

Application story



Accurate Dosing to Continuous Flow Chemistry Reactors (3)

Location	Bangalore, India (Installation: Feb 2021)	Hydra-Cell model	MT08MMNJNTTD05M
Type of application	Feb 2021 Dosing of Slurries with Organic Solvent and Acids to the Continuous Flow Reactors	Flow rate	50 ml/min to 200ml/min
Liquid	Organic Solvents Alcohol Ester Tetrahydrofuran (THF) Acetone Thionyl Chloride Acids Nitric Acid Sulphuric Acid HCl	Pressure	15 bar (218 psi)
Application details	A global process innovator specialising in pharmaceuticals, fine chemicals, high value chemicals, petrochemicals, agro chemicals, flavours and fragrances carry out various R & D trials on the processes using continuous flow reaction. In this process the Hydra-Cell pump is used to constantly feed the slurry along with organic solvents (Alcohol, Ester, Tetrahydrofuran (THF) & Acetone), Thionyl chloride acids such as Nitric acid, Sulphuric acid and HCl to the continuous flow reactor at low pressure up to 15 bar to carry out the reaction. The customer was using Fuji Techno pumps but these were not suitable for slurry dosing. Hence they switched over to Wanner's Hydra-Cell pump for its ability to pump slurries with a virtually pulse-less flow and accurate metering. Currently they are using MT08MMNJNTTD05M to pump for different types of slurry mixed with organic solvent and acids to the Continuous flow reactors with upto 30% solid concentration. The pumps was installed in February 2021 and it is still running without any maintenance, and is trouble-free.		

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Advantages of Hydra-Cell pump on this application

- Ability to pump slurries with an extremely low pulse flow
- Seal-less design for low maintenance
- Small footprint

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