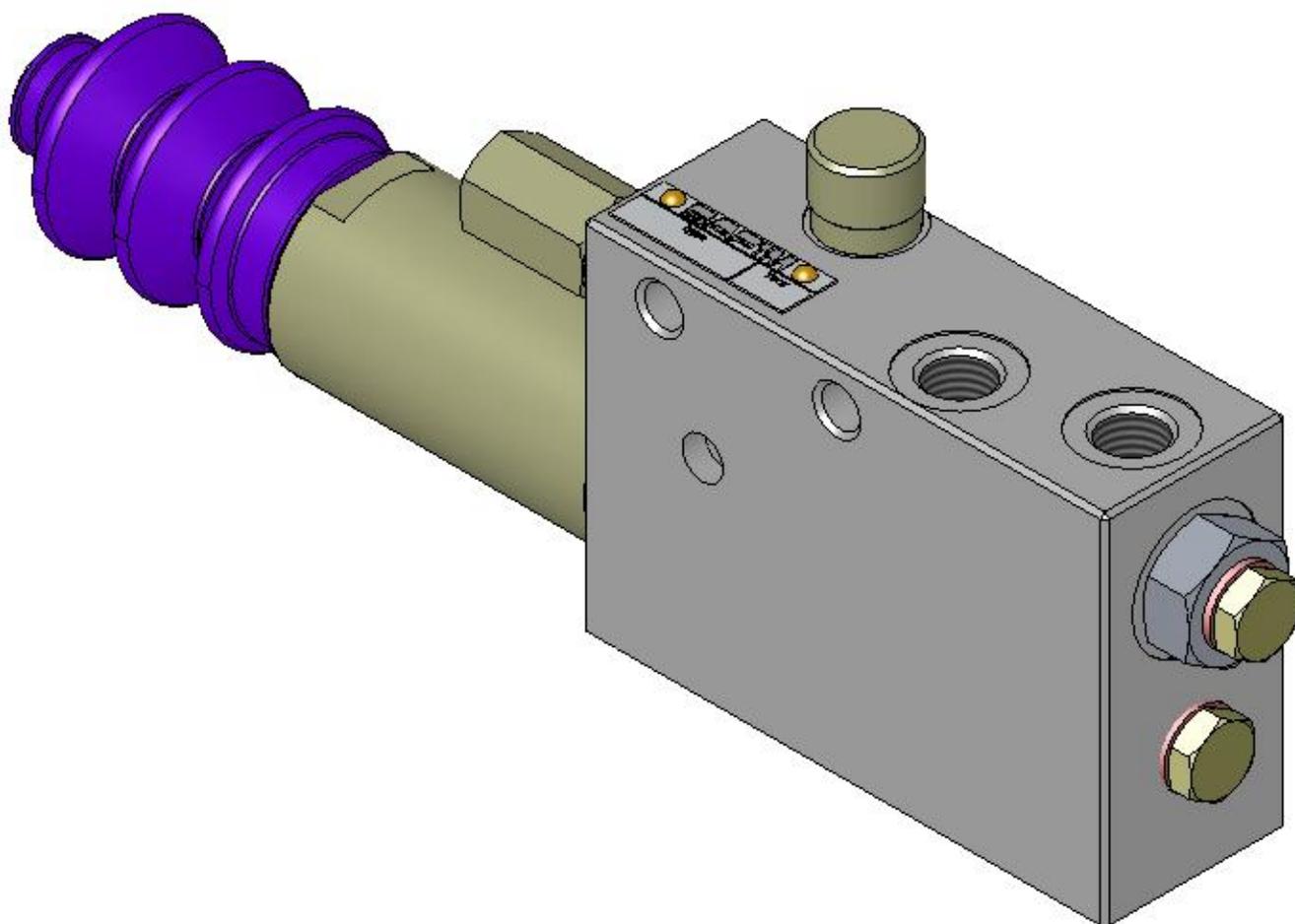


PARKING BRAKE MODULATION VALVE



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PARKING BRAKE MODULATION VALVE

Product target:

Parking brakes that exploit the force of one or more springs and are hydraulic operated present as their main feature the fact that when the control solenoid valve is being disconnected, they may produce an abrupt braking action.

This is dangerous if the vehicle is in motion, because of a possible load's loss (for example the load on the forks of a lift truck) but also for the driver's safety and for eventual mechanical damages.

The purpose in using this valve is therefore to limit the braking action for an extent of time that is enough to stop the vehicle or the machinery, thus enabling to operate the brake at its full capacity in a second time.

Functioning:

In case of activation of the cylinder's parking/emergency brake, the pressure is being partially discharged up to the set level to reduce the spring force and then, after the set time has gone by and the vehicle has been stopped, it resets the pressure in the cylinder, thus enabling the spring force to act completely.

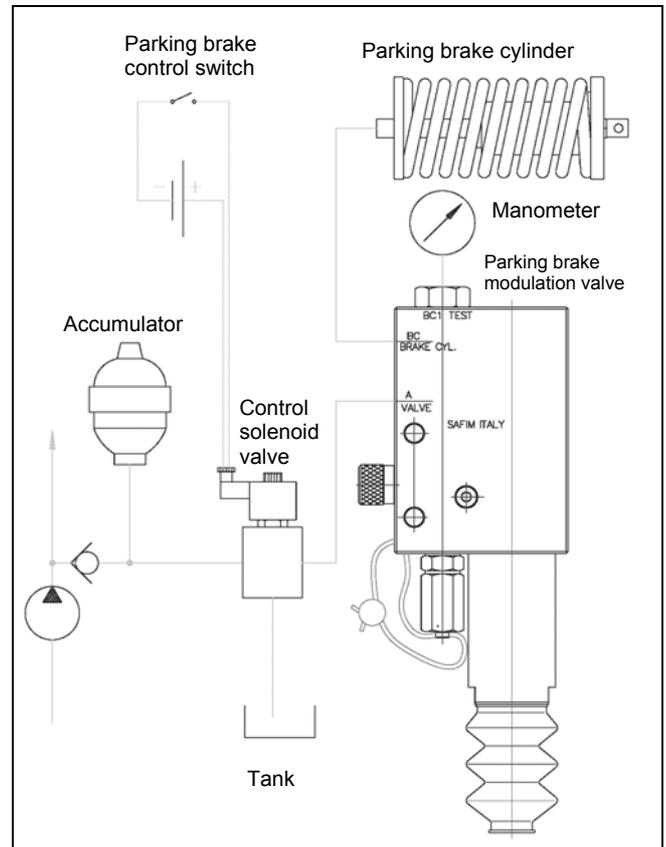
This valve does not delay the application of the preset braking force, but only the full spring force.

Applications:

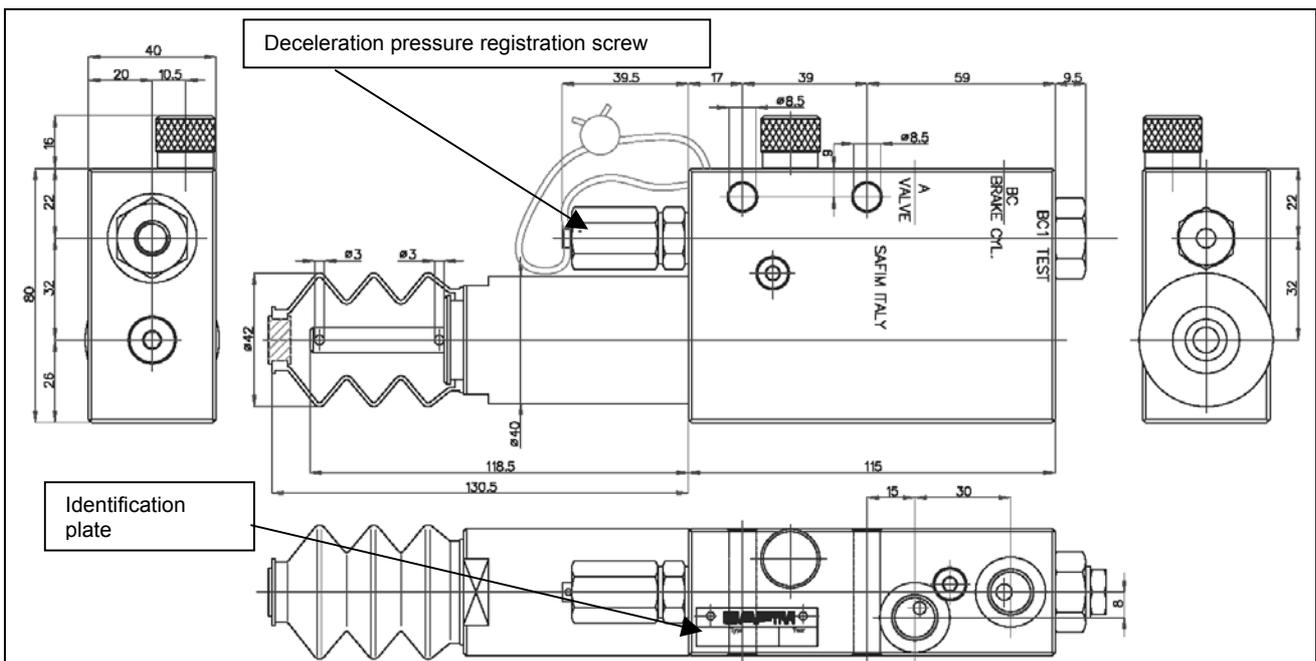
This valve is particularly suitable for stationary vehicles or mobile ones with apply hydraulic operated spring brakes, where emergency braking carried out with a brake operated a spring may result in damages.

Application examples are lift trucks, cranes, stakers, mobile cranes, lap machines, machinery used in paper mills, winding machines.

Plant sample:



Overall dimensions and connections:



Use range

- Deceleration pressure setting:
From 4 Bar to 10 Bar (0/-1 Bar)
From 11 Bar to 50 Bar (0/-10% Bar)
- Deceleration time setting: 2 - 6 sec (-1/+3 sec).

The deceleration time adjustment is being carried out with the oil in the TIMER close circuit at 30°C +/-50°C. The use of oil with a different viscosity may prejudice such an adjustment and the stability of the valve.

Installation requirements

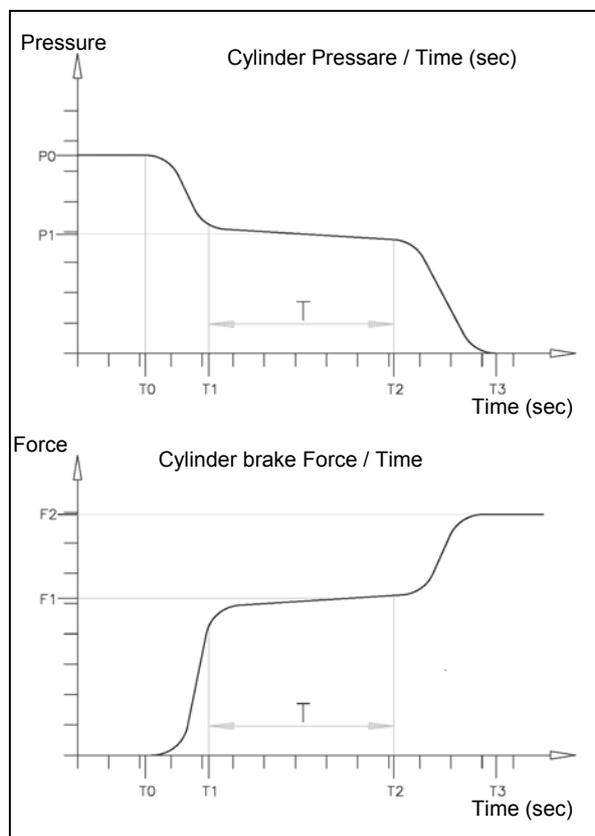
In order to assure that this setting is not being affected by environmental temperature conditions, it is necessary to install the valve in a vehicle's position, where temperature becomes steady between 20°C and 60°C when the machine is in operation.

- **Oil of the circuit:** hydraulic oil according to DIN 51524.
- **Filtering level:** NAS 1638 category 8
- **Type of oil:** MOBIL AERO HF MIL-PRF-5606 NATO H-515

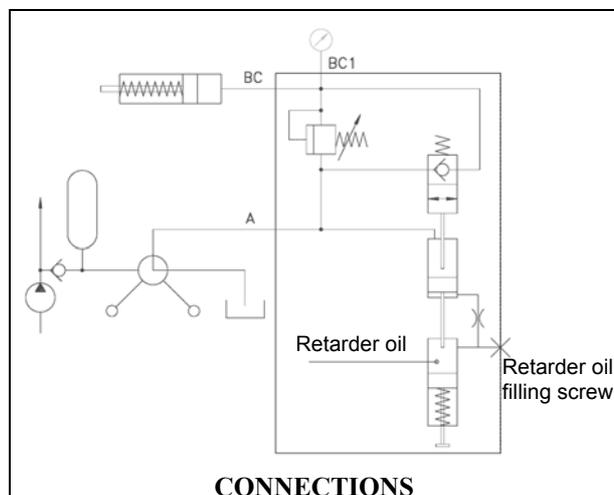
Assembly:

The modulation valve is being assembled on the hydraulic line between the control valve and the spring parking cylinder.

Operating wave:



Hydraulic system:



CONNECTIONS

VALVE (A)	Connection to the control valve	M14x1.5 DIN 3852-1X
BRAKE CYL. (BC)	Connection to the brake cylinder	M14x1.5 DIN 3852-1X
TEST (BC1)	Brake cylinder test pressure signal	M10x1 ISO 6149

Legal regulation for mobile machinery:

This valve makes the parking brake working at two performance levels.

The initial level is reduced by the pressure left on the spring cylinder.

The final performance level is achieved by the full spring force acting on the brakes.

The use is allowed in accordance to local rules.

We recommend that the performance level must not be lower than what required by the parking brakes or by the emergency braking.

This minimum performance must be verified for the whole wear level of the brakes. Performance level must be high for new and used brakes as well.

If it is not the case, it is necessary to adjust the brakes or to reduce the pressure in order to increase the force of the spring that works on the brake.

Order Part Numbers:

Part Number	Description
203040/XX-YY	XX indicates the setting deceleration pressure value (4 Bar < XX < 50 Bar). YY indicates the setting deceleration time (2 sec < YY < 6 sec)(standard 4 sec)