

CINCH CRANKS - Q FACTORS, BBs AND CHAINLINES

How to use this guide:

1. Verify the BB type and rear hub width of your bike from the manufacturer – Write them down
2. Using Table 1, identify which chainline is required based on the rear hub of your bike – Write it down
3. Using Table 2, identify which spindles are compatible with your chosen crankset – Write them down
4. Using Table 3, identify which of those spindles are compatible with the BB of your bike – Cross off all incompatible spindles
5. Using Table 4, use the columns for your desired ring setup (1X, 2X or 3X) and verify which of the remaining spindles on your list delivers the chainline closest to the value you require – Cross off all incompatible spindles
6. Using Table 5, check the resulting Q-factors for your crank and remaining spindle combinations – select whichever spindle gives the more desirable Q-factor. (Wider = better frame clearance, Narrower = better pedalling ergonomics)
7. Using Table 6, check if any spacers are required for your selected BB and spindle combination.
8. Using Table 7, check the spacer setup for your BB (Note that any required spindle spacers are in addition to spacers required in table 6),

Table 1: Rearhub/chainline relationship

<u>Typical bike type</u>	<u>Rear hub width (mm)</u>	<u>Nominal Chainline (mm)</u>
BMX	120	45
Gravel/Cross/MTB/Plus bikes	135/142	49
	148	52
MTB/Plus bikes, DH/FR bikes	150/157	56.5
Fat bikes	165	64
	170/177	66.5
	190/197	76.5

Some bikes feature offset rear ends – simply add the offset value to the nominal chainline value to calculate chainline in these cases.

Table 2: Crank spindle compatibility:

Crank	RF Spindle (Length in brackets)
Next SL Next R Turbine	RF134 (134.5)
	RF136 (136.5)
	RF143 (143.5)
	RF149 (149.5)
	RF169 (169.5)
	RF174 (174.5)
	RF189 (189.5)
	RF131BM (131.5)
SixC Atlas	RF136DH (136.5)
	RF151DH (151.5)
	RXC (135.25)
Aeffect Aeffect R Ride Cinch	RXC137 (137.25)
	XCP (144.25)
	AM83 (156.25) – OEM Only
	XCF100 (167.25)
	XCF190 (190.25)

Table 3: Spindle/BB compatibility

Ø30mm spindles can be identified by the first part of the code on the centre of the spindle

- Spindles **with** suffix “BM” or “DH” (eg.RF136DH) are compatible with SixC and Atlas cranks **only**
- Spindles **without** “BM” or “DH” suffix (eg. RF134) are compatible with Next R, Next SL and Turbine cranks **only**

Ø24mm Spindles can be identified by the first part of the code on the Non-drive crank end. These spindles are **not** replaceable.

RF Spindle code	BB type and Spindle compatibility – All cranks															
	See Table 4 for any additional spacers required for BB setup															
	BSA 68/73mm	BB92 BB89	BB30 68/73mm	PF30 68/73mm	392EVO	T47 68/73mm	BSA 83mm	BB107 BB104	PF30 83mm	BSA 100mm	BB124 BB121	PF30 100mm	BB132	BSA 120mm	BB144 BB141	PF30 120mm
RF131BM	✓†	X	✓*	✓	X	✓*	X	X	X	X	X	X	X	X	X	X
RF134 RF136DH	✓	✓	✓*	✓	✓	✓*	X	X	X	X	X	X	X	X	X	X
RF136	✓	✓	✓*	✓	✓	✓*	X	X	X	X	X	X	X	X	X	X
RF143	✓	✓	✓*	✓	✓	✓*	X	X	X	X	X	X	X	X	X	X
RF149 RF151DH	✓	✓	✓*	✓	✓	✓*	✓	✓	✓	X	X	X	X	X	X	X
RF169	X	X	X	X	X	X	✓	✓	✓	✓	✓	✓	X	X	X	X
RF174	X	X	X	X	X	X	X	X	X	✓	✓	✓	✓†	X	X	X
RF189	X	X	X	X	X	X	X	X	X	✓	✓	✓	✓†	✓†	✓†	✓†
RXC (135.25)	✓	✓	✓	✓	✓*	✓*	X	X	X	X	X	X				
RXC137 (137.25)	✓	✓	✓	✓	✓*	✓*	X	X	X	X	X	X				
AM (141.25)	✓	✓	✓	✓	✓*	✓*	X	X	X	X	X	X				
DHF EDH (144.75)	✓	✓	✓	✓	✓*	✓*	X	X	X	X	X	X				
XCP (144.25)	✓	✓	✓	✓	✓*	✓*	X	X	X	X	X	X				
AM83 (156.25)	X	X	X	X	X	X	✓	✓	✓	X	X	X				
DHF83 EDH83 (159.75)	X	X	X	X	X	X	✓	✓	✓	X	X	X				
XCF100 (167.25)	X	X	X	X	X	X	X	X	X	✓	✓	✓				
DHF100 (173.25)	X	X	X	X	X	X	X	X	X	✓	✓	✓				
XCF190 (190.25)	X	X	X	X	X	X	X	X	X	✓	✓	✓				

* BB not currently supplied by Raceface, no spacer information available

† No internal sleeve available

Table 4: Spindle/Chainline Compatibility

30mm Spindles – Cinch Chainlines				
RF Spindle (Length in brackets)	Chainline (mm) - 1X RF Direct mount ring -1X 104 BCD DH spider -3X 104/64 BCD Spider	Chainline (mm) -1X BMX Spider	Chainline (mm) -2X 104/64 BCD spider -2X 120/80 BCD spider	Chainline (mm) -2X “Boost” 104/64 BCD Spider
RF131BM	48.5 55-Flipped Ring	45	47	50
RF134 RF136DH	51 57.5 – Flipped Ring	47.5	49.5	52.5
RF136	52 58.5 – Flipped ring	48.5	50.5	53.5
RF143	55.5 62-Flipped Ring	52	54	57
RF149 RF151DH	58.5 65 - Flipped ring	55	57	60
RF169	68.5 75 – Flipped Ring	65	67	70
RF174	71.0 77.5 – Flipped Ring	67.5	69.5	72.5
RF189	78.5 85 - Flipped Ring	75	77	80

24mm Spindles – Cinch Chainlines				
RF Spindle (Length in brackets)	Chainline (mm) - 1X RF Direct mount ring -1X 104 BCD DH spider -3X 104/64 BCD Spider	Chainline (mm) -1X BMX Spider	Chainline (mm) -2X 104/64 BCD spider -2X 120/80 BCD spider	Chainline (mm) -2X “Boost” 104/64 BCD Spider
RXC (135.25)	51	47.5	49.5	52.5
RXC137 (137.25)	57.5 - Flipped ring			
XCP (144.25)	55.5 62– Flipped ring	52	54	57
AM83(156.25) – OEM Only	58.5 65- Flipped ring	56	58	61
XCF100 (167.25)	67 73.5– Flipped ring	63.5	65.5	68.5
XCF190 (190.25)	78.5 85 – Flipped ring	75	77	80

24mm Spindles – Non-cinch chainlines		
RF Spindle (Length in brackets)	Chainline (mm) - 1X -3X	Chainline (mm) - 2X
RXC (135.25)	49.5-51.5	44.5-46.5
XCP144 (144.25)	54-56	49-51
XCF100 (167.25)	65.5-67.5	60.5-62.5
XCF190 (190.25)	76.5-78.5	71.5-73.5
AM (141.25)	49.5-52.5	44.5-47.5
DHF/EDH(144.75)	49.5-55.5	44.5-50.5
AM83 (156.25)	57-60	52-55
DHF83/EDH83 (159.75)	57-63	52-58
DHF100 (173.25)	65.5-67.5	60.5-62.5

Note: All 24mm Cinch crank chainlines shown here can be increased by 1mm by rearranging spindle spacers

Table 5: Crank/ Spindle Q-factors

30mm Cinch - Q-factors		
Crank	RF Spindle	Q-Factor (mm)
Next SL	RF134	168
	RF136	170
	RF143	177
	RF149	183
	RF169	203
	RF174	208
	RF189	223
Next R	RF134	174
	RF136	176
	RF143	183
	RF149	189
	RF169	209
	RF174	214
	RF189	229
SixC	RF131BM	170
	RF136DH	175
	RF151DH	190
Turbine	RF134	178
	RF136	180
	RF143	187
	RF149	193
	RF169	213
	RF174	218
	RF189	233
Atlas	RF131BM	173
	RF136DH	178
	RF151DH	193

24mm Cinch - Q-factors		
Crank	RF Spindle (Length in brackets)	Q-Factor (mm)
Aeffect	RXC (135.25)	173
	RXC137 (137.25)	175
	XCP (144.25)	182
	AM83(156.25) - OEM Only	189
	XCF100 (167.25)	205
	XCF190 (190.25)	228
Aeffect R Ride Cinch	RXC (135.25)	175
	RXC137 (137.25)	177
	XCP (144.25)	184
	AM83(156.25) - OEM Only	191
	XCF100 (167.25)	207
	XCF190 (190.25)	230

24mm Non-Cinch - Q-factors		
Crank	RF Spindle (Length in brackets)	Q-Factor (mm)
Ride	RXC (135.25)	171
	XCP144 (144.25)	180
	XCF100 (167.25)	203
	XCF190 (190.25)	226
Chester	AM (141.25)	176
	DHF/EDH(144.75)	179.5
	AM83 (156.25)	191
	DHF83/EDH83 (159.75)	194.5
	DHF100 (173.25)	208

E-Bike Crank- Q-factors		
Crank	Drive Units	Q-Factor (mm)
Next R eBike	Bosch Gen 2 Bosch Gen 4	195
Aeffect eBike	Bosch Gen 2 Bosch Gen 4	194

Table 6: Spindle/BB Spacer requirements

RF Spindle code	30mm BB type and Spindle spacers					
	See Table 7 for any additional spacers required for specific BB shell setup					
	BSA 68/73mm PF30 68/73mm	BB92 BB89 392EVO	BSA 83mm BB107 BB104 PF30 83mm	BSA 100mm BB124 BB121 PF30 100mm	BB132	BSA 120mm BB144 BB141 PF30 120mm
RF131BM	None (68mm only, use 73mm BB setup)	X	X	X	X	X
RF134 RF136DH	None	None	X	X	X	X
RF136	1mm spacers each side	1mm spacers each side	X	X	X	X
RF143	4.5mm spacers each side	4.5mm spacers each side	X	X	X	X
RF149 RF151DH	7.5mm spacers each side	7.5mm spacers each side	None	X	X	X
RF169	X	X	10mm spacers each side	1.5mm spacers each side	X	X
RF174	X	X	X	4mm spacers each side	None	X
RF189	X	X	X	11.5mm spacers each side	7.5mm spacers each side	1.5mm spacers each side

RF Spindle code	24mm BB type and Spindle spacers		
	See Table 7 for any additional spacers required for specific BB shell setup		
	BSA 68/73mm BB92 BB89 BB30 68/73mm PF30 68/73mm	BSA 83mm BB107 BB104 PF30 83mm	BSA 100mm BB124 BB121 PF30 100mm
RXC (135.25)	2 Black, 1 Red	X	X
RXC137 (137.25)	4 Black, 1 Red	X	X
AM (141.25)	2 Black, 1 Red, 1 White	X	X
DHF EDH (144.75)	2 Black, 1 Red, 4 White	X	X
XCP (144.25)	2 Black, 1 Red, 4.5mm spacers each side	X	X
AM83 (156.25)	X	2 Black, 1 Red, 1 White	X
DHF83 EDH83 (159.75)	X	2 Black, 1 Red, 4 White	X
XCF100 (167.25)	X	X	2 Black, 1 Red
DHF100 (173.25)	X	X	2 Black, 1 Red, 1 White
XCF190 (190.25)	X	X	2 Black, 1 Red, 11.5mm spacers each side

Notes for Ø24mm cranks

The Interchangeable BLACK and WHITE 1mm spacers can be moved from one side of the BB to the other to adjust the chainline and crank clearance.

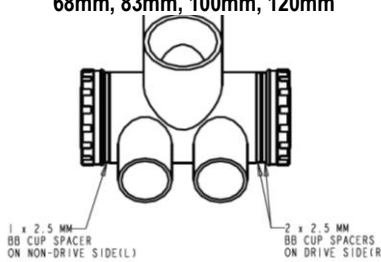
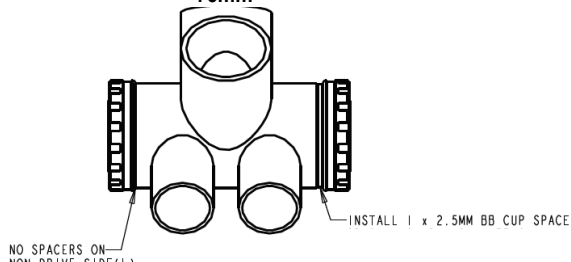

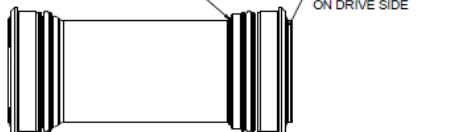
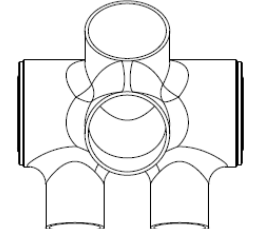
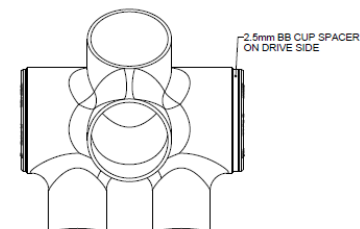
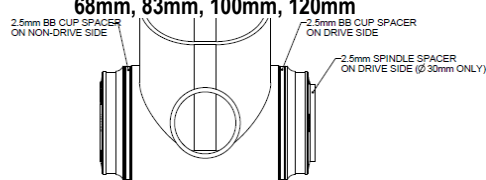
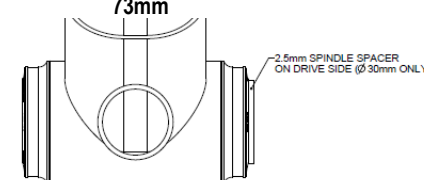
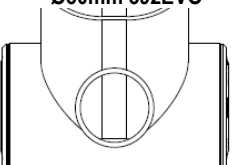
For non-Cinch 24mm cranks, the Red 1mm spacer must remain on the Drive side crank at all times

For Cinch 24mm cranks, the Red 1mm spacer and 1 Black 1mm spacer must remain on the drive side crank stopper ring at all times.

Where possible, BLACK 1mm rubber spacers should be mounted inboard of WHITE 1mm spacers to prevent them sliding off spindle when crank is disassembled.

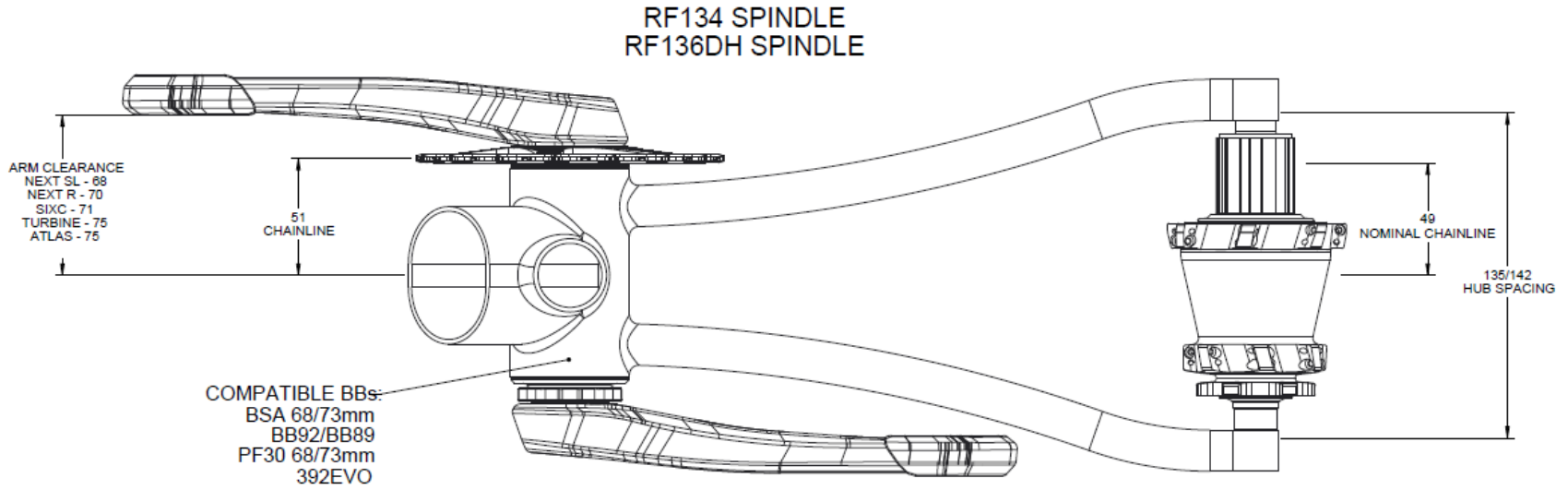
The 4.5mm and 11.5mm spacers have integrated black 1mm rubber spacers; these are in addition to any other spacers required.

Table 7: Raceface BB spacer setup

<p>BSA 68mm, 83mm, 100mm, 120mm</p>  <p>1 x 2.5 MM BB CUP SPACER ON NON-DRIVE SIDE(L) 2 x 2.5 MM BB CUP SPACERS ON DRIVE SIDE(R)</p>	<p>BSA 73mm</p>  <p>NO SPACERS ON NON-DRIVE SIDE(L) INSTALL 1 x 2.5MM BB CUP SPACER</p>
<p>Ø30mm - BB92, BB107, BB124, BB132, BB144</p>  <p>2.5mm SPACER ON SLEEVE</p>	<p>Ø30mm - BB89, BB104, BB121, BB141</p>  <p>NO SPACER ON SLEEVE 2.5mm SPINDLE SPACER ON DRIVE SIDE</p>
<p>Ø24mm - BB92, BB107, BB124</p>  <p>NO SPACERS ON BB CUPS</p>	<p>Ø24mm - BB89, BB104, BB121</p>  <p>2.5mm BB CUP SPACER ON DRIVE SIDE</p>
<p>PF30 68mm, 83mm, 100mm, 120mm</p>  <p>2.5mm BB CUP SPACER ON NON-DRIVE SIDE 2.5mm BB CUP SPACER ON DRIVE SIDE 2.5mm SPINDLE SPACER ON DRIVE SIDE (Ø 30mm ONLY)</p>	<p>PF30 73mm</p>  <p>2.5mm SPINDLE SPACER ON DRIVE SIDE (Ø 30mm ONLY)</p> <p>NO SPACERS ON BB CUPS</p>
<p>Ø30mm 392EVO</p>  <p>NO SPACERS ON BB CUPS</p>	

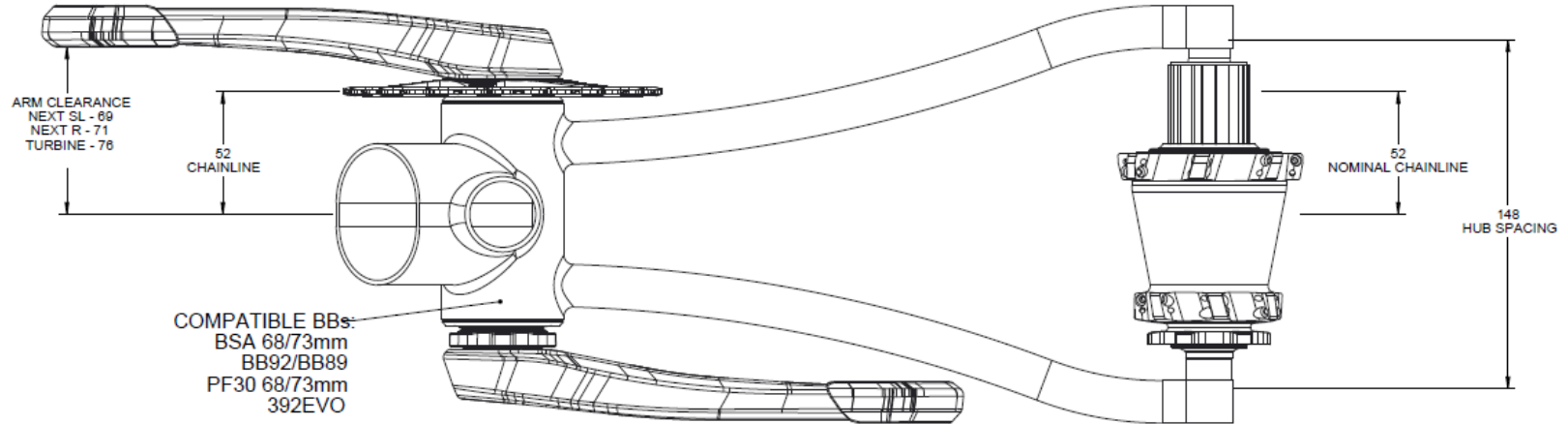
Note: Setups are based on Raceface BBs only, other setups may differ

Typical 30mm setups – Non-Boost:

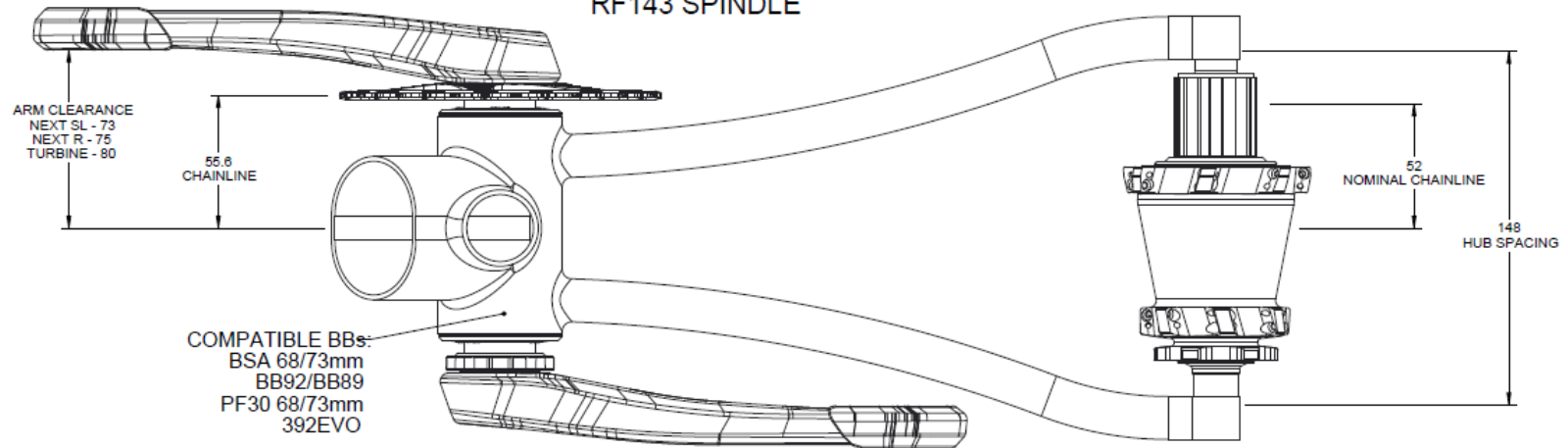


Typical 30mm setups – Boost:

RF136 SPINDLE

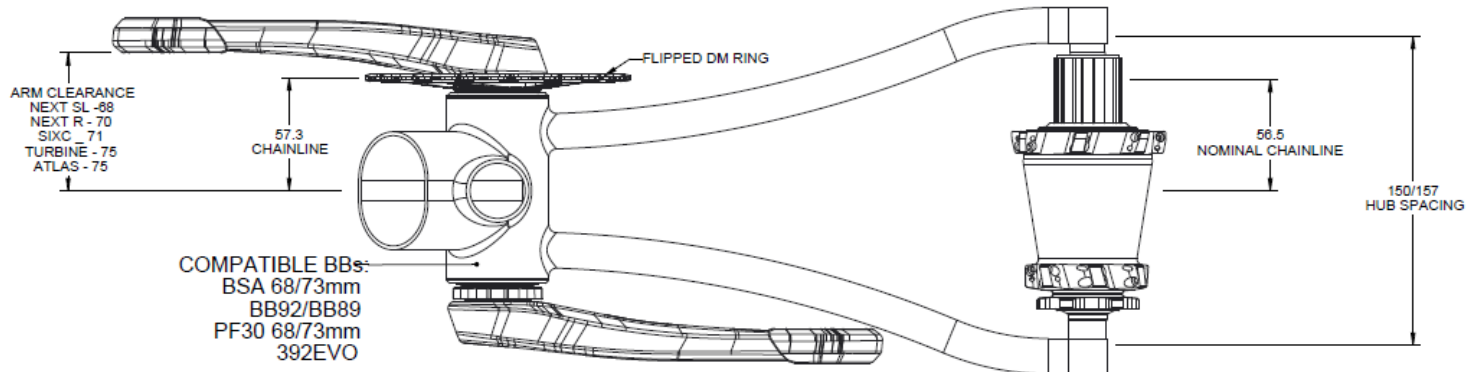


RF143 SPINDLE

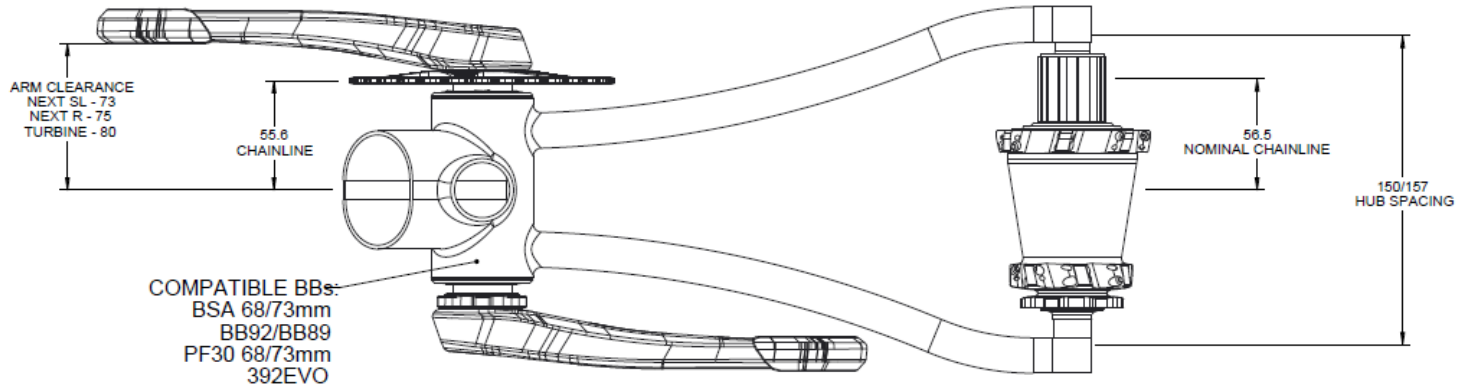


Typical 30mm setups – DH and Super Boost:

RF134 SPINDLE
 RF136DH SPINDLE



RF143 SPINDLE



RF149 SPINDLE
 RF151DH SPINDLE

