



Indice A du 30-03-2011

WHEELS
&
BRAKES

2011



**Quality
and performance
since 1985**

www.beringer-aero.com



following TRA2007 (tire and rim association)

BERINGER AERO - Aéroport - Champ Eymi - 05130 Tallard
tel: (+33) 492 201 619 fax: (+33) 492 526 966 www.beringer-aero.com contact@beringer-aero.com

Ultralight 4 " WHEEL without brake suitable for

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

540 g

- 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	540g	190kg	169 €

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 45mm (1.77") 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 thins 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	3800g	950kg	5550 N.m	405,000 ft-lb	548€
ZJB03	Cap for wheel 6", aluminium CNC machined, anodized	30g				45 €

FINISH: Red anodizing is standard color for wheels, brakes and master cylinders. Other colors are available on special order at an additional cost of **48€** 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 **115€**.

All prices are quoted in Euro without tax

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 (0.98") 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	1930g	650kg	480 N.m	144,000 ft-lb	354 €
JA-02	4.00-5" Wheel with brake: Aerotec® 2 piston caliper EA-01, stainless steel Disc DSC-006.	1830g	650kg	480 N.m	144,000 ft-lb	354 €
JA-51	5.00-5" Wheel with brake: high energy Aerotec® 2 piston Caliper EA-04, stainless steel Disc DSC-008	2330 g	650 kg	672 N.m	210,000 ft-lb	440 €
JA-52	4.00-5" Wheel with brake: high energy Aerotec® 2 piston Caliper EA-04, stainless steel Disc DSC-008	2230 g	650 kg	672 N.m	210,000 ft-lb	440 €
JB-01	5.00-5" Nose wheel	1220g	650kg			248 €
JB-02	4.00-5" Nose wheel	1120g	650kg			248 €
ZJB01	Cap for 5" wheel	30g				39 €

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
- Following TRA 2007
- ISO standard sealed ball bearings for optimal durability: 25mm (1") outer, 30mm (1.18") inner

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



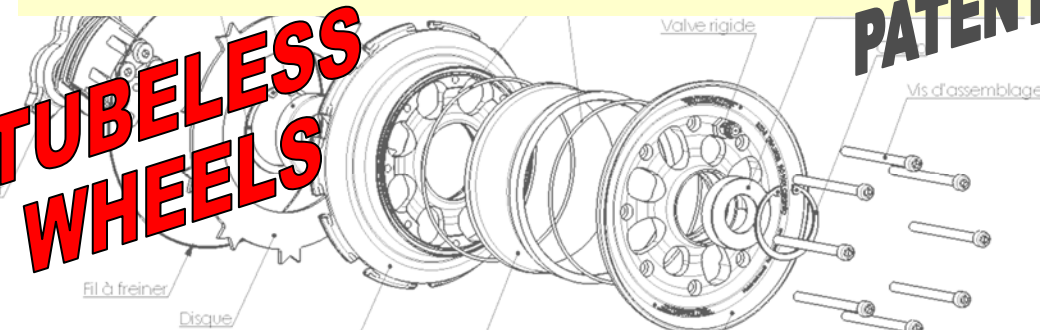
USE ONLY
DOT 4
OR BERINGER
BRAKE FLUID



2 piston AEROTEC® Caliper with sintered metal pads

**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	2100g	400 kg	480 N.m	144,000 ft-lb	378 €
JAA02	4.00-6 light Wheel with Aerotec® 2 piston caliper EA-01 and stainless steel Disc DSC-006	1930g	400 kg	480 N.m	144,000 ft-lb	378 €
JBA01	6.00-6 light Nose wheel (CNC machined - tubeless mounting)	1410g	400 kg			282 €
JBA02	4.00-6 light Nose wheel (CNC machined - tubeless mounting)	1240g	400 kg			282 €
ZJB02	Cap for 6" light Wheel aluminium CNC machined, anodized	30g				39 €

All prices are quoted in Euro without tax

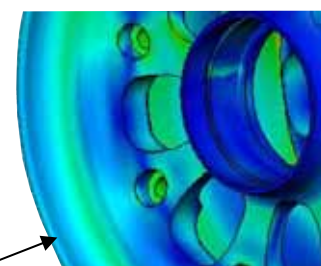
Wheel	Tire Application Chart
JAA01	600-6" 7.00-6" 800-6" 15x600-6"
JBA01	6" 8.50-6" 26" 29" 31"
JAA02	4.00-6" 15x6.00-6" 13x5.00-6"
JBA02	6.00-6"

CAUTION: static load valid only with appropriate tire

1Lbs ↔ 0.45 kg

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 48€ 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 115€.

WE RECOMMEND FIRST MOUNTING OF TIRES ON WHEELS IN 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: **778 €**

Price of the tire only: **399.70 €**

NEW

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: **574 €**

Price tyre only: **194.82 €**

NEW

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) : **498 €**

**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

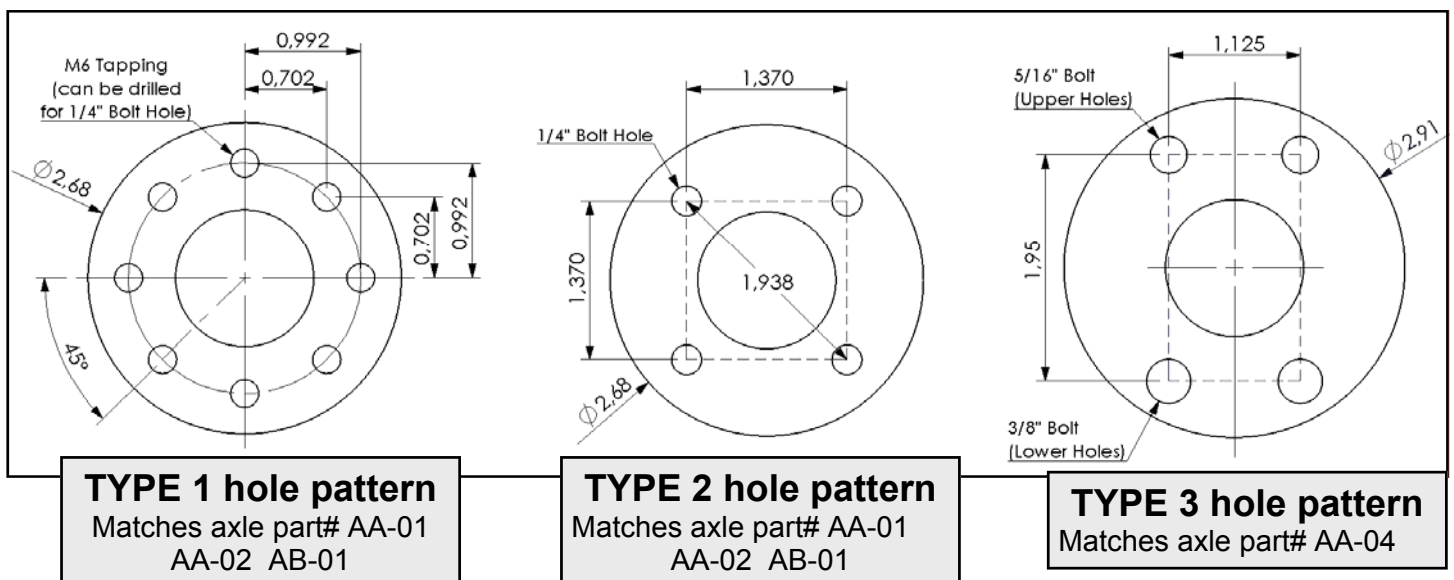
AA-06
for JD-01
3.50-4 " wheel

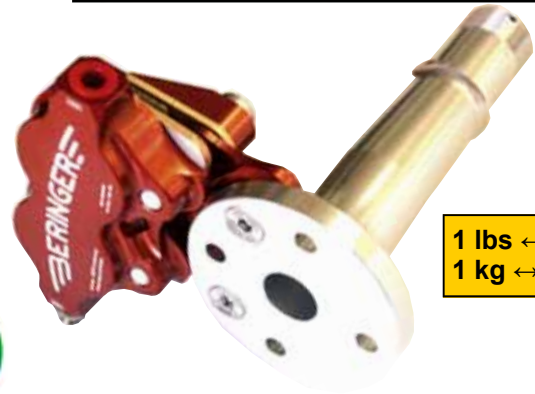
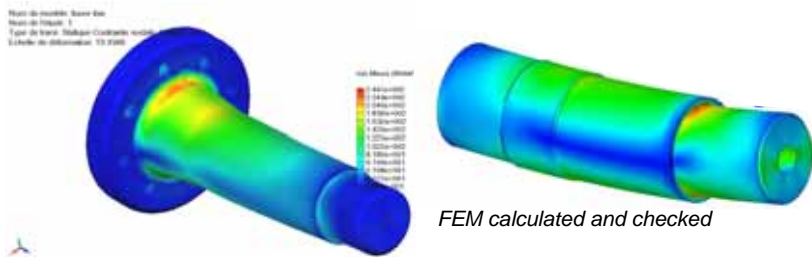


Part #	DESCRIPTION (all aluminium axles are anodized)	weight	Max Static load per axle	Limit load	Price
AA-01-T1	Aluminium Axle for JA-01 JAA-02 type 1 (8 holes)	240 g	350 kg	1250 kg	64€
AA-01-T2	Aluminium Axle for JA-01 JA-51 JAA-02 type 2 (4 holes US 5")	240 g	350 kg	1250 kg	64€
AA-01-T3	Aluminium Axle for JA-01 JAA-02 type 3 (4 holes US 6")	240 g	350 kg	1250 kg	64€
AA-01-T4	Aluminium Axle for JA-01 JAA-02 type 4 (4 holes Ø8mm)	240 g	350 kg	1250 kg	64€
AA-01-T5	Aluminium Axle for JA-01 JAA-02 type 5 (4 holes ITA)	240 g	350 kg	1250 kg	64€
AA-01-T7	Aluminium Axle for JA-01 JAA-02 type 7 (without holes)	240 g	350 kg	1250 kg	64€
AA-02-T1	Aluminium Axle for JA-02 type 1 (8 holes)	210 g	450 kg	1600 kg	64 €
AA-02-T2	Aluminium Axle for JA-02 JA-52 type 2 (4 holes US 5")	210 g	450 kg	1600 kg	64 €
AA-02-T7	Aluminium Axle for JA-02 type 7 (without holes)	210 g	450 kg	1600 kg	64 €
AA-03-T1	Aluminium Axle for JAA-01 type 1 (8 holes)	400 g	350 kg	2800 kg	98 €
AA-03-T2	Aluminium Axle for JAA-01 type 2 (4 holes US 5")	400 g	350 kg	2800 kg	98 €
AA-03-T7	Aluminium Axle for JAA-01 type 7 (without holes)	400 g	350 kg	2800 kg	98 €
AA-04-T3	Aluminium Axle for JAB02-HE type 3 (4 holes US 6")	630 g	800 kg	2800 kg	-
AA-06	Aluminium Axle for RA-003 (4 holes)	80 g	190 kg	665 kg	-
AB-01-T2	Steel Axle for JA-01 JA-51 type 2 (4 holes US 5") <i>nickel coated</i>	620 g	650 kg	2300 kg	86 €
ZSA01	Aluminium nut M25x1,5	5 g			5.9 €
ZSB01	Aluminium nut M35x1,5	10 g			8.5 €

All prices are quoted in Euro without tax

AXLE BOLT HOLE TEMPLATES (dimensions are inches)



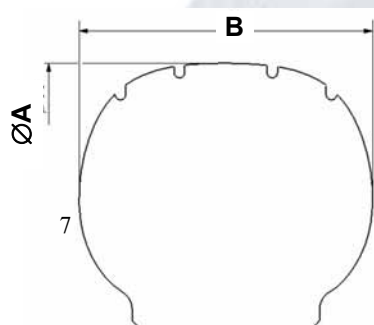


1 lbs ↔ 0.45 kg
1 kg ↔ 2.2 lbs

TIRES

Part#	DESCRIPTION		ØA (inch)	B (inch)	weight	Unit Price
PAA02	Michelin Aviator 5.00-5" 10 ply TUBELESS	Static load 2150 lbs	14.2	4.65	2640g	132 €
PAB01	Michelin Air 380x150-5" 6 ply,	Static load 1598 lbs	14.96	5.5	3000g	122 €
PAB02	Michelin Aviator 15x6.00-6" 6 ply,	Static load 1950 lbs	14.96	6.3	3150g	112 €
PAB03	6.00-6", 4 ply		17.5	6.3	3000g	98 €
PAB04	Michelin Aviator 8.00-6" 6 ply	Static load 2050 lbs	18.9	7.8	5800g	132 €
PAC01	11x4.00-5" 8 ply Tubeless	(non certified)	11.6	3.78	1580g	34 €
PAC02	15x6.00-6" 6 ply	(non certified)	14.75	5.1	2100g	32 €
PAC03	13x5.00-6" 4 ply	(non certified)	13.4	4.65	1400g	32 €
PAE01	8.00-6" 4ply	(non certified)	17.7	7.1	2970g	85 €
PAD01	4.00-6 6 ply	(non certified)	14.5	4.4	1600g	34 €
PAD02	8.00-6" 4 ply		18.5	7	5000g	-
PAF01	850-6 22" bush		21.2	7.8	7200g	194.82 €
PAF02	26" TUBELESS		24.4	9	10700g	399.70 €

All prices are quoted in Euro without tax



1Lbs ↔ 0.45 kg
1 in ↔ 25,4mm



Save up to 1.5kg 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:

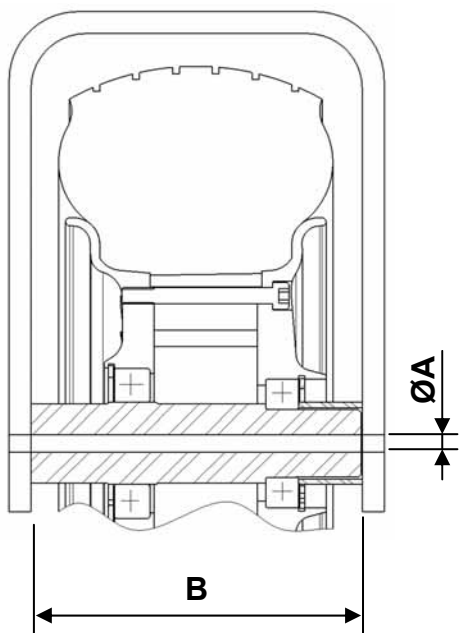
- 1 nose wheel
- 1 tire (mounted on rim, pressure tested)
- 1 aluminium axle with bearing spacer

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	2860 g	SLC02A	349 €
Lancair legacy (retractable LG)	4.00-5"	11x4.00-5" 8ply	6.5mm	110.5mm	2860 g	SLC01A	349 €
Glasair III (retractable LG)	4.00-5"	11x4.00-5" 8ply	6.5mm	120.65mm	2860 g	SGL01A	349 €
Van's RV6A, 7A, 9A	4.00-5"	11x4.00-5" 8ply	10mm	115mm	2860 g	SRV02A	349 €
MCR 01	4.00-5"	11x4.00-5" 8ply	20mm	129mm	2860 g	SDY01A	319 €
Zenair CH 601XL	4.00-6"	13x5.00-6" 4ply	8mm	141mm	2800 g	SZH02A	368 €
Standard BERINGER®	4.00-5"	11x4.00-5" 8ply	20mm	115-129mm	2860 g	SST02	298 €
Standard BERINGER®	5.00-5"	Michelin Aviator 5,00-5" 10ply	20mm	137-145mm	3950 g	SST03	398 €
Standard BERINGER®	4.00-6"	13x5,00-6" 4 ply	20mm	125-145mm	2800 g	SST04	354 €
Standard BERINGER®	4.00-5"	11x4.00-5" 8ply	12mm	108mm	2860 g	SST02	298 €

All prices are quoted in Euro without tax



Other kits are available.
Please ask us.

COMPLETE KITS FOR MAIN LANDING GEAR see following pages



Upgrade your aircraft and save 3 to 4.5 kg 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:

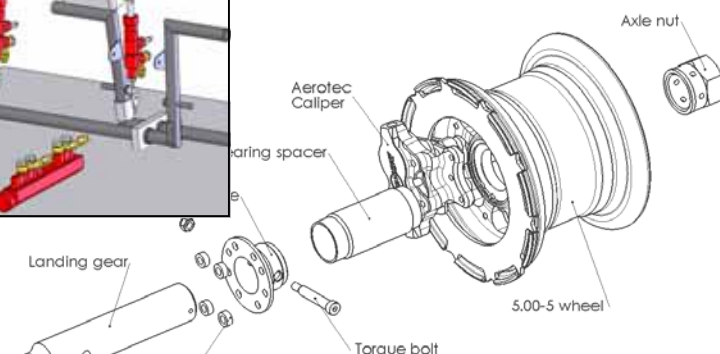
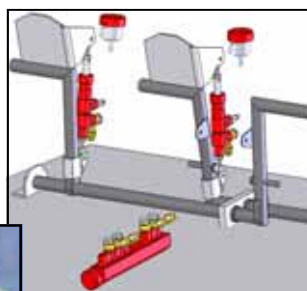
- 2 wheels 5" with reinforced calipers and stainless steel discs
- 2 tires (mounted and pressure tested)
- 2 axles or 2 sets of adaptation parts (as required)
- master cylinders & 2 fluid reservoirs
- 1 parking brake valve
- 1 anti-lock regulator
- stainless steel brake lines
- detailed mounting instructions.

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	2507 €
Van's RV6, 7, 9	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01 No parking brake valve	DOT4	SRV06	2097 €
Van's RV6A, 7A, 9A	JA-51	Michelin Aviator 5,00-5", 10ply	4 master cylinders HBA01	DOT4	SRV02	2507 €
Van's RV6A, 7A, 9A	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01 No parking brake valve	DOT4	SRV05	2097 €
Van's RV8	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01	DOT4	SRV03	2117 €
Van's RV8A	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01	DOT4	SRV04	2149 €
Lancair 320/360 (retractable LG)	JA-52	11x4.00-5", 8ply	4 master cylinders HBA01	DOT4	SLC02	2176 €
Lancair 320/360 (retractable LG)	JA-52	11x4.00-5", 8ply	2 master cylinders HBA01 No parking brake valve	DOT4	SLC04	1775 €
Lancair legacy (retractable LG)	JA-51	Michelin Aviator 5,00-5", 10ply	4 master cylinders HBA01	DOT4	SLC01	2514 €
Lancair legacy (retractable LG)	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01 No parking brake valve	DOT4	SLC03	2070 €
Glasair III (retractable LG)	JA-51	Michelin Aviator 5,00-5", 10ply	4 master cylinders HBA01	DOT4	SGL01	2468 €
Glasair III (retractable LG)	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01 No parking brake valve	DOT4	SGL02	2070 €
Falco	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01	DOT4	SFA01	2507 €
Furio	JA-51	Michelin Aviator 5,00-5", 10ply	2 master cylinders HBA01	DOT4	SFU01	2507 €

**TUBELESS
WHEELS**



All prices are quoted in Euro without tax

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

Upgrade your aircraft and save 3 to 4.5 kg 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.

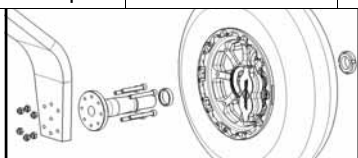
The wheel & brake set includes:

- 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	332 €
BOT Speedcruiser	JAA02	4.00-6" 6 ply	1 rudder master cylinder HBA01	DOT4	SBT01	1494 €
Breezer	JA-01	5.00-5" 10ply	2 rudder master cylinders HBA01	DOT4	SBR01	*
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	1614 €
Dynamic WT9 Speed	JAA02	15 x 6.00-6" 6ply	1 rudder master cylinder HBA01	DOT4	SAE01	1704 €
Eurostar EVEKTOR	JAA02	15 x 6.00-6" 6ply	2 rudder master cylinders HBA01	DOT4	SEU01	1660 €
Gaz'Aile	JA-02	11X4.00-5" 8 ply	1 hand master cylinder HAB02	DOT4	SGZ01	1370 €
FK9- FK14	JAA02	4.00-6" 6 ply	1 hand master cylinder HAB02	DOT4	SFK01	1502 €
G1 aviation	JAA02	8.00-6" 4ply	1 hand master cylinder HAB02	DOT4	SGA01	1502 €
Jabiru J400/J430	JA-51	5.00-5" 10ply	2 rudder master cylinders HBA01	DOT4	SJU01	1949 €
Ibis	JA-02	11X4.00-5" 8 ply	1 central mounting master cylinder	DOT4	SIB01	1386 €
Jabiru J400/J430	JA-31	5.00-5" 10ply	1 hand master cylinder HAB02	DOT4	SJU05	1707 €
Jabiru J170	JAA02	4.00-6" 6 ply	2 rudder master cylinders HBA01	DOT4	SJU03	1739 €
Jabiru J170	JAA02	4.00-6" 6 ply	1 hand master cylinder HAB02	DOT4	SJU04	1581 €
Jodel D20 ULM	JA-01	5.00-5" 10ply	2 rudder master cylinders HBA01	DOT4	SJD01	1660 €
MCR01	JA-02	11X4.00-5" 8 ply	2 rudder master cylinders HBA01	DOT4	SDY01	1667 €
Mysky NG4	JA-01	5.00-5" 10ply	2 rudder master cylinders HBA01	DOT4	SMS01	1680 €
Norécrin, Nord 1200, 1201, 1202, 1203	JAB01	6.00-6	4 rudder master cylinders HBA01	DOT4	SNR01	2085 €
Pioneer 300	JAA02	4.00-6" 6 ply	1 rudder master cylinder HBA01	DOT4	SPI01	1650 €
RANS Coyote	JAA02	15 x 6.00-6" 6ply	1 hand master cylinder HAB02	DOT4	SRA01	1370 €
Savannah	JAA02	15 x 6.00-6" 6ply	1 hand master cylinder HAB02	DOT4	SSV01	1370 €
Sinus, Virus PIPISTREL	JAA02	4.00-6" 6 ply	4 maître cylindres palonnier HBA01	DOT4	SPP01	1990 €
Skyranger - Nynja	JAA02	4.00-6" 6 ply	1 hand master cylinder HAB02	DOT4	SSK01	1370 €
Sting Carbon TL	JA-02	11X4.00-5" 8 ply	1 maître cylindre manche HAB01	DOT4	SSC01	1561 €
STORM Century	JA-02	11X4.00-5" 8 ply	1 hand master cylinder HAB02	DOT4	STR01	1320 €
Vampyr Century	JAA02	4.00-6" 6 ply	1 hand master cylinder HAB02	DOT4	SVA01	1370 €
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	1653 €
Zlin Savage 5 (tire < 29 ")	JAA01	-	2 rudder master cylinders HBA03	DOT4	SSA01	1739 €
Zlin Savage 5 (tire > 29 ")	JAA-01 + 2 extra calipers	-	2 rudder master cylinders HBA03	DOT4	SSA02	1979 €

Tire dimensions can be changed



* please ask us

All prices are quoted in Euro without tax

Upgrade your glider and save 1.5 to 3.5kg 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	1365 €
Schempp Hirth Duo, Arcus	JA-01	380x150-5	1 master cylinder hydr/cable HAC01	DOT4	1638 €
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 Euro without tax

* 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
- mounts on 22 mm (0.86") 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



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	295g	226 €
HAB02	Built-in master cylinder with mechanical parking brake valve	295g	242 €
HAA03	Additionnal master cylinder to mount in serie (double braking control). To be used with primary HAB01 or HAB02	285g	242 €
HAC01	Master cylinder CABLE actuated with support	295g	226 €
HAB04	CENTRAL MOUNTING Master cylinder built-in reservoir	300g	242 €

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 (2x spherical rod ends)	135g	164 €
HBA02	Master cylinder longer for rudder pedals 190mm (1x spherical rod end + 1 fork)	139g	164 €
HBA03	Master cylinder for rudder pedals 145mm (1x spherical rod end)	125g	164 €

All prices are quoted in Euro without tax

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

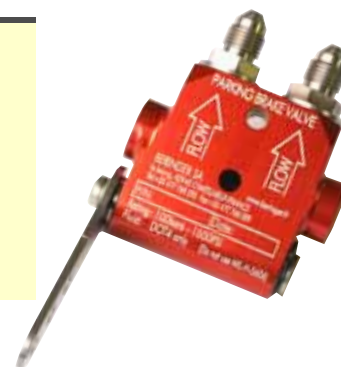


Part #	DESCRIPTION	weight	Price
HFA01	Remote reservoir kit	39g	31€
HFA02	Integral reservoir CNC machined for rudder master cylinder	55g	46€

PARKING BRAKE VALVE

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

- 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 RED ANODISE DOT4	200g	186 €
HVA02	Parking brake valve mineral fluid BLUE ANODISE MIL-H-5606	200g	186 €

All prices are quoted in Euro without tax



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)

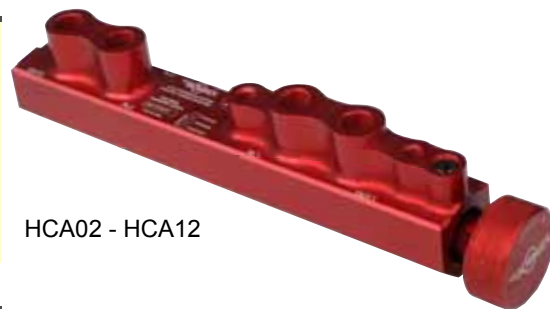


HCA01 - HCA11

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	270g	124 €
HCA11	Anti-lock regulator 20 to 50 bar	brake fluid DOT4	270g	124 €
HCA02	In-line balanced anti-lock regulator 10 to 40 bar	brake fluid DOT4	330g	124 €
HCA12	In-line balanced anti-lock regulator 20 to 50 bar	brake fluid DOT4	330g	124 €
HZA04	Ultralight pressure limiter 25 bar	brake fluid DOT4	65g	79 €
HZA01	Ultralight pressure limiter 35 bar	brake fluid DOT4	65g	79 €
HZA02	Ultralight pressure limiter 45 bar	brake fluid DOT4	65g	79 €
HZA03	Ultralight pressure limiter 60 bar	brake fluid DOT4	65g	79 €

All prices are quoted in Euro without tax



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



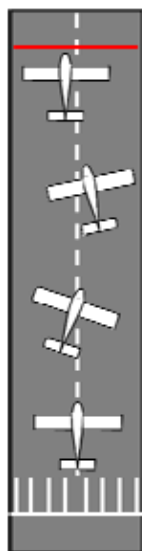
ALIR System
Anti Lock
In line
Regulator



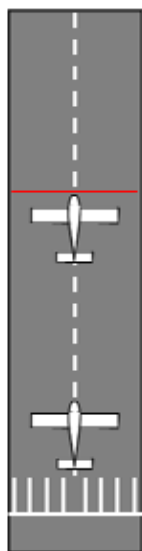
ALIR PRESSURE REGULATOR allowing a ± 1 bar maximum reference pressure and an equi-pressure left-right

**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.

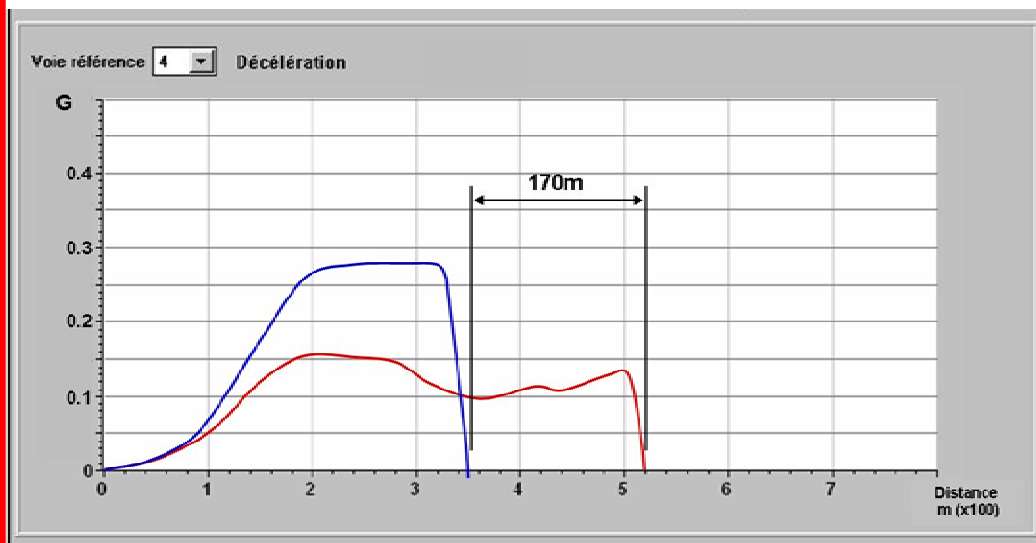
The system can be installed on certain old aircraft.

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

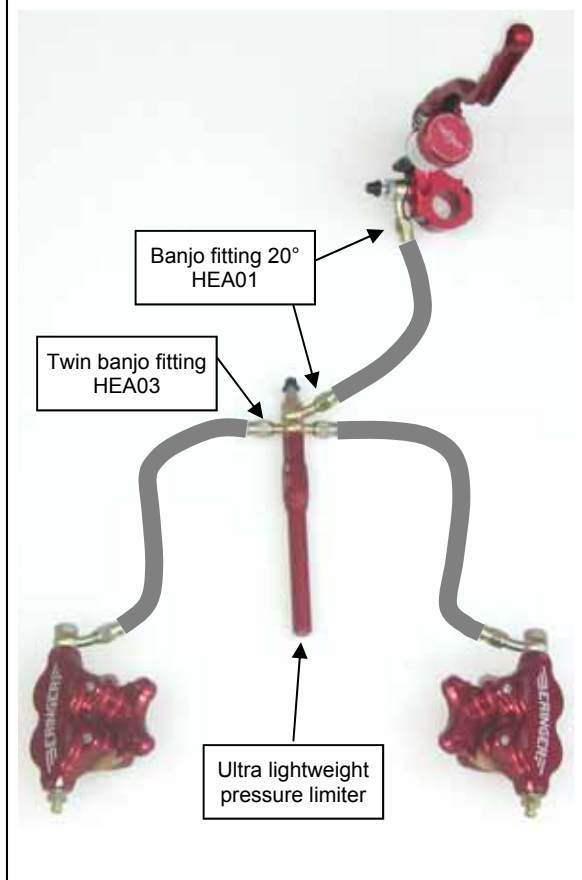
(in both cases, conditions are the same: same plane, same brakes)

Weight of the aircraft: 1200 kg, braking speed: 70 Kt



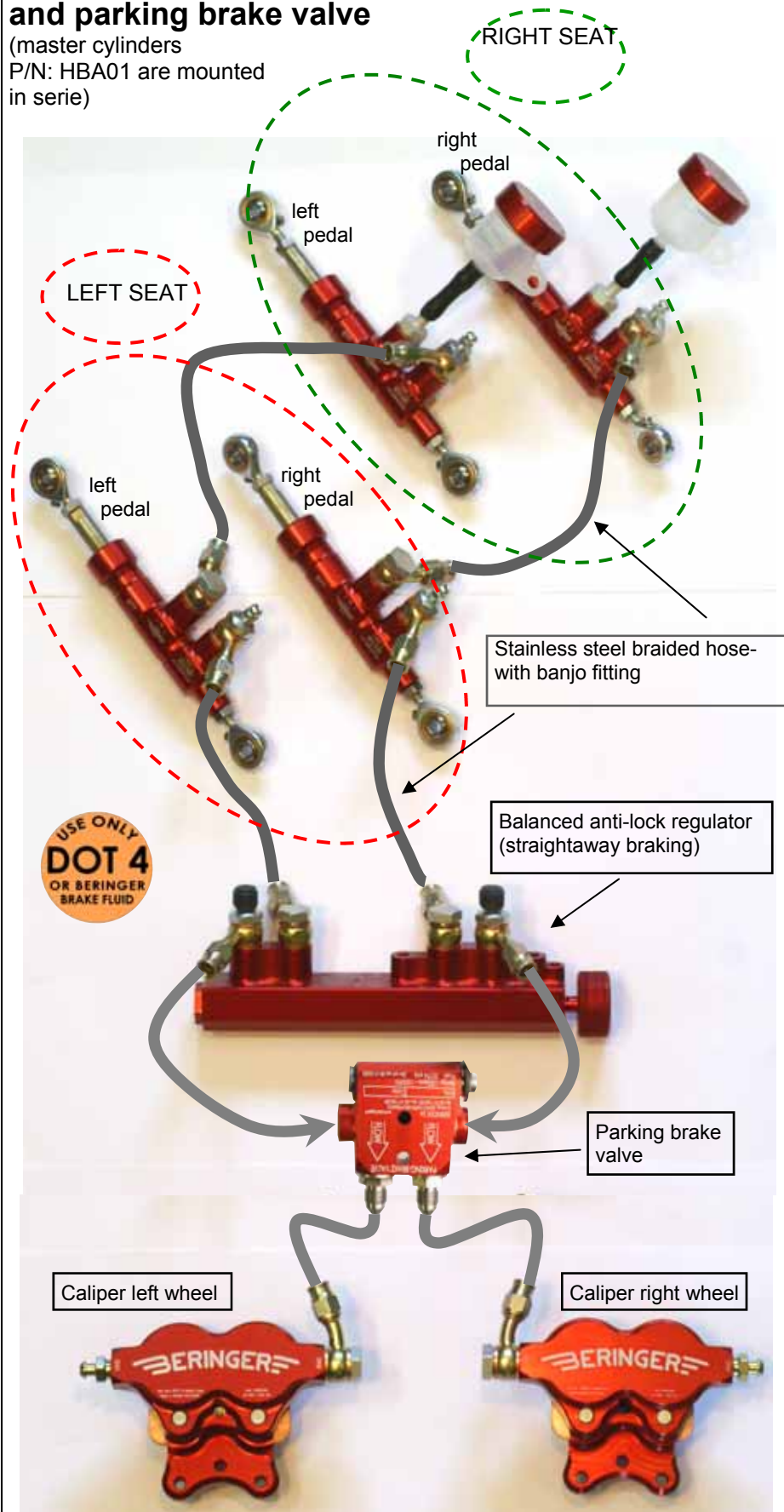
Nota: BERINGER brake pads used in the ALIR system have a friction coefficient that increases with the temperature allowing an increase of the deceleration when the lift decreases on the wings.

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)

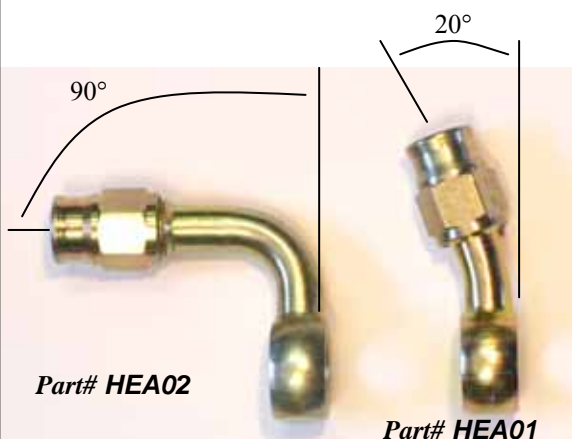


CAUTION:
BERINGER® and AEROTEC®
are registered trademarks.
BERINGER® owns 9 different
world patents protecting its uni-
que technology on master cylin-
ders, calipers, discs, brake regu-
lators and aircraft wheels.

**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 meter 4 €
HJA01	High performance Brake fluid DOT4	(0.5 L) 18.40 €
HJA02	High performance Brake fluid DOT5 Silicone base (longer life time). DOT5 cannot be mixed with DOT4.	(0.35 L) 22.50 €
HDB01	Stainless steel hose, braided, PTFE high temperature inner tube	Per meter 9.50 €
HEA01	Banjo fitting 20°	8.4 €
HEA02	Banjo fitting 90°	16.8 €
HEA03	Banjo twin	32 €
HEA04	Straight fitting, male M10x1	12.30 €
HEA05	Brake adaptor Metric M10x1 to JIC 7/16x20	8.90 €
HEA08	Straight fitting, female concave seat 7/16x20 (stainless)	35 €
HEA09	Straight fitting, female concave seat 3/8x24 (stainless)	29 €
ZGA01	Cushioned tube clamps for stainless steel hose	(batch of 10 parts) 7 €

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)	138 €
HED02	Set of 2 Brake lines for RV6A, 7A, 9A	850mm (x2)	138 €



All prices are quoted in Euro without tax

- 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	195 €

Delivered with EASA Form1

BRAKING DISCS for BERINGER® wheels

Part #	DESCRIPTION	Price
DSC-006	Stainless steel brake disc for Aerotec® caliper 2P EA-01 (3.2mm)	41 €
DSC-008	Stainless steel brake disc for Aerotec® caliper 2P EA-04 (4.2mm)	48 €
DSC-009	Stainless steel brake disc for Aerotec® caliper 2P EA-05 (5.8mm)	85 €



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	78 €
OPA02	Tire change tool for 6" wheels	92 €



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	19€
ONB01	Spray anti-puncture	19€
ONC01	Pressure bleeder	69€



Pressure bleeder

All prices are quoted in Euro without tax

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)	33 €
ZEA02	OEM pads for BERINGER® 2p reinforced caliper EA-03 (incl. 2 pads for 1 caliper, screws & procedure)	45 €
ZEA03	OEM pads for BERINGER® 2p high energy caliper EA-04 (5") (incl. 2 pads for 1 caliper, screws & procedure)	45 €
ZEA04	OEM pads for BERINGER® 2p high energy caliper EA-05 (6") (incl. 2 pads for 1 caliper, screws & procedure)	58 €

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	48 €
KAB01	Repair kit for rudder pedal master cylinder HBA01, HBA02, HBA03	72 €
KBA01	Repair kit for 2 piston calipers EA-01 and EA-03	48 €
KBA02	Repair kit for 3 piston caliper EA-02	62 €



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)	20 €
KCA02	Spare CLIPS for one 6" Light wheel (10 pieces)	20 €



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)	8 €
KDF02	O-ring seals to be replaced at each tyre changing for 6" and 6" light wheel (set for one wheel)	8 €
ZPA01	Safety wire stainless steel (roll of 450g)	32 €
HJA01	High performance Brake fluid DOT4	0.5L 18.40 €
HJA02	High performance Brake fluid DOT5 Silicone base (longer life) DOT5 cannot be mixed with DOT4.	0.35L 22.50 €

All prices are quoted in Euro without tax

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

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



BERINGER® 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.

