

06 NOVEMBER 2017

ALL IN ONE CALIPER BRAKE – SERIES “DUO”

The most of caliper brakes available typically falls into two categories:

1. Pneumatically or hydraulically applied / spring released
2. Spring applied / pneumatically or hydraulically released

The first is a SERVICE BRAKE: This system applies and releases the brakes when the control system activates/releases the brake.

Directly pneumatically applied disc brakes are used practically in every area of mechanical engineering. The actuating force is created here through compressed air, and the brake is released by spring force.

Pneumatically applied brakes are best suited for light to hard stopping duties and for tensioning applications where a high degree of control is required. Pneumatic Disc Brakes are widely used for speed reducing, stopping/braking of the low or high torque driving mechanism.

The second is an EMERGENCY BRAKE (FAIL-SAFE BRAKE):

The fundamental purpose of a power off brake is to stop or hold a load.

When power is off or lost, the brake is engaged and provide for emergency stopping.

If the machinery requires the using of SERVICE and EMERGENCY BRAKES CALIPER SERIES “DUO” is made for this!

“DUO” CALIPER BRAKE complies with all the technical characteristics contained in both calipers above and is able to function as a service brake as an emergency brake.

This specific feature allows the use of **just one caliper** instead of two!

The thruster consists of two pistons with two air inlets: AIR INLET A (*see image below*) for operating brake as pneumatically applied brake the other (AIR INLET B/*see image below*) as pneumatically released brake.

Power on condition: SERVICE BRAKE

PISTON A – IN OPERATION

Air control valve A is energized → The actuating force is created here through compressed air. Increasing or decreasing the supplied pressure, you can adjust the thrust exerted by piston and, consequently, the braking force of the caliper brake:

From 0 bar (brake caliper released) to 6 bar (maximum braking force)

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PISTON B – IN STAND BY

Air valve B is energized → the springs are under compression and don't engage the brake caliper.

Power off condition: EMERGENCY BRAKE

PISTON A – IN STAND BY

Air control valve A is de-energized → The air pressure falls and don't actuate the caliper

PISTON B – IN OPERATION

Air valve B is de-energized → The air pressure falls and the internal springs engages the caliper brake.

The picture shows the new PPT-PN066.

This new bigger DUO caliper. This caliper offers a braking force, as service or as emergency brake, up to 45.5000 N with just one caliper.

