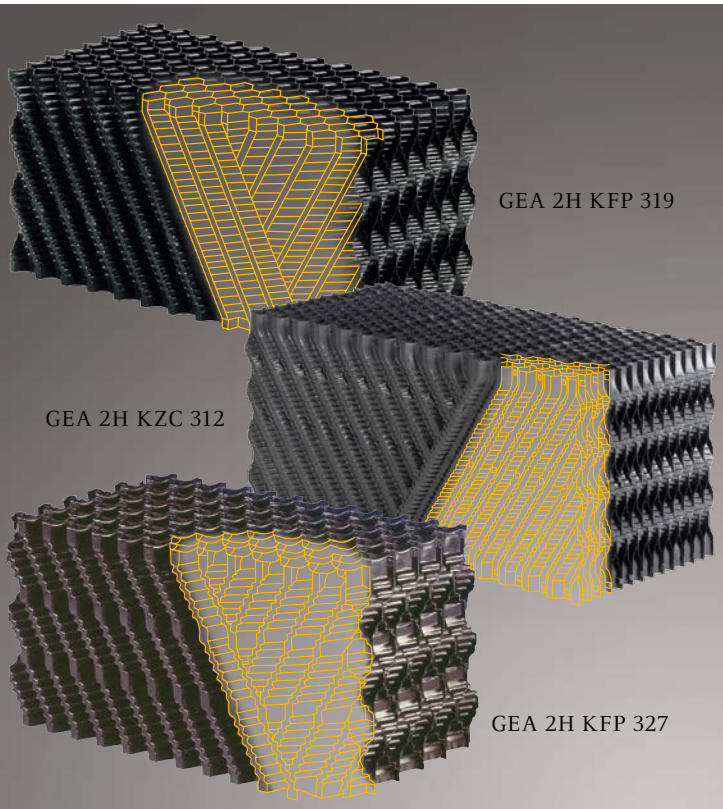
GEA 2H BIOdek® Cross-Fluted Fills with HX-Factor

For biological processes in water and waste water treatment



GEA 2H BIOdek® cross-fluted fills achieve best effluent values of biological sewage plants. Our customers profit from our experience gained by equipping hundreds of water treatment plants. We will be happy to support you in designing highly efficient and energy saving trickling filters or submerged bed reactors.

GEA 2H BIOdek® cross-fluted fills are designed for high efficiency and for meeting high effluent standards. Adjusted to the application, a variety of flute sizes between 8 and 38 mm provides sufficient space for biofilm growth. For nitrification and other applications with thin biofilms a high specific surface enables the construction of compact plants.

Freely selectable sheet thicknesses allow the production of BIOdek® fills which bear any weight load occurring in sewage treatment and which achieve any design life. BIOdek® is resistant against rot, fungi and most chemicals. UV protection additives are part of the compounds. With our unique welding process fills can be assembled anywhere in the world environmentally friendly, safe and avoiding the use of solvents.

Our products have got the HX-Factor. It is our promise and stands for our unique competence in water and waste water treatment and in heat exchange (**HX** = **H**EAT E**X**CHANGE).

HX-Factors of our Cross-Fluted Fills

- Optimum structures in terms of process engineering
- Premium quality materials for high quality requirements
- Easy and reliable on-site welding technology
- Freely selectable foil thickness for high bearing loads
- No memory effect
- Environmental friendly, impact and age resistant PP (PVC optional)

GEA 2H BIOdek® Cross-Fluted Fills

Technical Data

	PP	PVC
Void ratio	> 97 %	
Maximum length	96 "	
Maximum width	24 "	
Standard height	12 or 24 "	
Continuous operating temperature	158 °F	131 °F
Max. operating temperature (short term)	176 °F	140 °F

Maximum tolerances: On all dimensions +/- ¾" or 2 % whichever is the greater. Tighter tolerances by prior agreement.

Types

Application			Type	Material	Specific surface area	Corrugation height
Trickling Filters	Submerged Fixed Bed				ft²/ft³	mm
BOD_5-reduction						
For any organic peak load, unless vertical flow fills are preferred.	For BOD-removal of any load, unless vertical flow fills are preferred.		KFP 338/638	PP	21	38
			KFC 338/638	PVC	21	38
For partly BOD-removal or if effluent load up to 50 mg/l is allowed. Volume load can be up to 0.16 lb-BOD_5/ft³-day (2,5 kg BOD/m³).	Only as distribution layer above the support system.		KFP 327/627	PP	38	27
			KFC 327/627	PVC	38	27
For all BOD effluent standards. BOD-load <0.065 lb-BOD_5/ft³-day (<1 kg/m³d)	For BOD-removal by rotating biological contactor.		KFP 319/619	PP	46	19
			KFC 319/619	PVC	46	19
Nitrification						
For all BOD effluent standards. BOD-load <0.035 lb-BOD_5/ft³-day (<0,5 kg/m³d)	Downstream nitrification, without regular air flushing.		KFP 319/619	PP	46	19
			KFC 319/619	PVC	46	19
Downstream nitrification with low residual BOD-load.	Downstream nitrification.		KFP 315/615	PP	58	15
Downstream nitrification after complete BOD-removal.	Downstream nitrification.		KPP 312/612	PP	71	12
			KPC 312/612	PVC	71	12
Downstream nitrification after complete BOD-removal.	Downstream nitrification.		KZP 312/612	PP	73	12
			KZC 312/612	PVC	73	12
For applications without BOD-load.	For applications without BOD-load.		KFP 158	PP	98	8

This information has been put together with greatest care. However, any performance data given in this leaflet is subject to compliance with certain surrounding conditions and hence may vary from case to case. Further, we reserve the right to make changes at any time without notice. We strongly recommend (i) reconfirmation with GEA 2H whether this information is still fully valid, before using it for final designs and (ii) to verify performance data taking into account the actual surrounding conditions. GEA 2H takes no responsibility for any consequences due to non-compliance with these recommendations.

TÜVRheinland ZERTIFIZIERT Management System ISO 9001:2008 www.tuv.com ID 9105070210

GEA 2H Water Technologies, Germany, is ISO 9001:2008 certified.

GEA Heat Exchangers

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