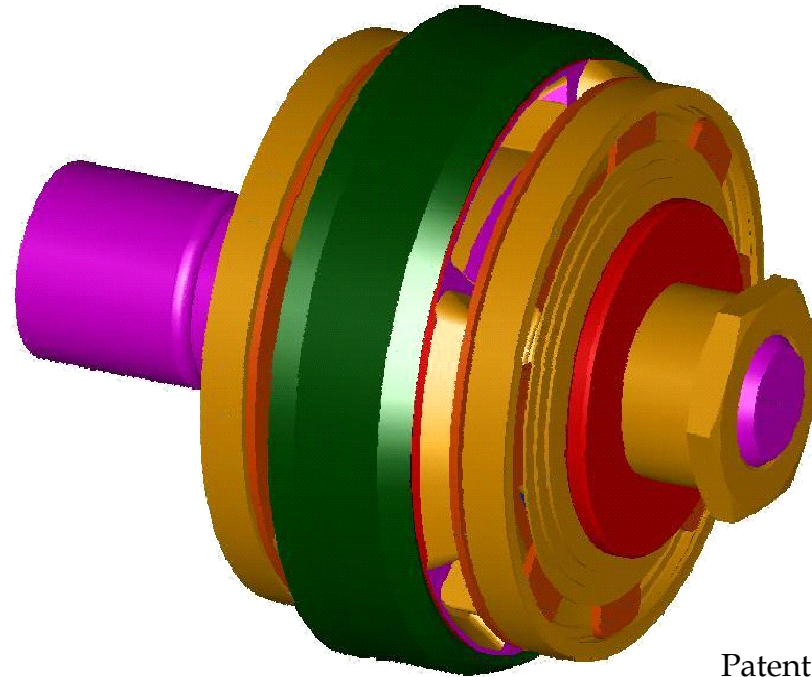


# Bi-directional High Performance Valve

(MTBO – Mono tube blow-off valve)



Patent pending

- Working principle
- Scope of application
- Damping/tuning range
- Ride & Handling perspective

# BHPV – working principle & features

This design is being developed to be a highly tuneable, highly consistent and most durable product . [piston top view](#)

## Tuneability [simulation](#)

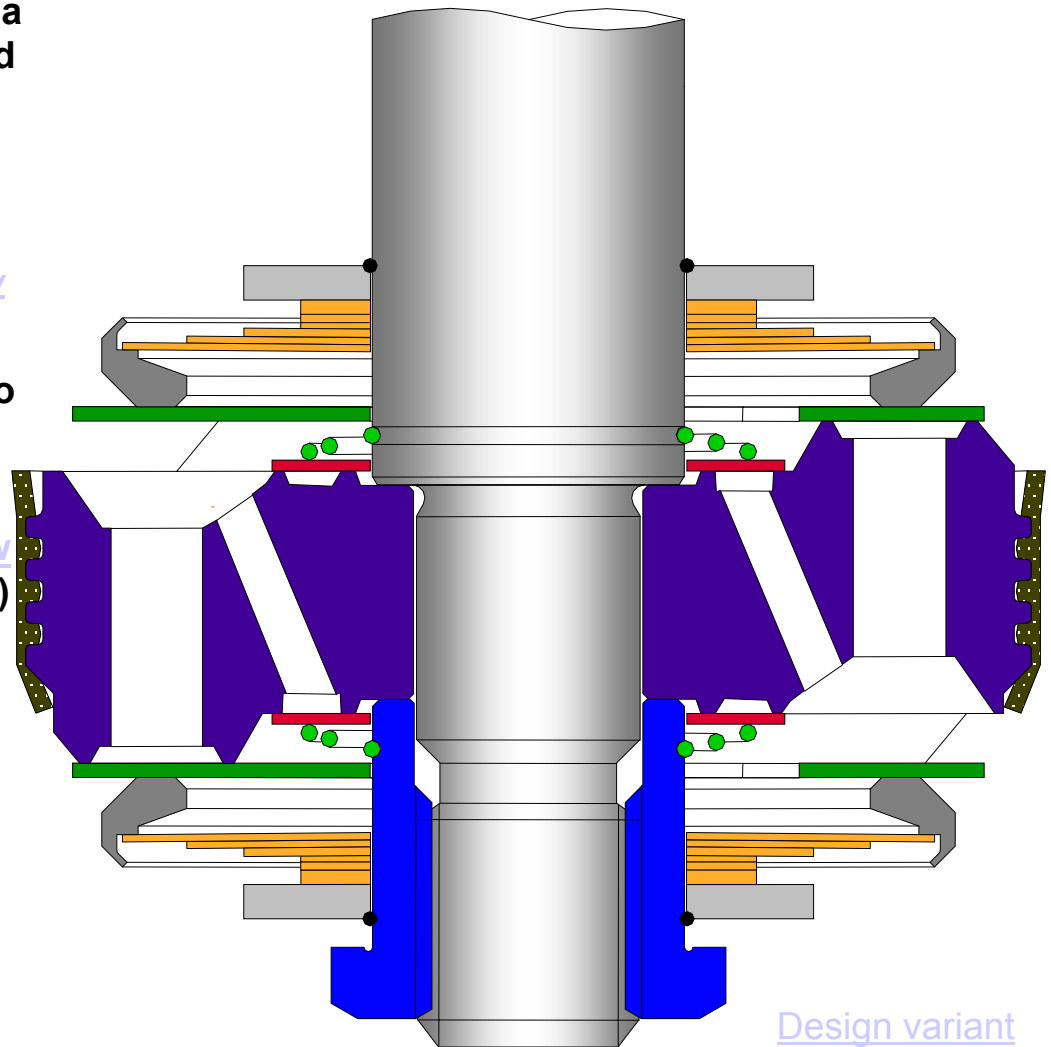
- Independent low speed tuning for rebound & compression [view](#)
- 2 parameters for mid speed (spring rate is not fully related to preload)
- parameter for high speed (different restricted pistons [view](#) and/or spring travel limiter [view](#))

## Valve scatter [result](#)

- Intelligent adjustment possible =>bridging of tolerances (LASER welding technology)

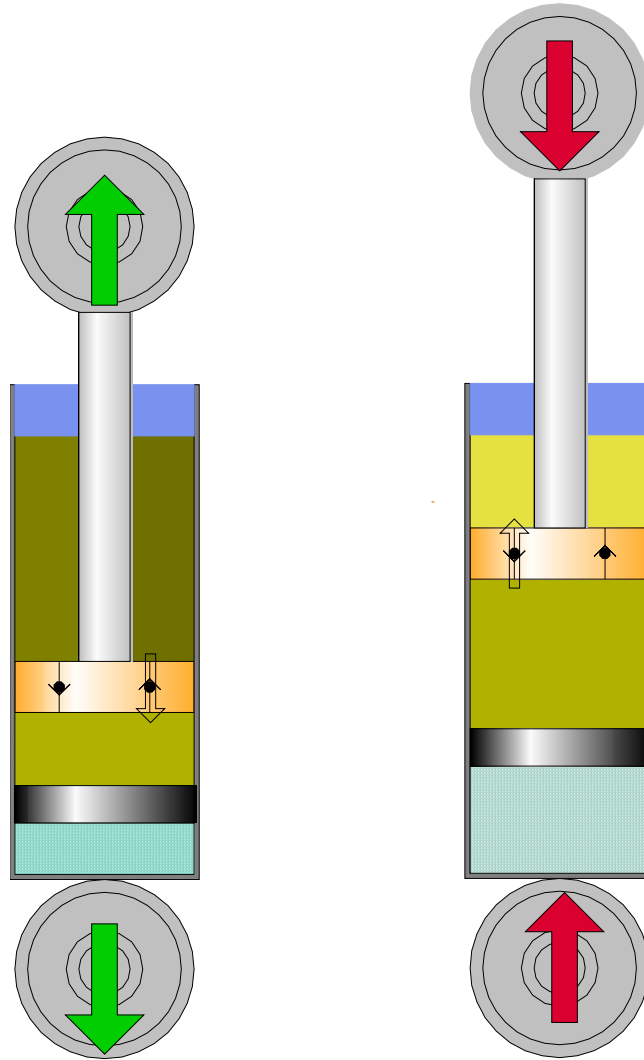
## Durability [view](#)

- Thick disc withstands high pressures
- Spring stack isolated from pressures differences

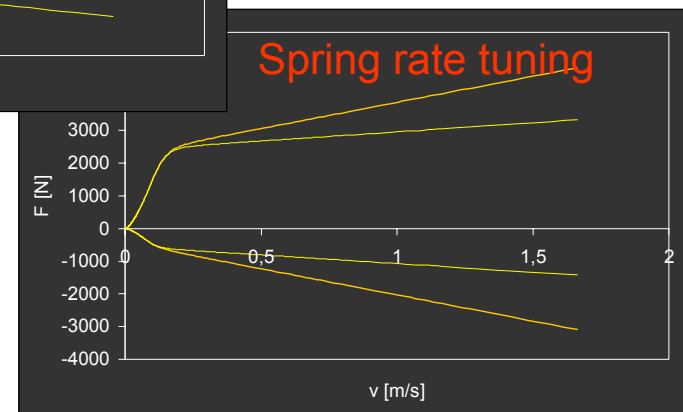
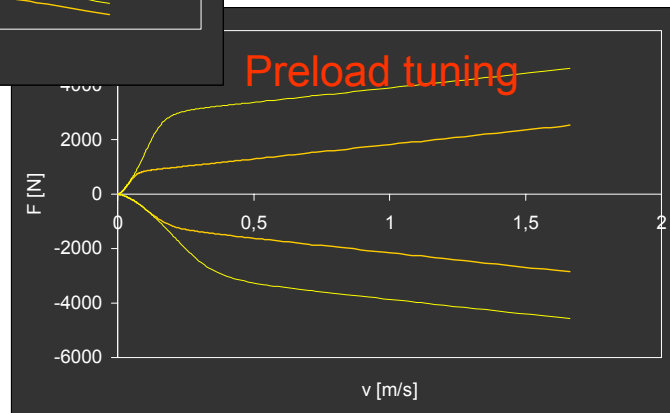
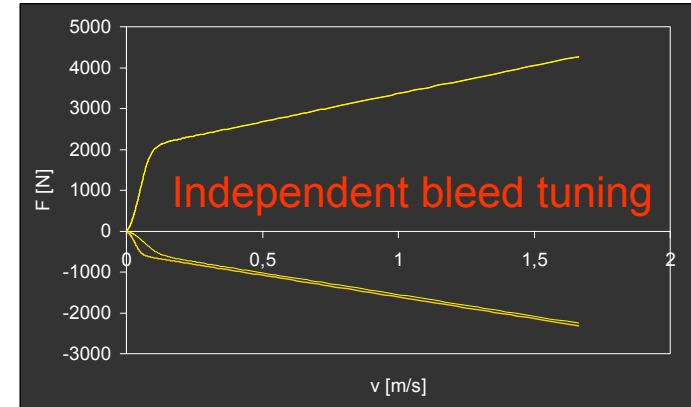
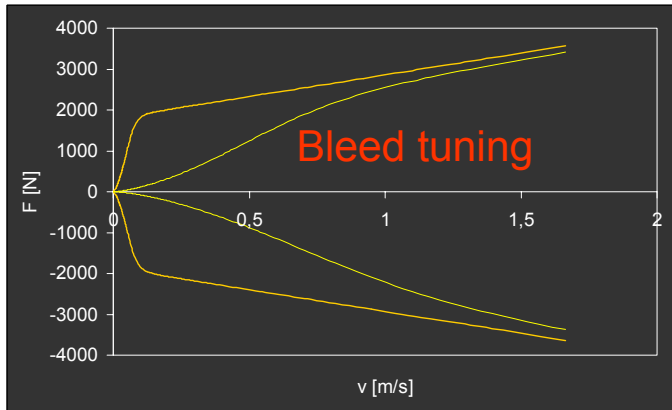


Patent pending

# BHPV – Scope : Mono tube dampers



# BHPV - Damping range / tuning



[simulation](#)

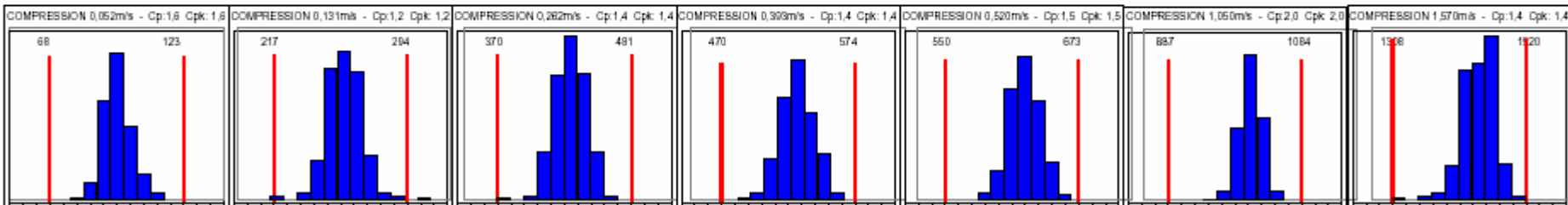
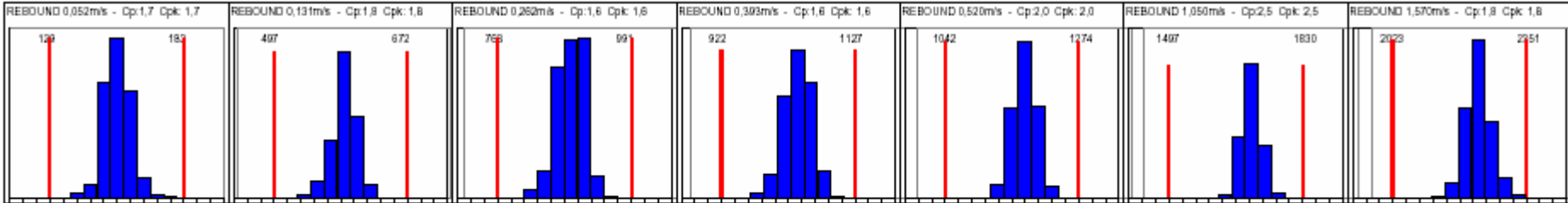
- The 2 x 3 (can be extended to 2 x 5) independent tuning parameters available in this design imply **less compromise** between ride comfort & handling, compared to conventional valves
- Where traditionally, double tube dampers impose less compromise than mono tube dampers, this design catches up on that issue, and offers on top the benefit of a **faster valve response**.

# BHPV - Results of a first production run.

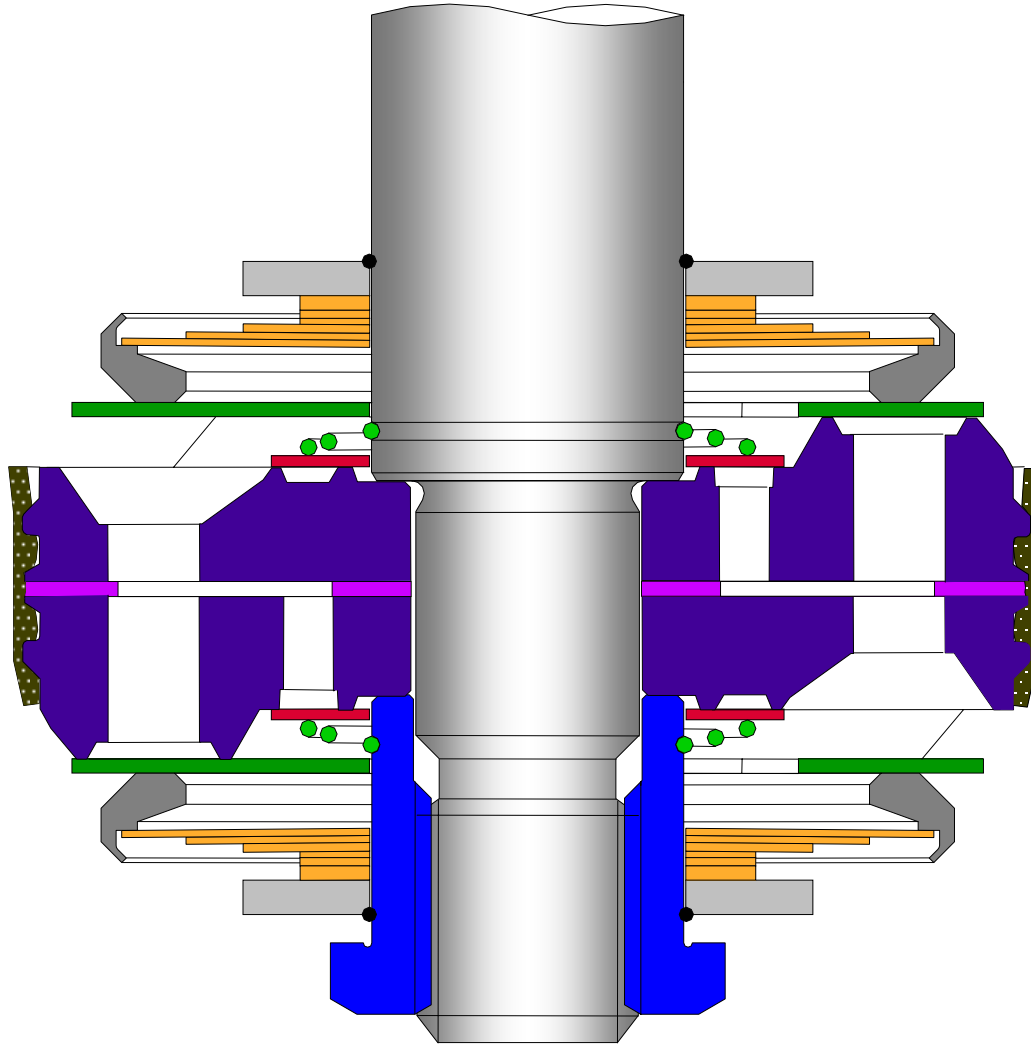


	REBOUND							COMPRESSION						
Velocity [m/s]	0.052	0.131	0.262	0.393	0.524	1.047	1.571	0.052	0.131	0.262	0.393	0.524	1.047	1.571
Spec [%]	17.5	15	13	10	10	10	7.5	17.5	15	13	10	10	10	7.5
Cp	1.7	1.8	1.6	1.6	2.0	2.5	1.8	1.6	1.2	1.4	1.4	1.5	2.0	1.4

ID units 300



[return](#)



[return](#)

Patent pending