

### Bonded lining:

Engiplas offers loose lining systems, consisting of PTFE, M-PTFE, PFA, FEP, ECTFE, and PVDF with a thickness ranging from 2mm – 6 mm (0.078" – 0.239") Our system is ideal for positive and negative pressure conditions at elevated temperatures of up to 180 deg C. Permeation resistance is greatly reduced by the quality of the fluoropolymer and its thickness.



### Rotational lining :

Engiplas offers Rotational lining system, consisting of PFA, MFA, FEP, ECTFE, ETFE XLPE and PE with thickness ranging from 2mm – 12.5 mm (0.078" – 0.5") Our system is ideal for positive and negative pressure conditions at elevated temperatures of up to 200 deg C. Permeation resistance is greatly reduced by the quality of the fluoropolymer and its thickness.



Material	Working temperatures Deg C	Chemical resistance	Comments
PTFE	-100 to 250	Supreme	Thermoplastic, suitable for high-purity applications, exceptional non-stick properties, high thermal stability and longest flex life
PTFE-M	-100 to 250	Supreme	Modified PTFE, suitable for high-purity applications, exceptional non-stick properties, high thermal stability, lower permeation rates and better mechanical properties than Std PTFE
PFA	-100 to 250	Supreme	Thermoplastic, suitable for high-purity applications, non-stick properties, lower permeation rates, high thermal stability and long flex life
MFA	-100 to 220	Supreme	Thermoplastic, non-stick properties, high thermal stability, lower permeation rates, better surface smoothness than PFA
FEP	-100 to 200	Excellent	Thermoplastic, exceptional non-stick properties, high thermal stability
ETFE	-50 to 150	Excellent	Thermoplastic, high thermal stability, lower permeation rates, outstanding abrasion & tear resistance, better mechanical properties
ECTFE	-50 to 150	Excellent	Thermoplastic, high thermal stability, outstanding abrasion & tear resistance, better mechanical properties
PVDF	-20 to 110	Very good	Thermoplastic, lower permeation rates outstanding abrasion resistance, better mechanical properties
PP	-10 to 90	Good	Thermoplastic, very good abrasion resistance, low cost material
XLPE	-10 to 85	Good	Thermosetic, supreme abrasion resistance – the best there is, low cost material.
HDPE	-10 to 60	Good	Thermoplastic, low cost material..

### About Engiplas:

For 40 years, Engiplas has been operating in the field of engineering and production of the lined columns and vessels which play a major role in the Chemical, Bio-diesel, Semi-conductors, Pharmaceutical, and water treatment industries. Engiplas's spectrum of corrosion resistant equipment is one of the broadest on the market. We provide small diameters as well as large ones, standard shapes as well as special shapes, a wider diversity of lining materials, and different construction materials.

We welcome you to contact us through our distributing locations around the world.



Argentina ● China ● Italy ● India ● Israel ● Netherland ● Poland ● Thailand ● USA



engiplas.com

### Coatings:

Engiplas offers supreme corrosion-resistant coating systems, providing protection for any steel member capable of withstanding up to 400 deg C (800 F ) in the oven. Coatings are available in PFA, FEP, ECTFE, ETFE, PVDF and PPA with a maximum up to 2mm thickness to ensure full vacuum, high-speed agitation, elevated temperatures, permeable media and abrasive working conditions.



### Loose lining:

Engiplas offers loose lining systems, consisting of PTFE, M-PTFE, PFA and FEP with thickness ranging from 2mm – 10mm (0.078" – 0.39")

Our system is ideal for positive and negative pressure conditions at elevated temperatures of up to 240 deg C. Permeation resistance is greatly reduced due to the quality of the fluoropolymer and its thickness.



## Vessels and Tanks

Engiplas manufactures a comprehensive range of vessels and tanks. Our steel manufacturing is according to international standards (ASME, PED) and comes complete with inclusive lining materials and techniques.

Our lined vessel and tanks are ideal for positive and negative pressure conditions at elevated temperatures of up to 240 deg C, Permeation resistance is greatly reduced by the quality of the fluoropolymer and its thickness



## Reactor vessels

Engiplas manufactures a comprehensive solutions for reaction vessel. Our steel manufacturing is according to international standards (ASME, PED) and comes complete with inclusive lining materials and techniques.

Our lined reactor vessels come complete with an agitation system ( magnetic or mechanical ), mechanical sealing , motor and transmission. Our agitators are also lined with a thick lining that protects them against corrosion and abrasion.



## Columns and internals

Engiplas manufactures a comprehensive solutions for columns. Our steel manufacturing is according to international standards (ASME, PED) and comes complete with inclusive lining materials and techniques.

Our lined columns are ideal for positive and negative pressure conditions at elevated temperatures of up to 240 deg C. Permeation resistance is greatly reduced by the quality of the fluoropolymer and its thickness



## Columns internals



## Filter housings:

Engiplas manufactures a wide range of lined filter housing. Our steel manufacturing is according to international standards (ASME, PED) and comes complete with inclusive lining materials and techniques.

Our lined filter housings are designed to enable a rapid change of the inner filter without damaging the lining. Positive to negative pressure conditions are available at elevated temperatures of up to 220 deg C.



## Heat exchangers:

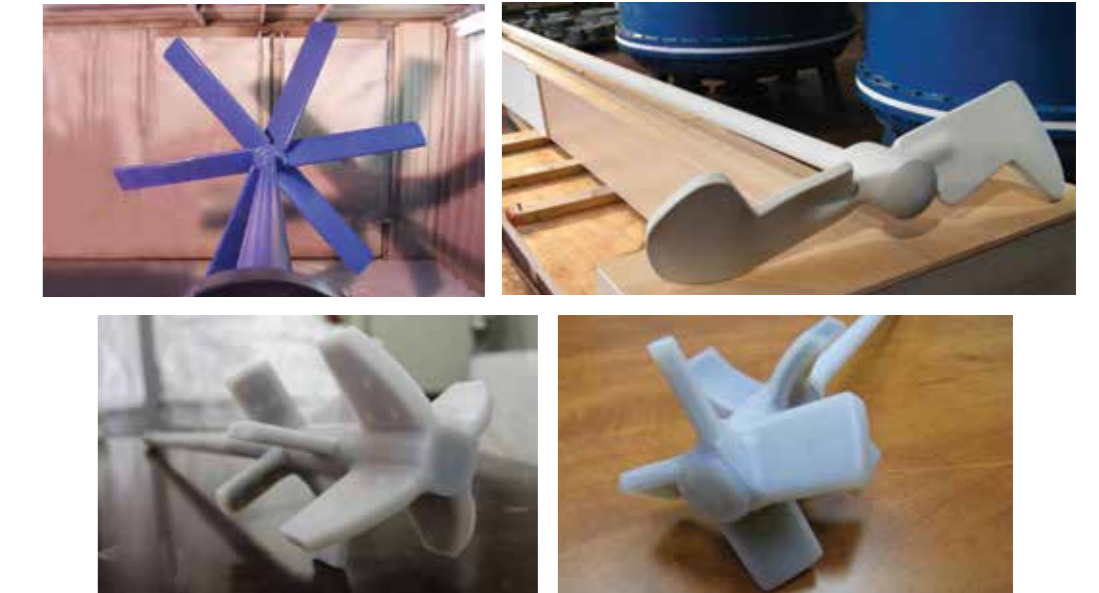
Engiplas manufactures shell & tube heat exchangers with Silicon Carbide or Fluoropolymer lined/coated tubes.

Our heat exchangers utilize the best heat transfer with minimum fouling and complete corrosion protection. Our units are engineered to perform under negative and positive pressure conditions at elevated temperatures of up to 200 deg C.



## Agitators:

Engiplas manufactures lined agitators in various lining materials such as PTFE, PFA, ETFE, PVDF, HDPE and PP with thicknesses ranging from 2 mm to 15 mm ( 0.07" to 0.59") The steel structure is engineered and balanced prior to the lining procedure. A final balancing is conducted at the end of the process by making the adjustments to the mechanical seal.



## Pipes and fittings

Engiplas manufactures a comprehensive range of lined pipes and fittings in ANSI and DIN standards. We produce both standard and non-standard items.



Our lined pipes and fittings are ideal for positive and negative pressure conditions at elevated temperatures of up to 200 deg C.

