

IRON & MANGANESE REMOVAL

with **MTM Filtermaterial**

Type **MIR**

The Iron & Manganese Removal Plants operate with the iron removal material MTM and are designed to work automatically. A time or volume controlled central valve ensures the success by preadjustment of the cycle time or requested volume by regeneration with Potassiumpermanganat $KMnO_4$.

MTM consists of a light weight granular core with a coating of manganese dioxide. The coating provides an example of contact filtration where the media itself provides the oxidizing potential. This allows for a much broader range of operation than many other iron removal medias. A pH level as low as 6.2 can be treated. Dissolved oxygen is not essential. The media's light weight reduces backwash water requirements.

The plants consist of one corrosion resistant reinforced glass fibre tank, needed filling of filtermaterial, one central control valve for operating the cycles like service and regeneration, brine tank with accessories.

Plant selection :

Type	Flow* m ³ /h	Capacity ** ppm x m ³		MTM Vol. Ltr.
		nur Fe	Fe + Mn	
MIR - 10	0,3 - 1,0	55	40	28
MIR - 20	1,0 - 2,0	110	80	56
MIR - 30	1,0 - 3,0	165	120	84
MIR - 50	1,0 - 5,0	275	200	141
MIR - 70	1,0 - 7,0	385	280	198
MIR - 80	1,0 - 8,0	440	320	226
MIR - 130	2,0 - 12,0	715	520	367
MIR - 180	2,0 - 15,0	990	720	509

*at dP 1,2 bar

** pH 7,2; 15°C

Operating conditions:

pH – Range	6,2 – 8,5
Temperaturerange	5 - 40 °C
Feedpressure	3,0 – 6,0 bar
Fe + Mn-Concent.	max. 15 mg/l
Mn-Concentration	max. 5 mg/l
H ₂ S Concentration	max. 2 mg/l
Oil-Concentration	none
Phosphophate	none

Plant layout:

Capacity in mg/l Fe x m³ or mg/l /Fe+Mn) x m³
Standard - Sevice time (in Std) =
Capacity (Fe im Feed in mg/l) x Flow (in m³/h) x F_k
 F_k = 4 (domestic)
 F_k = 2 (commercial)
 F_k = 1 (Industry 24 h service)

The Standard plants are equipped with 1" to 2 1/2" connecting aggregates which allows a max flow up to 15 m³/h. Larger units could be offered upon request.

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Plant dimensions :

Type	Installation (ca. in mm)			Tank in mm			Connection	
	Length	Width	Heigth	Diam.*	Heigth*	Typ	In	Out
MIR - 10	300	300	1650	259	1382	RT 1054	1"	1"
MIR - 20	400	400	1750	333	1392	RT 1354	1"	1"
MIR - 30	500	500	1750	356	1633	RT 1465	2"	2"
MIR - 50	600	600	1800	508	1669	RT 1865	2"	2"
MIR - 70	600	600	1850	554	1654	RT 2260	2"	2"
MIR - 80	700	700	1850	625	1652	RT 2471	2 1/2"	2 1/2"
MIR - 130	900	900	2200	785	2047	RT 3072	2 1/2"	2 1/2"
MIR - 180	1000	1000	2200	905	2062	RT 3672	3"	3"

Scope of supply :

- 1 pcs PARK-GRP Pressure Tank
- 1 pcs Central Control Valve
- 1 filling MTM
- 1 pcs KMnO₄ Brinetank, Brinevalve, Brinewell and Grid
- 1 pcs Nozzles top and bottom
- 1 pcs KMnO₄ - suction & Drain hose

Optional:

- 2 pcs Pressure gauge
- 2 pcs Shut off valves
- 1 pcs Flowmeter
- 1 pcs PVC – Piping

All components fits together but not assembled together

Technical changes possible.



MIR 20 with CLACK WS1 TC Valve