000 water meter	7ME6810 -
■■■■■ - ■■■■	
Communication interface	
No additional "add-on" communication module installed	A
Serial RS 485 with MODBUS RTU (Terminated as end device)	B
Serial RS 232 with MODBUS RTU	C
Power supply	
Internal battery (no battery included)	0
Internal battery pack installed ²⁾	1
External battery with 1.5 m (4.9 ft) power cable with IP68/NEMA 6P plugs, no battery included	2
12/24 V AC/DC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	3
115 ... 230 V AC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	4
This device is shipped with a Quick Start guide and the SITRANS F manual CD containing the complete manual library. Printed Operating Instructions are available for purchase via PMD	
¹⁾ The Diameter DN 700 (28") to DN 1200 (48") is only available as remote transmitter type installation. ²⁾ Lithium batteries are subject to special transportation regulations according to United Nations "Regulation of Dangerous Goods, UN 3090 and UN 3091". Special transport documentation is required to observe these regulations. This may influence both transport time and costs.	

Selection and Ordering data	Order code
<i>Additional information</i>	
Please add "-Z" to Order No. and specify Order code(s) and plain text.	
Flow unit	
l/s	L00
MGD	L01
CFS	L02
l/min	L03
m ³ /min	L04
GPM	L05
CFM	L06
l/h	L07
m ³ /h	L08
GPH	L09
CFH	L10
GPS	L11
Ml/d	L12
m ³ /d	L13
GPD	L14
Totalizer	
Volume calculation (default totalizer 1= forward and totalizer 2 = reverse)	
Totalizer 1 = RV, reverse flow	L20
Totalizer 1 = NET, net flow	L22
Totalizer 2 = FW, forward flow	L30
Totalizer 2 = NET, net flow	L31

4

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Selection and Ordering data

Order code

Additional information

Please add "-Z" to Order No. and specify Order code(s) and plain text.

Volume unit

m ³	L40
MI	L41
G	L42
AF	L43
I x 100	L44
m ³ x 100	L45
G x 100	L46
CF x 100	L47
MG	L48
G x 1000	L49
CF x 1000	L50
AI	L51
kl	L52

Pulse set up

(default pulse A = forward and pulse B = Alarm)

A function = RV, reverse flow	L62
A function = FWnet, forward net flow	L63
A function = RVnet, reverse net flow	L64
A function = Off	L65
Volume per pulse A = x 0.0001	L70
Volume per pulse A = x 0.001	L71
Volume per pulse A = x 0.01	L72
Volume per pulse A = x 0.1	L73
Volume per pulse A = x 1	L74
B function = FW, forward flow	L80
B function = RV, reverse flow	L81
B function = FWnet, forward net flow	L82
B function = RVnet, reverse net flow	L83
B function = Alarm	L84
B function = Call up	L85
Volume per pulse B = x 0.0001	L90
Volume per pulse B = x 0.001	L91
Volume per pulse B = x 0.01	L92
Volume per pulse B = x 0.1	L93
Volume per pulse B = x 1	L94

Data logger set up (default month logging)

DataloggerInterval = Daily	M31
DataloggerInterval = Weekly	M32

Factory mounted cables

5 m (16.4 ft) pulse cable A+B	M81
5 m (16.4 ft) communication cable RS 232/RS 485 terminated as end device	M82
20 m (65.6 ft) pulse cable A+B	M84
20 m (65.6 ft) communication cable RS 232/RS 485 terminated as end device	M85
Cello 2 channel, input cable 3 m (9.84 ft) with Brad Harrison micro-change 3 way connector	M87
Cello 2 channel, input cable 5 m (16.4 ft) with MIL-C-26482 spec. connectors	M89
SOFREL data logger cable 2 m with connector for SOFREL GSM module	M92

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Selection and Ordering data	Order No.
SITRANS F M	
MAG 8000 CT water meter with EPDM liner and Hastelloy electrodes	7 ME 6 8 2 0 -
	0 -
Diameter	
DN 50 (2")	2 Y
DN 65 (2½")	3 F
DN 80 (3")/Q3 150 m³/h (m³) without verification or DN 80 (3")/Q3 40 m³/h (m³) with MI-001 verification	3 M
DN 100 (4")	3 T
DN 125 (5")	4 B
DN 150 (6")	4 H
DN 200 (8")	4 P
DN 250 (10")	4 V
DN 300 (12")	5 D
DN 350 (14")	5 K
DN 400 (16")	5 R
DN 450 (18")	5 Y
DN 500 (20")	6 F
DN 600 (24")	6 P
Flange norm and pressure rating	
<u>EN 1092-1</u>	
PN 16	C
<u>ANSI B16.5</u>	
Class 150	J
<u>AS4087</u>	
PN 16	N
Approval/Verification	
Without verification according to OIML R 49	0
MI-001 Q3/Q1 = 25	1
MI-001 Q3/Q1 = 63	2
MI-001 Q3/Q1 = 80	3
MI-001 Q3/Q1 = 160	4
MI-001 Q3/Q1 = 200	5
MI-001 Q3/Q1 = 250	6
Without verification according to OIML R 49 (Q3/Q1 = 100)	7
Without verification according to OIML R 49 (Q3/Q1 = 250)	8
Region version	
Europe (m³, m³/h, 50 Hz) ¹⁾	1
USA (m³, m³/h, 60 Hz)	2
Transmitter type and Installation	
Basic version integral on sensor	A
Basic version remote, 5 m (16.4 ft) mounted cable on sensor with IP68/NEMA 6P plugs	B
Do - 10 m (32.8 ft)	C
Do - 20 m (65.6 ft)	D
Do - 30 m (98.4 ft)	E
Advanced version integral on sensor	K
Advanced version remote, 5 m mounted cable on sensor with IP68/NEMA 6P plugs	L
Do - 10 m (32.8 ft)	M
Do - 20 m (65.6 ft)	N
Do - 30 m (98.4 ft)	P
Communication interface	
No additional "add-on" communication module installed	A
Serial RS 485 with MODBUS RTU (Terminated as end device)	B
Serial RS 232 with MODBUS RTU	C
Encoder interface for ITRON 200WP radio with "Sen- sus" protocol ²⁾	D

Selection and Ordering data	Order No.
SITRANS F M	
MAG 8000 CT water meter with EPDM liner and Hastelloy electrodes	7 ME 6 8 2 0 -
	0 -
Power supply	
Internal battery (no battery included)	0
Internal battery pack installed ²⁾	1
External battery with 1.5 m (4.9 ft) power cable with IP68/NEMA 6P plugs, no battery included	2
12/24 V AC/DC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	3
115 ... 230 V AC power supply with battery backup and 3 m (9.8 ft) power cable for external connection. (no battery included)	4

This device is shipped with a Quick Start guide and the SITRANS F manual CD containing the complete manual library. Printed Operating Instructions are available for purchase via PMD.

²⁾ Lithium batteries are subject to special transportation regulations according to United Nations "Regulation of Dangerous Goods, UN 3090 and UN 3091". Special transport documentation is required to observe these regulations. This may influence both transport time and costs.

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Selection and Ordering data Order code

Additional information

Please add "-Z" to Order No. and specify Order code(s) and plain text.

Totalizer

Volume calculation (default totalizer 1= forward and totalizer 2 = reverse)

Totalizer 1 = RV, reverse flow	L20
Totalizer 1 = NET, net flow	L22
Totalizer 2 = FW, forward flow	L30
Totalizer 2 = NET, net flow	L31

Pulse set up

(default pulse A= forward and pulse B = Alarm)

A function = RV, reverse flow	L62
A function = FWnet, forward net flow	L63
A function = RVnet, reverse net flow	L64
A function = Off	L65
Volume per pulse A = x 0.001	L71
Volume per pulse A = x 0.01	L72
Volume per pulse A = x 0.1	L73
Volume per pulse A = x 1	L74
B function = FW, forward flow	L80
B function = RV, reverse flow	L81
B function = FWnet, forward net flow	L82
B function = RVnet, reverse net flow	L83
B function = Alarm	L84
B function = Call up	L85
Volume per pulse B = x 0.001	L91
Volume per pulse B = x 0.01	L92
Volume per pulse B = x 0.1	L93
Volume per pulse B = x 1	L94

Data logger set up (default month logging)

DataloggerInterval = Daily	M31
DataloggerInterval = Weekly	M32

Factory mounted cables

5 m (16.4 ft) pulse cable A+B	M81
5 m (16.4 ft) communication cable RS 232/RS 485 terminated as end device	M82
20 m (65.6 ft) pulse cable A+B	M84
20 m (65.6 ft) communication cable RS 232/RS 485 terminated as end device	M85
Cello 2 channel, input cable 3 m (9.84 ft) with Brad Harrison micro-change 3 way connector	M87
Cello 2 channel, input cable 5 m (16.4 ft) with MIL-C-26482 spec. connectors	M89
5 ft. Encoder interface cable with connector for ITRON 200WP radio	M90
25 ft. Encoder interface cable with connector for ITRON 200WP radio	M91
SOFREL data logger cable 2 m with connector for SOFREL GSM module	M92

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Accessories

Description	Order No.	
PC Flow Tool on CD (Download for free from www.siemens.com/flow)	◆ FDK-087L6001	
IrDA infrared interface adapter with USB for data acquisition with 1.2 m (3.9 ft) cable	◆ FDK-087L4163	
Battery backup for mains power supply, one pc. D-cell (3.6 V, 16.5 Ah) Attention on note ¹⁾	◆ FDK-087L4201	
Internal battery pack, one set D-cell (3.6 V 33 Ah) and accessories for replacement Attention on note ¹⁾	◆ FDK-087L4150	
External battery pack IP68/NEMA 6P with connec- tor, four D-cell (3.6 V 66 Ah) Attention on note ¹⁾	◆ FDK-087L4151	
Mains power supply 12 ... 24 V AC/DC with bat- tery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	FDK-087L4210	
Mains power supply 115 ... 230 V AC with battery backup up and 3 m (9.8 ft) power cable for external connection (no battery included)	◆ FDK-087L4211	
RS 232 add-on module, point to point communi- cation interface with MODBUS RTU protocol	FDK-087L4212	
RS485 add-on module, mul- tidrop communication inter- face with MODBUS RTU protocol	◆ FDK-087L4213	
Encoder interface module, with "Sensus" protocol for ITRON 200WP radio, only for use with 7ME6820 route	A5E02475650	
One cable entry 6 ... 8 mm (0.24 ... 0.31 ") M20 brass glands package (1 pc)	FDK-087L4196	
One cable entry 2 ... 5 mm (0.08 ... 0.20 ") M12 brass glands with M20 reduction. Package of 10 pcs	FDK-087L4154	

Description	Order No.	
One cable entry 6 ... 8 mm (0.24 ... 0.31 ") M20 brass glands package (10 pcs)	FDK-087L4155	
One cable entry 8 ... 11 mm (0.31 ... 0.43 ") M20 brass glands package (10 pcs)	FDK-087L4156	
One cable entry 11 ... 15 mm (0.43 ... 0.59 ") M20 brass glands package (10 pcs)	FDK-087L4157	
Two cable entries 3.5 ... 5 mm (0.14 ... 0.20 ") M20 brass glands package (10 pcs)	FDK-087L4158	
Two cable entries 5.5 ... 7.5 mm (0.22 ... 0.30 ") M20 brass glands package (10 pcs)	FDK-087L4159	
IP68/NEMA 6P potting kit	◆ FDK-085U0220	
MAG 8000 Hardware key to access protected param- eters	FDK-087L4165	
MAG 8000 demo - training unit pack operating on Alka- line batteries. Transmitter with Flow tool CD, IrDA inter- face adapter and hardware key (No dangerous goods limitations)	FDK-087L4080	
Alkaline battery for MAG 8000 demo transmit- ter (3 V 13 Ah) (No dangerous goods limita- tions)	FDK-087L4142	

◆ Short lead time (details in PMD)

¹⁾ Lithium batteries are subject to special transportation regulations according to United Nations "Regulation of Dangerous Goods, UN 3090 and UN 3091". Special transport documentation is required to observe these regulations. This may influence both transport time and costs.

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter MAG 8000/MAG 8000 CT

MAG 8000 has built in Hastelloy grounding electrodes, when installed in PVC or coated pipelines, grounding rings must be installed additionally.

Grounding rings, type C must be used for the 7ME6810 and 7ME6820 routes (sizes > DN 300) and for the 7ME6880 route (all sizes). Please see grounding rings in the section MAG 3100 Grounding rings and be aware that the mentioned MLFB codes include only 1 grounding ring. Grounding rings DN 25 to DN 300 in stainless steel are packed in pairs and sold as a "grounding ring kit".

Dimension	Order No.
DN 25	◆ A5E01002946 ^{F)}
DN 40	◆ A5E01002947 ^{F)}
DN 50	◆ A5E01002948 ^{F)}
DN 65	◆ A5E01002950 ^{F)}
DN 80	◆ A5E01002952 ^{F)}
DN 100	◆ A5E01002953 ^{F)}
DN 125	◆ A5E01002954 ^{F)}
DN 150	◆ A5E01002955
DN 200	◆ A5E01002957 ^{F)}
DN 250	◆ A5E01002958 ^{F)}
DN 300	◆ A5E01002962 ^{F)}



◆ Short lead time (details in PMD)

Spare parts

Description	Order No.
MAG 8000 (Basic version) transmitter compact replacement kit. System number specified by ordering. No battery included	FDK-087L4166
MAG 8000 (Basic version) transmitter remote replacement kit. System number specified by ordering. No battery included	FDK-087L4202
MAG 8000 (Advanced version) transmitter compact replacement kit. No battery included	FDK-087L4203
MAG 8000 (Advanced version) transmitter remote replacement kit. No battery included.	FDK-087L4204
MAG 8000 (Basic version) transmitter PCB replacement kit	A5E0117156 ^{F)}
MAG 8000 (Advanced version) transmitter PCB replacement kit	FDK-087L4168



Description	Order No.
Enclosure top including plastic lid, screws and blank product label	FDK-087L4167
Cable for external battery pack, 1.5 m (4.92 ft) with IP68/NEMA 6P connector	FDK-087L4152
5 ft. Encoder interface cable with IP68/NEMA 6P plugs included, for ITRON 200WP radio	A5E02551263
25 ft. Encoder interface cable with IP68/NEMA 6P plugs included, for ITRON 200WP radio	A5E02551182
Service tool kit package with various component for service and replacement.	FDK-087L4162



F) Subject to export regulations AL: 91999, ECCN: N.

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

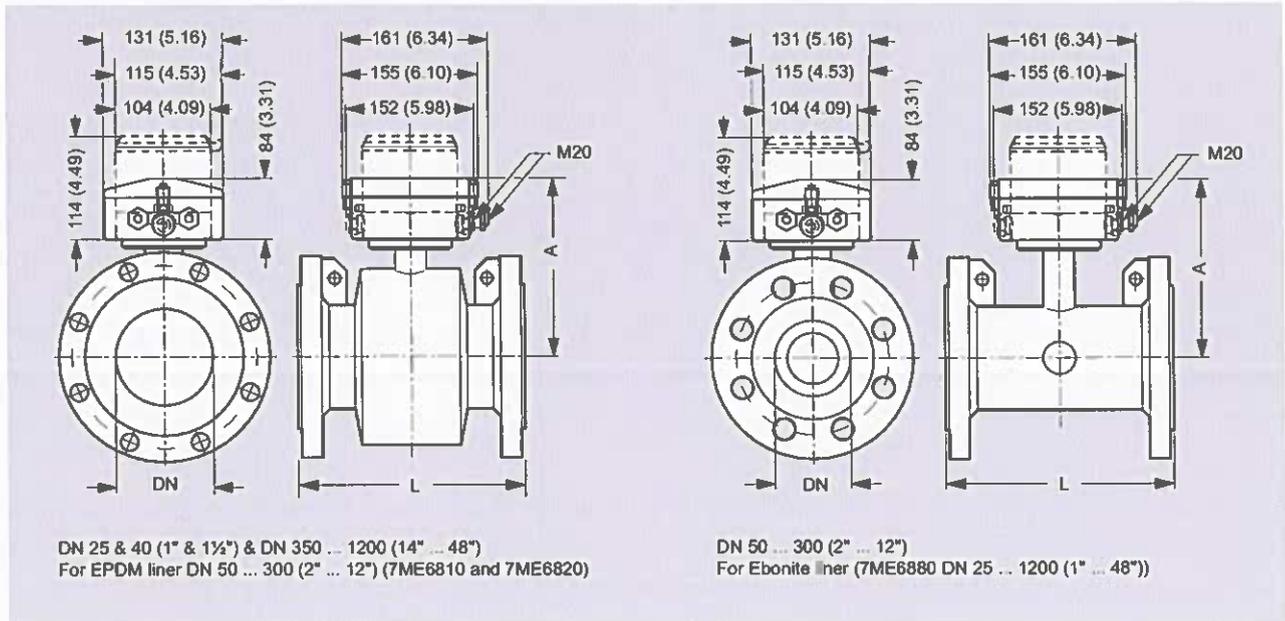
Description	Order No.	
Remote cable set 5 m (16.4 ft) with IP68/NEMA 6P plugs - PG 13.5	FDK-087L4108	
Remote cable set 5 m (16.4 ft) with IP68/NEMA 6P plugs - M20	On request	
Remote cable set 10 m (32.8 ft) with IP68/NEMA 6P plugs - PG 13.5	FDK-087L4109	
Remote cable set 10 m (32.8 ft) with IP68/NEMA 6P plugs - M20	On request	
Remote cable set 20 m (65.6 ft) with IP68/NEMA 6P plugs - PG 13.5	FDK-087L4110	
Remote cable set 20 m (65.6 ft) with IP68/NEMA 6P plugs - M20	On request	
Remote cable set 30 m (98.4 ft) with IP68/NEMA 6P plugs - PG 13.5	FDK-087L4111	
Remote cable set 30 m (98.4 ft) with IP68/NEMA 6P plugs - M20	On request	

SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Dimensional drawings



Dimensions in mm (inch)

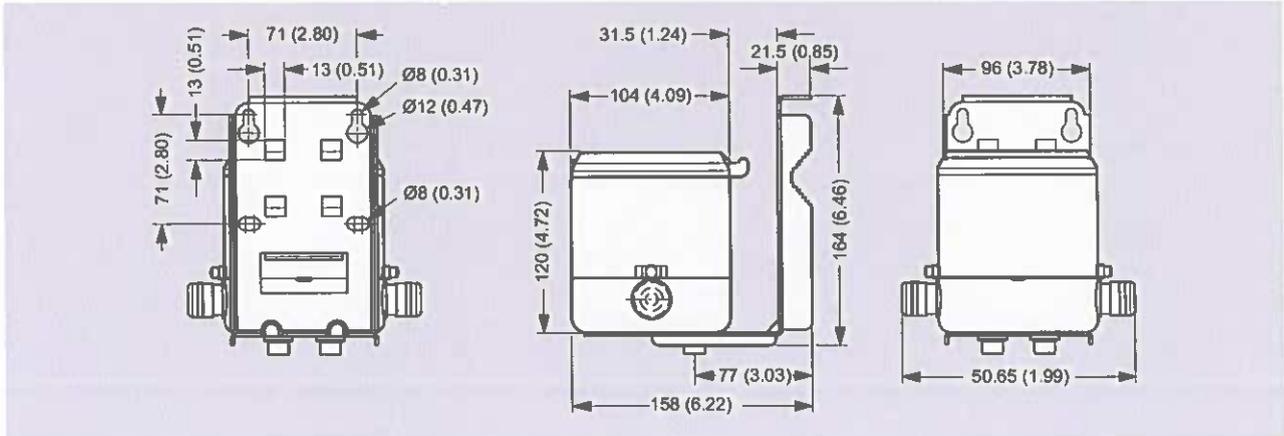
Nominal DN size	A	L, lengths						Weight ¹⁾	
		EPDM (7ME6810 and 7ME6820)	EN 1092-1 PN 10	EN 1092-1 PN 16/ PN 16 non PED	EN 1092-1 PN 40	ANSI 16.5 Class 150	AS 4087 PN 16	AWWA C-207 Class D	kg
mm (inch)	mm (inch)	mm	mm	mm	Inch	mm	mm		
25 (1)	194 (7.7)	-	-	200	7.9	200	-	6	13
40 (1½)	204 (8.1)	-	-	200	7.9	200	-	9	20
50 (2)	195 (7.7)	-	200	-	7.9	200	-	11	25
65 (2½)	201 (8)	-	200	-	7.9	200	-	13	29
80 (3)	207 (8.2)	-	200	-	7.9	200	-	15	34
100 (4)	214 (8.5)	-	250	-	9.8	250	-	17	38
125 (5)	224 (8.9)	-	250	-	9.8	250	-	22	50
150 (6)	239 (9.5)	-	300	-	11.8	300	-	28	63
200 (8)	264 (10.5)	350	350	-	13.8	350	-	50	113
250 (10)	291 (11.5)	450	450	-	17.7	450	-	71	160
300 (12)	317 (12.6)	500	500	-	19.7	500	-	88	198
350 (14)	369 (14.6)	550	550	-	21.7	550	-	127	279
400 (16)	394 (15.6)	600	600	-	23.6	600	-	145	318
450 (18)	425 (16.8)	600	600	-	23.6	600	-	175	384
500 (20)	450 (17.8)	600	600	-	26.8	600	-	225	494
600 (24)	501 (19.8)	600	600	-	32.3	600	-	340	747
700 (28)	544 (21.4)	700	875/700	-	N/A	N/A	700	316	694
750 (30)	571 (22.5)	N/A	N/A	-	N/A	N/A	750	N/A	N/A
800 (32)	606 (23.9)	800	1000/800	-	N/A	N/A	800	398	1045
900 (36)	653 (25.7)	900	1125/900	-	N/A	N/A	900	476	1045
1000 (40)	704 (27.7)	1000	1250/1000	-	N/A	N/A	1000	602	1322
1050 (42)	704 (27.7)	N/A	N/A	-	N/A	N/A	1050	N/A	N/A
1100 (44)	755 (29.7)	N/A	N/A	-	N/A	N/A	1100	N/A	N/A
1200 (48)	810 (31.9)	1200	1500/1200	-	N/A	N/A	1200	887	1996

¹⁾ For remote version the sensor weight is reduced with 2 kg (4.5 lb)

SITRANS F flowmeters SITRANS F M

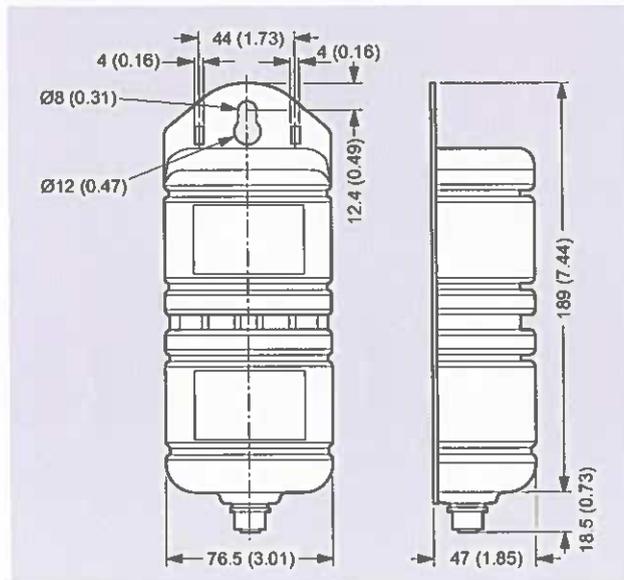
Battery-operated water meter
MAG 8000/MAG 8000 CT

Remote version



Dimensions in mm (inch), weight 3.5 kg (8 lbs)

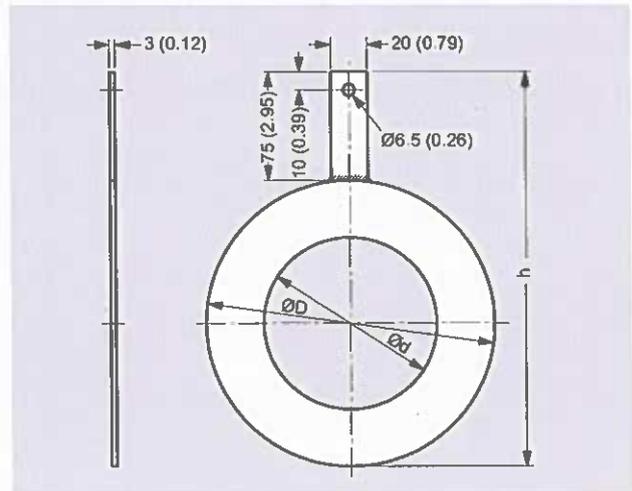
External battery pack



Dimensions in mm (inch), weight 2.0 kg (4.5 lbs)

Battery pack has to be mounted in upwards position to ensure maximum battery capacity.

Grounding rings



Dimensions in mm (inch) for grounding rings MAG 8000 with EPDM lining (7ME6810 and 7ME6820) DN 25 to DN 300

Dimension	Internal diameter (d)	Outside diameter (D)	h
DN 25	27	68	143
DN 40	38	88	163
DN 50	52	100	175
DN 65	64	120	195
DN 80	79	133	208
DN 100	95	158	233
DN 125	115	188	263
DN 150	145	216	336
DN 200	193	268	343
DN 250	246	324	399
DN 300	295	374	449

4

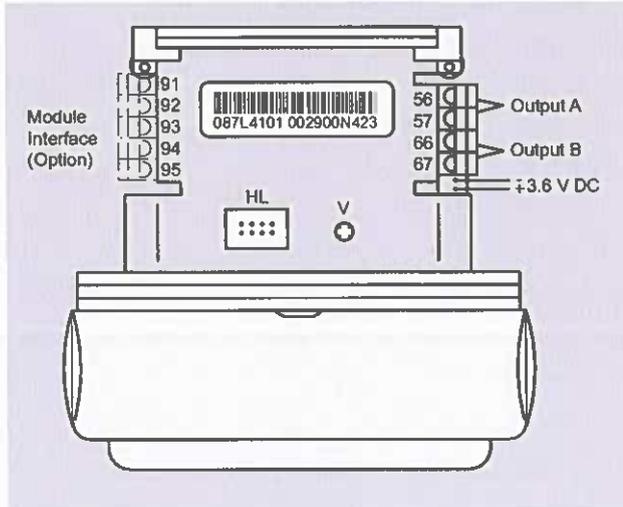
SITRANS F flowmeters

SITRANS F M

Battery-operated water meter
MAG 8000/MAG 8000 CT

Schematics

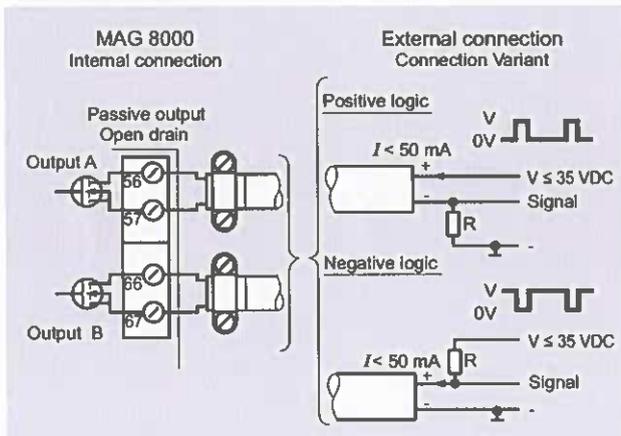
Electrical installation and pulse output – Connection diagram



4

HL = Hardware lock key connection
V = Push button for verification mode

Pulse wire connection



The pulse output can be configured as volume, alarm or call-up. The output can be connected as positive or negative logic. R = pull up/down is selected in relation to the V_x power supply and with a max. current I of 50 mA.

Use shielded cable to avoid EMC problems. Make sure the shield is correctly mounted under the cable clamp (no pig tail).