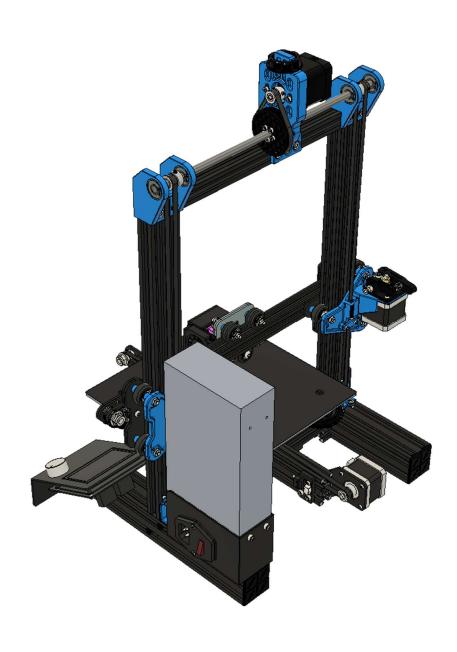
## Version 1

Unrotated

+

## V-Rollers



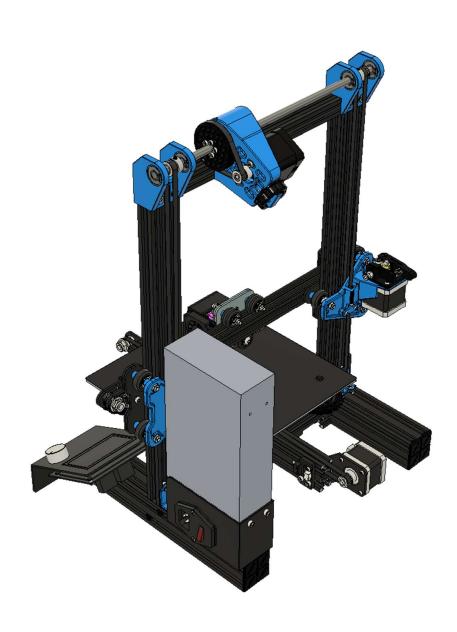
	Version: Unrotated + V-Rollers						
Category	Component	Quantity	Reuse from	Notes	My Source	Alternative Source	
Motion	20T Pulley - 8mm Bore	3	no	One for each side on the Rod, one for the printed 80T Gear.	<u>Aliexpress</u>	<u>Aliexpress</u>	
	16T Pulley - 5mm Bore	1	no	Motorshaft	<u>Aliexpress</u>	<u>Aliexpress</u>	
	Gt2 Belt	2 Meter	no	Don't buy the cheapest. You should go for belts with glassfiber. Width: 6mm	Amazon Germany	<u>Aliexpress</u>	
	188mm Looped Belt	1	no	Width: 6mm	<u>Aliexpress</u>	Aliexpress Affiliate Link Voron Guys	
	F623ZZ 3*10*4 bearing	4	no	2 Pieces per side	<u>Aliexpress</u>		
	608ZZ Bearing	4 (5)	no	Do you have an old skateboard? You can steal the bearings from the wheels;) (5 for extra bearing in transmission body)	<u>Aliexpress</u>	<u>Aliexpress</u>	
	8mm Rod	330 mm	yes/no	Theres no link, just go to your local hardware store and take a cheap 8mm (aluminium) rod. You don't have to buy a hardened steel one. (to expensive and hard to cut). You also could use your leadscrew.			
Fasteners	M5x8mm	15	no	Any type of M5x8mm screw can be used. I really like the openbuilds one	<u>Aliexpress</u>		
	M5x40mm	6	yes (3 x)	Screwhead must fit under the extrusion from the X-Axis. (Take a look at 5:20 of my video) You also could use a stock 40mm screw from the left side of the printer and place this on the inside of the right side. This way you can use any type of screwhead for the remaining holes.	<u>Aliexpress</u>	Aliexpress (cheaper)	
	M5x30mm	4	no	7, 7, 11	Aliexpress		
	M5 T-nuts	15	no		Aliexpress		
	M3x30mm	2	no				
	M3x25mm	2	no				
	M3x16mm	10	no				
	M3x12mm	8	no	If you have no screws, you should buy a kit. Especially for the tensioner a longer screw can be good.	Aliexpress		
	M3x10mm	2	no				
	M3x6mm	5	no				
	M3 nuts	10	no				
Electronics	Motor extension cable	1	no	The original Cable is obviously too short^^ Check if the middle cables are crossed!!!	<u>Aliexpress</u>		
<b>Printed Parts</b>	RightV3	1	/	Thingiverse (Bowden-Version available)			
	LeftV3	1	/	Thingiverse (Bowden-Version available)			
	RightTop	1	/	Thingiverse			
	LeftTop	1	/	Thingiverse			
	RightBottom	1	/	Thingiverse			
	LeftBottom	1	/	Thingiverse			
	Spacer	3	/	Thingiverse			
	Tensioner Block	2	/	Thingiverse			
	TensionerClamp	2	/	Thingiverse			
	Transmission	1	/	<u>Github</u>			
	MotorMountTensionerArm	1	/	<u>Github</u>			
	ZDriveTensioningRing	1	/	<u>Github</u>			
	80TRingGear	1	/	<u>Github</u>			
Filament	Petg or ABS (+)	??kg	no	Yes you can use PLA, but you shouldn't ;)			

## Version 2

Rotated

+

## V-Rollers



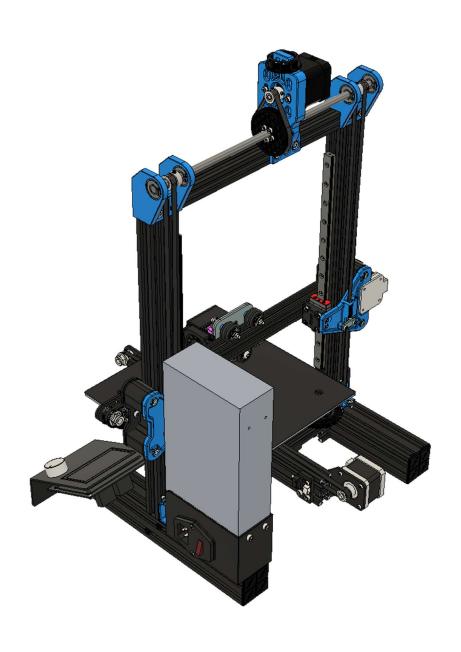
	Version: Rotated + V-Rollers						
Category	Component	Quantity	Reuse from	Notes	My Source	Alternative Source	
Motion	20T Pulley - 8mm Bore	3	no	One for each side on the Rod, one for the printed 80T Gear.	<u>Aliexpress</u>	<u>Aliexpress</u>	
	16T Pulley - 5mm Bore	1	no	Motorshaft	<u>Aliexpress</u>	Aliexpress	
	Gt2 Belt	2 Meter	no	Don't buy the cheapest. You should go for belts with glassfiber. Width: 6mm	Amazon Germany	<u>Aliexpress</u>	
	188mm Looped Belt	1	no	Width: 6mm	<u>Aliexpress</u>	Aliexpress Affiliate Link Voron Guys	
	F623ZZ 3*10*4 bearing	4		2 Pieces per side	<u>Aliexpress</u>		
	608ZZ Bearing	4 (5)		Do you have an old skateboard? You can steal the bearings from the wheels;) (5 for extra bearing in transmission body)	<u>Aliexpress</u>	<u>Aliexpress</u>	
	8mm Rod	330 mm	yes/no	Theres no link, just go to your local hardware store and take a cheap 8mm (aluminium) rod. You don't have to buy a hardened steel one. (to expensive and hard to cut). You also could use your leadscrew.			
Fasteners	M5x8mm	17	no	Any type of M5x8mm screw can be used. I really like the openbuilds one	Aliexpress		
				Screwhead must fit under the extrusion from the X-Axis. (Take a look at 5:20 of my video) You also could			
	M5x40mm	6	yes (3 x)	use a stock 40mm screw from the left side of the printer and place this on the inside of the right side. This			
				way you can use any type of screwhead for the remaining holes.	Aliexpress	Aliexpress (cheaper)	
	M5x30mm	4	no		Aliexpress		
	M5 T-nuts	17	no		Aliexpress		
	M3x30mm	2	no				
	M3x25mm	2	no				
	M3x16mm	10	no				
	M3x12mm	8	no	If you have no screws, you should buy a kit. Especially for the tensioner a longer screw can be good.	Aliexpress		
	M3x10mm	2	no				
	M3x6mm	5	no				
	M3 nuts	10	no				
Electronics	Motor extension cable	1	no	The original Cable is obviously too short^^ Check if the middle cables are crossed!!!	Aliexpress		
<b>Printed Parts</b>	RightV3	1	/	Thingiverse (Bowden-Version available)			
	LeftV3	1	/	Thingiverse (Bowden-Version available)			
	RightTop	1	/	Thingiverse			
	LeftTop	1	/	Thingiverse			
	RightBottom	1	/	Thingiverse			
	LeftBottom	1	/	Thingiverse			
	Spacer	3	/	Thingiverse			
	Tensioner Block	2	/	Thingiverse			
	TensionerClamp	2	/	Thingiverse			
	Transmission	1	/	Github			
	MotorMountTensionerArm	1	/	Github			
	ZDriveTensioningRing	1	/	Github			
	80TRingGear	1	/	Github			
Filament	Petg or ABS (+)	??kg	no	Yes you can use PLA, but you shouldn't ;)			
				,,			

Version 3

Unrotated

+

MGN-12H



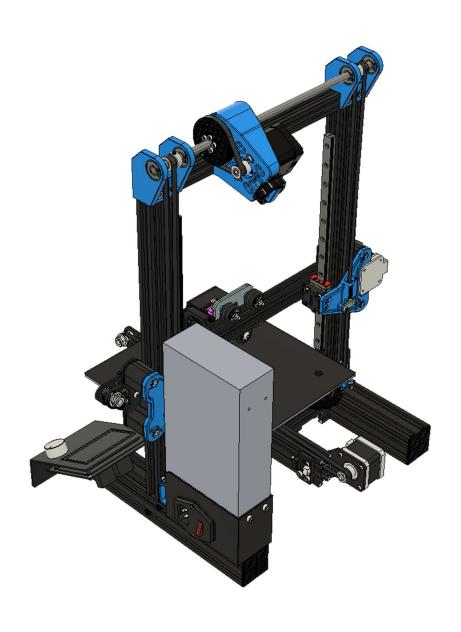
	Version: Unrotated + MGN						
Category	Component	Quantity	Reuse from	Notes	My Source	Alternative Source	
Motion	20T Pulley - 8mm Bore	3	no	One for each side on the Rod, one for the printed 80T Gear.	<u>Aliexpress</u>	Aliexpress	
	16T Pulley - 5mm Bore	1	no	Motorshaft	<u>Aliexpress</u>	Aliexpress	
	Gt2 Belt	2 Meter	no	Don't buy the cheapest. You should go for belts with glassfiber. Width: 6mm	Amazon Germany	Aliexpress	
	188mm Looped Belt	1	no	Width: 6mm	<u>Aliexpress</u>	Aliexpress Affiliate Link Voron Guys	
	F623ZZ 3*10*4 bearing	4	no	2 Pieces per side	<u>Aliexpress</u>		
	C0077 D	4 (5)		Do you have an old skateboard? You can steal the bearings from the wheels;) (5 for extra bearing in			
	608ZZ Bearing	4 (5)	no	transmission body)	<u>Aliexpress</u>	<u>Aliexpress</u>	
	0 0 1	220	,	Theres no link, just go to your local hardware store and take a cheap 8mm (aluminium) rod. You don't			
	8mm Rod	330 mm	yes/no	have to buy a hardened steel one. (to expensive and hard to cut). You also could use your leadscrew.			
	300mm MGN Rail	2	no	Don't buy the cheapest.			
Fasteners	M5x8mm	15	no	Any type of M5x8mm screw can be used. I really like the openbuilds one	Aliexpress		
	M5x40mm	1	yes		Aliexpress	Aliexpress (cheaper)	
	M5x30mm	4	no		Aliexpress		
	M5 T-nuts	15	no		Aliexpress		
	M3x30mm	2	no				
	M3x25mm	2	no				
	M3x20mm	4	no				
	M3x16mm	10	no				
	M3x12mm	8	no	If you have no screws, you should buy a kit. Especially for the tensioner a longer screw can be good.	Aliexpress		
	M3x10mm	10	no	The your nave no serews, you should buy a kit. Especially for the tensioner a longer serew can be good.	<u>инскрисээ</u>		
	M3x8mm	24	no	You will need these to mount the rails. All holes: 12 per rail. You can use less, minimum 4 per rail.			
	M3x6mm	5	no	Tou will fleed these to mount the falls. All flores. 12 per fall. Tou can use less, fillillitum 4 per fall.			
	M3 nuts	14	no				
	M3 T-nuts	24	no	You will need these to mount the rails. All holes: 12 per rail. You can use less, minimum 4 per rail.			
Electronics	Motor extension cable	1	no	The original Cable is obviously too short^^ Check if the middle cables are crossed!!!	Aliexpress		
Printed Parts		1	/	Thingiverse (Bowden-Version available)	Allexpress		
Printeu Parts	LeftV3	1	/	Thingiverse (Bowden-Version available)			
		1	/				
	RightTop	1	/	Thingiverse Thingiverse			
	LeftTop		/	Thingiverse			
	RightBottom	1	/	Thingiverse			
	LeftBottom	1	/	Thingiverse			
	Spacer_Right (MGN folder)	1	/	Thingiverse			
	Spacer_Left (MGN folder)	1	/	Thingiverse			
	Right (MGN folder)	1	/	Thingiverse			
	Left (MGN folder)	1	/	Thingiverse			
	DistanceBracket	2	/	Thingiverse - you will need this to align the rails. Just take a look at my video.			
	Tensioner Block	2	/	Thingiverse			
	TensionerClamp	2	/	Thingiverse			
	Transmission	1	/	Github			
	MotorMountTensionerArm	1	/	<u>Github</u>			
	ZDriveTensioningRing	1	/	<u>Github</u>			
	80TRingGear	1	/	<u>Github</u>			
Filament	Petg or ABS (+)	??kg	no	Yes you can use PLA, but you shouldn't ;)			

Version 4

Rotated

+

MGN-12H



	Version: Rotated + MGN						
Category	Component	Quantity	Reuse from	Notes	My Source	Alternative Source	
Motion	20T Pulley - 8mm Bore	3	no	One for each side on the Rod, one for the printed 80T Gear.	<u>Aliexpress</u>	<u>Aliexpress</u>	
	16T Pulley - 5mm Bore	1	no	Motorshaft	<u>Aliexpress</u>	Aliexpress	
	Gt2 Belt	2 Meter	no	Don't buy the cheapest. You should go for belts with glassfiber. Width: 6mm	Amazon Germany	Aliexpress	
	188mm Looped Belt	1	no	Width: 6mm	<u>Aliexpress</u>	Aliexpress Affiliate Link Voron Guys	
	F623ZZ 3*10*4 bearing	4	no	2 Pieces per side	<u>Aliexpress</u>		
	60077 D vir -	4 (5)		Do you have an old skateboard? You can steal the bearings from the wheels;) (5 for extra bearing in			
	608ZZ Bearing	4 (5)	no	transmission body)	Aliexpress	<u>Aliexpress</u>	
	0 0 1	220	,	Theres no link, just go to your local hardware store and take a cheap 8mm (aluminium) rod. You don't			
	8mm Rod	330 mm	yes/no	have to buy a hardened steel one. (to expensive and hard to cut). You also could use your leadscrew.			
	300mm MGN Rail	2	no	Don't buy the cheapest.			
Fasteners	M5x8mm	17	no	Any type of M5x8mm screw can be used. I really like the openbuilds one	Aliexpress		
	M5x40mm	1	yes		Aliexpress	Aliexpress (cheaper)	
	M5x30mm	4	no		Aliexpress		
	M5 T-nuts	17	no		Aliexpress		
	M3x30mm	2	no				
	M3x25mm	2	no				
	M3x20mm	4	no				
	M3x16mm	10	no				
	M3x12mm	8	no	If you have no screws, you should buy a kit. Especially for the tensioner a longer screw can be good.	Aliexpress		
	M3x10mm	10	no	1. You have no selected you should say a like sepectary for the tensioner a longer select can see good.	r tirexpress		
	M3x8mm	24		You will need these to mount the rails. All holes: 12 per rail. You can use less, minimum 4 per rail.			
	M3x6mm	5	no	The first control of the first			
	M3 nuts	14	no				
	M3 T-nuts	24	no	You will need these to mount the rails. All holes: 12 per rail. You can use less, minimum 4 per rail.			
Electronics	Motor extension cable	1	no	The original Cable is obviously too short^^ Check if the middle cables are crossed!!!	Aliexpress		
Printed Parts		1	/	Thingiverse (Bowden-Version available)	инскрі сээ		
T Time Ca T area	LeftV3	1	/	Thingiverse (Bowden-Version available)			
	RightTop	1	/	Thingiverse			
	LeftTop	1	/	Thingiverse			
	RightBottom	1	/	Thingiverse			
	LeftBottom	1	/	Thingiverse			
	Spacer Right (MGN folder)	1	1	Thingiverse			
	Spacer Left (MGN folder)	1	/	Thingiverse			
	Right (MGN folder)	1	/	Thingiverse			
	Left (MGN folder)	1	/	Thingiverse			
	DistanceBracket	2	/	Thingiverse - you will need this to align the rails. Just take a look at my video.			
	Tensioner Block	2	1	Thingiverse			
	TensionerClamp	2	1	Thingiverse			
	Transmission	1	1	Github Github			
	MotorMountTensionerArm	1	1	Github			
	ZDriveTensioningRing	1	1	Github			
	80TRingGear	1	/	Github			
Filament	Petg or ABS (+)	??kg	no	Yes you can use PLA, but you shouldn't;)			
i ilaillellt	reig of Abs (+)	: : Kg	110	res you can use FLM, but you shouldn't , j			