

## Internal and Integrated headsets

If you haven't already noticed the internal and integrated headset age is well upon us. The variations in bearing ID, OD & angles can become quite confusing. We hope to make it easy for you to find out what headset or bearing you will need so that your purchase can be stress free.

There are Three different forms of internal & integrated bearings;

**Integrated:** Without cups, this style uses bearings that fit directly into a specially machined headtube. This style, having first been introduced in Italy in the late 60's is currently popular for both road bikes & BMX bikes.

There are Three bearing styles utilised in an integrated headset;

- \* TH system which uses 36/36 Degree ACB (i.e Orbit I)
- \* Cane creek system which uses 36/45 Degree ACB (i.e Orbit IS)
- \* Campagnolo system which uses 45/45 Degree ACB (i.e Orbit C)

Note: FSA provide bearing sizes to suit all of the above



**Internal:** With cups, & sometimes called Z Series or low profile system, this style of headset relies on cups that are pressed into the headtube. Once the cups are installed, bearings fit in the cups just like a conventional headset.

**Replacing bearings:** When replacing bearings for integrated & internal headsets you can simply read the code off the side of the bearing. If the bearing is old & the writing is not ledgeable you may need a headset guide to help provide the details you need to purchase a replacement bearing. If you only have the frame and it does not have the bearings or cups you will need to contact the manufacturer or importer to find out exactly what type of headset will fit. Failing this you will need to use a headset guide.

**Using micro spacers:** Micro spacers are .25mm thick & fit between the compression ring and the top cover. Integrated headtubes are specifically machined to accept proprietary bearings. Due to frame manufacturing tolerances, the vertical height of the bearing pocket can vary resulting in an imperfect fit between the top of the head tube & the headset top cover. Any number of micro spacers can be used in order to achieve the correct clearance. Micro spacers are available for 11/8"

## Headset Bearing Guide

| Campagnolo - Yellow or White Seal (45° x 45°) |                |                 |
|---|----------------|-----------------|
|   | TH-870(1-1/8") | TH-870S(1-1/4") |
| OD  | 41.8mm         | 46.8mm          |
| T   | 8mm            | 7mm             |

| TH-Red Seal (36° x 36°) |                |            |                |            |
|-------------------------|----------------|------------|----------------|------------|
|                         | Oversize ACB   |            | Micro ACB      |            |
|                         | TH-871(1-1/8") | TH-373(1") | TH-872(1-1/8") | TH-372(1") |
| OD                      | 44mm           | 41.5mm     | 41.5mm         | 38.5mm     |
| T                       | 8mm            | 8mm        | 6.5mm          | 6.5mm      |

| 36° x 45° |                                |            |        |        |
|-----------|--------------------------------|------------|--------|--------|
|           | Cane Creek - Blue or Grey Seal |            | Econ   | Serv   |
|           | TH-873(1-1/8")                 | TH-373(1") | TH-823 | TH-800 |
| OD        | 41mm                           | 38mm       | 41mm   | 41.7mm |
| T         | 6.5mm                          | 6.5mm      | 6.5mm  | 7.2mm  |

**Headset Guide**  
Perfect for measuring all internal and integrated bearings

## Headset Spacers

### FSA Headset Spacers Alloy

#### 1", 1-1/8" & 1.5"

- Alloy Spacers Include FSA Logo
- 1", 1-1/8" & 1.5"
- Black 5, 10 & 20mm
- Silver 2, 4, 5, 10 & 20mm
- Black 1.5" in 10mm only



### FSA Headset Spacers Carbon

- Carbon spacers include FSA logo
- 1" or 1-1/8"
- 5, 10 & 20mm



### FSA Micro Spacers 11/8

If frames have not been machined properly micro spacers will create the necessary clearance

- Fits between the compression ring and top cover of integrated headsets.
- .25mm thick



### Wheels MFG Headset Spacers

#### Carbon & Alloy 1", 1-1/8", 1-1/4" & 1.5"

- 1 & 1-1/8" Carbon 2.5, 5, 10, 15, 20 & 40mm
- 1" & 1-1/8" Alloy Black 2.5, 5, 10, 15, 20 & 40mm
- 1" & 1-1/8" Alloy Silver 2.5, 5, 10, 15, 20 & 40mm
- 1-1/8" Alloy White 5, 10 & 20mm
- 1-1/4" Alloy Silver 2.5 & 5mm
- 1.5" Alloy Black 5 & 10mm



## Tapered Intergrated Headsets

### FSA Orbit C-33

FSHS120-0474

- With carbon fibre cover top cap
- 1 1/8" Upper 45/45 degree bearing ACB 870 41.8mm OD Bearing Campagnolo compatible fits directly into headtube
- 1 1/4" Lower 45/45 degree bearing ACB 970 46.8mm OD Bearings Bottom fits directly into headtube
- Weight 62grms
- For tapered Headtubes (47mm ID-52mm OD Headtubes)
- 1 1/8-1 1/4" tapered forks only



### FSA Orbit CF-40

FSHS120-0465

- With carbon fibre cover top cap
- 1 1/8" Upper 45/45 degree bearing ACB 8B 41.8mm OD Bearing Campagnolo compatible fits directly into headtube
- 1.5" Lower 36/45 degree bearing SB6808 52mm OD Bearings Bottom fits directly into headtube
- Weight 86grms
- For tapered Headtubes (46mm ID-56mm OD Headtubes)
- 1 1/8-1.5" tapered forks only



### FSA Orbit IS Ceramic

FSHS120-0341

- With carbon fibre cover top cap
- 36/45 degree bearing ACB Ceramic 873 Cane Creek compatible
- 41mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 52grms
- 1 1/8" (41mm ID-45mm OD Headtubes)



## 1-1/8" Intergrated Headsets

### FSA Orbit IS

FSHS120-0325

- 36/45 degree bearing ACB 873 Cane Creek compatible
- 41mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 62grms
- For 1 1/8" (41mm ID-45mm OD Headtubes)



### FSA Orbit CF Ceramic

FSHS120-0426

- With carbon fibre cover top cap
- 45/45 degree bearings ACB Ceramic 870 Campagnolo compatible
- Patented alignment tip
- 41.8mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 63grms
- for 1 1/8" (41.8mm ID-46mm OD Headtubes)



### FSA Orbit I

FSHS120-0330

- 36/36 degree bearings ACB 872 TH compatible
- 41.5mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 65grms
- For 1 1/8" (41.5mm ID-47mm OD headtubes)



### FSA Orbit CF

FSHS120-0425

- With carbon fibre cover top cap
- 45/45 degree bearings ACB 870s Campagnolo compatible
- 41.8mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 62grms
- For 1 1/8" (41.8mm ID-46mm OD headtubes)

CF with 15mm Carbon top cover, also available with 8.7mm Carbon top cover.



### FSA Orbit C

FSHS120-0405

- 45/45 degree bearings ACB 870 Campagnolo compatible
- 41.8mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 65grms
- For 1 1/8" (41.8mm ID-46mm OD headtubes)



### FSA BMX Impact Pro

FSHS140-0997

- For BMX use / Gyro compatible
- 45/45 degree bearings ACB 870 Campagnolo compatible
- 41.8mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 65grms
- For 1 1/8" (41.8mm ID-46mm OD headtubes)



### FSA BMX Impact

FSHS140-0995

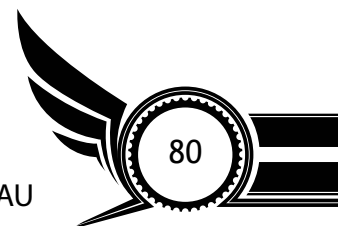
- For BMX use / Gyro compatible
- 45/45 degree bearings ACB 8B Campagnolo compatible
- 41.8mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 74grms
- For 1 1/8" (41.8mm ID-46mm OD headtubes)



### Atom lab Intergrated

ALHS1HST001B

- 36/45 degree bearing ACB Cane creek compatible
- 41mm OD Bearing fits directly into headtube
- Fits 1 1/8 Atom Lab Trail-King frames



## Tapered Internal Headsets



### Gravity DX Pro

- 1/18" top and 1.5" bottom head tubes
- Top cup Uses 11/8" 36/45 ACB873
- Bottom cup uses 1.5" 36/45 SB6808
- For tapered steerer 1.5" to 1-1/8"
- For tapered Headtubes (50-57mm OD Headtubes)
- For tapered Headtubes (44-49.65mm ID Headtubes)
- Stack height: 9.9 + 13.4 = 23.3mm
- Weight 139grams



### Gravity SX Pro

- 1/18" top and 1.5" bottom head tubes
- Top cup Uses 11/8" 36/45 ACB873
- Bottom cup uses 1.5" 36/45 SB6808
- For tapered fork steerer 1.5" to 11/8"
- For tapered Headtube (50-61mm OD Headtubes)
- For tapered headtube (44-55mm ID Headtubes)
- Stack height: 8.4 + 2.4 = 10.8mm
- Weight 95.6grams

## 1-1/8" Internal Headsets



### FSA Orbit Z Ceramic

- FSHS100-1306
- Forged Alloy cups
- 36/45 degree bearing Ceramic ACB 873 Cane Creek compatible
- For Internal 1 1/8" Headtube (50mm OD headtubes)
- For Internal 1 1/8" Headtube (44mm ID headtubes)
- Stack height 9.8+3.3=13.1
- Weight 75grms



### FSA Orbit Z

- FSHS100-1300
- Forged Alloy cups
- 36/45 degree bearing ACB 873 Cane Creek compatible
- For Internal 1 1/8" Headtube (50mm OD headtubes)
- For Internal 1 1/8" Headtube (44mm ID headtubes)
- Stack height 9.8+3.3=13.1
- Weight 79grms
- Colours; Black and White



### FSA ZS-4D

- FSHS100-1510
- Chromoly cups
- Economical 11/8" 36/45 degree angular contact bearings
- For Internal 1 1/8" Headtube (50mm OD headtubes)
- For Internal 1 1/8" Headtube (44mm ID headtubes)
- Stack height 8.3+5.6=13.9
- Weight 90grms

## 1.5" & 1.5" to 1-1/8" Reducer Headsets



### FSA Orbit Xtreme Pro 1.5"r

- FSHS100-0065
- For 1.5 Headtube with 1-1/8" fork steerer
- Forged and CNC machined 6061/T6 alloy cups
- 20mm headtube insertion
- 1.5" 36/45 SB6808 Industrial cartridge sealed bearings
- Stainless steel crown race
- Stack height 16.5+13.5=30mm
- Black anodized
- Weight 174grms



### FSA Orbit Xtreme Pro 1.5"

- FSHS100-0065
- Forged and CNC machined 6061/T6 alloy cups
- 20mm headtube insertion
- 1.5" 36/45 SB6808 Industrial cartridge sealed bearings
- Stainless steel crown race
- Stack height 16.5+13.5=30mm
- Black anodized
- Weight 150grms



### FSA Orbit Z 1.5"r

- FSHS100-1312
- Our most popular 1.5" reducer headset gives a stack height of 10.7mm
- For 1.5" Headtube with 1-1/8" fork steerer
- 36/45 degree bearing ACB 873 Cane Creek compatible
- Stack height 6.3+ 4.4 =10.7
- Weight 110grms
- Also available as a lower cup to suit Giant Glory DH



### FSA The Big Fat Pig 1.5"

- FSHS140-1305
- CNC Machined steel cups
- 20mm headtube insertion
- Super oversized 7/32"x20 caged ball bearings
- Stainless steel crown race
- Stack height 17+11.7=28.7mm
- Black anodized
- For 1.5 fork steerer
- Weight 345grms



### FSA Orbit DL 1.5"r

- FSHS100-1250
- For 1.5" head tube and 11/8" Fork steerer
- CNC machined 6061/T6 cups
- 5/32"x26 Caged ball bearings
- Stack height 18.1+11.9=30mm
- Black anodized
- Weight 240grms



### FSA 1.5" to 1-1/8" Headtube Reducer

- FSHS160-0150
- For the rider that wants to use 11/8 steerer forks with a 1.5" headtube frame.
- Fits into 1.5" Headset fits 11/8" headset
- Black anodized
- Weight 77grms

## Threadless 1-1/8" Headsets

### FSA Orbit Extreme Pro

FSHS100-0050BLK/0055SIL

- Forged and CNC machined 6061/T6 alloy cups
- Special Size ACB Stainless steel sealed bearings
- Patented alignment tip
- Stack height 16.4+13.5=29.9mm
- Weight-99grams
- Colours; Black and Silver anodized
- Also Available in 22mm deep cup (black)



### FSA Orbit MX

FSHS100-0505

The perfect XC/AM MTB headset

- Forged and CNC machined 6061/T6 alloy cups
- 36/36 degree bearings ACB 872 TH compatible
- Patented alignment tip
- Stack height 18.7+13.4=32.1mm
- Weight-98grams
- Colours; Black and White
- Limited Edition; Blue, Gold, Green, Grey & Red



### FSA Orbit X

FSHS120-0005 11/8"

The perfect Road bike stem

- Forged and CNC machined 6061/T6 alloy cups
- 36/36 degree bearings ACB 872 TH compatible
- Patented alignment tip
- Stack height 18.4+13.1=31.5mm
- Weight-82 grams
- Colours; Black anodized



### FSA TH-No.18

FSHS140-2250 11/8"

- Forged steel cup
- 36/36 degree bearings ACB 872 TH compatible
- Patented alignment tip \*Aluminium 6061/T6 top cover
- Stack height 12.9+12.6=25.5mm
- Weight-136 grams
- Colours; Black anodized



### FSA TH-855

FSHS140-2210

- Forged steel cup
- 5/32"x20 caged ball bearings
- \*Stack height 14.9+11.1=26mm
- \*Weight-126grams
- Colours; Black anodized



### FSA Orbit DL

FSHS100-1205

- Forged and CNC machined 6061/T6 alloy cups
- 5/32"x22 caged ball bearings upper
- Patented alignment tip
- Stack height 16.9+11.9=28.6mm
- Weight-160 grams
- Colours; Black anodized



### FSA Intellaset TH-28

FSHS120-4005

The Intellaset gives the serviceability and reliability of traditional headsets with the sleek looks of integrated headsets

- Forged steel cup
- 1/8"x26 caged ball bearings
- Stack height 14.2+10.3=24.5mm
- Weight-105grams
- Colours; Black anodized



### FSA Mallet TH-872

FSHS140-2335

- Forged chromoly lower cup
- 12mm deep cup design
- Oversized 3/16"x20 caged Lower ball bearings
- 5/32"x22 caged Upper ball bearings
- Stack height 14+11.9=25.9mm
- Weight-150grams
- Colours; Black anodized



### FSA The Pig DH Pro

FSHS140-2000SIL/2005BLK

- Forged chromoly lower cup
- Forged and CNC machined 6061/T6 alloy upper cup
- Industrial sealed cartridge lower bearing
- 36/36 degree bearings ACB 872 TH Upper bearing
- Gyro compatible
- Stack height 15.4+16=31.4mm
- Weight-166grams
- Colours; Black and Silver anodized
- Also Available in 22mm deep cup (black)



### FSA The Pig Standard

FSHS140-1000SIL/1005BLK

- Forged chromoly lower cup
- Forged and CNC machined 6061/T6 alloy upper cup
- Super Oversized 1/4"x15 caged lower ball bearings
- 5/32"x22 caged upper ball bearings
- Gyro compatible
- Stack height 15.4+13.6=29mm
- Weight-166grams
- Colours; Black and Silver anodized



## Threadless 1-1/8" Cyclo Cross Headsets



### FSA Orbit X CX

FSHS120-0

- With Cable Hanger for Cyclocross
- Forged and CNC machined 6061/T6 alloy cups
- 36/36 degree bearings ACB 872 TH compatible
- Patented alignment tip
- Stack height 30.3+13.2=43.5mm
- Weight-82 grams
- Colour; Black anodized



### IRD Long Drop Cable Hanger

- Cable Hanger for Cyclocross with longer drop
- CNC aircraft grade aluminium
- fits most 1-1/8" headsets
- Single clamping bolt
- Colour; Black and Ti silver

## Threadless 1" Headsets



### FSA Orbit X 1"

FSHS121-0020

- Forged and CNC machined 6061/T6 alloy cups
- 36/36 degree bearings ACB 372 TH compatible
- Patented alignment tip
- Stack height 18.4+13.1=31.5mm
- Weight-82 grams
- Colours; Black and Silver anodized



### FSA Orbit IS 1" integrated

FSHS120-0320

- 36/45 degree bearing ACB 373 Cane Creek compatible
- 38mm OD Bearing fits directly into headtube
- Patented alignment tip for increased durability and performance
- Weight 62grms
- For 1" (38mm ID-42mm OD Headtubes)

## Threaded 1" Headsets



### FSA Duron X 1"

FSHS120-1400

- 5/32" caged ball bearings upper
- Needle bearings lower
- Stack height 24.6+15=39.6mm
- Weight- 106 grams
- Colours; Silver



### Tange Levin 1"

Resembles old style Campy headset and just as well made NJS approved 1" threaded headsets

- Alloy with steel crown races
- Caged bearings
- Made in Japan
- Stack height 37.5
- Weight-102 grams
- Colours; Silver

## Headset Compression Caps & Star Nuts



### FSA Compressor Pro

FSHS160-3012

- Made for carbon steerers
- Carbon fibre top cap with FSA logo
- For 11/8"



### FSA Compressor

FSHS160-3010 11/8" 3000 1"

- Made for carbon steerers
- Black anodized with FSA logo
- 1" and 11/8"



### FSA TH-476

FSHS160-2008

- Hollow BMX assembly
- Black anodized with FSA logo
- Hollow chromoly bolt
- 11/8



### FSA TH-375 1", TH-875 1-1/8"

### & TH-985 1.5"

- Standard star nut set up
- Alloy top cap
- Colour; Black and Silver
- 1", 11/8 and 1.5" (black only)