



Indice A du 24-06-2011

WHEELS
&
BRAKES

2011



**Quality
and performance
since 1985**

**www.beringer-aero.com
contact@beringer-aero.com**



AUTORITÉ DE
SURVEILLANCE

Conforms to standard TRA 2007 (tire and rim association)
BERINGER company is 2009 approved by EASA
European Aviation Safety Agency

Tim Kern - 121five.com - 863-651-6095 - info@timkern.com

BERINGER AERO - Aéroport - Champ Eymi - F-05130 Tallard

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Ultralight 4 " WHEEL without brake suitable for

- main landing gear single seater
- nose wheel LSA ULM
- bush tail wheel

1.2 Lbs

- size : 3.50-4
- Static load 190 kg (418 Lbs) Limit load : 665 kg (1163 Lbs)
- TUBELESS two pieces plus O-ring and rigid valve
- 2017 Aluminium alloy machined from solid on CNC
- Following TRA 2007
- ISO standard sealed ball bearings for optimal durability:15mm outer, 20mm inner



TUBELESS WHEELS

Part#	DESCRIPTION	weight	Static	Unit Price
RA-003	3.50-4" Wheel	1,2 Lbs	418 Lbs	\$270USD

tires
3.00-4 and 4.00-4

NEW 6" WHEEL - HIGH ENERGY

HIGH ENERGY 6" WHEEL

Suitable for 4 & 6 seat aircraft single and twin engine

- Static load: 950kg (2094 Lbs) Limit load: 3800kg (8377 Lbs)
- TUBELESS three pieces plus O-ring and rigid valve
- 2017 Aluminium alloy machined from solid on CNC
- Following TRA 2007
- ISO standards bearings for optimised durability: 35mm (1.38") for outer rim and 40mm (1.57") for inner rim (sealed ball bearings)



NEW



HIGH ENERGY 2P caliper

- new HIGH ENERGY 2 piston callipers Ø32mm
- new larger stainless steel disc
- sintered metal pads very long life

Double insulated system: two coats of insulation between pad and calliper.
Cooling fins machined in the caliper

available also for mineral fluid



Part#	DESCRIPTION	weight	Static load	Brake torque	Max RTO Energy	Unit Price
JAB02-HE	6.00-6" wheel (CNC machined - tubeless mounting) with Aerotec® 2 piston Caliper high energy EA-05, stainless steel Disc DSC-009	8,44 Lbs	2094 Lbs	5800 in-lb	405,000 ft-lb	\$855 USD
ZJB03	Cap for wheel 6", aluminium CNC machined, anodized	2 oz				\$78 USD

FINISH: Red anodizing is standard color for wheels, brakes and master cylinders. Other colors are available on special order at an additional cost of \$96 per batch of parts: silver, blue, black, yellow, titanium grey. Hard Nickel is also available for the wheels with a lead time and an extra cost of \$178

All prices are quoted in US dollars

WHEEL 5"

- sizes : 5.00-5 and 4.00-5
- Static load 650 kg (1432 Lbs) Limit load : 2600kg (5731 Lbs)
- TUBELESS three pieces plus O-ring and rigid valve
- 2017 Aluminium alloy machined from solid on CNC
- Following TRA 2007
- ISO standard sealed ball bearings for optimal durability: 25mm (1") outer, 30mm (1.18") inner

PATENTED



CALIPER AEROTEC® 2P

- 2 austenitic stainless steel polished pistons
- Body made of aerospace alloy to withstand high temperatures (>200Mpa at 390°F)
- To be used with DOT 4 fluid , 2 inputs, thread size M10x1
- Maximum operating pressure: 870 psi, tested pressure: 1740 psi.
- Brake torque of 4230 in-lb (352 ft-lb) at maximum operating pressure
- Uses floating stainless steel disc (covered by AEROTEC® patents)
- Sintered brake pads allow very high friction temperature (> 1100°F) and long life



WHEEL CAP

- Anodized cap for wheel
- Alloy: 2017 (AU4G) machined from billet on CNC



NEW : HIGH ENERGY 5" WHEEL

Suitable for

- 4 seat aircraft
- fast experimental (Lancair-Glasair, RV...)
- new HIGH ENERGY 2 piston callipers Ø32mm (+ 40% braking torque)
- new larger stainless steel disc
- sintered metal pads very long life
- Pad friction surface increased: + 60%

Double insulated system: two coats of insulation between pad and caliper.
Cooling thins machined in the caliper

**available also
for mineral fluid**

Wheel	Tire application chart
JA-01, JB-01	5.00-5" 15x6.00-5"
JA-02, JB 02, JB-02-HE	11x4.00-5"
JA-01-HE	5.00-5"



**NEW
high energy
5" WHEEL**

1 lbs ↔ 0.45 kg
1 kg ↔ 2.2 lbs



NEW

HIGH ENERGY
2 piston caliper

Part#	DESCRIPTION	weight	Static load	Brake torque	Max RTO Energy	Unit Price
JA-01	5.00-5" Wheel with brake: Aerotec® 2 piston caliper EA-01 and stainless steel Disc DSC-006	4.25 Lbs	1432 Lbs	4230 in-lb	144,000 ft-lb	\$554 USD
JA-02	4.00-5" Wheel with brake: Aerotec® 2 piston caliper EA-01, stainless steel Disc DSC-006.	4.03 Lbs	1432 Lbs	4230 in-lb	144,000 ft-lb	\$554 USD
JA-51	5.00-5" Wheel with brake: high energy Aerotec® 2 piston Caliper EA-04, stainless steel Disc DSC-008	5,18 Lbs	1444 Lbs	5800 in-lb	210,000 ft-lb	\$686 USD
JA-52	4.00-5" Wheel with brake: high energy Aerotec® 2 piston Caliper EA-04, stainless steel Disc DSC-008	4,95 Lbs	1444 Lbs	5800 in-lb	210,000 ft-lb	\$686 USD
JB-01	5.00-5" Nose wheel	2,69 Lbs	1432 Lbs			\$398 USD
JB-02	4.00-5" Nose wheel	2,47 Lbs	1432 Lbs			\$398 USD
ZJB01	Cap for 5" wheel	2 oz				\$68 USD

WHEEL 6" light

- Static load: 400kg (881 Lbs) Limit load: 1600kg (3526 Lbs)
- TUBELESS three pieces plus O-ring and rigid valve
- 2017 Aluminium alloy machined from solid on CNC
- Conforms to TRA 2007 standards
- ISO standard sealed ball bearings for optimal durability: 25mm (1") outer, 30mm (1.18") inner

CALIPER AEROTEC® 2P for wheel 6" light

- 2 austenitic stainless steel polished pistons
- Body made of aerospace alloy to withstand high temperatures (>200Mpa at 390°F)
- To be used with DOT 4 fluid, 2 inputs, thread size M10x1
- Maximum operating pressure: 870 psi, tested limit pressure: 1740 psi.
- Brake torque of 4230 in-lb (at maximum operating pressure)
- Normal Kinetic Energy: 120,000 ft-lb Maximum R.T.O Kinetic Energy: 144,000 ft-lb
- Caliper is fixed with a floating disc (covered by Aerotec patents)
- Sintered brake pads allow very high friction temperature (> 1100°F) and very long life



2 piston AEROTEC® Caliper with sintered metal pads

Ref: 1Lb ↔ 0.45 kg

TUBELESS WHEELS

PATENTED

Part #	DESCRIPTION	weight	Static load	Brake torque	Max RTO Energy	Unit Price
JAA01	6.00-6 light Wheel with Aerotec® 2 piston caliper EA-01 and stainless steel Disc DSC-006	4.63 lbs	881lbs	4230 in-lb	144,000 ft-lb	\$598 USD
JAA02	4.00-6 light Wheel with Aerotec® 2 piston caliper EA-01 and stainless steel Disc DSC-006	4.25 lbs	881lbs	4230 in-lb	144,000 ft-lb	\$598 USD
JBA01	6.00-6 light Nose wheel (CNC machined - tubeless mounting)	3.10 lbs	881lbs			\$449 USD
JBA02	4.00-6 light Nose wheel (CNC machined - tubeless mounting)	2.73 lbs	881lbs			\$449 USD
ZJB02	Cap for 6" light Wheel aluminium CNC machined, anodized	2 oz				\$68 USD

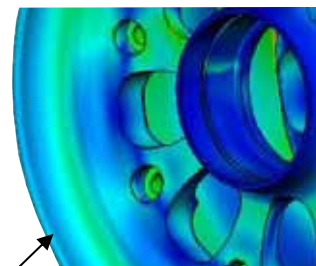
All prices are quoted in US dollars

Wheel	Tire Application Chart
JAA01	600-6" 7.00-6" 800-6" 15x600-6"
JBA01	6" 8.50-6" 26" 29" 31"
JAA02	4.00-6" 15x6.00-6" 13x5.00-6"
JBA02	6.00-6"

CAUTION: static load valid only with appropriate tire

CAP FOR WHEEL

- Anodized cap for wheel
- Alloy: 2017 (AU4G) machined from billet on CNC



FEM calculated and checked

FINISH: Red anodizing is standard color for wheels, brakes and master cylinders. Other colors are available on special order at an additional cost of \$96 per batch of parts: silver, blue, black, yellow, titanium grey. Hard Nickel is also available for the wheels with a lead time and an extra cost of \$178

Free and Recommended: We urge you to have us mount your first tires at our plant. This service, free of charge, includes a pressure test, ensuring maximum security of the assembly.

26" BUSH WHEEL with TIRE

Thanks to their incredible 620mm diameter and very low pressure (0,6 bar), the new BUSH WHEELS will allow you to approach landings across water, to land on riverbeds, and on soft or rough terrain. They offer you a new dimension of freedom.

The BUSH WHEEL includes the famous BERINGER 2-piston brake, fully capable of delivering all the torque required by the large-diameter tire. You will be able to stop your aircraft within meters and still be able to hold against full power with the brakes.

Tire 26" TUBELESS

Dimension: 620mm x 230mm

Weight: wheel with brake (caliper, pads, disc) + tire : 12.8kg

Price of the complete wheel with tire: **\$1166 USD**

Price of the tire only: **\$568 USD**



22" BUSH WHEEL with TIRE

With a 540mm diameter and low pressure (0,8 bar), the BERINGER 22" BUSH WHEEL is able to handle soft or rough terrain, expanding your landing possibilities.

With a 9.3kg weight (wheel+brake+tire), the 540mm assembly is 3.5kg lighter than the 620mm wheel above. It reduces weight and cost while maintaining high performance bush capability.

Diameter 22" TUBELESS

Dimension: 540mm x 200mm

Weight: wheel with brake (caliper, pads, disc) + tire : 9.3kg

Price of the complete wheel with tire: **\$875 USD**

Price tyre only: **\$277USD**



29" and bigger BUSH WHEEL without TIRE

wheel with double caliper system : double the braking torque

Price : wheel with two calipers and disc (without tire) : **\$777 USD**



**TUBELESS
WHEELS**



Material: aluminium anodized or high strength steel with thin nickel coating

- Different types of axle available:
 - for wheel fork (supported at both ends)
 - for cantilever installation
- FEM calculated and checked for better stress distribution

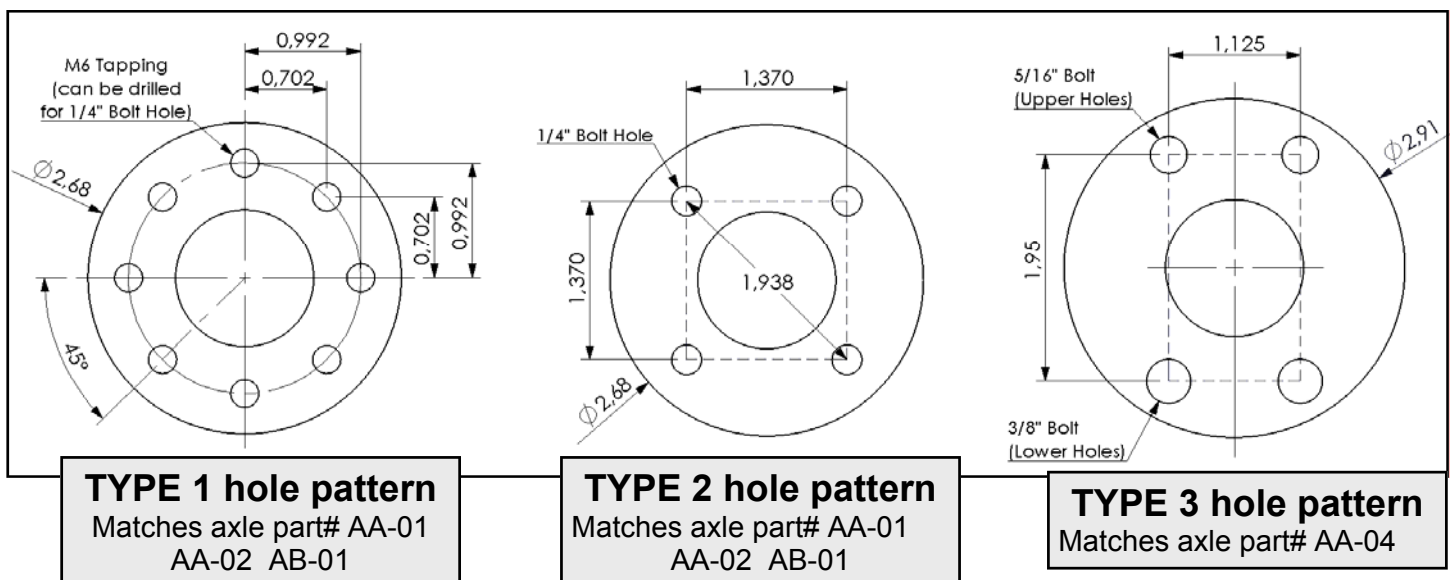
AA-06
for JD-01
3.50-4 " wheel

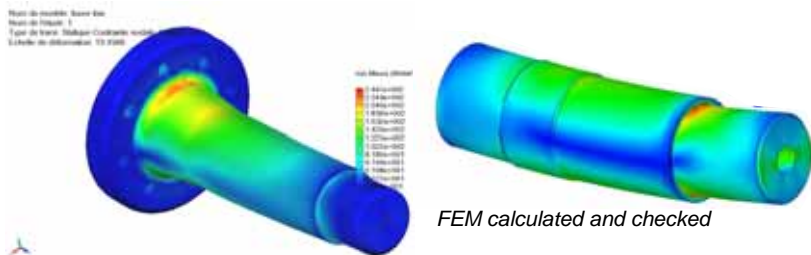


Part #	DESCRIPTION (all aluminium axles are anodized)	weight	Max Static load per axle	Limit load	Price
AA-01-T1	Aluminium Axle for JA-01 JAA-02 type 1 (8 holes)	9 oz	750 Lbs	2600 Lbs	\$110 USD
AA-01-T2	Aluminium Axle for JA-01 JA-51 JAA-02 type 2 (4 holes US 5")	9 oz	750 Lbs	2600 Lbs	\$110 USD
AA-01-T3	Aluminium Axle for JA-01 JAA-02 type 3 (4 holes US 6")	9 oz	750 Lbs	2600 Lbs	\$110 USD
AA-01-T4	Aluminium Axle for JA-01 JAA-02 type 4 (4 holes Ø8mm)	9 oz	750 Lbs	2600 Lbs	\$110 USD
AA-01-T5	Aluminium Axle for JA-01 JAA-02 type 5 (4 holes ITA)	9 oz	750 Lbs	2600 Lbs	\$110 USD
AA-01-T7	Aluminium Axle for JA-01 JAA-02 type 7 (without holes)	9 oz	750 Lbs	2600 Lbs	\$110 USD
AA-02-T1	Aluminium Axle for JA-02 type 1 (8 holes)	8 oz	950 Lbs	3400 Lbs	\$110 USD
AA-02-T2	Aluminium Axle for JA-02 JA-52 type 2 (4 holes US 5")	8 oz	950 Lbs	3400 Lbs	\$110 USD
AA-02-T7	Aluminium Axle for JA-02 type 7 (without holes)	8 oz	950 Lbs	3400 Lbs	\$110 USD
AA-03-T1	Aluminium Axle for JAA-01 type 1 (8 holes)	14 oz	772 Lbs	6173 Lbs	\$179 USD
AA-03-T2	Aluminium Axle for JAA-01 type 2 (4 holes US 5")	14 oz	772 Lbs	6173 Lbs	\$179 USD
AA-03-T7	Aluminium Axle for JAA-01 type 7 (without holes)	14 oz	772 Lbs	6173 Lbs	\$179 USD
AA-04-T3	Aluminium Axle for JAB02-HE type 3 (4 holes US 6")	1 1/2 lbs	1800 Lbs	6300 Lbs	-
AA-06	Aluminium Axle for RA-003 (4 holes)	3 oz	419 Lbs	1466 Lbs	\$91 USD
AA-07	Aluminium Axle for RA-003 (for fork)	2 1/4 oz	419 Lbs	1466 Lbs	\$56 USD
AB-01-T2	Steel Axle for JA-01 JA-51 type 2 (4 holes US 5") <i>nickel coated</i>	1 1/3 lbs	1400 Lbs	4900 Lbs	\$134 USD
ZSA01	Aluminium nut M25x1,5	0.3 oz			\$19 USD
ZSB01	Aluminium nut M35x1,5	0.5 oz			\$37 USD

All prices are quoted in US dollars

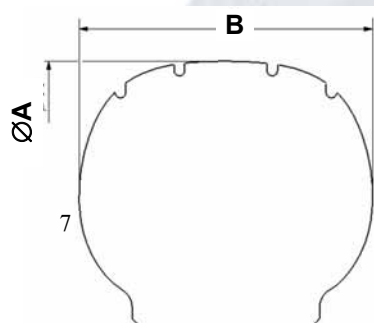
AXLE BOLT HOLE TEMPLATES (dimensions are inches)





TIRES

Part#	DESCRIPTION	ØA (inch)	B (inch)	weight	Unit Price
PAA02	Michelin Aviator 5.00-5" 10 ply TUBELESS	14.2	4.65	5.9 lbs	\$187 USD
PAB01	Michelin Air 380x150-5" 6 ply,	14.96	5.5	6.7 lbs	\$173 USD
PAB02	Michelin Aviator 15x6.00-6" 6 ply,	14.96	6.3	7 lbs	\$159 USD
PAB03	6.00-6", 4 ply	17.5	6.3	8.9 lbs	\$139 USD
PAB04	Michelin Aviator 8.00-6" 6 ply	18.9	7.8	12.9 lbs	\$187 USD
PAC01	11x4.00-5" 8 ply	11.6	3.78	3.8 lbs	\$48 USD
PAC02	15x6.00-6" 6 ply	14.75	5.1	4.9 lbs	\$45USD
PAC03	13x5.00-6" 4 ply	13.4	4.65	2.9 lbs	\$45 USD
PAC04	13x5.00-6" 8 ply	13.4	4.65	3.4 lbs	\$54 USD
PAE01	8.00-6" 4ply	17.7	7.1	8.6 lbs	\$121 USD
PAD02	8.00-6" 4 ply	18.5	7	10.3 lbs	\$175 USD
PAD01	4.00-6 6 ply	14.5	4.4	3 lbs	\$45 USD
PAF01	850-6 22" bush	21.2	7.8	16 lbs	\$277 USD
PAF02	26" TUBELESS	24.4	9	23.8 lbs	\$568 USD
PAG01	4.00-4"	11.9	3.93	2.3 lbs	\$32 USD
PAG02	3.00-4"	10.35	3.54	1.4 lbs	\$32 USD



1Lbs ↔ 0.45 kg
1 in ↔ 25,4mm

All price 1.5s are quoted in US dollars



Save 2 to 3 lbs on your experimental aircraft with lightweight BERINGER® nose wheel. Nose Wheels are aluminum red anodized, machined from billet on CNC, with O-rings for Tubeless mounting.

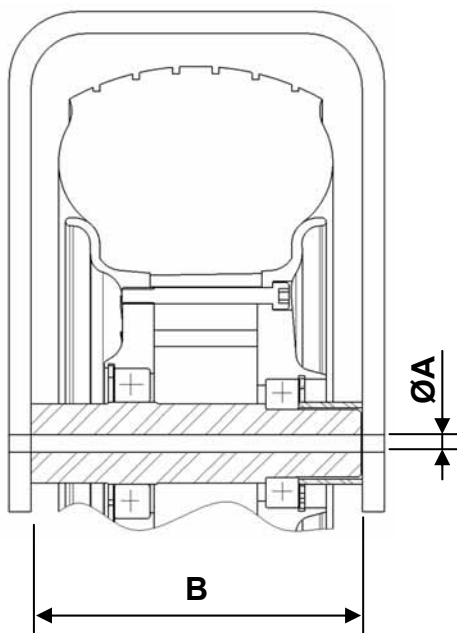
The NOSE WHEEL KIT includes:

- 1 nose wheel
- 1 tire (mounted on rim, pressure tested)
- 1 aluminium axle with bearing spacer

TUBELESS WHEELS



Aircraft Type	Wheel	Tire	axle		Weight of the kit	Kit Part n°	Price
			Ø A	B			
Lancair 320, 360 (retractable LG)	4.00-5"	11x4.00-5" 8ply	6.5mm	110.5mm	6.35 Lbs	SLC02A	\$558 USD
Lancair legacy (retractable LG)	4.00-5"	11x4.00-5" 8ply	6.5mm	110.5mm	6.35 Lbs	SLC01A	\$558 USD
Glasair III (retractable LG)	4.00-5"	11x4.00-5" 8ply	6.5mm	120.65mm	6.35 Lbs	SGL01A	\$558 USD
Van's RV6A, 7A, 9A	4.00-5"	11x4.00-5" 8ply	10mm	115mm	6.35 Lbs	SRV02A	\$558 USD
Van's RV10	5.00-5"	Michelin Aviator 5,00-5" 10ply	10mm	131 mm	9.1 Lbs	SRV07A	\$649 USD
MCR 01	4.00-5"	11x4.00-5" 8ply	20mm	129mm	6.35 Lbs	SDY01A	\$558 USD
Zenair CH 601XL	4.00-6"	13x5.00-6" 4ply	8mm	141mm	6.22 Lbs	SZH02A	\$585 USD
Standard BERINGER®	4.00-5"	11x4.00-5" 8ply	20mm	115-129mm	6.35 Lbs	SST02	\$498 USD
Standard BERINGER®	5.00-5"	Michelin Aviator 5,00-5" 10ply	20mm	137-145mm	8.77 Lbs	SST03	\$649 USD
Standard BERINGER®	4.00-6"	13x5.00-6" 4 ply	20mm	125-145mm	6.22 Lbs	SST04	\$558 USD
Standard BERINGER®	4.00-5"	11x4.00-5" 8ply	12mm	108mm	6.35 Lbs	SST02	\$498 USD



All prices are quoted in US dollars



Other kits are available.
Please contact us
contact@beringer-aero.com

COMPLETE KITS FOR MAIN LANDING GEAR see following pages



Upgrade your aircraft and save 6 to 10 lbs with high performance BERINGER® wheels and brakes. Complete main wheel and brake sets are designed to mount directly, replacing original equipment. Wheels are aluminum red anodized, fully CNC machined, with O-rings for Tubeless mounting. Brake calipers use sintered metallic pads and stainless steel pistons for increased life.

Wheel & brake set includes:

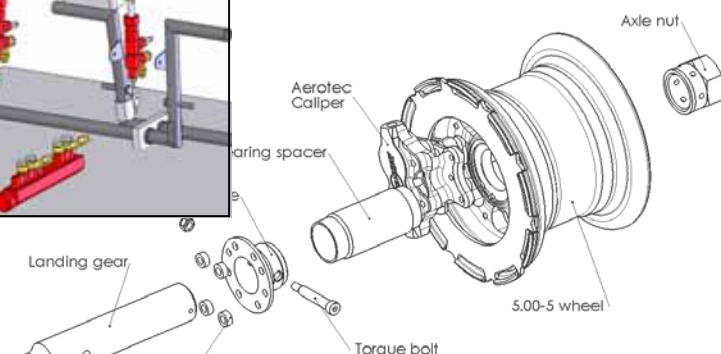
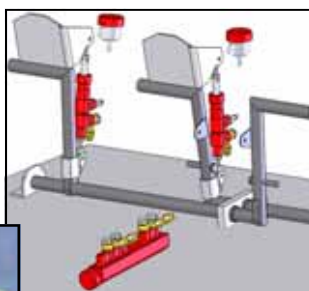
- 2 wheels 5" with reinforced calipers and stainless steel discs
- 2 tires (mounted and pressure tested)
- 2 axles or 2 sets of adaptation parts (as required)
- master cylinders & 2 fluid reservoirs
- 1 parking brake valve
- 1 anti-lock regulator
- stainless steel brake lines
- detailed mounting instructions.

PATENTED



Aircraft Type	Wheels	Tires	Other parts	Brake fluid	Part #	Price
Van's RV6, 7, 9	JA-51	Michelin Aviator 5,00-5", 10ply	4 master cylinders HBA01	DOT4	SRV01	\$3,875 USD
Van's RV6, 7, 9	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01 No parking brake valve	DOT4	SRV06	\$3,219 USD
Van's RV6A, 7A, 9A	JA-51	Michelin Aviator 5,00-5", 10ply	4 master cylinders HBA01	DOT4	SRV02	\$3,875 USD
Van's RV6A, 7A, 9A	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01 No parking brake valve	DOT4	SRV05	\$3,219 USD
Van's RV8	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01	DOT4	SRV03	\$3,249 USD
Van's RV8A	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01	DOT4	SRV04	\$3,321 USD
Lancair 320/360 (retractable LG)	JA-52	11x4.00-5", 8ply	4 master cylinders HBA01	DOT4	SLC02	\$3,349 USD
Lancair 320/360 (retractable LG)	JA-52	11x4.00-5", 8ply	2 master cylinders HBA01 No parking brake valve	DOT4	SLC04	\$2,706 USD
Lancair legacy (retractable LG)	JA-51	Michelin Aviator 5,00-5", 10ply	4 master cylinders HBA01	DOT4	SLC01	\$3,889 USD
Lancair legacy (retractable LG)	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01 No parking brake valve	DOT4	SLC03	\$3,178 USD
Glasair III (retractable LG)	JA-51	Michelin Aviator 5,00-5", 10ply	4 master cylinders HBA01	DOT4	SGL01	\$3,814 USD
Glasair III (retractable LG)	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01 No parking brake valve	DOT4	SGL02	\$3,179 USD
Falco	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01	DOT4	SFA01	\$3,875 USD
Furio	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01	DOT4	SFU01	\$3,875 USD

**TUBELESS
WHEELS**



All prices are quoted in US dollars

Wheel & brake SET for Ultraleight & Home Built Aircraft p.10

Upgrade your aircraft and save 6 to 10 Lbs with high performance BERINGER® wheels and brakes. Complete main wheel and brake sets are designed to mount directly, replacing original equipment. Wheels are aluminum red anodized, fully CNC machined, with O-rings for Tubeless mounting.
Brake calipers use sintered metallic pads and stainless steel pistons for increased life.

The wheel & brake set includes:

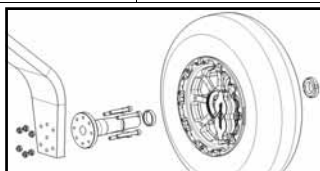
- 2 wheels with caliper and stainless steel discs
- 2 Tires
- 2 axles
- master cylinders with reservoir
- 1 anti-lock regulator or ultra light pressure limiter
- stainless steel brake lines
- detailed mounting instructions.



Aircraft Type	wheels	tires	Other parts	Brake fluid	Part #	Price
Air Création Tanarg	-	-	1 regulator with brake lines	DOT4	SAC01	\$528 USD
BOT Speedcruiser	JAA02	4.00-6" 6 ply	1 rudder master cylinder HBA01	DOT4	SBT01	\$2390 USD
Breezer	JA-01	5.00-5" 10ply	2 rudder master cylinders HBA01	DOT4	SBR01	\$2465 USD
C42 COMCO Ikarus	JAA02	15 x 6.00-6" 6ply	1 hand master cylinder HAB02	DOT4	SCC01	*
Dynamic WT9	JAA02	15 x 6.00-6" 6ply	1 rudder master cylinder HBA01	DOT4	SAE02	\$2566 USD
Dynamic WT9 Speed	JAA02	15 x 6.00-6" 6ply	1 rudder master cylinder HBA01	DOT4	SAE01	\$2709 USD
Eurostar EVEKTOR	JAA02	15 x 6.00-6" 6ply	2 rudder master cylinders HBA01	DOT4	SEU01	\$2639 USD
Flight Design CTSW 2007	JAA02	15 x 6.00-6" 6ply	2 rudder master cylinders HBA01	DOT4	SFD01	\$2343 USD
Gaz'Aile	JA-02	11X4.00-5" 8 ply	1 hand master cylinder HAB02	DOT4	SGZ01	\$2178 USD
FK9- FK14	JAA02	4.00-6" 6 ply	1 hand master cylinder HAB02	DOT4	SFK01	\$2388 USD
G1 aviation	JAA02	8.00-6" 4ply	1 hand master cylinder HAB02	DOT4	SGA01	\$2388 USD
Jabiru J400/J430	JA-51	5.00-5" 10ply	2 rudder master cylinders HBA01	DOT4	SJU01	\$2965 USD
Ibis	JA-02	11X4.00-5" 8 ply	1 central mounting master cylinder	DOT4	SIB01	\$2218 USD
Jabiru J400/J430	JA-31	5.00-5" 10ply	1 hand master cylinder HAB02	DOT4	SJU05	\$2709 USD
Jabiru J170	JAA02	4.00-6" 6 ply	2 rudder master cylinders HBA01	DOT4	SJU03	\$2765 USD
Jabiru J170	JAA02	4.00-6" 6 ply	1 hand master cylinder HAB02	DOT4	SJU04	\$2514 USD
Jodel D20 ULM	JA-01	5.00-5" 10ply	2 rudder master cylinders HBA01	DOT4	SJD01	\$2639 USD
MCR01 (rudder)	JA-02	11X4.00-5" 8 ply	2 rudder master cylinders HBA01	DOT4	SDY01	\$2651 USD
MCR01 (hand)	JA-02	11X4.00-5" 8 ply	1 hand master cylinder HAB02	DOT4	SDY02	\$2376 USD
Mysky NG4	JA-01	5.00-5" 10ply	2 rudder master cylinders HBA01	DOT4	SMS01	\$2688 USD
Norécrin, Nord 1200, 1201, 1202, 1203	JAB01	6.00-6	4 rudder master cylinders HBA01	DOT4	SNR01	\$3315 USD
Pioneer 300	JAA02	4.00-6" 6 ply	1 rudder master cylinder HBA01	DOT4	SPI01	\$2628 USD
RANS Coyote	JAA02	15 x 6.00-6" 6ply	2 rudder master cylinders HBA02	DOT4	SRA01	\$2543 USD
Savannah	JAA02	15 x 6.00-6" 6ply	1 hand master cylinder HAB02	DOT4	SSV01	\$2178 USD
Pipistrel Sinus, Virus	JAA02	4.00-6" 6 ply	2 maître cylindres palonnier HBA01	DOT4	SPP01	\$2543 USD
Pipistrel Sinus, Virus	JAA02	4.00-6" 6 ply	4 maître cylindres palonnier HBA01	DOT4	SPP01	\$3164 USD
Skyranger - Nynja	JAA02	4.00-6" 6 ply	1 hand master cylinder HAB02	DOT4	SSK01	\$2192 USD
Sting Carbon TL	JA-02	11X4.00-5" 8 ply	1 maître cylindre manche HAB01	DOT4	SSC01	\$2482 USD
STORM Century	JA-02	11X4.00-5" 8 ply	1 hand master cylinder HAB02	DOT4	STR01	\$2099 USD
Vampyr Century	JAA02	4.00-6" 6 ply	1 hand master cylinder HAB02	DOT4	SVA01	\$2192 USD
VL3 AVEKO	JAA02	4.00-6" 6ply	2 rudder master cylinders HBA01	DOT4	SVK01	*
Zenair CH601XL	JAA02	15x6,00-6" 6ply	2 rudder master cylinders HBA01	DOT4	SZH05	\$2628 USD
Zlin Savage 5 (tire < 29 ")	JAA01	-	2 rudder master cylinders HBA03	DOT4	SSA01	\$2711 USD
Zlin Savage 5 (tire > 29 ")	JAA-01 + 2 extra calipers	-	2 rudder master cylinders HBA03	DOT4	SSA02	\$3087 USD

* please ask us

Tire dimensions can be changed



All prices are quoted in US dollars

Upgrade your glider and save 3 to 8 Lbs with high performances BERINGER® wheels and brakes. These complete wheel and brake sets are designed to mount directly, replacing original equipment. Wheels are aluminum red anodized, fully CNC machined, with O-rings for Tubeless mounting. Brake calipers use sintered metallic pads and stainless steel pistons for increased life time.

The wheel & brake set includes:

- 1 wheel with caliper 2P and stainless steel disc
- 1 tire + 1 axle
- 1 master cylinder with reservoir
- 1 ultra light pressure limiter
- Stainless steel brake line
- Detailed mounting procedure



Type of glider	wheel	tire	Other parts	Brake fluid	Price without tax
Glasflügel H201Libelle	JA-02	11x4.00-5	1 hand master cylinder HAB02	DOT4	*
HPH 304S	JA-01	5.00-5	1 rudder master cylinder HBA01	DOT4	*
LAK-17BT	JA-01	5.00-5	1 hand master cylinder HAB02	DOT4	*
Neukom Elfe S4	JA-02	11x4.00-5	1 hand master cylinder HAB02	DOT4	*
Nimbus 3 et 4	JA-01	380x150-5	1 master cylinder hydr/cable HAC01	DOT4	*
Pégase	JA-01	5.00-5	1 hand master cylinder HAB02	DOT4	*
Stemme S6	JA-01	5.00-5	2 hand master cylinderS HAB02	DOT4	*
Schempp Hirth Ventus 2	JA-02	5.00-5	1 master cylinder hydr/cable HAC01	DOT4	\$2184 USD
Schempp Hirth Duo, Arcus	JA-01	380x150-5	1 master cylinder hydr/cable HAC01	DOT4	\$2621 USD
Schleicher ASW17	JA-02	5.00-5	1 hand master cylinder HAB02	DOT4	*
Schleicher ASW20	JA-01	5.00-5	1 hand master cylinder HAB02	DOT4	*
Schleicher ASW22	JA-01	5.00-5	1 hand master cylinder HAB02	DOT4	*
Test Bonus	JA-01	5.00-5	2 hand master cylinders HAB02	DOT4	*

All prices are quoted in US dollars

* ask us



HAND MASTER CYLINDER AEROTEC®

- available built-in reservoir or remote reservoir (to be ordered separately)
- parking brake valve optional
- three ball bearing for smooth operation, long life
- Covered with the world-wide AEROTEC® patents, it brings exceptional brake feeling
- Machined from billet on CNC
- Weight: 285g - 10 oz
- mounts on 22 mm (7/8") axle or directly on flat surface with 2 screws
- Works in all position



MASTER CYLINDER CABLE actuated

Built-in reservoir, delivered with aluminium support.

Actuated with sleeved cable. Can be installed in the fuselage



HAC01



HAB04

CENTRAL MOUNTING MASTER CYLINDER

All in one: lever, master cylinder, sealed reservoir. To be mounted on Ø22mm axle or on support with two 6mm screws.

Part #	DESCRIPTION	weight	Price
HAB01	Built-in master cylinder	11 oz	\$352 USD
HAB02	Built-in master cylinder with mechanical parking brake valve	11 oz	\$377 USD
HAA03	Additional master cylinder to mount in serie (double braking control). To be used with primary HAB01 or HAB02	10 oz	\$377 USD
HAC01	Master cylinder CABLE actuated with support	11 oz	\$352 USD
HAB04	CENTRAL MOUNTING Master cylinder built-in reservoir	11 oz	\$377 USD

MASTER CYLINDER for Rudder pedals

- Piston diameter: 12.7 mm (1/2 ")
- Piston maximum travel : 20 to 22mm (3/4 to 7/8")
- Generated volume : 1.5 cubic inch
- threaded connections: M10x1
- Spherical rod ends: M6x1 (male).
- Machined from solid on CNC
- Allows the mounting of 2 master cylinders in series (for right and left seat) see page 16



Part #	DESCRIPTION	weight	Price
HBA01	Master cylinder for rudder pedals 170mm - 6.7" (2x spherical rod ends)	5 oz	\$261 USD
HBA02	Master cylinder longer for rudder pedals 190mm - 7.5" (1x spherical rod end + 1 fork)	5 oz	\$261 USD
HBA03	Master cylinder for rudder pedals 145mm - 5.7" (1x spherical rod end)	4,5 oz	\$261 USD

All prices are quoted in US dollars

Remote RESERVOIR

- Transparent reservoir with CNC aluminium cover and visible fluid level
- Incorporates tight bellows
- with mounting kit and hose
- Weight : 39g (1 1/2 oz)



Integral RESERVOIR ultra compact

- CNC machined from aluminium billet,
- Incorporates tight bellows
- Direct mounting on the master cylinder, 180° mounting range
- Weight : 55g (2 oz)
- Vertical or horizontal mounting



**TIGHT
100%**



Vertical mounting
side mounting

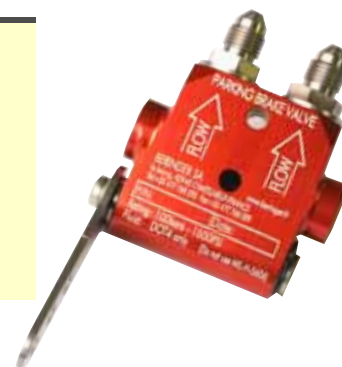


Part #	DESCRIPTION	weight	Price
HFA01	Remote reservoir kit	1 1/2 oz	\$65 USD
HFA02	Integral reservoir CNC machined for rudder master cylinder	2 oz	\$73 USD

PARKING BRAKE VALVE

Lightweight parking brake valve, billet aluminum, anodized
Available for mineral-based fluid or DOT4 brake fluid

- On/off quarter turn lever actuated
 - CNC machined from billet
 - Max. input pressure: 1450PSI (100 bar)
- Note : **BERINGER®** braking systems use only DOT4 brake fluid



available for DOT4 or mineral-based fluid

Part #	DESCRIPTION	weight	Price
HVA01	Parking brake valve DOT4 fluid	5 oz	\$298 USD
HVA02	Parking brake valve mineral fluid	5 oz	\$298 USD

All prices are quoted in US dollars



ANTI-LOCK REGULATOR

This system avoids the problem of locking brakes and increases the life of tires and brake systems (linings, disc, inner rim)

- Low hysteresis anti-lock regulator
- For aircraft with symmetrical braking systems
- Adjustment range: 10 to 40 bars (or 20 to 50 bars, with thumbwheel)
- Threaded connection: M10x1
- Machined from solid on CNC
- For DOT4 brake fluid
- Weight: 270g (9 1/2 oz)

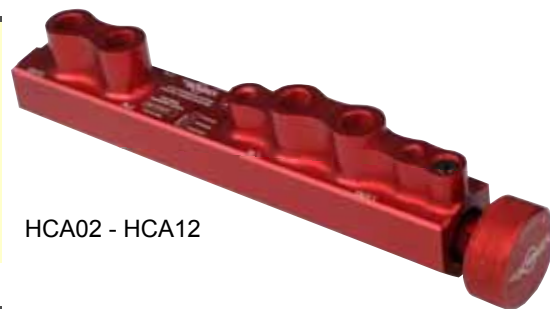


HCA01 - HCA11

In-line BALANCED ANTI-LOCK REGULATOR

Installs in-line; regulates in case of emergency overpressure

- 2 inputs, 2 outputs (thread : M10x1)
- For DOT4 brake fluid
- weight: 330g (11 1/2 oz)



HCA02 - HCA12

Ultra lightweight PRESSURE LIMITER

- Can progressively limit the pressure in the braking system at 25, 35, 45 or 60bars
- Highly recommended to avoid over pressure and damage to the brake system
- must be used with hand master cylinder
- Threaded connection: M10x1
- Machined from solid on CNC
- For DOT4 brake fluid
- Weight: 65 g (2 oz)



Smaller than a marker

HZA01-HZA02-HZA03-HZA04

Part #	DESCRIPTION		weight	Price
HCA01	Anti-lock regulator 10 to 40 bar	brake fluid DOT4	9 1/2 oz	\$197 USD
HCA11	Anti-lock regulator 20 to 50 bar	brake fluid DOT4	9 1/2 oz	\$197 USD
HCA02	In-line balanced anti-lock regulator 10 to 40 bar	brake fluid DOT4	11 1/2 oz	\$197 USD
HCA12	In-line balanced anti-lock regulator 20 to 50 bar	brake fluid DOT4	11 1/2 oz	\$197 USD
HZA04	Ultralight pressure limiter 25 bar	brake fluid DOT4	2 oz	\$126 USD
HZA01	Ultralight pressure limiter 35 bar	brake fluid DOT4	2 oz	\$126 USD
HZA02	Ultralight pressure limiter 45 bar	brake fluid DOT4	2 oz	\$126 USD
HZA03	Ultralight pressure limiter 60 bar	brake fluid DOT4	2 oz	\$126 USD

All prices are quoted in US dollars



1 bar ↔ 14.5 psi
1 psi ↔ 0.069 bar

PATENTED

30% of accidents occurring on the ground are due to a bad control of the brakes

Avoid all these risks with the BERINGER ALIR on your aircraft



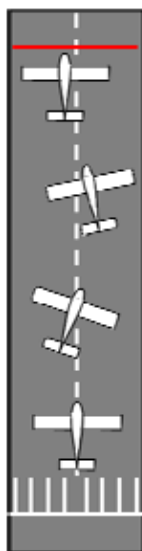
ALIR System
Anti Lock
In line
Regulator



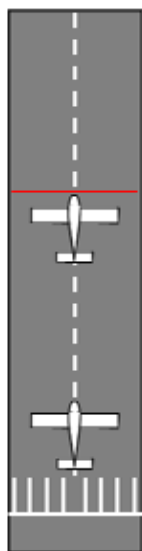
ALIR PRESSURE REGULATOR allowing a ± 1 bar maximum reference pressure and an equi-pressure left-right

**a real advance
in term of safety**

ALIR



Without ALIR



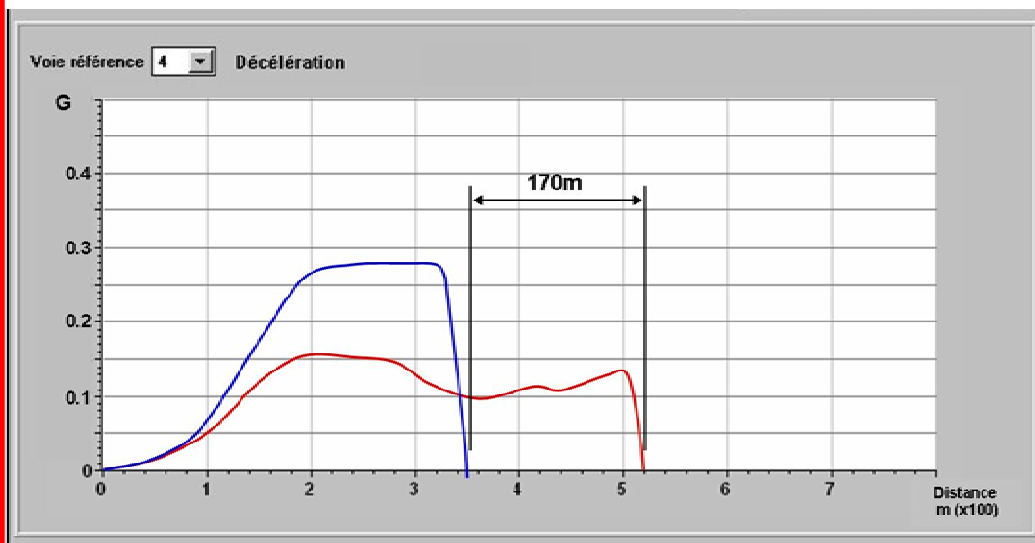
with ALIR

The ALIR system allows the control of the direction on the ground with differential braking.

The system can be installed on certain old aircraft.

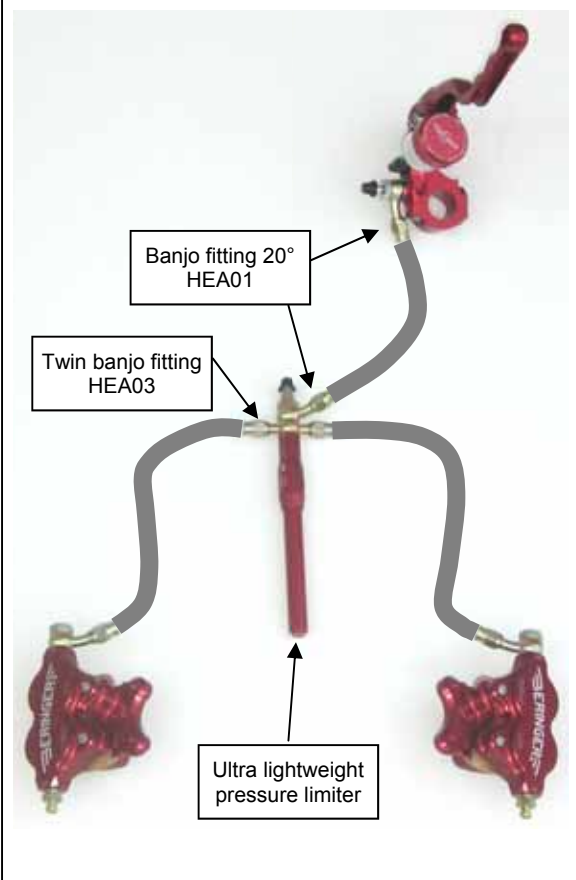
EMERGENCY BRAKING : comparison of:

- blue curve : with ALIR: the pilot applies full braking without any control (similar to a car ABS)
 - red curve: without ALIR: no regulation, the pilot must control the braking
- (in both cases, conditions are the same: same plane, same brakes)
Weight of the aircraft: 1200 kg (2667 Lbs), braking speed: 70 Kt



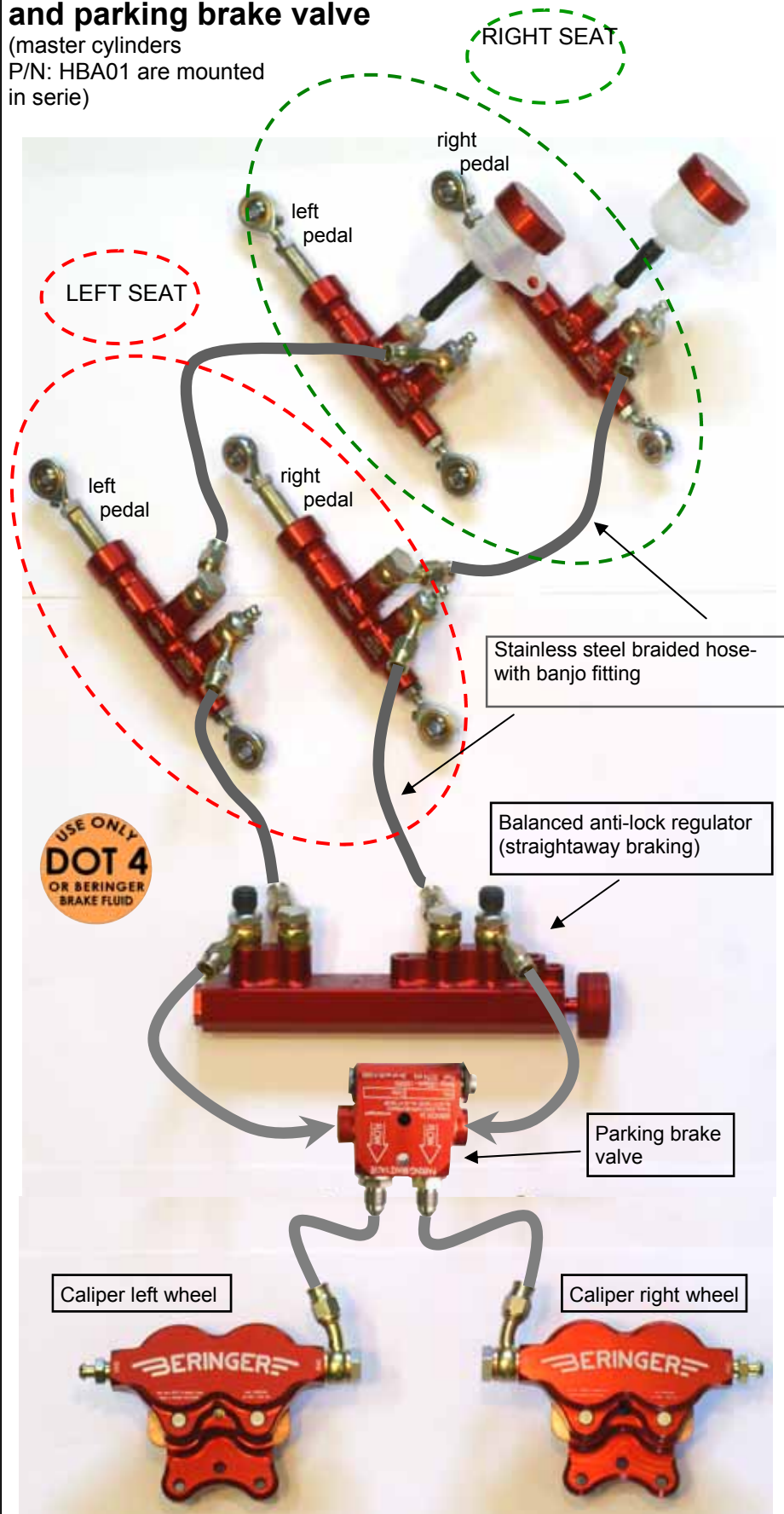
Nota: BERINGER brake pads used in the ALIR system have a friction coefficient that increases with the temperature allowing an increase of the deceleration when the lift decreases on the wings.

Ultra lightweight regulator (for symmetrical braking)



Differential braking system with in-line balanced anti-lock regulator (anti-skid & in-line braking) and parking brake valve

(master cylinders P/N: HBA01 are mounted in serie)

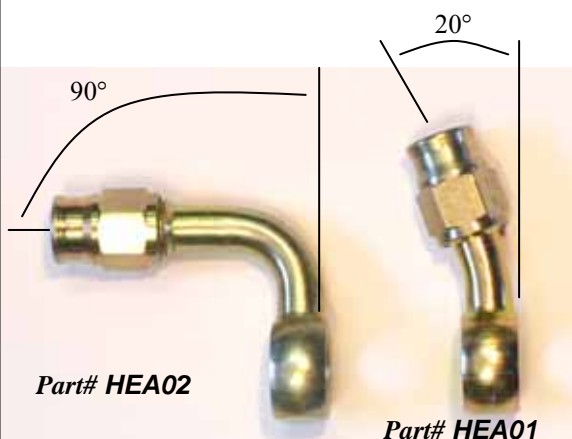


CAUTION:
BERINGER® and AEROTEC®
are registered trademarks.
BERINGER® owns 9 different
world patents protecting its uni-
que technology on master cylin-
ders, calipers, discs, brake regu-
lators and aircraft wheels.

**INFRINGERS WILL BE PRO-
SECUTED**

PATENTED

A fitting is required at each end of stainless steel hose.



Part# HDB01



Stainless steel hose braided for brake lines



CHOOSE your fittings, length and ORDER YOUR BRAKE LINE READY TO USE



Ask for special brake line ORDER FORM

Part #	DESCRIPTION	Price
HDA01	EPDM hose for reservoir, specific for DOT4 brake fluid	Per foot \$3 USD
HJA01	High performance Brake fluid DOT4	30 cu.in. (492 cc, 16.6 oz US) \$39 USD
HJA02	High performance Brake fluid DOT5 Silicone base (longer life time) DOT5 cannot be mixed with DOT4.	20 cu.in (328 cc, 11.1 oz US) \$49 USD
HDB01	Stainless steel hose, braided, PTFE high temperature inner tube	Per foot \$6 USD
HEA01	Banjo fitting 20°	\$16 USD
HEA02	Banjo fitting 90°	\$23 USD
HEA03	Banjo twin	\$49 USD
HEA04	Straight fitting, male M10x1	\$20 USD
HEA05	Brake adaptor Metric M10x1 to JIC 7/16x20	\$13 USD
HEA08	Straight fitting, female concave seat 7/16x20 (stainless)	\$49 USD
HEA09	Straight fitting, female concave seat 3/8x24 (stainless)	\$35 USD
ZGA01	Cushioned tube clamps for stainless steel hose	(contains 10 clamps) \$10 USD

All prices are quoted in US dollars

BRAKE LINES for RV's

Retrofit your RV with stainless brake lines :

- BERINGER® Brake hose is stainless steel braided with PTFE inner tube and stainless steel fittings. It provides consistent brake pedal pressure without spongy feeling. The flexibility allows landing gear leg movements and avoids leakage that appears with hardline tube. Each brake line connect brake caliper to fuselage connector: straight fittings, female concave seat 7/16x20.
- Each brake line is pressure tested and delivered with certificate.



Part #	DESCRIPTION	length	Price
HED01	Set of 2 Brake lines for RV6, 7, 9	1100mm (x2)	\$198 USD
HED02	Set of 2 Brake lines for RV6A, 7A, 9A	850mm (x2)	\$198 USD

1 inch ↔ 25,4mm

- Designed and produced following the ADOA et POA (PART21G) agreement
- high resistance CRO-MO steel
- Fully machined on CNC
- Stabilizing heat treatment to limit heat distorsion
- Anticorrosion coating for easy running

CRO-MO alloy

longer life, maintenance reduced

Part #	DESCRIPTION	Price
AV-ROB-001	Disque de frein pour DR400	\$310 USD

Delivered with EASA Form1

BRAKING DISCS for BERINGER® wheels

Part #	DESCRIPTION	Price
DSC-006	Stainless steel brake disc for Aerotec® caliper 2P EA-01 (thickness 3.2mm)	\$65 USD
DSC-008	Stainless steel brake disc for Aerotec® caliper 2P EA-04 (thickness 4.2mm)	\$76 USD
DSC-009	Stainless steel brake disc for Aerotec® caliper 2P EA-05 (thickness 5.8mm)	\$133 USD



SPECIFIC TOOLS

BERINGER® TOOL for tire changing

- Specific tire change tool for BERINGER® wheels with conical aluminum spacer : eases mounting of tire on wheel half.
- Plywood flanges steady tire while positioning second wheel half with the O-ring.
- Includes: Plywood flanges, bolts with butterfly nut and conical aluminum spacer

Part#	DESCRIPTION	Price
OPA01	Tire change tool for 5" wheels	\$125 USD
OPA02	Tire change tool for 6" wheels	\$147 USD



BRAKE PRESSURE BLEEDER helps the bleeding by sending the brake fluid under pressure in the line. Delivered with manometer, hose and fittings

WARNING: the o'ring located between the rims and spacer must be replaced at each tire changing.

TIRE LUBRICANT

Spray of professional liquid soap, Michelin BIB'UP

SPRAY ANTI-PUNCTURE

to spray into the tire in case of puncture

Part#	DESCRIPTION	Price
ONA01	Spray Michelin Bib Up	\$30 USD
ONB01	Spray anti-puncture	\$30 USD
ONC01	Pressure bleeder	\$110 USD

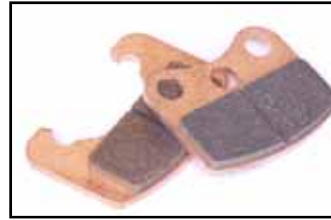


Pressure bleeder

All prices are quoted in US dollars

BRAKE PADS

- Friction material: sintered metallic
- High coefficient of friction
- Very long life
- high temperature resistant 600°C



PATENTED

Part#	DESCRIPTION	Price
ZEA01	OEM pads for BERINGER® 2p caliper EA-01 (incl. 2 pads for 1 caliper, screws & procedure)	\$53 USD
ZEA02	OEM pads for BERINGER® 2p reinforced caliper EA-03 (incl. 2 pads for 1 caliper, screws & procedure)	\$72 USD
ZEA03	OEM pads for BERINGER® 2p high energy caliper EA-04 (5") (incl. 2 pads for 1 caliper, screws & procedure)	\$72 USD
ZEA04	OEM pads for BERINGER® 2p high energy caliper EA-05 (6") (incl. 2 pads for 1 caliper, screws & procedure)	\$91 USD

REPAIR KITS

Repair kits are available for BERINGER® master cylinders, 2 and 3 piston calipers. They include all piston seals, specific grease, bearings (for master cylinders), copper seals, and instructions.

Part#	DESCRIPTION	Price
KAA01	Repair kit for BERINGER® hand master cylinders HAA03, HAB01, HAB02	\$76 USD
KAB01	Repair kit for rudder pedal master cylinder HBA01, HBA02, HBA03	\$115 USD
KBA01	Repair kit for 2 piston calipers EA-01 and EA-03	\$77 USD
KBA02	Repair kit for 3 piston caliper EA-02	\$99 USD



SPARE CLIPS

Stainless steel clips between wheel rim and disc.
Includes: 10 left and 10 right (set for 1 wheel), procedure



Part#	DESCRIPTION	Price
KCA01	Spare CLIPS for one 5" wheel (10 left and 10 right)	\$32 USD
KCA02	Spare CLIPS for one 6" Light wheel (10 pieces)	\$32 USD



O-ring seals - brake fluid - safety wire

WARNING: the o'ring located between the rims and spacer must be replaced at each tire changing.



DOT4 brake fluid

High performance DOT4 brake fluid with dry boiling point at 440°F minimum meets FMVSS 116/DOT4 specifications.

DOT4 is yellow colored and it is not compatible with brake system designed for mineral base fluids.

Part#	DESCRIPTION	Price
KDF01	O-ring seals to be replaced at each tyre changing for 5" wheel (set for one wheel)	\$14 USD
KDF02	O-ring seals to be replaced at each tyre changing for 6" and 6" light wheel (set for one wheel)	\$14 USD
ZPA01	Safety wire stainless steel (roll of 450g)	\$51 USD
HJA01	High performance Brake fluid DOT4	0.5L \$30 USD
HJA02	High performance Brake fluid DOT5 Silicone base (longer life) DOT5 cannot be mixed with DOT4.	0.35L \$36 USD

All prices are quoted in US dollars

Illustrations and photos are not contractual. Parts can be modified in the constant search for improvements.

Tim Kern - 121five.com - 863-651-6095 info@timkern.com

www.beringer-aero.com



BERINGER® BRAKES: an advanced technology



**Champion du Monde Endurance
2000, 2002, 2003**

BERINGER® has been manufacturing brakes for motorcycles in the same spirit of quality and performance for 17 years. After only a short time, BERINGER®braking products have been accepted by the well-known racing teams for their exceptional reliability, allowing BERINGER® to be used by 15 teams in the World Endurance Championships over a period of 10 years. BERINGER® was used by the 2000 and 2003 World Champion Team Phase One, 2002 with the Team ZONGSHEN, 2nd in 2005 and 3rd in 2006 with BOLLIGER Team .

Champion US Supermotard 2009

BER -

INGER® brakes for cars have also been showered

with praise in Supertourismo races with a title in 2002, 2003 and 2005 French Champion. BERINGER®also supplied the brakes for the 2003 RENAULT FRV6.

This was all made possible by a team of exceptional Mechanical Engineers who have studied and developed new products for each specific use. These innovations are covered by many patents and have allowed BERINGER®brakes to take a decisive technological lead.

Of course BERINGER®controls product quality to ensure total reliability to the users of brakes. This is evidenced by the following certifications : ISO 9001, UTAC, TÜV.

BERINGER®wheels and brakes for airplanes are using this innovating technology as well as the patents developed for car and motorcycles competition. They have allowed the creation of a product whose ratio weight/performance is without precedent.

A new standard in safety and efficiency is now available in Aircraft Brake Systems.

