

GTV SUSPENSION FEEDER

GTV feeder for liquid spray material



APS Suspension Spraying © Fraunhofer IWS Dresden

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Technical Data:

Dimension:	Width 1.000 mm, Height 1.200 mm, Depth 500 mm
Suspensions volume:	10L (20l, 50l, as well as special small once 2l, 5l)
Circulating quantity :	10L
Feed pressure:	4 to 6 bar generated by Inertia gas (N2/Ar bottle)
Feed mass:	10 – 150 ml/min with Injector \varnothing 0,3 mm
Particle ratio:	upto 50% in particular up to 70% depending on material and suspension
Particle size:	0,005 – 10 μ m
Viscosity:	10 mPa \times s
Flow control :	calorimetric, mass flow proportional
Spray time:	at 50ml/ min >3h
Atomzing gas	Air/N2/Argon
Spray process:	High velocity oxy fuel (HVOF) and Atmospheric Plasma spraying
Development:	GTV in cooperation with Fraunhofer IWS Dresden
Control unit:	TP177, Siemens S7 PLC



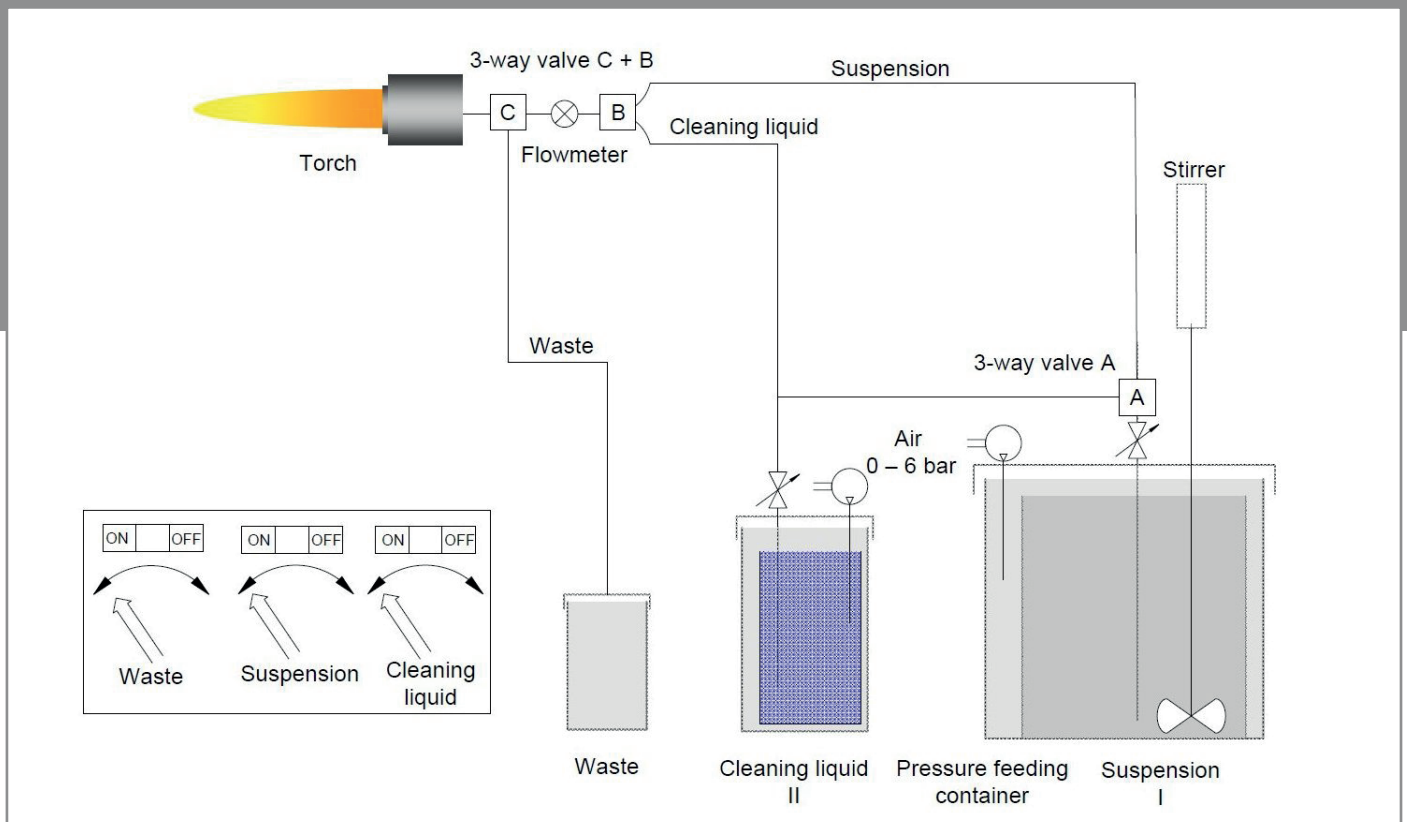
The GTV suspension feeder basically consists out of 2 pcs. separate canisters A and B in order to prevent sedimentation of the suspension as well as blocking of the feeding hose connected to the injector due if suspension stops flowing.

While pressurized canister A contains actually the suspension, canister B contains a rinsing fluid (water) which is also pressurized.

The suspension is circulated in pressure canister A by a compressed air driven stirrer in order to prevent sedimentation within the canister. Filling level of both suspension and rinsing fluid is controlled and a minimum filling level is displayed.

The feeding of suspension is generated by an appropriate pressuring and an opening of a proportional exit valve A at the suspension canister A. The suspension is fed to the injector of the gun. The control of the flow is done by the calorimetric principle. The quantity of mass is regulated by the opening level of valve A. For process control and documentation the flow rate can be stored each millisecond.

After stopping the suspension feeding an automatic rinsing cycle is started. The rinsing fluid will be caught in a further canister (waste). This shifting of suspension and rinsing fluid ensures a trouble-free operating process.





Ever since the company was established in 1982, the name GTV has stood for top quality and a high level of delivery reliability for all types of thermal spray products.

GTV provides its customers with many years of experience in all aspects of the high-technology field of thermal spray technology, enabling them to make use of the effective and efficient GTV system solutions in order to gain a substantial competitive advantage in the market.



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