

# BHS POCKET LEAF FILTER 400-TANTALINE RENTAL & PURCHASE QUOTATION

Tel: 704.845.1190; Fax: 704.845.1902

E-mail: info@bhs-filtration.com

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#### **SPECIFICATIONS**

1. All wetted parts to be Tantaline-treated for maximum corrosion resistance

Corrosion resistance shown on pages 4 – 5
 Filter area: 20 cm<sup>2</sup>
 Process Volume: 400 ml
 Jacket Volume: 200 ml

6. Operating Pressure Vessel: 6 barg/FV (maximum)

Operating Pressure Jacket: 4 barg
 Maximum cake thickness: 150 mm
 Design temperature Vessel: 200 degrees C
 Design temperature Jacket: 200 degrees C

11. Dimensions: 24 inches tall x 5 inches wide

12. Weight (empty): 5.2 kg



#### **COMMERCIAL:**

**Purchase Price:** \$11,556.00

Shipment: 6 - 8 weeks ARO

Weekly Rental: \$500 / week with a minimum of a two week rental

Lease term begins when filter arrives onsite and ends when rental filter is picked up for return shipment back to Lessor. This is a week-to-week lease and not a sale. Title remains at all times with Lessor (BHS-

Sonthofen Inc.).

Shipment: 6-8 weeks ARO

**Payment Terms:** 100% due at time of invoicing at the end of the rental period

**Spare Parts:** Any spare parts, such as seals required during the rental period will be

ordered by the Lessee through BHS-Sonthofen Inc. Costs for the spare

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parts will be the responsibility of the Lessee.

**BHS Assistance:** BHS process engineers are available for training, process testing, etc. at

"actual expenses" only

**Validity:** Through calendar year 2018

**Rental Period:** To be agreed

**Dispatch:** All shipping expenses and risk of loss to/from Lessor's designated points

are Lessee's sole responsibility.

**Terms:** BHS-Sonthofen Inc., "Terms and Conditions of Sales and Service"

Cleaning

**Procedures:** To be provided by Lessee including MSDS sheets. The rental unit is to be

cleaned with zero residual product.

**Installation:** Equipment will be delivered to the client's site. Client is responsible for

installation and all process connections and piping.



Use and

**Maintenance:** Lessee will use the Equipment only in accordance with Lessor's operating,

maintenance and safety instructions and, at its expense, will keep the Equipment in good repair with reasonable wear and tear expected, replacing all parts as necessary with spare parts purchased from Lessor.

**Warranty:** The Equipment is leased AS IS. Lessor does not extend any warranty,

express or implied, including the implied warranties of title, fitness for a

particular purpose and merchantability.

Liability and Indemnification:

Lessor shall not be liable in damages to Lessee for any amount for any

reason. Lessee shall indemnify and, at Lessor's request, defend Lessor against any and all liability and expense, including attorneys' fees, incurred as a result of any claim arising out of or related to Lessee's use of

the Equipment.

Insurance and Risk: All risk of loss or damage is Lessee's responsibility. Lessee shall insure

the Equipment against loss and liability for its Replacement Value and not less than \$12,000.00 respectively, and shall have Lessor named as loss

payee/additional insured as appropriate.

Remedies on

**Default:** Lessor may enter on Lessee's premises and repossess the Equipment at

any time in the event Lessee fails to observe any obligation hereunder in

addition to any other remedy available.

**Miscellaneous:** Lessee may not assign or sublet this Agreement. This is the complete

agreement between the parties. All disputes shall be governed by North Carolina and adjudicated exclusively in the North Carolina General Courts of Justice, Superior Court Division, Charlotte, NC and each party consents

to its jurisdiction.

Agreed to by:

Barry A. Perlmutter

<del>\_\_\_\_\_</del>

BHS-Sonthofen Inc.

Barry A. Perlmutter,

President & Managing Director

Date:

Company:

By:

Title:

Date:

BHS-Sonthofen Inc. 14300 South Lakes Drive Charlotte, North Carolina 28273-6794

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### Media where Tantaline<sup>®</sup> shows immunity — the immunity is valid up to at least 150°C (302°F), unless otherwise noted:

Acetic acid, CH<sub>3</sub>COOH Acetic anhydride, (CH,CO)2-O Acetone, CH, COCH, Air, <300°C (570°F) Alcohols, R-OH Aldehydes, R-CHO Aluminum chloride, AlCl Aluminum nitrate, Al(NO,), Aluminum sulfate, Al<sub>4</sub>(SO<sub>4</sub>)<sub>3</sub> Amines, R-NH. Ammonium bicarbonate, NH<sub>4</sub>CO<sub>3</sub> Ammonium carbonate (NH<sub>4</sub>),CO<sub>3</sub> Ammonium chloride, NH,Cl Ammonium nitrate, NH, NO, Ammonium acid fosfate, NH, H, PO, Ammonium fosfate, (NH<sub>4</sub>)<sub>3</sub>PO<sub>4</sub> Ammonium sulfate, (NH,),SO, Amyl acetate, C,H<sub>14</sub>O<sub>2</sub>

Amyl chloride, C<sub>5</sub>H<sub>11</sub>Cl

Aniline hydrochloride C<sub>6</sub>H<sub>5</sub>NH<sub>2</sub>.HCl

Aqua regia, HCl-HNO<sub>3</sub> mixture

Barium carbonate, BaCO<sub>3</sub> Barium chloride, BaCl, Barium hydroxide, Ba(OH), Barium nitrate, Ba(NO<sub>3</sub>)<sub>2</sub> Benzoic acid, C<sub>6</sub>H<sub>5</sub>COOH Boric acid, H,BO, Bromine, dry, <300°C (570°F), Br<sub>2</sub> Bromine, wet, Br, Butyric acid, C<sub>3</sub>H,COOH Calcium bicarbonate, Ca(HCO<sub>3</sub>)<sub>2</sub> Calcium bisulfates, Ca(HSO<sub>4</sub>)<sub>2</sub>
Calcium bisulfites, Ca(HSO<sub>3</sub>)<sub>2</sub> Calcium carbonate, CaCO<sub>3</sub> Calcium chloride, CaCl. Calcium hydroxide, Ca(OH), Calcium hypochlorite, CaOCl Carboxylic acids, R-COOH Carbon dioxide, CO<sub>2</sub> Chloric acid, HCIO<sub>3</sub> Chlorinated brine Chlorine, dry, <250°C (480°F) Cl, Chlorine, wet, <350°C (662°F), Cl, Chlorine oxides Chloroacetic acid, CH,CICOOH Chromic acid, H<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>
Chrome plating solutions Citric acid, C<sub>6</sub>H<sub>8</sub>O<sub>7</sub> Cleaning solutions Copper salts, Dichloroacetic acid, CHCl<sub>2</sub>COOH Dimethyl formamide, (CH<sub>3</sub>)<sub>2</sub>CNH<sub>2</sub>

Ethyl sulfate, C,H,O,S Fatty acids, R-COOH Ferric chloride, FeCl, Ferric sulfate, Fe,(SO,), Ferrous sulfate, FeSO Formaldehyde, HCHO Formic acid, HCOOH Fruits Glycerine, CH<sub>2</sub>OHCHOHCH<sub>2</sub>OH Potassium dichromate, K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> Graphite, <1000°C, C Hydroiodic acid, HI Hydrobromic acid, HBr Hydrocarbons, HxCy Hydrochloric acid, HCl Hydrogen bromide, <400°C, HBr
Hydrogen chloride, <350°C, HCl
Potassium sulfate, K,SO<sub>4</sub>
Potassium thiosulfate, K,S,O<sub>5</sub> Hydrogen iodide, HI Hydrogen peroxide, H<sub>2</sub>O<sub>2</sub> Hydrogen sulfide, H<sub>2</sub>S \* Hydroxyacetic acid, CH<sub>2</sub> ОНСООН Hypochlorus acid, HCIO lodine, <300°C (570°F), I<sub>2</sub> Ketones, R-CO-R Lactic acid, CH<sub>3</sub>CH(OH)CO<sub>3</sub>H Magnesium chloride, MgCl<sub>2</sub> Sodium citrate, Na<sub>3</sub>crit Magnesium hydroxide, Mg(OH)<sub>2</sub> Sodium cyanide, NaCN Sodium dichromate, Na Magnesium sulfate, MgSO<sub>4</sub> Maleic acid, C<sub>4</sub>H<sub>4</sub>O<sub>4</sub> Manganous chloride, MnCl<sub>2</sub> Methyl alcohol, CH<sub>3</sub>OH
Methylsulfuric acid, (CH<sub>3</sub>)HSO<sub>4</sub> Milk Mineral oils Mixed acids (sulfuric-nitric), H,SO,-HNO, Motor fuels Nickel salts Nitric acid, HNO, Nitric acid, fuming, HNO<sub>3</sub> Nitric oxide, NO2 Nitrogen, <300°C (570°F), N<sub>2</sub> Nitrous acid, HNO, Nitrosyl chloride, NOCI Organic chlorides, R-CI Organic acids, R-COOH Organic esters, R-COO-R' Organic salts

Oxalic acid, (COOH),

Perchloric acid, HClO Petroleum products

Oxygen, <300°C (570°F), O,

Phenol/Carbolic acid, C.H.OH

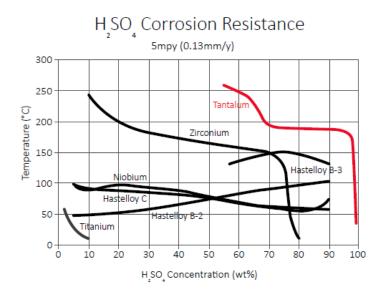
Phosphoric acid, <4ppmF,<180°C, H<sub>3</sub>PO<sub>4</sub> Phosphorus, <700°C (1290°F), P Phosphorus chlorides, PCl<sub>3</sub>
Phosphorus oxychloride, POCl<sub>3</sub> Phthalic anhydride, C<sub>s</sub>H<sub>4</sub>C<sub>2</sub>O<sub>3</sub>
Pickling acids, except HNO<sub>3</sub>-HF
Potassium bromide, KBr Potassium chloride, KCI Potassium ferricyanide, Potassium iodide, KI K<sub>3</sub>Fe(CN)<sub>6</sub> Potassium nitrate, KNO, Potassium permanganate, KMnO<sub>4</sub> Propionic acid, C,H,COOH Sea water Silver nitrate, AgNO<sub>3</sub> Sodium acetate, NaCH<sub>3</sub>COO Sodium aluminate, NaAlO, Sodium bisulfate, solution, NaHSO<sub>4</sub> Sodium bromide, NaBr Sodium chlorate, NaClO<sub>3</sub> Sodium chloride, NaCl Sodium citrate, Na<sub>3</sub>CH(COO)<sub>3</sub> Sodium dichromate, Na,Cr,O, Sodium hypochlorite, Na<sub>2</sub>O<sub>3</sub>O Sodium hypochlorite, NaClO Sodium nitrate, NaNO<sub>3</sub> Sodium nitrite, NaNO<sub>3</sub> Sodium fosfate, Na<sub>3</sub>PO<sub>4</sub> Sodium silicate, Na<sub>4</sub>SiO<sub>4</sub> Sodium sulfate, Na,SO, Sodium sulfide, Na.S Sodium sulfite, NaSO, Sodium thiosulfate, Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> Stearic acid, c<sub>17</sub>H<sub>35</sub>CO<sub>2</sub>H Succinic acid, C<sub>4</sub>H<sub>6</sub>O<sub>4</sub> Sugar
Sulfamic acid, H<sub>3</sub>NSO<sub>3</sub>
Sulfur, <500°C (930°F), S
Sulfur chlorides, SxCl<sub>3</sub>
Sulfur dioxide, SO<sub>2</sub>
Sulfuric acid, to 175°C (350°F), H<sub>2</sub>SO<sub>4</sub>
Sulfurous acid, H<sub>2</sub>SO<sub>3</sub>
Sulfuryl chloride, SO<sub>2</sub>Cl<sub>2</sub> Tannic acid C<sub>76</sub>H<sub>5</sub>2O<sub>46</sub> Tartaric acid, C<sub>4</sub>H<sub>6</sub>O<sub>6</sub> Thoinyl chloride, SOCI, Zinc chloride, ZnCl, Zinc sulfate, ZnSO,

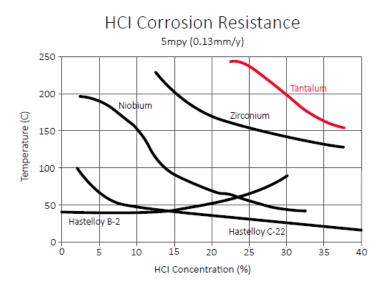
Ethylene dibromide, C,H,Br,



## Corrosion Charts

These charts show the conditions under which various metals will corrode at a fixed rate of 5 mils per year (mpy). Tantalum by far outperforms other specialty metals and alloys.





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