

THRIVING ON INNOVATION
LAGUNA TOOLS



DriftMaster Bandsaw Fence System Manual

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Dear Woodworker:

Thank you for your purchase and welcome to the Laguna Tools group of discriminating woodworkers. I understand that you have a choice of where to purchase your machines and appreciate the confidence you have in our products.

Every machine sold by Laguna Tools has been carefully designed and well thought through from a woodworker's perspective. I cut on our bandsaws, lathes, table saws and combination machines. Through my hands-on experience, I work hard to make our machines better. I strive to give you machines that inspire you to create works of art. Machines that are a joy to run and work on. Machines that encourage your performance.

Today, we offer high-performance machines with innovative solutions that meet the needs of woodworkers and their ever-evolving craft.

I started Laguna Tools as a woodworker; I still am.

Thank you again for becoming a Laguna Tools customer.

Torben Helshoj

President and Founder - Laguna Tools

Thriving on Innovation

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Safety Rules

As with all machinery, there are certain hazards involved with the operation and use. Using it with caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. If you have any questions relative to the installation and operation, do not use the equipment until you have contacted your supplying distributor.

Read the following carefully before operating the machine:

- 1. Keep the working area clean and be sure adequate lighting is available.**
- 2. Do not wear loose clothing, gloves, bracelets, necklaces or ornaments. Wear face, eye, respiratory and body protection devices as indicated for the operation or environment.**
- 3. Be sure that the power is disconnected from the machine before tools are serviced or an attachment is to be fitted or removed.**
- 4. Never leave the machine with the power on.**
- 5. Do not use dull, gummy or cracked cutting tools.**
- 6. Be sure that the keys and adjusting wrenches have been removed and all the nuts and bolts are secured.**

Limited Warranty

New woodworking machines sold by Laguna Tools carry a one-year warranty from the date of shipping. Laguna Tools guarantees all new machines sold to be free of manufacturers' defective workmanship, parts, and materials.

We will repair or replace, without charge, any parts determined by Laguna Tools, Inc., to be a manufacturer's defect. We require the defective item/part to be returned to Laguna Tools. In the event the item/part is determined to be damaged due to lack of maintenance, cleaning or misuse/abuse, the customer will be responsible for the cost to replace the item/part, plus all related shipping charges.

This limited warranty does not apply to natural disasters, acts of terrorism, normal wear and tear, product failure due to lack of maintenance or cleaning, damage caused by accident, neglect, lack of or inadequate dust collection, or misuse/abuse or damage caused when repair or alterations have been made or attempted by others.

Laguna Tools, Inc. is not responsible for additional tools or modifications sold or performed (other than from/by Laguna Tools, Inc.) on any Laguna Tools, Inc., woodworking machine. Warranty may be voided upon the addition of such noted tools and/or modifications, determined on a case-by-case basis.

Normal user alignment, adjustment, tuning and machine settings are not covered by this warranty. It is the responsibility of the user to understand basic woodworking machinery settings and procedures and to properly maintain the equipment in accordance with the standards provided by the manufacturer.

Parts, under warranty, are shipped at Laguna Tools, Inc's cost either by common carrier, FedEx Ground service or a similar method.

Technical support to install replacement parts is primarily provided by phone, fax or e-mail. The labour required to install replacement parts is the responsibility of the user.

Laguna Tools is not responsible for damage or loss caused by a freight company or other circumstances not in our control.

Only new machines sold to the original owner are covered by this warranty. For warranty repair information, call 1-800-332-4094.

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Specification sheet.

Drift Master	Specification
Fence height	4 inches in high position 1/2 inch in low position
Fence length	31 1/2 inches
Lateral fence travel	17 inches
Fence travel per rotation	0.07 inches [1.7 mm]
Fence travel per graduation	0.004 inches [0.1 mm]
Total weight	40 lbs

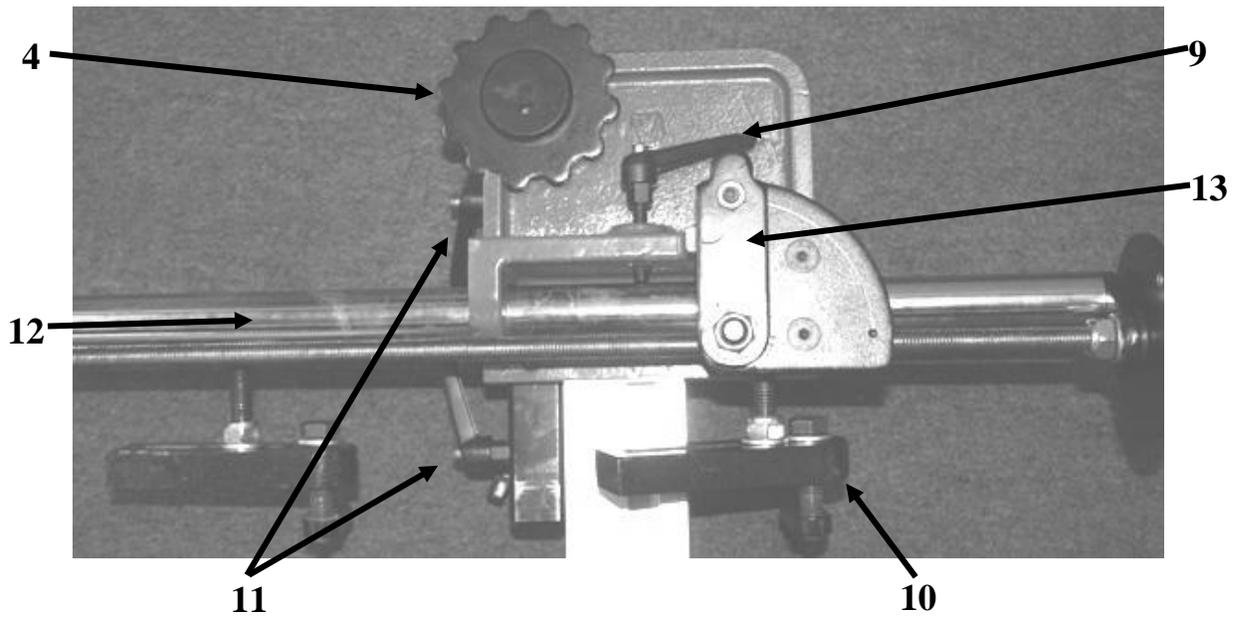
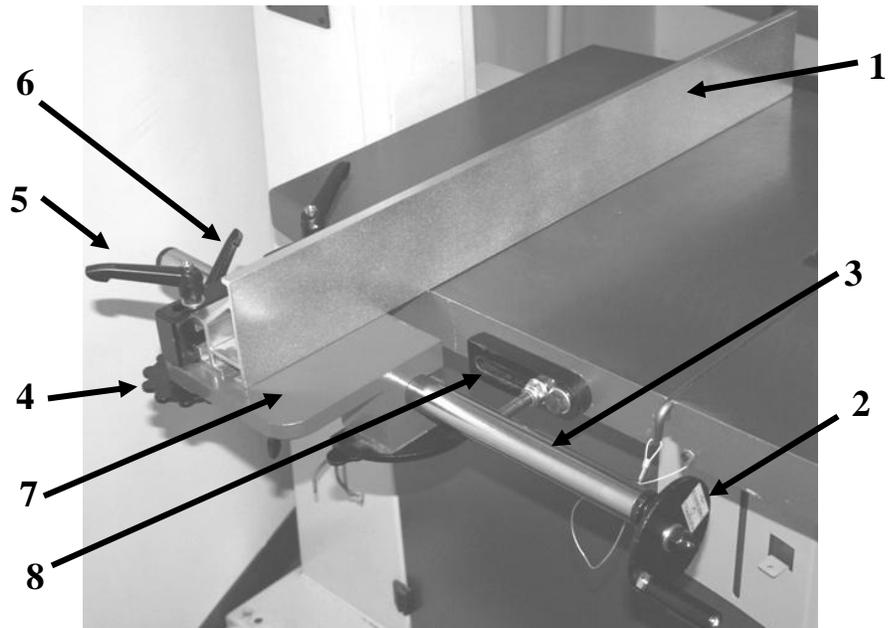
Receiving your drift master.

Note. It is probable that your drift master will be delivered by a third party. Before you unpack your drift master, you need to first inspect the packing, invoice and shipping documents supplied by the driver. Ensure that there is no visible damage to the packing or the drift master. You need to do this prior to the driver leaving. All damage must be noted on the delivery documents and signed by you and the delivery driver. You must then contact the seller (Laguna Tools) within 24 hours.

Introduction to the drift master.

This drift master is designed to give you years of safe service. Read this owner's manual in its entirety before assembly or use.

Parts of the drift master.



1. Fence.
2. Lateral adjusting handle.
3. Fence support shaft.
4. Drift adjusting disc.
5. Drift release handle.
6. Drift pivot handle.
7. Fence support table.
8. Universal bracket.
9. Fence lateral clamp knob.
10. Nut special.
11. Fence clamp handles.
12. Lead screw.
13. Lead screw engage/disengage lever.

Fence.

The fence is a heavy-duty aluminum extrusion that can be fitted to either the high or low position. The fence is adjustable to suit the width of the cut that is required and the band saw that the drift master is being used on. The fence attaches to the fence support table via a bar that fits into a “T” slot.

Lateral adjusting handle.

The lateral adjusting handle rotates the lead screw and moves the fence toward or away from the blade. The handle is supplied fitted to the left hand side, but it can be moved to the right hand side if you find it more convenient.

Fence support shaft.

The fence support shaft is a large-diameter hard-chromed steel shaft. The fence support table rides on this shaft and guides the fence.

Drift adjusting disc.

The drift adjusting disc adjusts the angle of the fence to accommodate for drift of the blade. Adjustments can only be made once the two clamp handles have been released.

Drift release clamp.

The drift release clamp clamps the fence in the required angle.

Drift pivot clamp.

The drift pivot clamp clamps the fence to a pivot. The fence pivots about the shaft while the drift is adjusted.

Fence support table.

The fence support table is constructed from cast iron and supports the fence and other components of the system.

Universal bracket.

Two universal brackets are supplied to attach the drift master to the side of the band saw.

Support table clamp.

The support table clamp clamps the fence support table to the fence support shaft. This keeps the fence locked in the required position while cutting your job.

Nut special.

Two nut specials are provided that fit the clamping bolts. The nut specials fit on the inside of the table.

Fence clamp handles.

The fence clamp handles pull the fence up against the fence support bar.

Lead screw.

The lead screw, when rotated, moves the fence along the fence support shaft.

Lead screw engage/disengage lever.

The lead screw engage/disengage lever allows the lead screw to be disengaged from the fence support table. This action reverts the drift master to a conventional fence and can be moved to any position along the fence support shaft. It is also a convenient function, as the fence can be roughly positioned, then the thread is engaged for fine adjustment.

Unpacking your drift master.

1. Dismantle the box.
2. Using the knife, cut the plastic wrap.
3. Remove all the parts that have been packed with the drift master.

Note. If you have any doubt about the described procedure, seek professional assistance. Do not attempt any procedure that you feel is unsafe or that you do not have the physical capability of achieving.



Packed Drift master

Cleaning the drift master.

Remove the rust protection grease with WD 40 or a similar solvent. It is important that you remove all the grease and re-lubricate with a Teflon- based lubricant, as Teflon has less tendency to attract sawdust and cause clogging. You should also wax the fence, as this also protects and reduces friction.

What you will receive with the drift master.



**Universal
brackets**

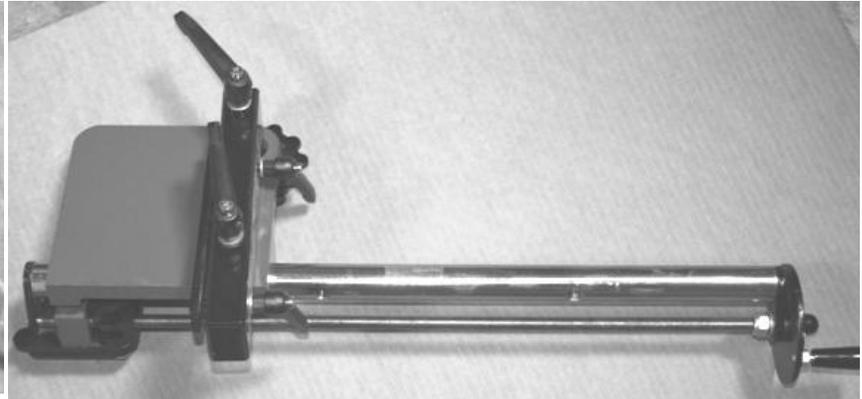
Nut special

Fixings

Fence



Mounting studs



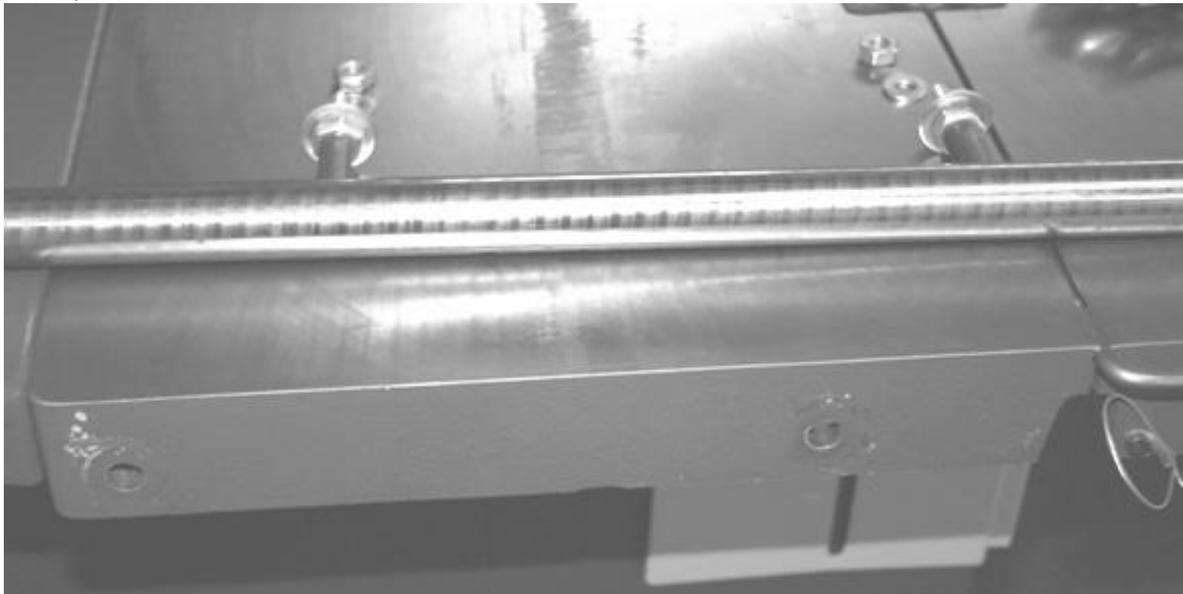
Main assembly

Assembly and setup.

The drift master can fit on most band saws, either using the existing holes on the side of the band saw table or by drilling two holes.

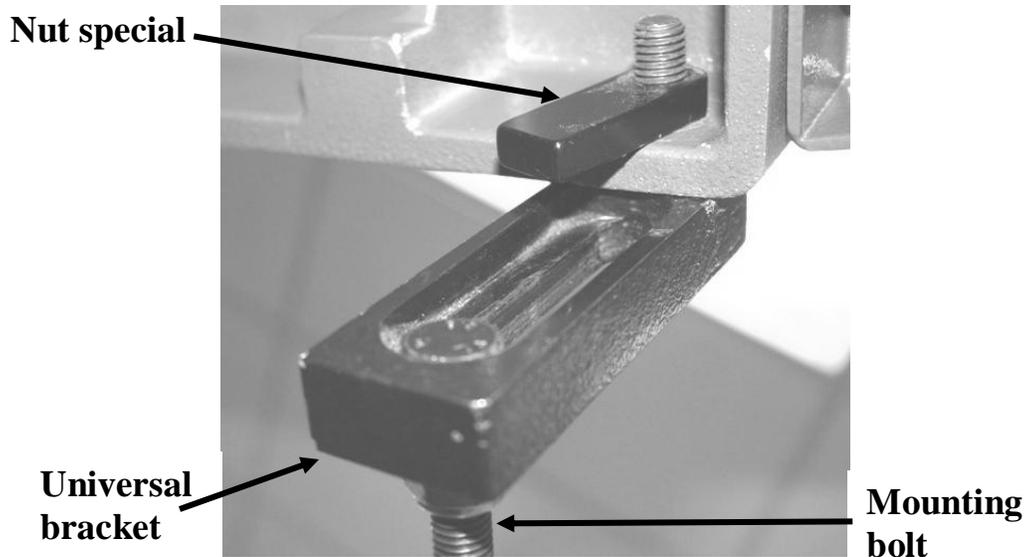
The first part of this manual covers fitting the drift master using existing holes.

Note. If the universal mounting brackets hang below the bottom of the table on your installation, they may interfere with the door. To open the door, the table will have to be tilted.



Existing fence

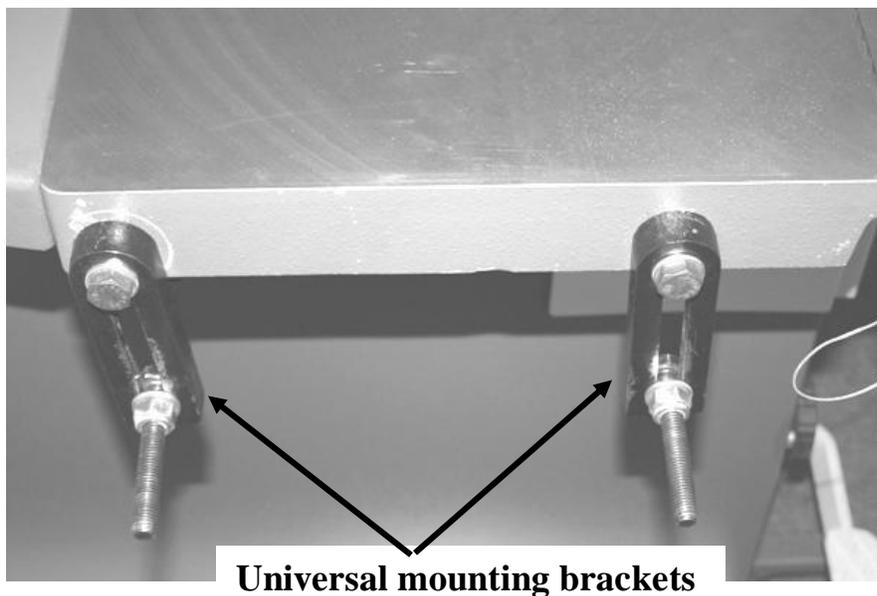
Remove the existing fence.



Fit the mounting bolts to the universal brackets but do not fully tighten. Fit the universal brackets to the table with the nut special on the inside of the table but do not fully tighten. The nuts are designed so that no wrench is needed on the inside of the table. This will ease the assembly process.

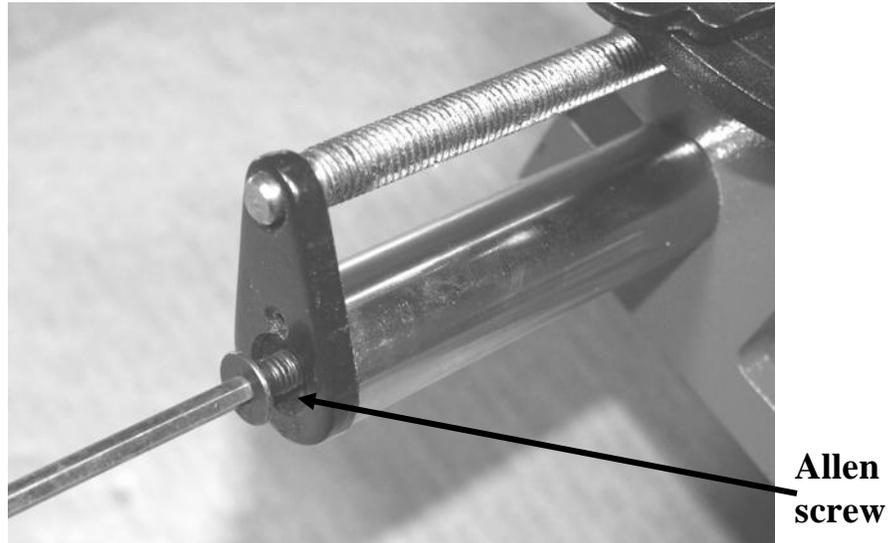
Note. You may need to enlarge the holes in the table. They need to be a minimum of 1/2-inch diameter.

Note. You will need a 19 mm socket wrench.



Universal mounting brackets shown fitted to the band saw table.

If you are fitting the drift master on your own, it is recommended that the table be removed to reduce the weight and ease assembly. If you have help with the assembly, you can skip the removal process.

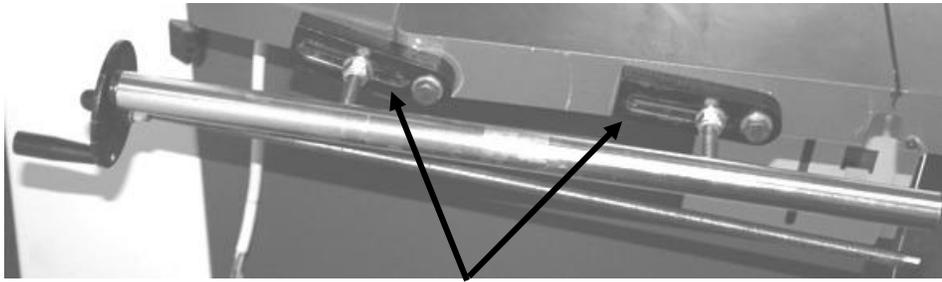


Remove the Allen screw from the end plate and remove the plate. The plate has a small screw that lines up with a hole in the shaft. This is used for location only. **Do not** remove the screw.

Disengage the lead screw with the lead screw engage/disengage lever. Slide the table assembly off the shaft.

The shaft has four tapped holes to suit various table hole configurations. When selecting which holes are best suited for your configuration, the following must be taken into account:

1. Do not have the universal brackets covering the blade slot.
2. The universal brackets must not hang down so far that they restrict the lower door from opening.
3. The drift master must be positioned to give the maximum coverage.

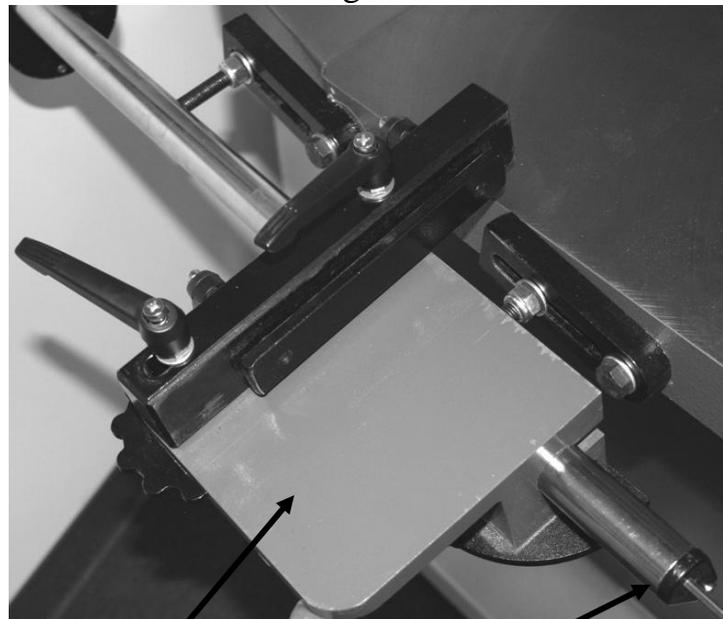


Shaft shown fitted to the universal mounting brackets

Using a 19 mm socket wrench, fit the shaft to the two fixing bolts in the holes that you have selected. The holes have tapered threads, and the bolts will jam into the tapers.

This is important, as it will enable you to tighten the lock nuts at a later stage, and depending on your configuration, you may not have access to the back of the universal mounting bracket.

Do not tighten the lock nuts at this stage.



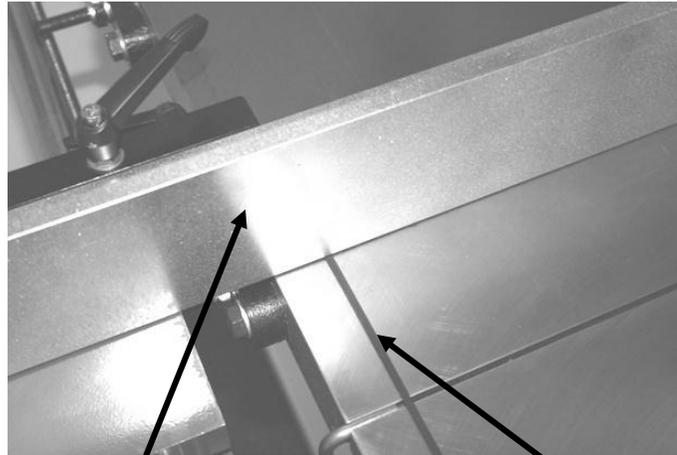
Fence support table

End plate

Slide the table onto the shaft and lead screw. Refit the end plate.

Adjust the shaft and the universal mounting brackets so that the fence support table is approximately level with the top of the band saw table and that the shaft is positioned to give the coverage required. Snug tight the lock nuts and the table mounting bolts. You do not have to fully tighten at this stage, as the shaft

will have to be fine-tuned once the fence is fitted. Slide the fence onto the clamp plate and snug tight the fence with the clamp levers.

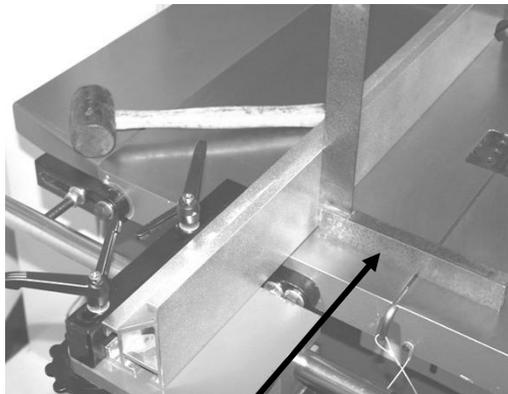


Fence

1/16 inch material

With the fence over the front universal mounting bracket, lay a piece of material approx 1/16-inch thick on the table under the fence. The thickness is not important. It is advisable when setting up the fence that it contact the table at the end furthest away from the drift master and is not in contact with the table anywhere else. This will greatly reduce the friction when moving the fence. It is not important that the fence is flush with the support table but it is an advantage, as it will mean that the gap under the fence will be maintained when you change from the low to the high position.

Loosen the fence clamp handles, and using a **rubber** mallet, tap the universal mounting bracket so that the bottom of the fence support table is level with the bottom of the fence. Fully tighten the lock nut and the mounting bolt. Move the fence so that it is positioned over the remaining universal mounting bracket and repeat the procedure.



Engineers square

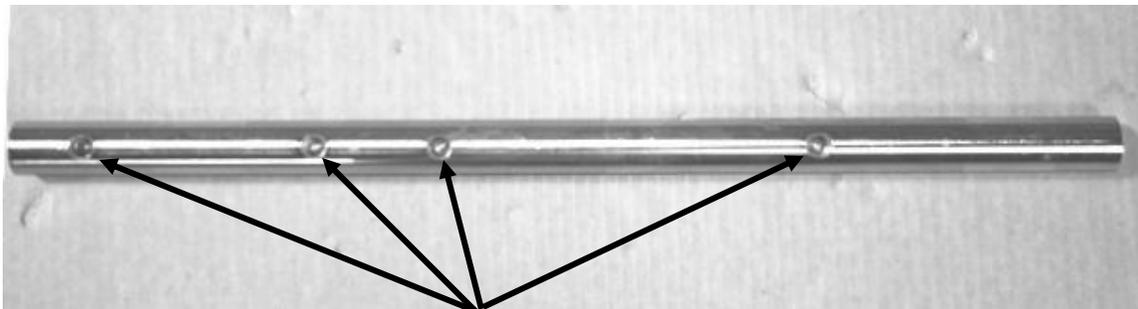
Using an engineer's square, check that the fence is square to the table. If the fence needs adjustment, tap the universal mounting bracket either up or down until the fence is square. Fully tighten the lock nut and the mounting bolt.



Drift master assembled

Mounting without the use of brackets.

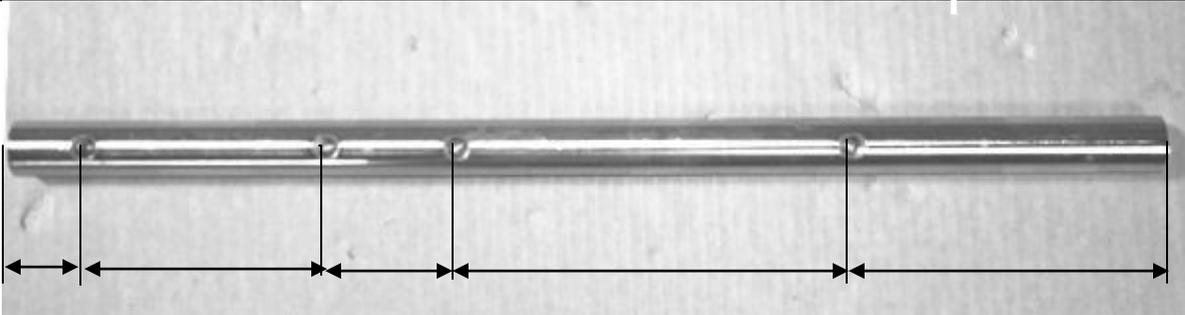
The drift master can be mounted directly to the side of the band saw table with mounting studs. This will eliminate the use of the universal mounting brackets. It will require that two holes be drilled in the side of the table to match the hole centers on in the drift master shaft.



Fixing holes

The 1/2-inch minimum diameter holes need to be drilled 38 mm from the top of the table. The centers of the holes will depend on the holes that you select on the shaft, which will, in turn, depend on the band saw that you have and the coverage required.

Note. For fine adjusting the fence to the band saw table, you will probably have to elongate the holes either up or down.



	Dimension
A	1.578 inches [40 mm]
B	4.968 inches [126.2 mm]
C	2.656 inches [67.5 mm]
D	8.062 inches [204.78 mm]
E	6.453 inches [164 mm]

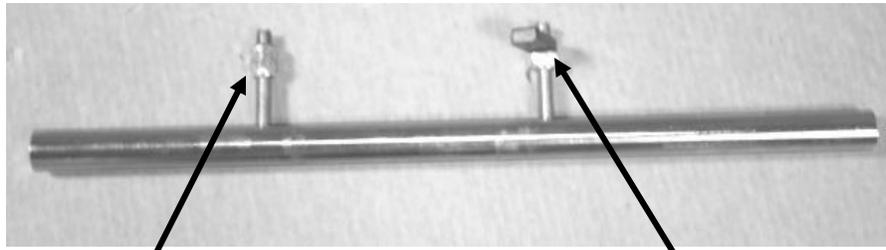
As you can see, there is far more work involved in not using the universal brackets, and thought is required if you undertake this option.

The drift master must be positioned to give the maximum coverage. Select the fixing holes that are best suited for your configuration.

Mark out the table and center punch the hole centers. This will give the drill a point to start. Use a small diameter drill first and work up through the drills to minimum 1/2-inch diameter.

Note. The drift master is subject to change, and may be supplied with different hole centers. Your drift master must be checked for dimensional accuracy.

Never rely on the above table.



Double nuts or Nuts with special nuts

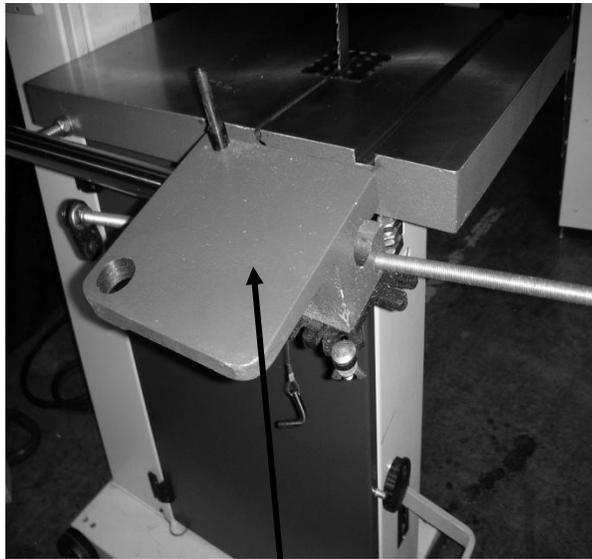
Fit the two nuts onto the stud (or nut with nut special) and tighten together. Fit the studs to the two fixing holes in the shaft that you have selected. The holes have tapered threads, and the studs will jam into the tapers. This is important, as it will enable you to tighten the nuts at a later stage. Loosen the two nuts and remove the outer one.



Shaft fitted

Fit the shaft to the side of the table and fit the nuts and washers to the studs on the inside of the table.

Adjust the nuts so that the shaft is parallel to the edge of the table. It is not important that the shaft is exactly parallel, as it is likely that the edge of the table is not straight.

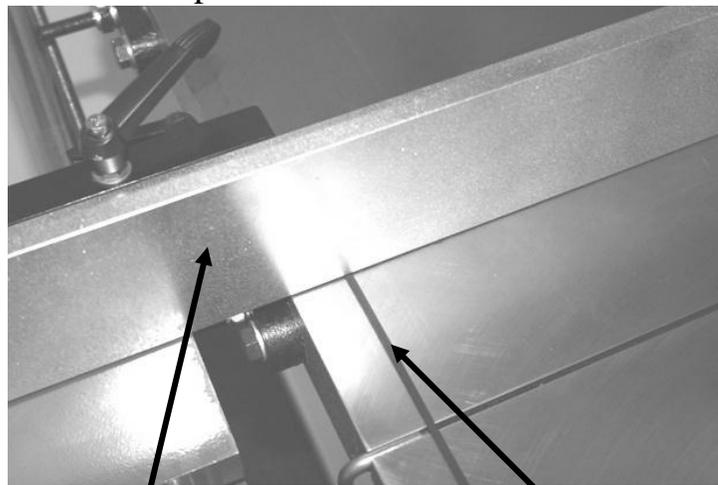


Support table

Fit the support table to the shaft as detailed earlier.

Elongate the holes so that the fence support table is approximately level with the top of the band saw table and snug tight the lock nuts.

You do not have to fully tighten at this stage, as the shaft will have to be fine-tuned once the fence is fitted. Slide the fence onto the clamp plate and snug tight the fence with the clamp levers.

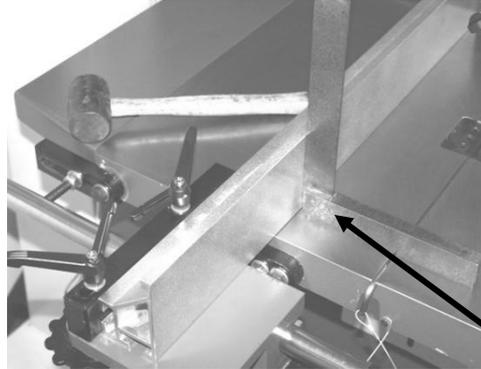


Fence

1/16 inch material

With the fence over the front stud, lay a piece of material approx 1/16-inch thick on the table under the fence. The thickness is not important. It is advisable when setting up the fence that it contact the table at the end furthest away from the drift master and is not in contact with the table anywhere else. This will greatly reduce the friction when moving the fence.

It is not important that the fence is flush with the support table, but it is an advantage, as it will mean that the gap under the fence will be maintained when you change from the low to the high position.



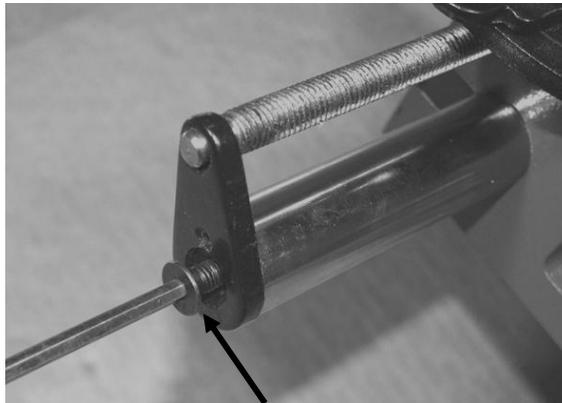
Drift master shown with universal brackets Engineers square

Using an engineer's square, check that the fence is square to the table. If the fence needs adjustment, elongate one hole and adjust the drift master either up or down, depending on the error.

Using the drift master.

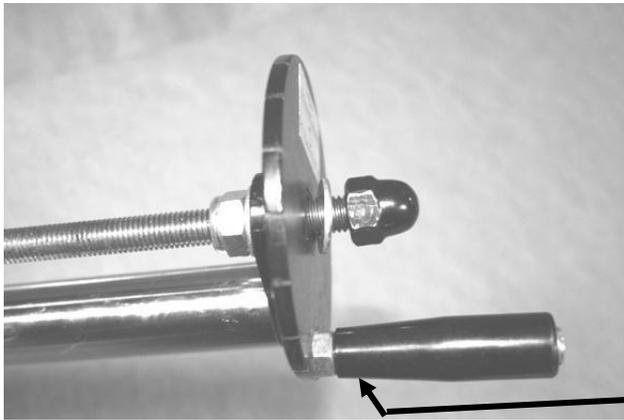
Adjusting handle on either side of the fence.

The adjusting handle can be fitted to either side of the drift master. It is supplied fitted to the left hand side, as this will suit most machines. To change the handle to the right hand side:

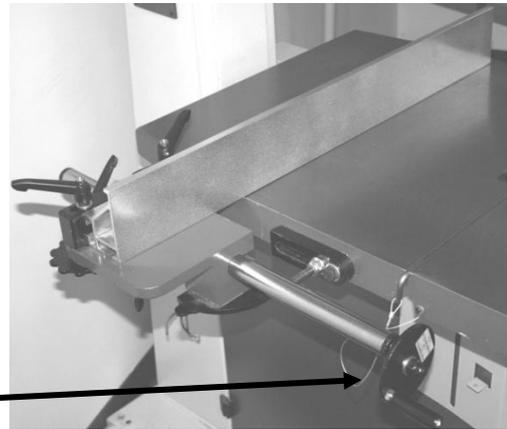


Allen screw

1. Remove the Allen screw from the end plate and remove the plate. The plate has a small screw that lines up with a hole in the shaft. This is used for location only. **Do not** remove the screw.



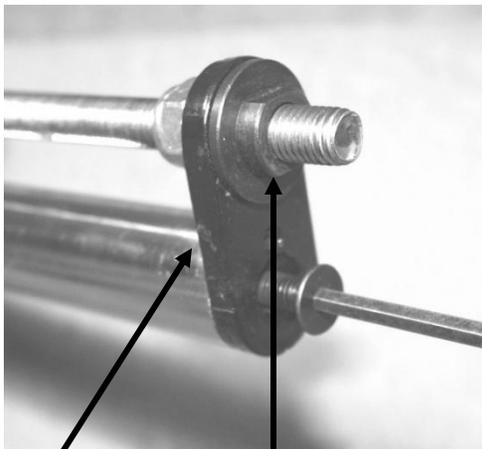
Handle fitted on the Right hand side



2. While holding the handle, loosen the nut and remove the handle. The handle fits onto two flats on a threaded bush. Try not to rotate the handle with the nut removed, as this will change the clearance between the nut and the threaded bush.

3. Remove the Allen screw from the end plate and remove the plate. The plate has a small screw that lines up with a hole in the shaft. This is used for location only. **Do not** remove the screw.

4. With the lead screw engage/disengage lever in the disengaged position, remove the lead screw from the drift master.



End plate Threaded bush



Handle, washer and nut fitted

5. Fit the lead screw to the drift master from the opposite direction.

6. Fit the end plate.

7. Fit the handle end plate.

8. Fit the handle, washer and nut. Tighten the nut while holding the handle. Rotate the handle and check that it runs smoothly and that there is not excessive backlash when going from one direction to the other.

If it feels tight or there is excessive backlash, remove the nut and handle. Rotate the bush out slightly if the rotation is tight, or rotate the bush in if there is excessive backlash. Replace the handle, washer and nut and tighten the nut while holding the handle.

9. Recheck and repeat the procedure if refinement is required.

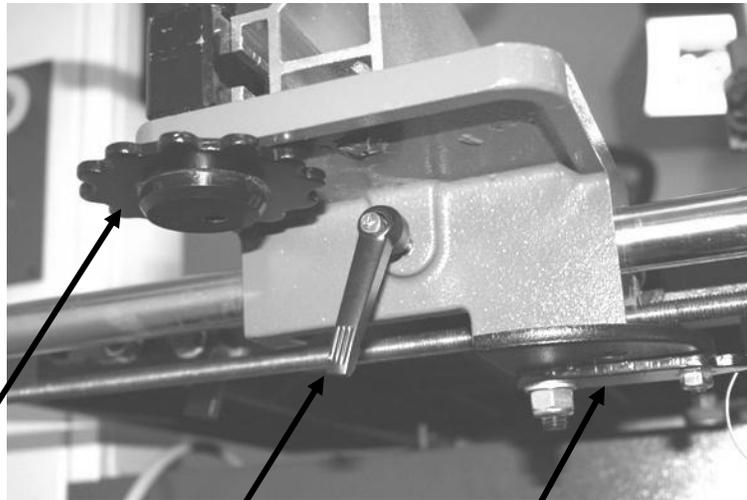
Drift master controls.

Lead screw adjusting handle.

The lead screw adjusting handle is used to move the fence to the required position on your band saw. For every turn of the handle, the fence moves 0.07 inches [1.7 mm]. The handle has graduations around the outside, and by moving the handle one graduation, the table will move 0.004 inches [0.1 mm]. It is important to note that as with any system that uses a lead screw, there will be backlash. To ensure that this backlash will not affect the accuracy of the drift master, the following operating procedure must be used.

With the lead screw engagement lever in the engaged position, move the fence toward the blade to the required position. If you go past the position required, reverse the handle at least one turn past the required position and then turn the handle back to the required position. This will ensure that any backlash does not affect the accuracy of the system.

Note. After moving the fence to the required position, lock the support table prior to making a cut. Never rely on the fence staying in the correct position if the table is not locked.



Drift adjusting disc Table lock lead screw engage/disengage lever

Table lock.

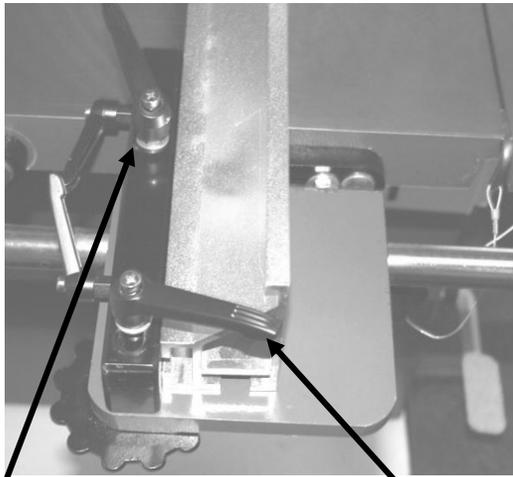
The table lock clamps the table to the shaft and must be released prior to adjusting the fence.

Drift adjusting disc.

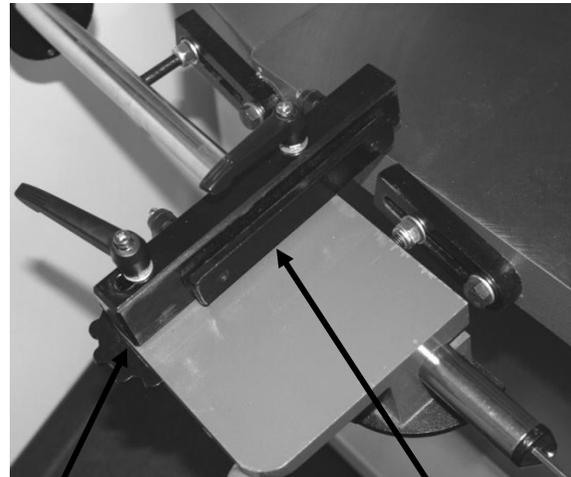
With the fence drift release handle and the pivot handle in the unlocked position, the drift adjusting disc can adjust the drift angle of the fence.

Lead screw engage/disengage lever.

The lead screw engage/disengage lever allows the lead screw to be disengaged from the fence support table. This action reverts the drift master to a conventional fence, and the fence can be moved to any position along the fence support shaft. It is also a convenient function, as the fence can be roughly positioned, then the thread engaged for fine adjustment.



Drift pivot handle **Drift release handle**



Drift bar **Fence clamp bar**

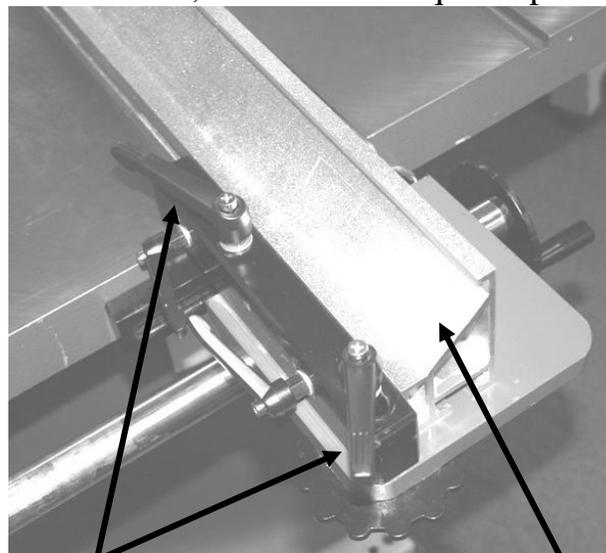
Drift release handle.

The drift release handle clamps the fence in the required angle and must be in the unlocked position while drift is being adjusted.

Drift pivot knob.

The drift pivot handle clamps the fence to a pivot. The fence pivots about the shaft while the drift is adjusted and must be in the unlocked position while drift is being adjusted.

Note. All clamping handles on the drift master are ratcheting type. The handles can be adjusted to ensure that they are not in an inconvenient position. To adjust the handle, lift the handle, rotate to the required position and release.



Fence clamp handles **Fence**

Fence.

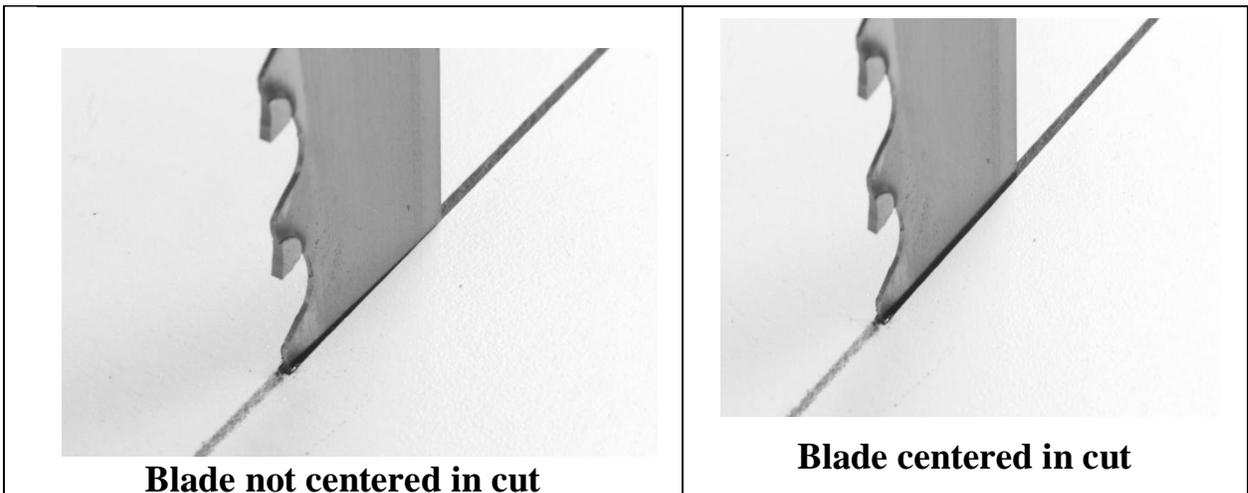
The fence is a heavy-duty aluminum extrusion that can be fitted to either the high or low position. The fence is adjustable laterally to suit the job at hand and the band saw that the drift master is being used on. The fence has two “T” slots, one for the high position and one for the low position. The “T” slot slides onto a bar that is pulled towards the drift bar and clamps the fence.

Adjusting the fence for drift.

There are several methods of adjusting the fence for drift. Two methods are covered in this manual, but it must be noted that Laguna tools recommends Method 2, as it is far easier, quicker and more accurate.

Method 1

- 1.** Make a straight pencil line on the edge of a board.
- 2.** Feed the wood into the blade, cutting next to the pencil mark. If the blade is drifting, you will have to compensate by angling the wood and that way keep the cut straight.
- 3.** Stop the blade while not moving the wood with the cut in the middle of the wood. Mark with a pencil the angle on the table. This is the angle of drift, and you will have to set the fence to the pencil line.
- 4.** Adjust the fence as detailed earlier.
- 5.** Cut a piece of wood using the fence and stop the blade in the middle of the wood. Check that the back of the blade is in the middle of the saw cut.
- 6.** If the back of the blade is not in the middle of the saw cut, repeat the procedure.



Method 2 (recommended method).

- 1.** Set the fence parallel with the blade by loosening the drift release and drift pivot clamps and adjusting the drift adjusting disc. Clamp the drift release and drift pivot clamps. It is not important that it is exact, as you will be readjusting later in the procedure.
- 2.** Using a piece of scrap wood, make a cut while holding the wood against the fence. Stop the cut in the middle of the wood.
- 3.** Look at the position of the back of the blade within the saw cut. The back of the blade should be in the center of the slot but you will probably find that it is closer to one side.
- 4.** Slightly loosen the drift clamps and adjust the fence to compensate with the drift adjusting disc. Retighten the drift clamps.
- 5.** Repeat steps 2, 3 and 4 until the blade is centered.

Note. You may have to do several fine adjustments, and it is better to perform several small adjustments until you become skilled at the procedure. Once you have mastered the process, it should only take a minute to perform the adjustment.

Note. Each blade has a slightly different drift, and each time you change a blade, you must check and readjust if necessary.

Note. It is worth taking the time to set the fence accurately, as it will save frustration and enhance the performance of your machine.

Note. If the universal mounting brackets hang below the bottom of the table on your installation, they may interfere with the door. To open the door, the table will have to be tilted.

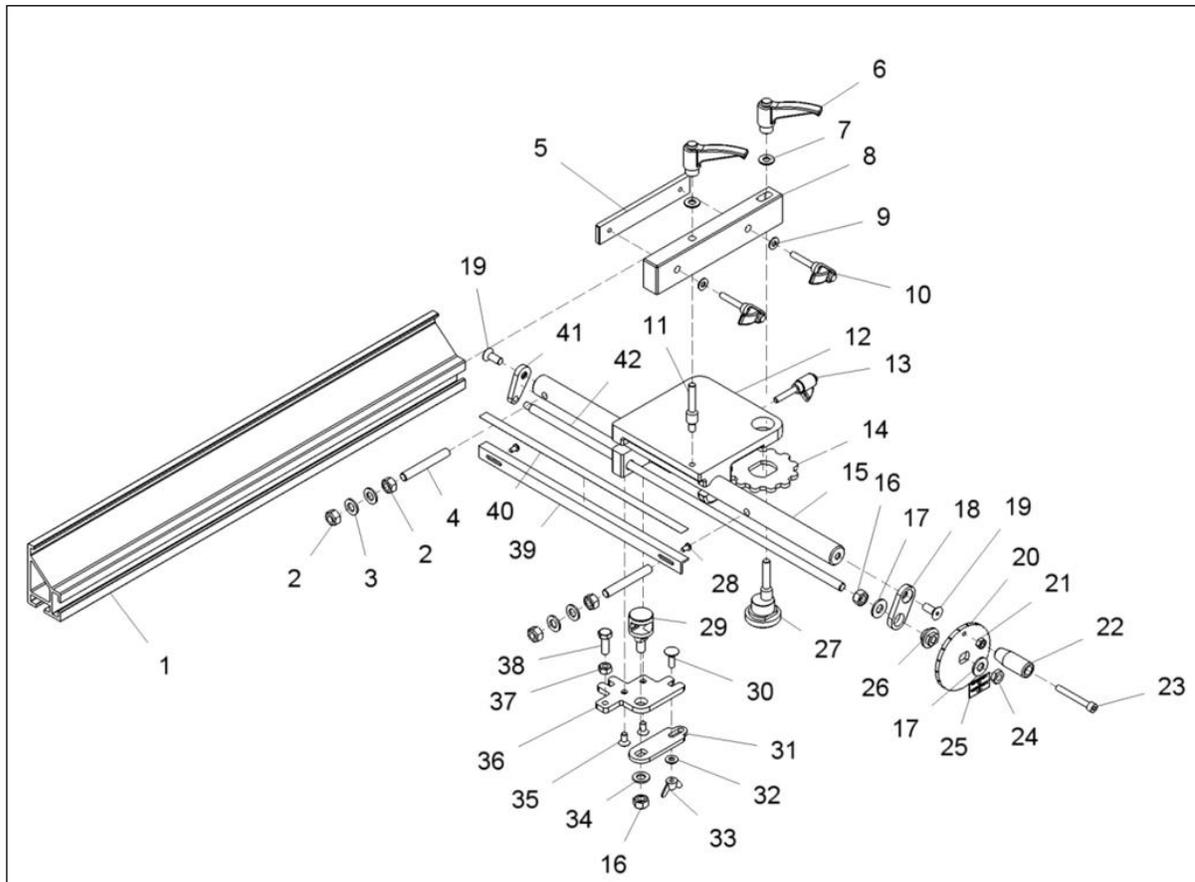
Maintenance.

All tools and machines require regular maintenance, and the drift master is no exception. This section details the general maintenance and care of your drift master. In general, we recommend that you only use a Teflon-based lubricant on the drift master. Regular oil attracts dust and dirt, and the Teflon tends to dry and has fewer tendencies to accumulate dirt and sawdust.

Weekly maintenance.

1. Generally inspect the drift master for damage and loose or worn parts.
2. Clean the drift master and make sure that all moving parts are clean and free from sawdust and dirt.
3. Lubricate all moving parts with a Teflon-based lubricant.

Exploded view drawing.



1	B50.01.00.00.04	ALUMINUM PROFILE	1
2	DIN 985	NUT M 12	4
3	DIN 125 A	WASHER AM12	4
4	B50.01.00.00.02	STUD	2
5	B50.01.00.00.05	COTTER	1
6	GN603-78-M10-DGN	HANDLE M10	2
7	DIN 134	WASHER M10	2
8	B50.01.00.00.06	RIM	1
9	DIN 134	WASHER M 8	2
10	GN603-63-M8-45-DGN	HANDLE M8X45	2
11	B50.01.00.00.07	CENTERING STUD	1
12	B50.01.00.00.03	SLIDE BLOCK FOR FENCE	1
13	GN603-63-M8-40-DGN	HANDLE M8X40	1
14	B50.01.00.00.08	STRIP FOR ADJUSTING	1
15	B50.01.00.00.01	BEAM	1
16	DIN 985	NUT M 12	2
17	DIN 134	WASHER M12	2
18	B50.01.10.00.01	STRIP FOR DISC	1
19	DIN 7991	SCREW M10X25	2
20	B50.01.10.00.05	DISK FOR ROTATING	1
21	DIN 934	NUT M8	1
22	ART.139-60-8.5	HANDLE 8.5	1
23	DIN 912	SCREW M 8X65	1
24	DIN 439	NUT M12 LOW	1
25	TAB. T1144	PLATE	1

26	B50.01.10.00.07	BUSHING	1
27	B50.01.00.00.09	ECCENTRIC	1
28	ISO 7380	SCREW M 6X10	2
29	B50.01.10.00.03	NUT	1
30	DIN 603	SCREW M8X25	1
31	B50.01.10.00.04	ROTATING STRIP	1
32	DIN 134	WASHER M 8	1
33	DIN 315	FLYING NUT M8	1
34	DIN 125 A	WASHER AM12	1
35	DIN 7991	SCREW M 8X16	2
36	B50.01.10.00.02	SUPPORT STRIP	1
37	DIN 555	NUT M10	1
38	~DIN 933	BOLT POLYAMIDE M10X30	1
39	B50.01.10.00.08	L-SHAPE ALUMINUM	1
40		RULER RIGHT- LEFT 0-500	1
41	B50.01.10.00.09	STRIP	1
42	B50.01.10.00.06	SCREW M12	1

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