

유량계

<https://flosonic.kr>

에프엠테크(주)

고객 여러분의 곁에서 Needs에 부합하는
새로운 제품과 최적의 서비스를 제공할 것입니다.

ADVANCED CUSTOMIZED SOLUTION

FM TECH
에프엠테크(주) | Choice for
the best



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We provide "Customized solution"
including on-site survey, design,
production, and maintenance.



Engineer

Customized
Solution



One-step
Service

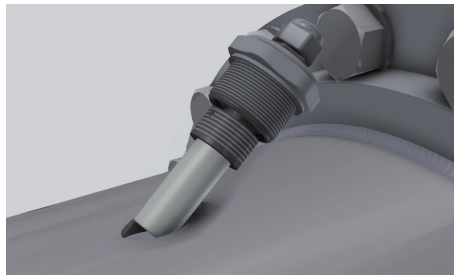
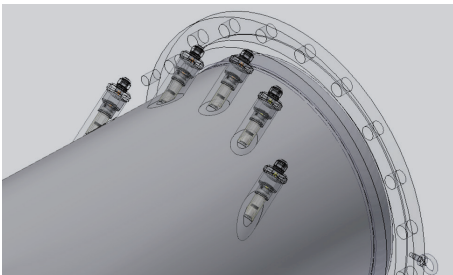
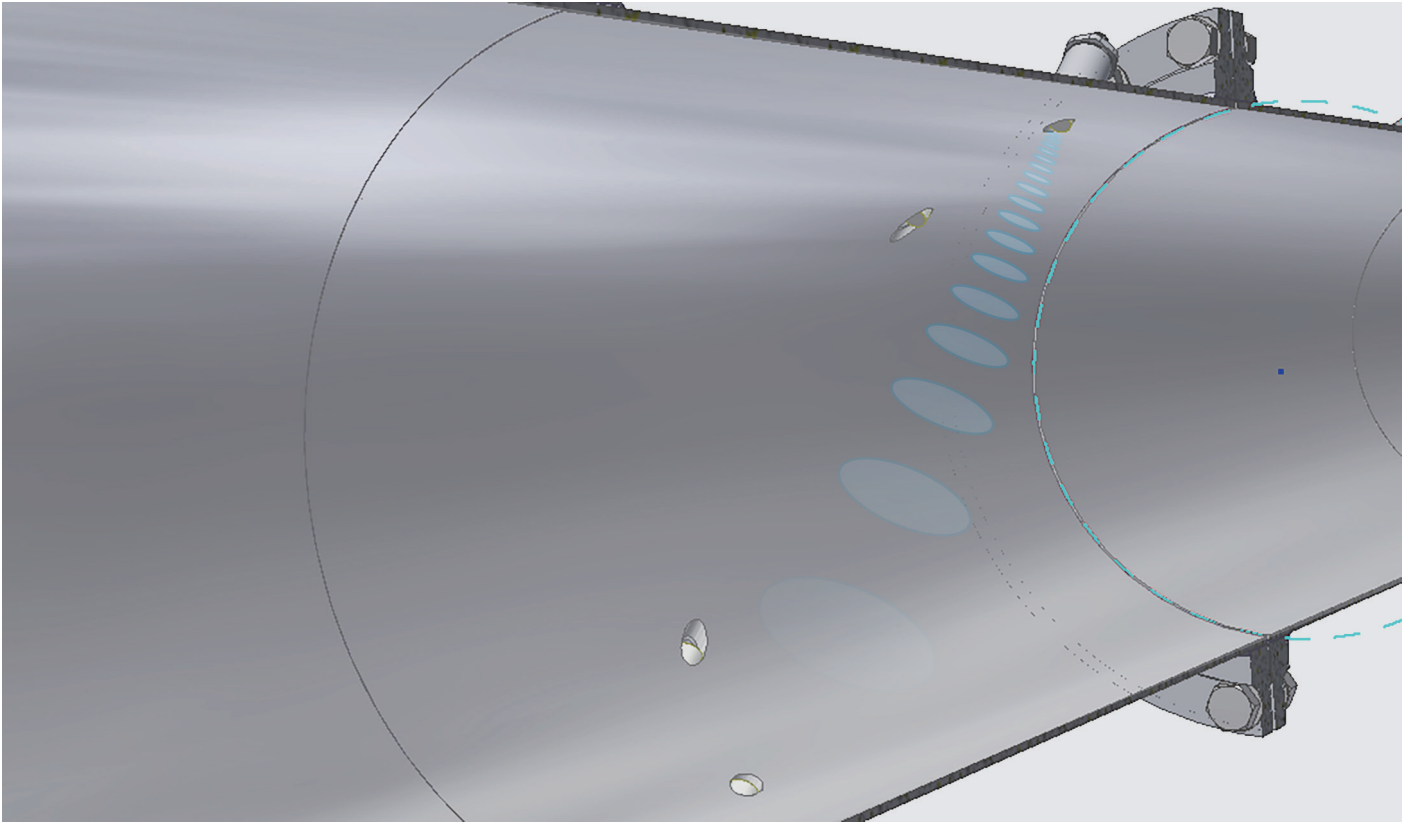


당사는 각각의 공정상황에 맞는 솔루션을 제시하기 위해 현장조사에서 부터
제작, 유지보수에 이르는 일련의 과정을 제공합니다.

Advanced signal processing & High-precision time measurement



Wetted type

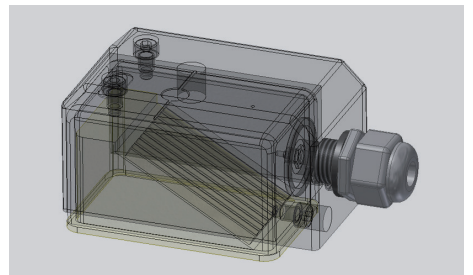
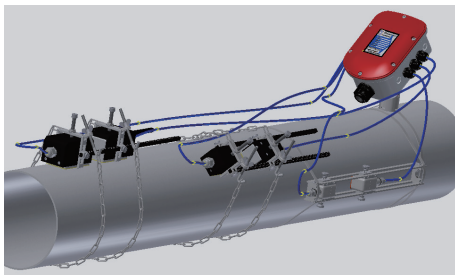
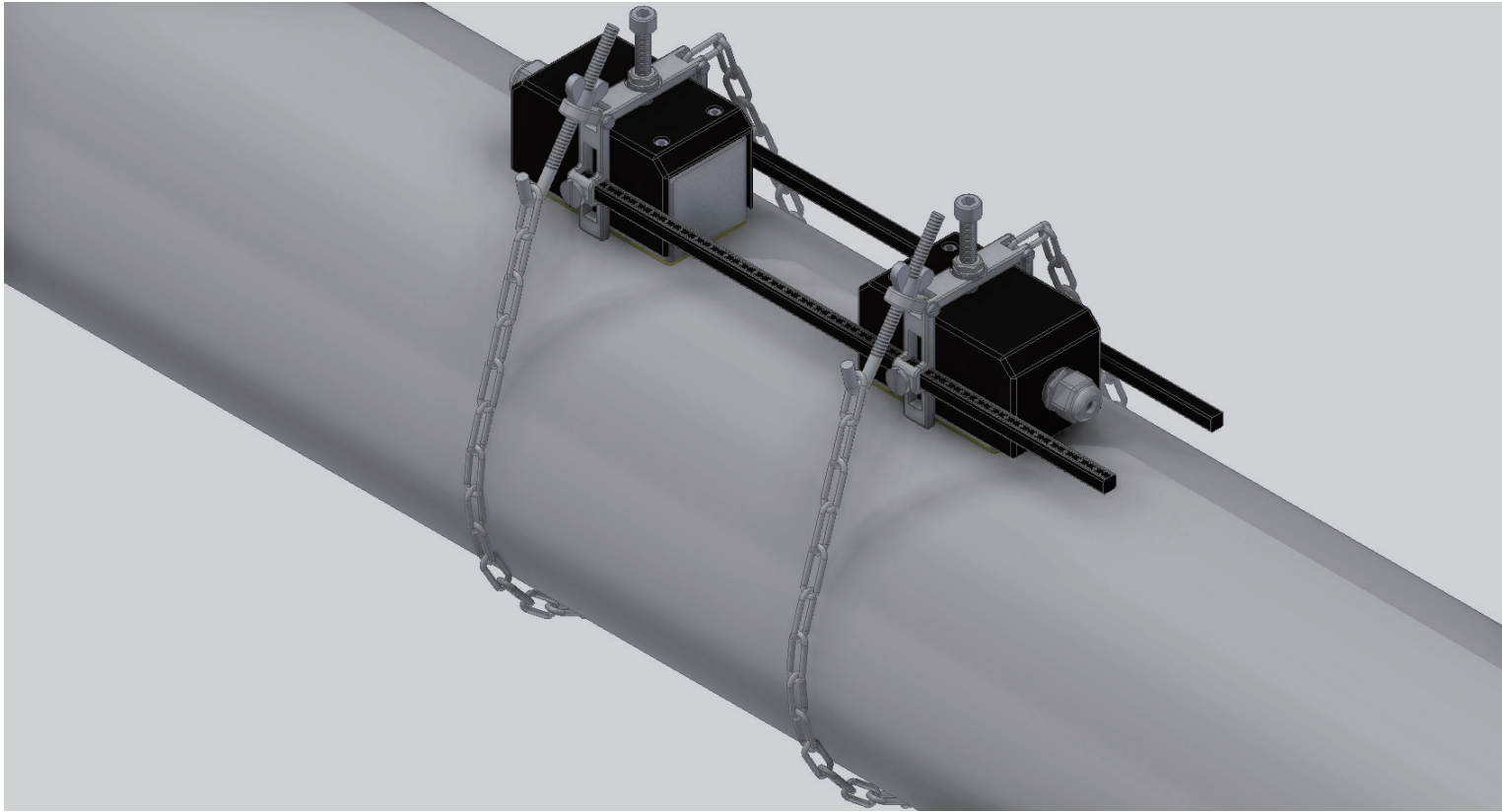


- 센서가 유체와 직접 접촉하여 유량을 측정
- 공정변화에 따른 뛰어난 반응속도
- 높은 정확도
- 짧은 직관부에 적용가능
- 오일 등과 같은 비전도성 유체도 측정가능
- 유체 화학적 성질에 따른 다양한 재질 적용가능

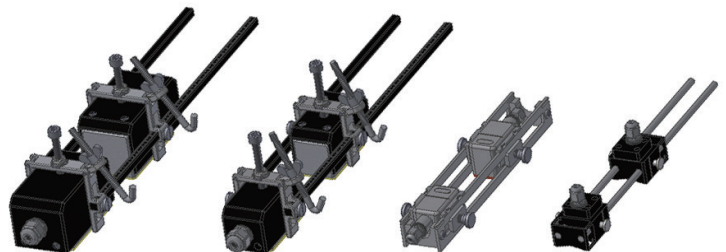
Specification of Wetted type

| 항목 | 내용 |
|----------------|---|
| 회선수 | 5회선 (기본), 10회선 (옵션) |
| 측정방식 | 전파시간차법 |
| 정확도 | ±0.5 % of reading ※ 유속 ≥ 0.3 m/s Calibration : ±0.2% of reading |
| 측정구간 | -12.2m/s to 12.2m/s |
| 반복성 | ±0.05% of reading |
| Turndown Ratio | 약 400:1 |
| 전원 | 100 to 250 VAC (60Hz) |
| 소비전력 | 30 watts |
| 주변온습도 | -25℃ to +60℃ / Up to 95%, non-condensing |
| Warming up | 10분 |
| 입력 | 4-20 mA Analog input I (display : Pressure, Temperature, Level) Option 4-20 mA Analog input II (display : Turbidity, Residual chlorine, pH) |
| 출력 | One RS232 / RS485 (Modbus RTU) One 4-20 mA Analog output (16bit active/passive output, 5V Max) One Pulse : frequency type, active/passive output 24VDC Max, (Max frequency: 2000Hz) |
| Conduit ports | Controller conduit ports : 5 ports (PG21-1port, PG9-4ports) Junction box conduit ports : 12 ports (PG21-1port, PG9-11ports) |
| Weather proof | Controller - IP65 (KS C ICE 60029) Junction box - IP68 (KS C ICE 60029) |
| Data Logging | 시/일별 순간유량, 적산, 온도, 압력, 이력 등을 저장 (Micro Memory 2~16GB) |
| 주요기능 | 그래픽 LCD(Back Light), 순간유량, 적산유량, 회선별 유속, 유체온도, 압력, 자체진단, Scope기능 |
| Material | <ul style="list-style-type: none"> · Body and Flange: Carbon Steel, STS304 etc. · Sensor housing: STS304, Teflon, PE · Sensor Cable: RG-58 (Sensor to J/b), RG174-12C Shield (J/b to Controller) · Sensor Cable gland: PA(Polyamide_PG9) or STS304 · Junction box Cable gland: PA (Polyamide_PG9) · Controller housing: PC+ABS · Controller Cable gland: PA(Polyamide_PG9, PG21) |

Clamp on type



- 센서가 유체와 직접 접촉하지않고 유량을 측정
- 별도의 배관가공없이 설치 가능함
- Leak point 없음
- 공정영향없이 유지보수 가능
- 설치조건에 따른 센서 회전수 변경가능



N1

N2

N3

N4

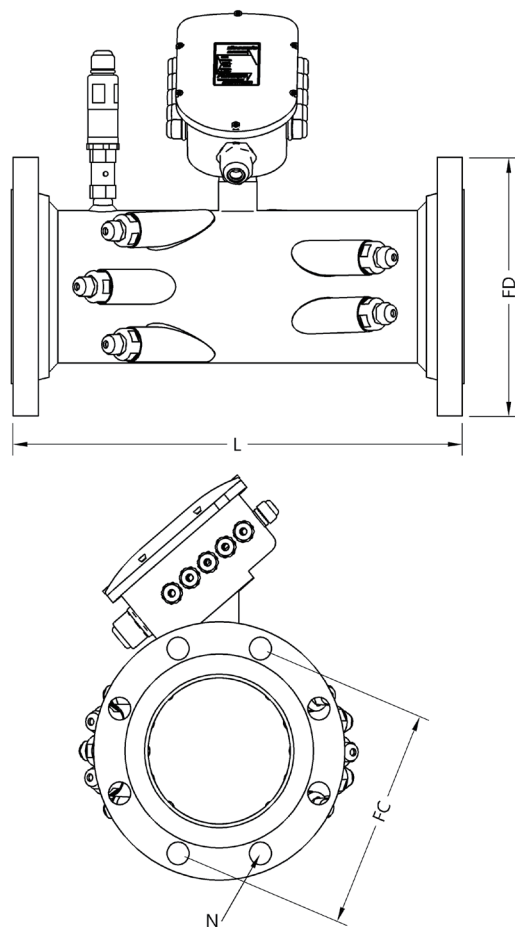
Specification of Clamp on type

| 항목 | 내용 |
|----------------|---|
| 회선수 | 1회선 (기본), 2,4회선 (옵션) |
| 측정방식 | 전파시간차법 |
| 정확도 | ±1.0 % of reading ※ 유속 ≥ 0.3 m/s Calibration : ±0.5% of reading |
| 측정구간 | -12.2m/s to 12.2m/s |
| 반복성 | ±0.25% of reading |
| Turndown Ratio | 약 400:1 |
| 전원 | 100 to 250 VAC (60Hz) |
| 소비전력 | 30 watts |
| 주변온습도 | -25°C to +60°C / Up to 95%, non-condensing |
| Warming up | 10분 |
| 입력 | 4-20 mA Analog input I (display : Pressure, Temperature, Level) Option 4-20 mA Analog input II (display : Turbidity, Residual chlorine, pH) |
| 출력 | One RS232 / RS485 (Modbus RTU) One 4-20 mA Analog output (16bit active/passive output, 5V Max) One Pulse : frequency type, active/passive output 24VDC Max, (Max frequency: 2000Hz) |
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| Weather proof | Controller - IP65 (KS C ICE 60029) Junction box - IP68 (KS C ICE 60029) |
| Data Logging | 시/일별 순간유량, 적산, 온도, 압력, 이력 등을 저장 (Micro Memory 2~16GB) |
| 주요기능 | 그래픽 LCD(Back Light), 순간유량, 적산유량, 회선별 유속, 유체온도, 압력, 자체진단, Scope기능 |
| Material | <ul style="list-style-type: none"> · Sensor housing: STS304/Aluminum Hard chromium plating · Sensor Cable: RG-58 (Sensor to J/B), RG174-12C Shield (J/B to Controller) · Sensor Cable gland: Brass Nickel-plated or STS304 · J/B Cable gland : PA(Polyamide_PG9) · Controller housing: PC+ABS · Controller Cable gland: PA(Polyamide_PG9, PG21) |

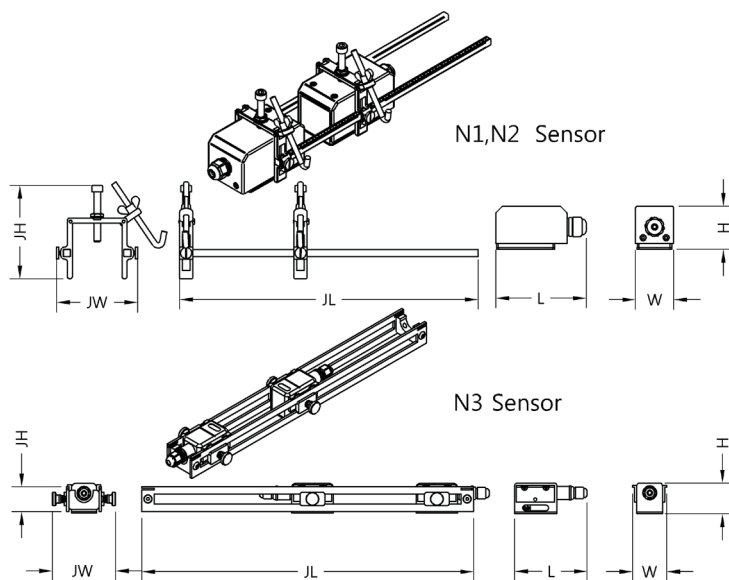
Dimension

Wetted type

| Meter Size (mm) | L (mm) | FD (mm) | FC (mm) | Weight (kg) | Bolting | |
|--------------------|-----------|------------|------------|----------------|---------|------|
| | | | | | Hole. N | Size |
| 100 | 380 | 238 | 180 | 15 | 8 | M16 |
| 125 | 420 | 263 | 210 | 20 | | |
| 150 | 450 | 290 | 240 | 25 | | |
| 200 | 550 | 342 | 295 | 38 | | |
| 250 | 620 | 410 | 350 | 60 | 12 | M20 |
| 300 | 680 | 464 | 400 | 70 | | |
| 350 | 750 | 530 | 460 | 80 | | |
| 400 | 850 | 582 | 515 | 105 | 16 | M24 |
| 450 | 900 | 652 | 565 | 130 | | |
| 500 | 1000 | 706 | 620 | 155 | | |
| 600 | 1100 | 810 | 725 | 210 | 20 | M27 |
| 700 | 1150 | 928 | 840 | 290 | | |
| 800 | 1200 | 1034 | 950 | 380 | | |
| 900 | 1300 | 1156 | 1050 | 455 | 24 | M30 |
| 1000 | 1350 | 1262 | 1160 | 570 | | |
| | | | | | | |



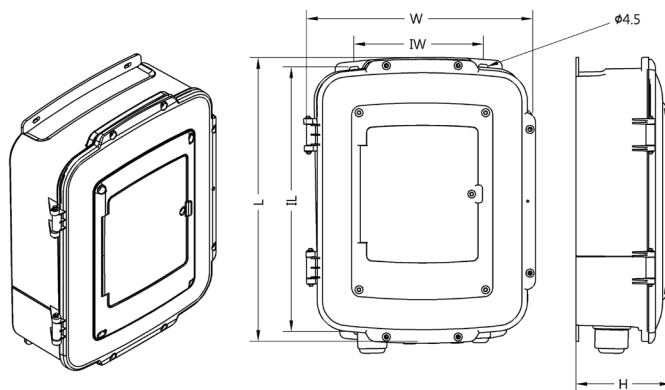
Clamp on type



| Sensor Type | Sensor | | | Pipe Size |
|----------------|-----------|----|-----|-----------|
| | L | W | H | |
| | Clamp Zig | | | |
| | JL | JW | JH | |
| 소형(N3) | 88 | 41 | 37 | 25~200 |
| | 400 | 76 | 30 | |
| 중형(N2) | 108 | 46 | 52 | 100~1000 |
| | 360 | 84 | 128 | |
| 대형(N1) | 128 | 60 | 62 | 500~6000 |
| | 360 | 98 | 135 | |

Controller

| Controller | L | W | H | IL | IW | Material |
|------------|-----|-----|-----|-----|-----|----------|
| Wet/Clamp | 315 | 255 | 106 | 294 | 144 | PC+ABS |



Ordering information

| 구분 | Order Code | | | | | | | | Description |
|--------------------------------|--------------------------------------|---|---|----|----|------|---------|----|---|
| Example Number | Flosonic UC S4 N 0200 B010 CS3N315 N | | | | | | | | 초음파 외벽부착식 배관재질STS304, 외경 200A, 2회선, 메인케이블 10m, 클램프온 STS304 30도 N3 -15~60℃ 0.5MHz 센서, 2% normal clamp type, 일반 |
| Brand Name | Flosonic | | | | | | | | (주)우보 계측기류 브랜드이름 |
| Product Kind | | U | | | | | | | Ultrasonic Flowmeter |
| Install-Type | | | F | | | | | | Flange type |
| | | | C | | | | | | Clamp on type |
| | | | S | | | | | | Special |
| Flowtube Material | | | | CS | | | | | Carbon Steel |
| | | | | S4 | | | | | Stainless Steel 304 |
| | | | | DT | | | | | Ductile Iron |
| | | | | PV | | | | | PVC pipe |
| | | | | OP | | | | | Other pipe |
| Flange Standard | | | | | K | | | | KS D 3578-15F |
| | | | | | A | | | | ANSI |
| | | | | | J | | | | JIS |
| | | | | | N | | | | None |
| | | | | | SJ | | | | Special |
| Pipe Size | | | | | | 0025 | | | 25A |
| | | | | | | 0050 | | | 50A |
| | | | | | | 0065 | | | 65A |
| | | | | | | 0100 | | | 80A |
| | | | | | | ... | | | ... |
| | | | | | | 1000 | | | 1000A |
| | | | | | | 기타 | | | 제작사 문의 |
| Sensor Path No. & Cable Length | | | | | | | Axxx | | RG-174-6C Shield xxxm(1회선) |
| | | | | | | | Bxxx | | RG-174-6C Shield xxxm(2회선) |
| | | | | | | | Cxxx | | RG-174-12C Shield xxxm(3회선) |
| | | | | | | | Dxxx | | RG-174-12C Shield xxxm(4회선) |
| | | | | | | | Exxx | | RG-174-12C Shield xxxm(5회선) |
| | | | | | | | 기타 | | 제작사 문의 |
| Sensor Type | | | | | | | Fmssstx | | F : Flange type m : Sensor Material(T: Teflon, S: STS304, ...) sss : Flange Sensor size(015, 020, 025, ...) t : Useable Temperature (0:-40~60℃, 1:-15~60℃, 2:-15~120℃, ...) x : Sensor Frequency (2: 2MHz, 1: 1MHz, 5: 0.5MHz, ...) |
| | | | | | | | Cmdsstx | | C : Clamp on type m : Sensor Material(T: Teflon, S: STS304, ...) d : Clamp Sensor degree(3:30도, 4:40도, ...) ss : Clamp Sensor size(N1, N2, N3, N4, ...) t : Useable Temperature (0:-40~60℃ 1:-15~60℃, 2:-15~120℃, ...) x : Sensor Frequency (2: 2MHz, 1: 1MHz, 5: 0.5MHz, ...) |
| | | | | | | | 기타 | | 제작사 문의 |
| Option | | | | | | | | N | Factory Test Report |
| | | | | | | | | K | Calibration(Kolas) |
| | | | | | | | | 기타 | 제작사 문의 |

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