

GENERAL NOTES

7-speed compatibility

All 7-speed cogs in our range can be mounted on hubs marked 7-/8-/9-/10-/11-speed. To bridge the remaining distance to the wider free-wheel bodies and allow the cassette to be mounted without play, you need the Shimano 3 mm, 1,85 mm and perhaps 1 mm spacer.

If you have a system with a screw-on cog arrangement, you can order a screw-on cog as a special order from our order hotline or buy a hub compatible with insertable cogs. You must, however, note the installation width of the frame; it is often narrower (e. g. 126 mm) than the specified hubs (130/135 mm).

Insertable cog



Screw-on cog



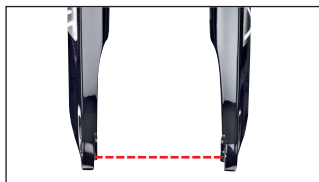
Installation dimension of frame

The installation dimension on the frame is referred to as the unobstructed internal distance between the left and right chain stays. Race bike frames generally have 130 mm and trekking bike frames 135 mm. In the case of MTB bikes, there is now a range of standards: 135/142/150/157 mm. Not only the installation dimension changes, but also the axle thickness.



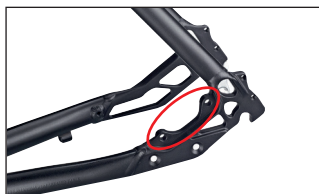
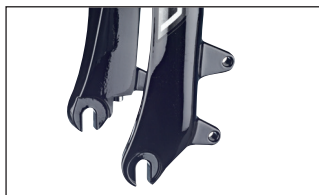
Fork installation dimension

The installation dimension on the fork is referred to as the unobstructed internal distance between the fork blades. This is generally 100 mm (race bike/MTB/ATB). Newer MTB forks with a 20 mm quick-release axle bracket, however, have an installation dimension of 110 mm. E-Bikes with a front motor also frequently use installation dimensions of 110 mm.



IS 2000 standard

The IS 2000 standard is to be found on many forks, frames and brake callipers. The marking on the frame, fork and brake calliper refers to a hole spacing of 51 mm (middle-middle). For the assembly of post-mount brake callipers, an appropriate adapter is needed to form the connection between the IS bracket and the brake calliper.



Post-mount standard

The PM standard is to be found on many forks/frames and brake callipers. The marking on the frame and the fork is a base with an inner thread. There may be differences in base height (6"/7"/8"). Most frequently, the 6" standard is used (assembly of a 160 mm disc is possible without an adapter). The hole spacing is 74 mm (middle-middle).



Overall capacity of rear derailleur

The difference in the number of teeth at the front and the difference in the number of teeth at the rear result in the overall capacity. If these two values are added together, the capacity of the rear derailleur may not be exceeded, as otherwise the rear derailleur or drive train.

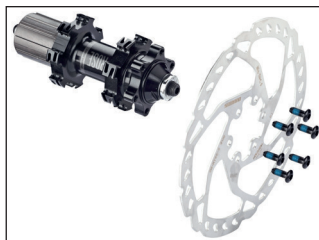
Bottom bracket: 44-32-22 = 22 teeth

Sprocket: 11-34 = 23 teeth

The result: 22 + 23 = 45 teeth

6-hole hubs/brake discs

Brake disc fixing via 6 screws. The distance between the middles is 44 mm.



Center Lock hubs/brake discs

Center Lock hubs have a multi-tooth profile (Ø 35,5 mm) to which the Center Lock disc grips. It is secured by means of a central closing ring. This ensures a secure position on the hub, resulting in higher precision and rigidity.



Lexicon of Shimano chain rings:

1. Identify the Shimano model on the interior of the right-hand crank arm using the FC-XXXX number.
2. Dismantle the chain ring and note the number of teeth and the code (e. g. the letter "N").
3. Select the chain ring in accordance with the information in the catalogue; the number of teeth and the code must match for optimum shifting comfort.

Hole spacing: Hole spacing refers to the measured distance between the middle of the two fixing drill-holes (see fig. A). This is not to be confused with the "bolt circle diameter", which is also commonly used.

fig. A



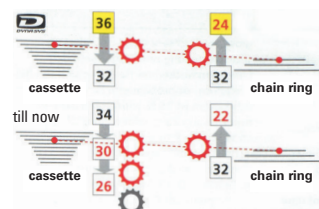
Bolt circle diameter:

The bolt circle diameter or BCD is the diameter of the circle formed by the fixing screws.



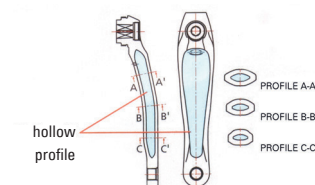
Shimano Dyna-Sys

Shimano 10-speed MTB gearshift systems are known for a differing crank transmission and smaller spectrum (CloseStep; gradation generally 42/32/24 compared to 9-speed 44/32/22). In combination with 10-speed cassettes and a wider spectrum (11-36), shifting is more intuitive. Differential gearshifts, which often need to be used with 3 x 9 gearshift systems, are not generally needed.



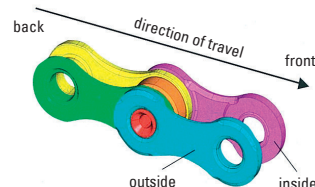
Shimano Hollowtech II technology

With Hollowtech II technology, Shimano makes light and rigid crank sets a reality. Some features of this technology include hollow crank arms and the connection between the right-hand crank and the axle (XTR-Deore LX/Dura Ace-105). The axle diameter is 24 mm. In conjunction with the wide bearing spacing when compared with older bearing systems, there is better rotation efficiency and flexural stiffness. There is also a balanced distribution of weight and higher stability. 2-piece crank sets are structured identically but do not have a hollow crank arm, making them heavier (Deore/Alfine/Tiagra).



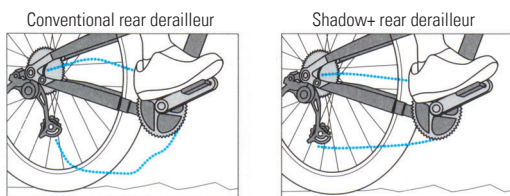
Shimano HG-X

HG-X components are tuned to one another and, when used correctly, ensure more fluid gear shifting. The outer side of the chain is optimised for shifting at the front; the inner side for shifting at the rear. For this reason, the direction of travel of these chains is binding. HG-X systems are currently used in the MTB/ATB 10-speed gear shift systems from Shimano. It is very important that only HG-X chain rings and HG-X chains be used.



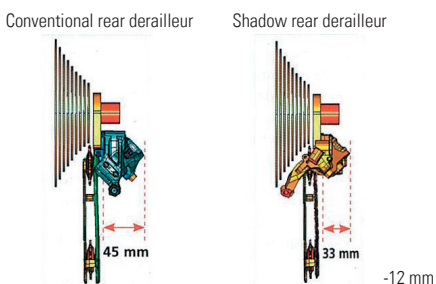
Shimano Shadow+ rear derailleur

Simple solution to reduce incidents of the chain coming off. An interior stabiliser with ON/OFF switch ensures increased tension.



Shimano Shadow rear derailleur

Shadow rear derailleurs have a much flatter shape on the smallest pinion when compared to normal rear derailleurs. This minimises off-road contact with branches, stones and roots, for example.



11-speed

Latest-generation freewheel body with 1.85 mm extra width. You can mount your 11-speed cassette right here. If, however, you still have an 8-, 9- or 10-speed gear shift system, you will require a separate 1.85 mm spacer to eliminate play. To assemble a 7-speed cassette, you will need the 3 mm spacer in addition to the 1.85 mm spacer (and you may also need the additional 1 mm spacer).



10-speed

A steep drop in the cogging is a feature of these freewheel bodies. Shimano and Easton have installed these freewheel bodies on certain wheels and hub models. Construction-conditioned not suitable with Shimano 7-/8-/9-speed sprockets, Shimano youth gradations, Shimano MTB 10-speed sprockets, Tiagra CS-4600 and all SRAM sprockets.



7-/8-/9-/10-speed

A wide groove is a feature of these freewheel bodies. 8-/9-/10-speed sprockets can be mounted directly; 7-speed sprockets require a suitable 3 mm spacer (and, if required, also the additional 1 mm spacer) to eliminate play.

Bottom bracket/housing standards

	Width of housing	Thread in housing	Internal diameter of housing
BSA (1,37x24 tpi)	68, 73 or 83 mm	YES (left-hand thread on right, right-hand thread on left)	34.8 mm
ITAL. (36x24 tpi)	70 mm	YES (right-hand thread on both sides)	36 mm
BB 86 Pressfit	86.5 mm	NO	41 mm
BB 92 Pressfit	89.5 or 92 mm	NO	41 mm
BB 30	68 or 73 mm	NO	42 mm
Pressfit 30	68 or 73 mm	NO	46 mm
BB 386 EVO	86.5 mm	NO	46 mm

SHIMANO COMPATIBILITIES –MECHANICAL–

11-speed road

Crank	Front derailleur	STI lever	Chain	Rear derailleur
FC-9000	FD-9000	ST-9000	CN-9000	RD-9000
FC-6800	FD-6800	ST-6800	CN-6800	RD-6800
		SL-BSR1		

10-speed road / double

Crank	Front derailleur	STI lever	Chain	Rear derailleur
FC-7900/50	FD-7900	ST-7900	CN-7901	RD-7900
FC-6700/50	FD-6700	ST-6700	CN-6701	RD-6700
FC-5700/50	FD-5700	ST-5700	CN-5701	RD-5700/01
FC-4600/50	FD-4600	ST-4600	CN-4601	RD-4600/01
				RD-7800
				RD-6600

10-speed road / triple

Crank	Front derailleur	STI lever	Chain	Rear derailleur
FC-6703	FD-6703	ST-6703	CN-7801	RD-6700
FC-5703	FD-5703	ST-5703	CN-6600	RD-5700/01
FC-4603	FD-4603	ST-4603	CN-5600	RD-4600/01
				RD-7800
				RD-6600

10-speed cross / double

Crank	Front derailleur	SL/ST lever	Chain	Rear derailleur
FC-CX70	FD-CX70	ST-6700	CN-7901	RD-7900
FC-CX50		ST-5700	CN-6701	RD-6700
		ST-4600	CN-5701	RD-5700/01
		SL-R780	CN-4601	RD-4600/01
		SL-4600		RD-7800
		SL-R770D		RD-6600
		SL-BS79		

10-speed Road Flatbar / double

Crank	Front derailleur	SL lever	Chain	Rear derailleur
FC-6700/50	FD-6700	SL-R780	CN-7901	RD-7900
FC-5700/50	FD-5700	SL-4600	CN-6701	RD-6700
FC-4600/50	FD-4600		CN-5701	RD-5700/01
	FD-CX70		CN-4601	RD-4600/01
				RD-7800
				RD-6600

10-speed Road Flatbar / triple

Crank	Front derailleur	SL lever	Chain	Rear derailleur
FC-6703	FD-6703	SL-R783	CN-7801	RD-6700
FC-5703	FD-5703	SL-4603	CN-6600	RD-5700/01
FC-4603	FD-4603		CN-5600	RD-4600/01
				RD-7800
				RD-6600

10-speed MTB

Crank	Front derailleur	SL lever	Chain	Rear derailleur
10-speed	10-speed	10-speed	10-speed HG-X	10-speed HG-X
DynaSys	DynaSys	DynaSys	DynaSys	DynaSys

10-speed ATB

Crank	Front derailleur	SL lever	Chain	Rear derailleur
10-speed	10-speed	10-speed	10-speed HG-X	10-speed HG-X

A change to the transmission ratio can mean that these components CANNOT be combined with race bike 10-speed components.

Brakes

BR-9010
BR-9000
BR-7900
BR-6810
BR-6800
BR-6700
BR-5710
BR-5700
BR-3500
BR-R562
BR-2401
BR-CX70
BR-CX50
BR-CX77
BR-R515
BR-R315
BR-4601

Brake lever

BL-4600
BL-3500
BL-R780
BL-2400