

Verdermix VMX Static Mixer

For mixing and/or dispersing all kinds of viscous media!

The most applied static mixing element shape in the world is the helical shaped mixing element (Verdermix type: VMV). This mixing element has unique characteristics and has a proven track record. However, for certain applications Verdermix is offering a better alternative; the Verdermix VMX static mixer. For extreme viscous media and laminar flow applications the VMX is the way to go!



Your benefits

- High mixing efficiency
- Compact installation (small footprint)
- Proven principle for over 25 years
- Tanks & agitators are not needed because of in-line production process
- Low investment costs
- No moving parts thus robust and maintenance free

When to choose for VMX Static Mixer

For applications where extreme viscosity and/or volumetric difference between the to be mixed media occurs, the VMX mixing element is the right choice. In almost all cases it concerns a laminar flow.

Construction VMX Static Mixer

The VMX mixing element is constructed out of crossing intermeshing metal strips, welded together. Small diameters are also available in casted version. The elements are welded together, creating a string. The length of the string varies between 2 till approx. 20 mixing elements. The string of elements can be fixed welded into the pipe. If a retainer

ring is applied, the string of mixing elements can be removed out of the pipe. This retainer ring countersinks into a machined recess of the applied "raised face welding neck flange".

Working principle VMX

The media is continuously split, stretched, transported from the inside to the outside of the pipe diameter and vice versa. Each mixing element is placed, in line, under a 90 degree angle in relation to the previous mixing element. Due to the strong cross stream velocity gradients, the additive is sheared, as it passes through the mixing element. This results in continuously finer striations till it is "homogeneous" mixed.



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Advantages VMX over Helical shaped mixing element

Construction: The VMX mixing element creates a very high degree of mixing per element. Because of this high degree of mixing you will need less mixing elements compared to helical shape mixing elements. Fewer elements and also a shorter length of the elements result in a relatively short static mixer.

Process: The VMX can handle extreme high viscosities and/or volumetric differences between the media that will be mixed. Also

capacity fluctuations have less influence on the mixing result.

When risk of clogging or damaging the media is too high

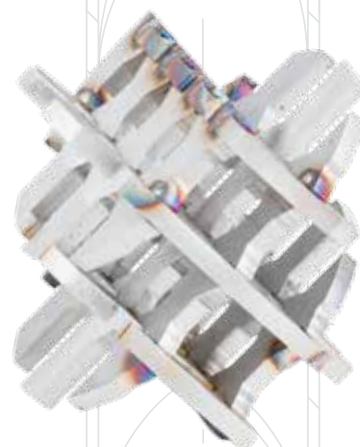
The structure and flow path of the VMX mixing element is less open than the helical model, there is a higher risk for clogging and/or damaging the media.

The structure and flow path of the VMX mixing element is less open compared to the helical model. This must be taken in account when handling large solid

particles. Choosing a bigger pipe diameter may be necessary.

Also the generated shearing force on fluids, or put simple: "mixing power", is much higher compared to the forces created by the helical model. This may result in a higher pressure drop over the complete mixer, which must be taken into consideration when selecting the corresponding pumping solution.

For some sensitive products or additives, this generated "mixing power", can be too much. Again, choosing a bigger pipe diameter can most often solve this matter.



Verdermix also supplies: A complete program of dynamic mixers (agitators) for almost all types of industries. Please visit our website or contact us for more information.

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