DYCLAR

PILOT TEST

CONCEPT / IDEAS

2021

pilot test of Dyclar technology
for problems of any complexity
on any water infrastructure

assess
FEASIBILITY,
EFFICIENCY,
OPEX and RISKS

DYCLAR

FAST
FREE
CONVENIENT

Pilot test options

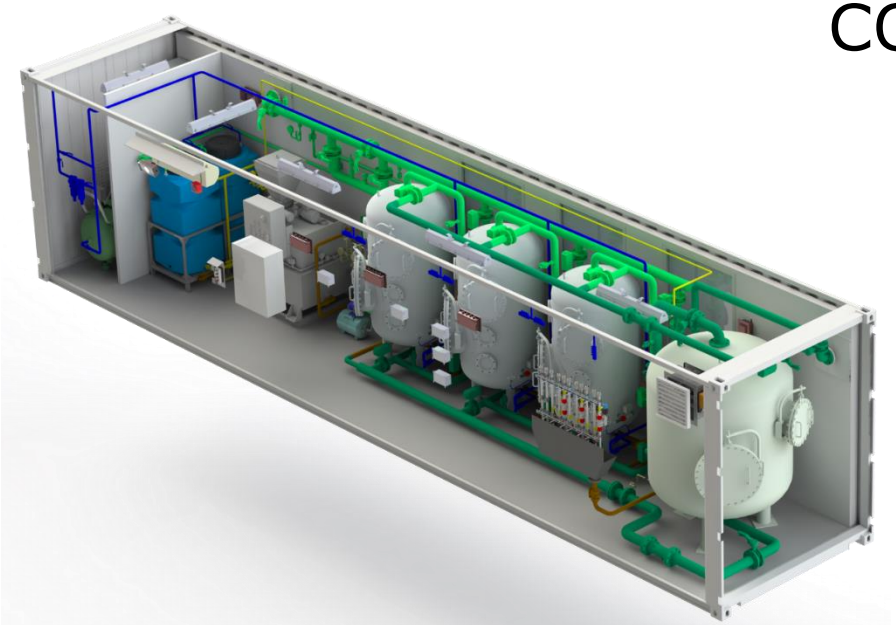
PILOT PLANT

1,3 x 0,7 x 2,2 m

0.25-0.4 m3/h

preparation period
2-4 weeks

FREE for 1 time



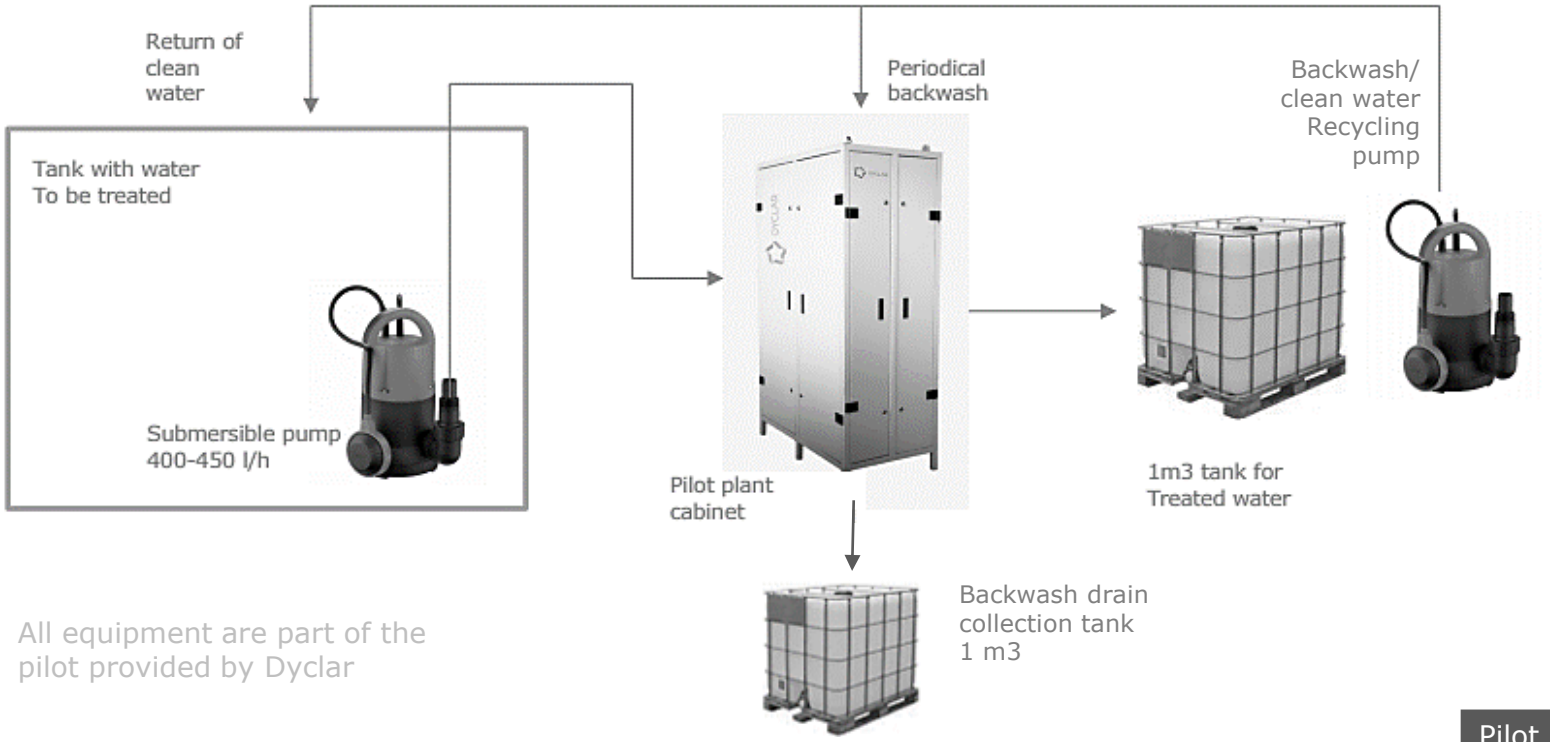
CONTAINER

12,2 x 2,4 x 2,9 m

20 / 30 m3l/h

preparation period
2-6 months

Composition of the pilot plant



All equipment are part of the pilot provided by Dyclar

1_SUBMERSIBLE PUMP

Submersible pump used to supply raw water into system

2_PILOT PLANT CABINET

all Dyclar technological equipment – volume reactor, dynamic clarifier with floating media and polishing media filter

3_ICBs

Two tanks for purified water and drain water collection

4_BACKWASH PUMP

Submersible pump placed in purified water tank and used for backwash

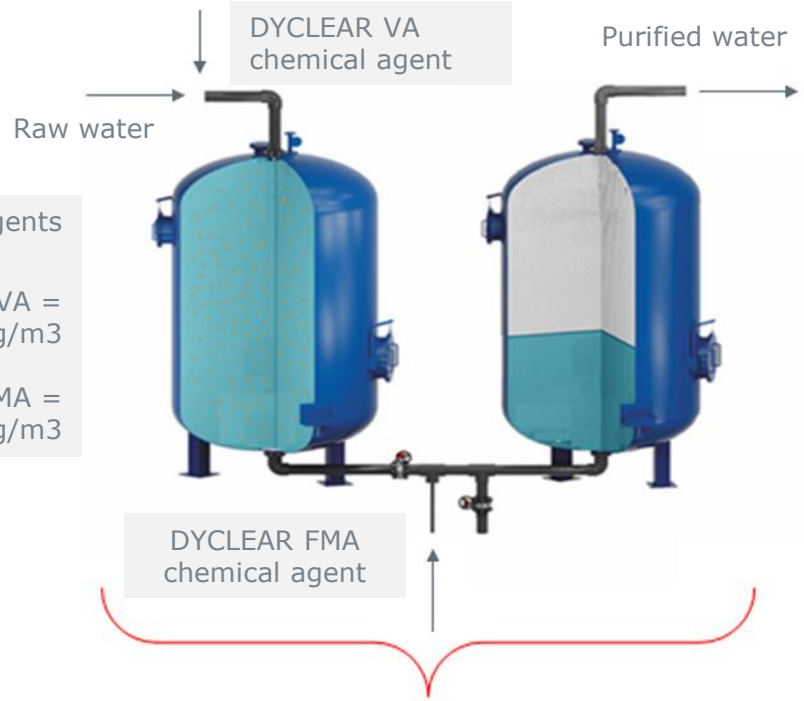
Pilot plant parameter	Value
Flow rate (performance), l/h	200 - 500
Inlet pressure, bar	3 … 4
Pressure drop in/out, bar	< 1,5
Power consumption, kW	< 3
Weight, kg	Without water 465
Dimensions, mm (LxWxH)	1320 x 740 x 2170
Ambient temperature	+3°C … +60 ° C

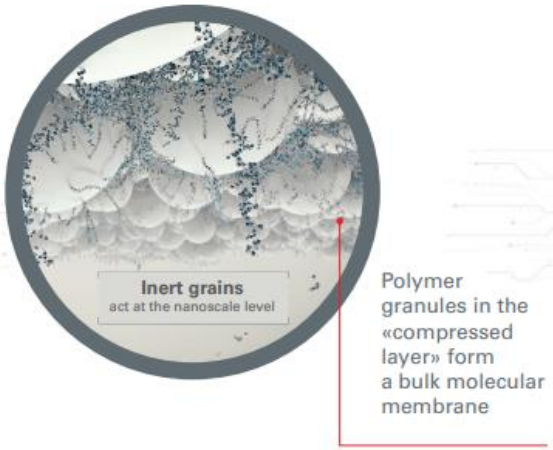
Technology of the pilot plant

Q of chemical agents

Dyclear VA = 15-20 g/m3

of Dyclear FMA = 0.2-0.3 g/m3





1_INDUCTION of the 1th REAGENT

a reagent is introduced into the source water before the pressure contact tank

2_COAGULATION

flakes of coagulated particles are formed in the pressure contact tank

3_INTENSIFICATION

a 2nd reagent is dosed to intensify the coagulation process before the dynamic clarifier unit

4_CLARIFICATION

of water in the INERT™ floating bed layer in the dynamic clarifier unit

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Expected reduction of contamination

#	Parameters of water	Unit	DYCLAR inlet: raw water experience	DYCLAR outlet: treated water quality experience	expected reduction ratio, % max	expected reduction ratio tolerance, %
1	Color	mg/l	25-807	5-20	98	80-99
2	Turbidity	mg/l	2-264	0,1-0,26	99	95-99
3a	Suspended matters	mg/l	3-290	0,3-3,0	98	95-98
4a	Various oils	mg/l	0,06-106	0,01-7,6	98	85-98
5	Permanganate oxidability	mg/l	3,8-76	1,6-9,4	88	60-90
6	BOD	mg/l	1-12,7	0,5-3,4	75	50-75
7	COD	mg/l	11,4-140	4-25	82	65-85
8	Al	mg/l	0,05-3,7	0,01-0,12	97	80-98
9	Fe	mg/l	0,3-7,6	0,03-0,12	98	90-99
10	Cu	mg/l	0,0053-0,024	0,001-0,0013	95	80-95
11	Zn	mg/l	0,0018-0,11	0,001-0,0057	95	45-95
12	Mn	mg/l	0,065-0,148	0,018-0,062	72	60-72
13	NH4 (ammonia)	mg/l	0,12-0,6	0,04-0,15	75	66-75
14	NO3 (nitrate ions)	mg/l	3,4-38,75	1,27-25	63	35-63
15	NO2 (nitrite ions)	mg/l	0,09-5	0,01-2,29	89	55-89
16	PO4 (phosphate ions)	mg/l	0,1-2,4	0,01-0,1	96	90-96
18a	Temperature	Celsius	3-51°C (real experience in operation)		Already confirmed on operating DYCLAR water treatment plants	
18b	Resistance of DYCLAR to high temperature	Celsius	80-100°C		Additional pilot tests are to be conducted at the site of the client before quotation	

DYCLAR

Waste production

PILOT PLANT

drain water

=15 l/h
for 0,3 m3/h
performance

INDUSTRIAL PLANT

backwash water

=5-10%

- recycle to the head of the process
- send to decanter plant
- Disposal to sewage system

drain water

sludge

landfill
waste

DYCLR gmbh

dyclar.com

we will be happy to answer any questions

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