



Function Mobi DiR

The water flows about the inflow through the measuring system Mobi-DiR. The pacification route - > 3xD - is in the inflow tube. The outflow zone amount 2xD. By the end arch will be attain, which is necessary for a exact mesurement with a magnetic flow meter. By the inflatable sealing bag the measuring system will be sealed in the sewer pipe.

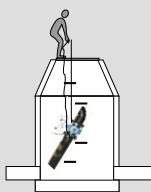
Benefit/ Applications

- > MID-generally accepted measuring systems
- > The most precise measuring methode. Measuring error <1%
- > No adjustment on site.
- > Fast arrangement mounting time: 5-15 Min.
- > Mounting without tread the inspection point is possible
- > Infiltration water determination
- > Observation of indirect dischargers
- > Flow signal for sample
- > Calibration of weir and venturi-flumes

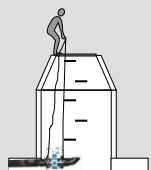
Mounting of a measurement Mobi-DiR 200/15kf

In 5-15 minutes mounted while the sewage is running

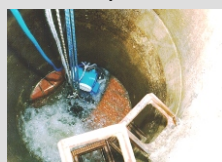
1.) Put into the shaft.



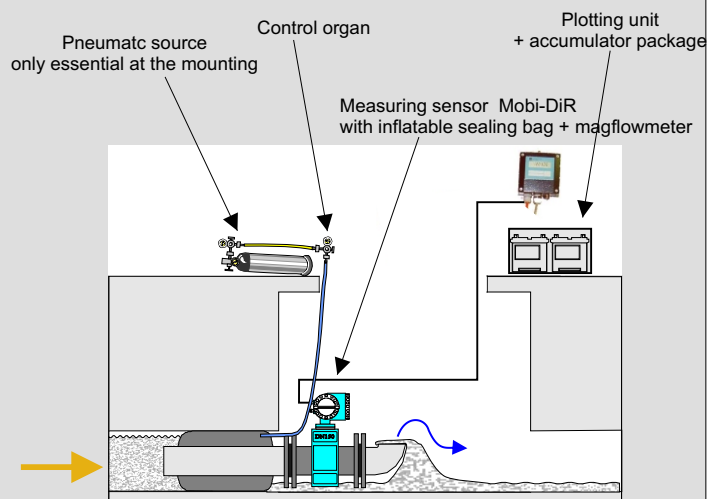
2.) Put the sensor in the tube.



3.) Inflate the sealing bag in the canal until it is shut tightly. The measuring starts. The system is through tie extra to safe.



Constructure of the measuring point



Technichal data:

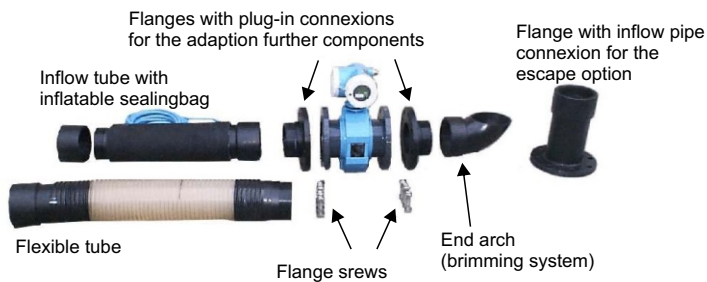
Magflow meter coating :	hard rubber	Material piping:	PE-HD black
Magflow meter electrode-material:	stainless steel / Alloy C-22	Sealing material :	EPDM
Protection category sensor :	IP67 standard (3h / 1m underwater)	Integrated in- and outlet run:	inflow 3xØM ID / escape 2xØM ID
Connecting cable:	12m with plug off the pickup sensor to the plotting unit	Measurement signal output :	4-20 mA + counting impulses
protective lacquer	two-component epoxide resin adhesive (AMERLOK) / PP	Flange screw s:	stainless steel
Explosible region authorisation:	ATEX II2G EEx ia IIC T6	Caul:	natural rubber
Allow ed error of measurement :	< 1% of reading value	Compressed air bottle:	can be remove after the mounting, control cycle circa. all 48h
Maximum retention:	5m water column	Compressed air hose:	12m with no-return valve
Designed temperature range:	0 - 45°C		
Designed pH range :	pH 6 - 9		

Measuring principle, Full-filled electromagnetic flow meter

Acording to law of induction of Farady will be in a electric conductor, which is moving in a magnetic field , a voltage induced. At the elctromagnetic measuring principle the flow medium (sewage) is equivalent to the moving electric conductor. The induced voltage is proportional to the flow velocity and will be include about two measuring electrodes. Through the latest magnetic field technics, the turbulences in the flowing medium will be gripped constant. So the measuring system has very shor pacification routes. The measuring tube has no mounting parts.

Possible combinations

The specific system parts can be composed by a plug-in connexion (quarter rotation) in varying designs

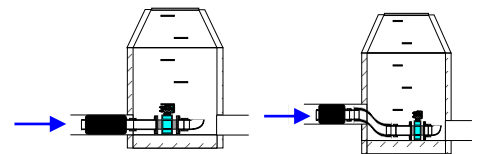


Option 1) Standard inflow version as steep mounting



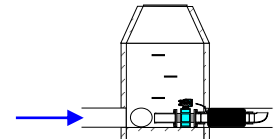
Option 2) Inflow version with flexible tube

This system can be installed "around the corner", too.



Option 3) Escape version with or without flexible tube

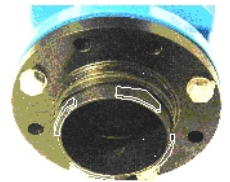
For example when many inflows flow in the shaft, System will be longer about 225 mm



Assembling of the Mobi-DiR component parts using Multibajonett

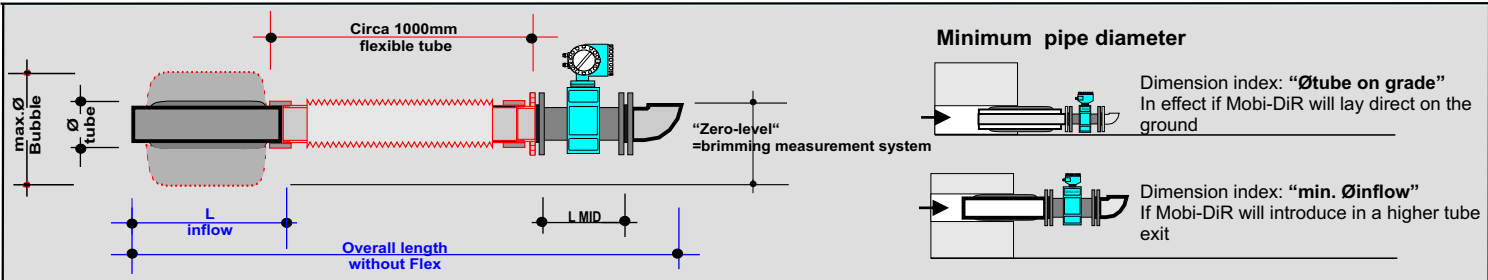
NEW

- Never again involved hoses
- Fast assembling
- System conversion possible in the shaft
- 4 different feed-in positions possible
- easiest handling

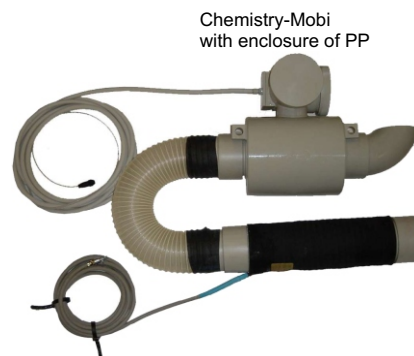
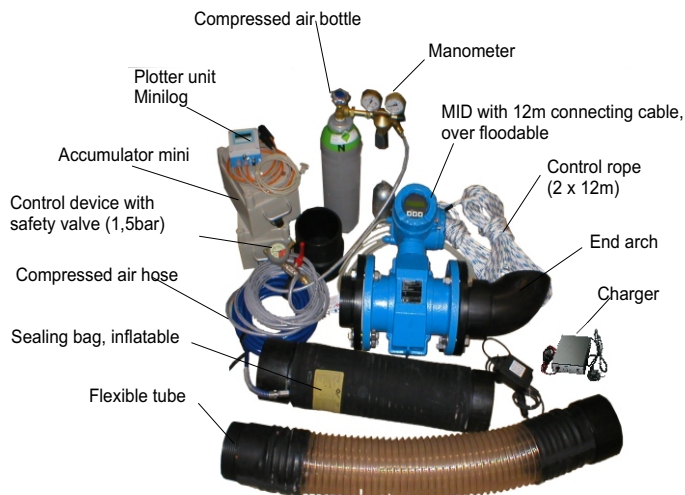


With screw thread, circa 7-8 revolutions necessary **Rotation 45°**

Dimension index



	Ø MID	L MID	Ø Flange	on grade Ø tube	min. Ø inflow	max. Ø inflow	Overall length	L inflow				
									Zero-level	I/s min.	I/s with 1m retention	kg
100/06	65	200	185	205	100	150	570	370	Mobi DiR ***/06 = 55mm+ (0,5xØ inflow tube) +retention	0,07	8	15
125/08	80	200	200	210	125	500	1160	700	Mobi DiR ***/08 = 65mm+ (0,5xØ inflow tube) +retention	0,1	13	24
125/10	100	250	220	220	125	250	1230	700	Mobi DiR ***/10 = 75mm+ (0,5xØ inflow tube) +retention	0,2	19	32
200/10	100	250	220	220	200	500	1230	700	Mobi DiR ***/10 = 75mm+ (0,5xØ inflow tube) +retention	0,2	19	32
200/15	150	300	285	295	200	500	1400	730	Mobi DiR ***/15 = 100mm+ (0,5xØ inflow tube) +retention	0,4	42	42
330/25	250	450	395	410	330	600	1840	630	Mobi DiR ***/25 = 145mm+ (0,5xØ inflow tube) +retention	0,8	136	74



MINILOG

Standard data logger with 16 bit analogue/digital transducer. Registered analogue values and counter pulses. With fixed sitting connection cables for accumulator package and Mobi-DiR. The data will be saved in adjustable intervals (between 1 min. and 1h) as middle-, minimum- and Maximumvalue, each with date and time. The data can be connected and read out over the enclosed interface cable at the RS232- interface of a PC.

The MINILOG has a own circa. 5 years-batteriy. Therefore the own operating time of the Mobi-DiR produced with the ZUB-AKPK-16 from circa 24 hours up to 48 till 60 hours. This apparat is ex factory ready-for-use and adjusted on the right parameters.

Equipment Mini-Logl

IP65 protective housing
LCD display shows time ,measured value and counter.
RS232 interface + Interface cable
case 100 x 100 x 61 mm
~ 0.8 kg



Accumulator package: ZUB-AKPK-16

Accumulator package with 16AH 24V. For 24h (48h) operatingtime.
In weatherproof glass fibrereinforced plastic cabinet.Incl. connecting cable for control unit Minilog Weight ca. 16kg
Dimension 178x184x330mm



Charger ZUB-LG-2,5

Special charger for lead gel accumulator. To prevent an overloading. Charge a 60 Ah accumulator package in ~28h and a 16 Ah accumulator package in ~ 12 h. 2.5Aat 24V



Transformator ZUB-TRFO-2A

For longer measuring time it is better to connect directly with a transformator. Transformator 2A 24V. With connector for Minilog



Compressed air bottleZUB-DRLF-05

Every compressed air source with minimum 5 bar can be employed. Compressor, diving air bottles and so on. If you install the system under running, we recommend compressed air bottles, because the filling of the sealing bag is faster. The sensor is pressed in the pipe before the waterpressure van pushed it out. 200 bar 5l compressed air bottle. With pressure reducer, 10m hose, control device. The refilling of the bottle can made by a fire brigade or in a diving shop.



Control device: ZUB-STOR-1,5 or ZUB-STOR-2.5

It prevent a overstretch of the sealing bag. The sealing bag may only be inflate inside pipes. Attention - look for the maximum diameter. Control device for 1.5 bar sealing bags up to 200mmcanal diameter control device for 2.5 bar sealing bags up to 100-150mmcanal diameter



2 Control-rope: ZUB-Seil

Special hand friendly rope with end protecting cap. Length 12m. Rope will be thread into the open flange holes. One rope is the carrier rope. With this rope Mobi-DiR will let down into the canal.The second rope is the control rope. It is fasten at the backward flange. To straight the Mobi-DiR horizontal. In the most case you can install Mobi-DiR from outside the manhole. Personal protection is guaranteed.



Compact-Case: FELIX-L

The protection case FELIX is used for housing of the electronic components. Minilog, 1 x 16 Ah Accumulator, Transformator, charger/ in Felix integrated ZUB-AKDP Adapter for using a parallel outside of the FELIX. Display for Accumulator charge condition, Output signal for a sampler, Mounting clamp to connect FELIX in a manhole under the cover (NON-EX)



Sewer-pipe Adapter

For smaler or bigger pipe diameter you need no new Mobi-DiR.

Flexible Reduce-Adapter:

You assemble the adapter in the sewer-pipe.
Using a Mobi-DiR 200/15 for smaler sewer-pipes then 200mm diameter you lay down the Mobi-DiR on the banquet
With the flexible tube it is possible to connect in the smaler sewer-pipe.

125-250

For Mobi DiR-Typ: 200/15
to install in pipe-diameter 125-250mm



100-150

For Mobi DiR-Typ: 200/15 and 200/08
to install in pipe-diameter 125-250mm
You need the control-device ZUB-STOR-2,5.



Fixed Extension-Adapter:

The Adapter wil be blow up in the bigger sewer-pipe. After this you bring in the normal Mobi-DiR.

200-500

For Mobi DiR-Typ: 100/06 und 125/08
to install in pipe-diameter 200-500mm.



500-800

For Mobi DiR-Typ: 200/15 und 200/08
to install in pipe-diameter 500-800mm



Pneumatic safety vent: ZUB-PSIEL

If the flow is too big for the Mobi-DiR (only when the sewer-pipe diameter is much bigger then the Mobi-DiR diameter) the safety-valve blow out the sealing bag.



Accumulator package: ZUB-AKPK-60

Accumulator package with 60Ah 24V. For 90h (180h)operatingtime.
In weatherproof Polyethylen plastic cabinet.Incl. connecting cable for control unit Minilog Weight ca. 45kg
Dimension 235x410x580mm



Control device: ZUB-STOR-2.5

It prevent a overstretch of the sealing bag. The sealing bag may only be inflate inside pipes.
Attention - look for the maximum diameter. control device for 2.5 bar sealing bags up to 100-150mmcanal diameter
Only for Mobi-DiR 100/06 and Adapter 100-150

