HUB SERVICE MANUAL

DUKE RACING WHEELS

WARRANTY

DUKE hubs are guaranteed for five years from the date of purchase against any hidden defect. Bearings are wearing parts and are not covered by the warranty. The guarantee does not apply in case of inappropriate use, absence or non-respect of the maintenance advice, modification or incorrect assembly of the hub (spoke profiles, spoke passages, spoke tensions, etc.)

For all additional requests and warranty requests, please contact us by e-mail at the following address :

contact@duke-racingwheels.com

CARACTERISTIQUES PRINCIPALES

Materials

Hub shell, axle and caps : Aircraft grade aluminium (7075)
Freewheel body : Grade 5 Titanium (Ti6Al4V)
CNC machining

Bearings

FRONT		REAR	
MadMAX / BadBOY IS	: 2x 6803	Hubshell	: 2x 6902
BadBOY CL SP	: 2x 6903	Free hub XD-XDR & HG11	: 2x 6902
		Free hub Microspline & N3W	: 1x 6902/1x 6802

Bearings with differentiated flanges: the red sealing flange must be positioned to the outside

Driving System

The power transmission si made by two toothed wheels.
One is fixed, the other si mobile on a specific spring.

70 teeth for MTB hub Mad Max (5.1°)
40 cteeth for Road/Gravel hub & Bad Boy (9°)
compatible with E-Bike.

Sealing

Double wall caps
Specific freewheel seal developed in-house by DUKE

Cleaning

Never use a high pressure cleaner
Never apply detergent ot the hubs
Ues a soft bristle brush with soapy water

Maintenance

The hubs should be checked at least once a year.
If used ni extreme rain and mud conditions, the hub should be serviced more frequently.
be serviced more frequently..
DUKE provides this service on request.
The user can also perform the maintenance himself.
The maintenance procedure is described below.
However, improper handling may damage the hub or impair its performance.
Any damage caused will not be covered by the warranty..

ASSEMBLY

Lacing

Straight-pull hubs :
Max tension : 1200N
Recommended tension : 1100N

J-bend hubs :
Max tension : 1200N
Recommended tension : 1100N

Cassette

Tightening torque fo 40Nm
(an insufficient torque could may cause the cogs of the cassette to mark the the freewheel body.)

Disc

Tightening torque of 6Nm

Geometries

These are optimized ot the maxmium ni order ot guarantee the best possible stability wheel.
We do not know fo any better geometry ot date..

Hubs weights

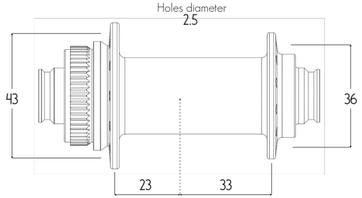
MadMAX CL XDR 24h : fr = 92g / rr = 201g
MadMAX CL XD 28h : fr = 98g / rr = 202g
MadMAX IS MS 28h : fr = 104g / rr = 219g

BadBOY CL XD : fr = 108g / rr = 239g
BadBOY IS XD : fr = 120g / rr = 257g

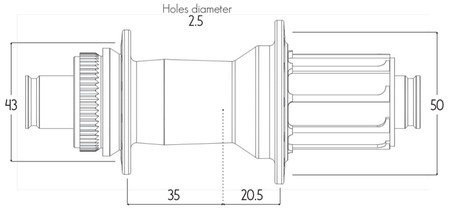
BadBOY SP road : fr = 102g / rr = 210g
BadBOY SP Mtb : fr = 110g / rr = 215g

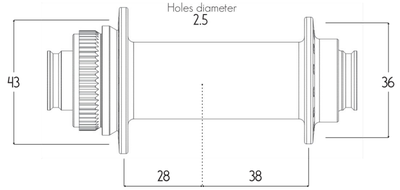
The weight of the hubs can vary slightly depending on the type of axle and freewheel body chosen.

GEOMETRIE

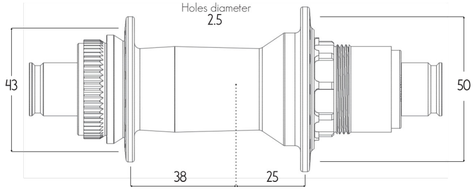


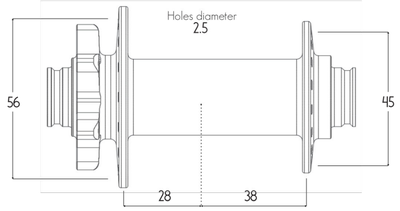
BadBOY CL
(100x12)



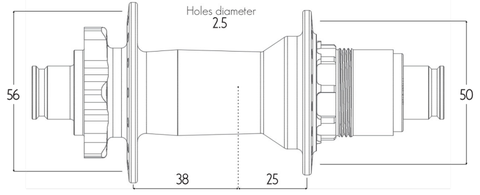


BadBoy CL
(Boost)





BadBOY IS
(Boost)



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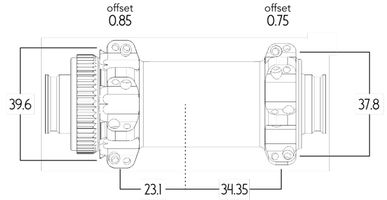
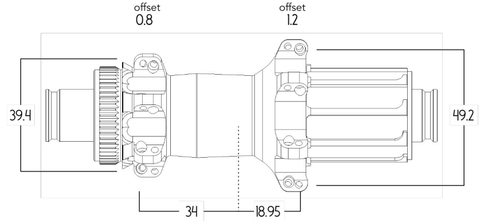
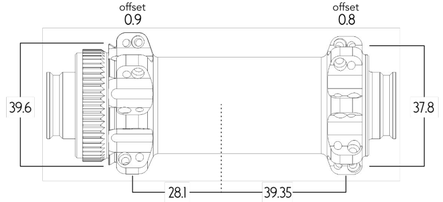
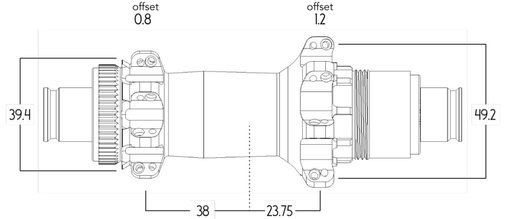


BadBOY
CL / SP
Road





BadBOY
CL / SP
Boost



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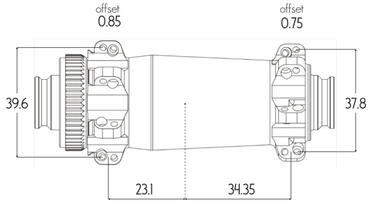
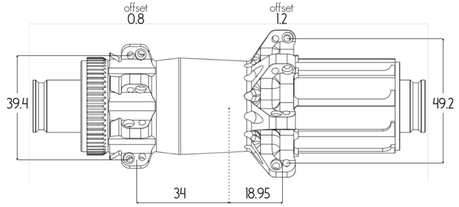
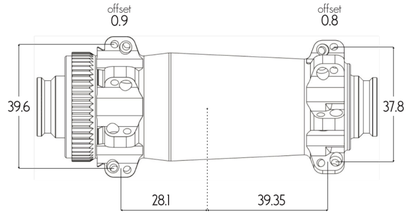
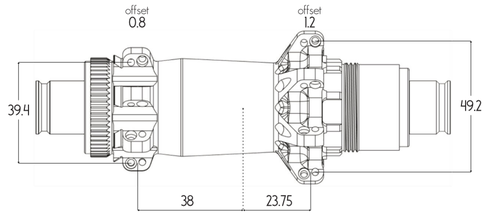


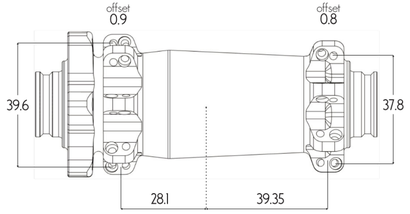
MadMAX CL
(Road)



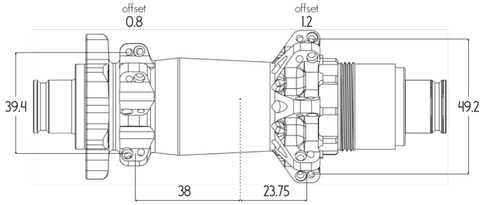


MadMAX CL
(MTB)





MadMAX IS
(MTB)

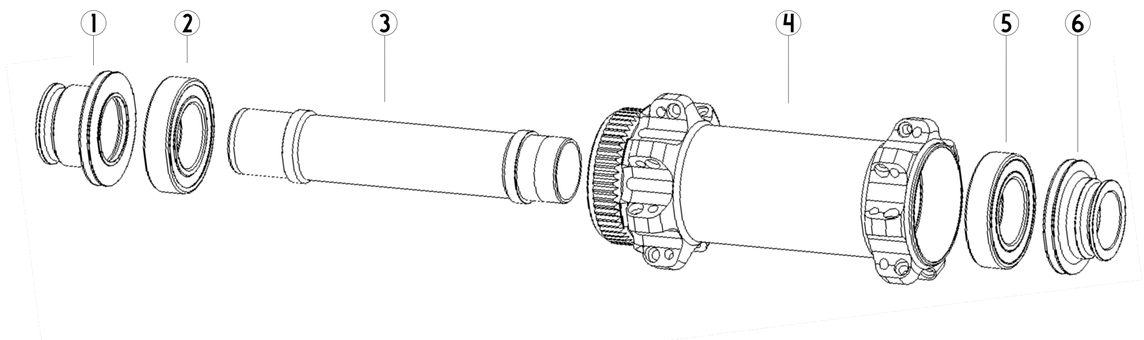


DUKE FRONT HUB MAINTENANCE
MADMAX & BADBOY

Make sure your workplace is clean and properly lighted. Dirt mixed with grease can interfere with the operation of the of the freewheel. The hubs should be serviced at least once a year.
If used in extreme rain and mud conditions,the hub must be serviced more frequently.

The use of a bearing press and suitable compression spacers is essential for bearing assembly.

1. Disc side cap
2. Bearing 6803 disc side
3. Axle
4. Hub body
5. Bearing 6803 opposite disc side
6. opposite disc side cap



PROCESS :

DISASSEMBLY

1 / Remove the caps 1 & 6 by pulling them carefuly
2 / Push the axle towards the disc side using a suitable tool
3 / Remove the bearings from the axle 3
4 / Clean al parts, do not spray degreaser on the bearings 2 & 5 use a dry cloth toremove any dirt.
Use a dry wiper to remove any dirt.

ASSEMBLY

A / Apply a thin layer of DUMONDE TECH Pro X MR Grease on the bearing seats of the hub body 4
B / Insert the bearing 2 red side out into the hub body
C / Reinsert the axis 3 with the red flange bearing 5 towards the outside while maintaining the bearing 2 in position (attention to the direction of the axis)
D / Reposition the caps 1 & 6

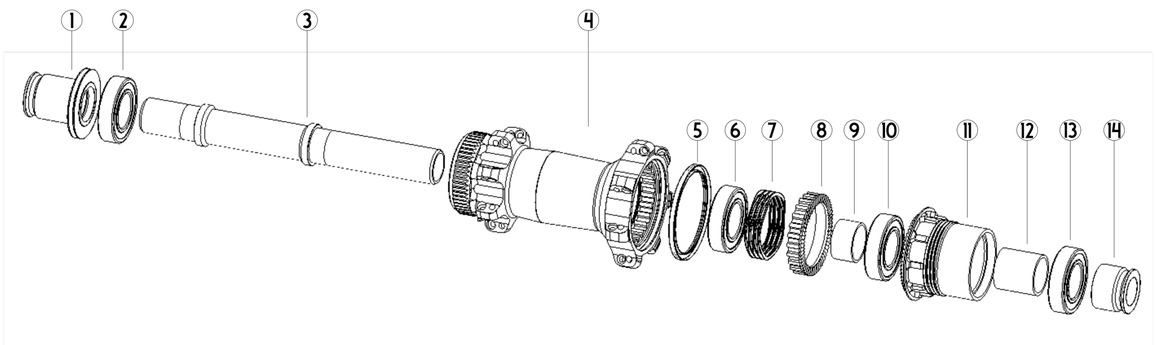
Please follow the order in witch the bearings are mounted, otherwise they may not function properly.

DUKE REAR HUB MAINTENANCE
MADMAX & BADBOY

Make sure your workplace is clean and properly lightened. Dirt mixed with grease can interfere with the operation of the of the freewheel. The hubs should be serviced at least once a year. If used in extreme rain and mud conditions, the hub must be serviced more frequently.

The use of a bearing press and suitable compression spacers is essential for bearing assembly.

1. Disc side cap
2. 6902 Bearing disc side
3. Axle
4. Hub body
5. Sealing ring
6. 6902 Bearing side disc opposite
7. Spring
8. Mobile toothed wheel
9. Hub spacer
10. 6902 internal freewheel bearing
11. Freewheel body
12. Freewheel body spacer
13. 6902 external freewheel bearing (except microspline 6802)
14. Opposite side disc cap



PROCESS :

DISASSEMBLY

1 / Remove the caps (1) & (14) by pulling them carefuly
2 / Remove the freehub body (11) and the spacer (9) then the mobile toothed wheel (8) and the spring (7)
3 / Push out the axle (3) (towards the disc side) & remove the bearing (2)
4 / Get the bearing (6) out
5 / For the freehub body remove the bearing (10) then the spacer (12) & the bearing (13) (respect the (10) (12) (13) order, red flange to the outside)
6 / Clean piece by piece with a clean & dry wipe

ASSEMBLY

A / Apply a thin layer of DUMONDE TECH D Pro X MR Grease on the bearing seats of the hub body (4)
B / For the freewheel body, when assembling always respect the order (10) (12) (13) red side out into the hub body
C / Mount in first the bearing (6) then mount the bearing (2) on the axle (3) mounted in the (4) hub body, The red bearing flange must always face outwards.
D / Position spring (7) alone (without ratchet) in hub body (4) Check that seal (5) is correctly seated in its housing without damaging it.
E / Apply a small quantity of DUMONDE TECH D grease to the teeth of freewheel body (11), then position ratchet (8) against the teeth of freewheel body (11). Simultaneously place ratchet (8) and CRL (11) in hub body (4) CRL (11) teeth placed without ratchet will damage seal (5)
F / Position caps (1) and (14)

Please follow the order in witch the bearings are mounted, otherwise they may not function properly.

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