

Plec de prescripcions tècniques que regeixen el contracte de subministrament de 54 unitats de membranes d'osmosi inversa per a l'estació de tractament d'aigua de l'ETAP de Sagnier i Mas Blau

Número expedient C-2024-09

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1. Objecte del contracte

Subministrament de 54 unitats de membranes d'osmosi inversa per a l'estació de tractament d'aigua de l'ETAP de Sagnier, marca Dow chemical, model BW30HRLE-440i (dry). La funció d'aquestes membranes és retenir les sals i els elements minerals de l'aigua que es capta. El subministrament inclou l'adquisició, el transport i el lliurament de les membranes

La classificació de l'objecte del contracte d'obres en la CPV (Vocabulari Comú de Contractes Públics) és la corresponent a "Maquinària i aparells per a filtrar o depurar aigua" núm. 44163160-9

2. Característiques tècniques de les membranes a subministrar.

Les membranes a subministrar seran:

- marca DOW CHEMICAL
- tipus BW30HRLE-440i seques (dry)

Actualment les dues ETAPs tenen instal·lades les membranes de la marca i model anteriorment descrits, totes amb el sistema ILEC™. Aquest sistema és essencial per al bon funcionament de la infraestructura, perquè redueix el risc de fuites en les juntes tòriques que poden causar una mala qualitat de l'aigua.

Per aquest motiu es demana que les membranes disposin del sistema ILEC™, havent-t'hi al mercat una única empresa que les fabrica amb el sistema ILEC™ i és DOW CHEMICAL, i han de ser del model BW30HRLE-440i (dry).



Product Data Sheet

DOW FILMTEC™ BW30HRLE-440i Element

Description

Ideal for: reverse osmosis plant managers and operators dealing with controlled-pre-treatment waters and seeking advanced membrane treatment with good water purity and low energy consumption.

DOW FILMTEC™ BW30HRLE-440i:

- Offers good salt-rejection with 33% lower pressures
- Delivers excellent silica, boron, nitrate, IPA and ammonium rejection
- Provides increased active area with the most effective cleaning performance, robustness and durability due to its widest cleaning pH range (1-13) and chemical tolerance and the support of Dow technical representatives
- Includes iLEC™ interlocking end caps, reducing system operating costs and the risk of o-ring leaks that can cause poor water quality



Product Type

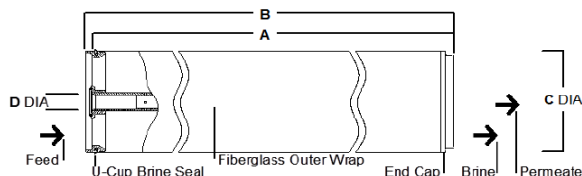
Spiral-wound element with polyamide thin-film composite membrane

Product Specifications

DOW FILMTEC™ Element	Active Area		Feed Spacer Thickness (mil)	Permeate Flow Rate		Typical	Minimum Salt Rejection (%)
	(ft²)	(m²)		(GPD)	(m³/d)	Stabilized Salt Rejection (%)	
BW30HRLE-440i	440	41	28	12,650	48	99.3	99.1

1. Permeate flow and salt (NaCl) rejection based on the following standard test conditions: 2,000 ppm NaCl, 150 psi (10.3 bar), 77°F (25°C), pH 8, 15% recovery.
2. Flow rates for individual elements may vary but will be no more than ± 15%.
3. Stabilized salt rejection is generally achieved within 24-48 hours of continuous use; depending upon feedwater characteristics and operating conditions.
4. Sales specifications may vary as design revisions take place.
5. Active area guaranteed ± 3%. Active area as stated by Dow Water & Process Solutions is not comparable to nominal membrane area often stated by some manufacturers. Measurement method described in Form No. 609-00434.

Element Dimensions



DOW FILMTEC™ Element	A		B		C		D	
	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
BW30HRLE-440i	40.0	1,016	40.5	1,029	7.9	201	1.125 ID	29 ID

1. Refer to Dow Water & Process Solutions Design Guidelines for multiple-element applications. 1 inch = 25.4 mm
2. Element to fit nominal 8-inch (203-mm) I.D. pressure vessel.
3. Individual elements with iLEC endcaps measure 40.5 inches (1,029 mm) in length (B). The net length (A) of the elements when connected is 40.0 inches (1,016 mm).

Operating and Cleaning Limits

Maximum Operating Temperature ^a	113°F (45°C)
Maximum Operating Pressure	600 psig (41 bar)
Maximum Element Pressure Drop	15 psig (1.0 bar)
pH Range, Continuous Operation ^a	2 – 11
pH Range, Short-Term Cleaning (30 min.) ^b	1 – 13
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance ^c	< 0.1 ppm

^aMaximum temperature for continuous operation above pH 10 is 95°F (35°C).

^bRefer to Cleaning Guidelines in specification sheet 609-23010.

^cUnder certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, Dow Water & Process Solutions recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to technical bulletin "Dechlorinating Feedwater" for more information.

Additional Important Information

Before use or storage, review these additional resources for important information:

- [Usage Guidelines for DOW FILMTEC™ 8" Elements](#)
- [System Operation: Initial Start-Up](#)

* Permeate obtained from first hour of operation should be discarded

Regulatory Note

These membranes may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support.

DOW FILMTEC™ Membranes Contact Dow Water & Process Solutions:

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<http://www.dowwaterandprocess.com>

Notice: The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

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3. Lloc de subministrament

Les membranes s'entregaran a l'ETAP de Sagnier, ubicada a c/ Frederica Montseny núm 31, 08820 El Prat de Llobregat.

El Prat de Llobregat, Novembre 2024

Oliver Triano Gómez
Tècnic de la secció de Producció