INSTRUCTIONS FOR USE - ENGLISH

DIABLOC

LAPPING

Maintenance of composite lapping plates NEW LAM M'M', EVOLAM ULTIMATE and 2000 SERIES

CODE 09309050

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SOCIÉTÉ CERTIFIÉE ISO 9001

Lamplan's composite lapping plates are designed to satisfy high-performance demands. The lapping precision can be maintained over time by reconditioning the plate regularly using a DIABLOC.

1. Why DIABLOC

Flatness

Due to wear and tear from lapping for prolonged periods, composite plates can deform in a concave or convex way. The magnitude of deformation can be checked using Lamplan's Micrometric Ruler.

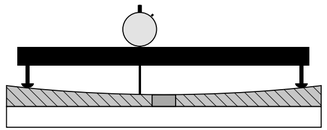


PLATE CONCAVELY DEFORMED

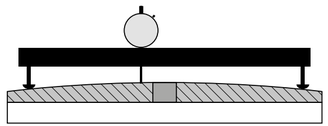


PLATE CONVEXLY DEFORMED

Surface

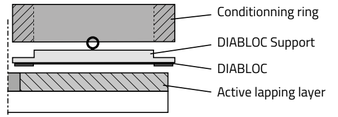
Depending on the materials lapped or polished (ceramic for instance), COMPOSITE plates can present a glazed surface. This glazing brings down the efficiency of the composite plate which can be recovered by reconditioning with a DIABLOC.

As a result, if the plate deformation is too severe, or if there is a defect, the plate must be regenerated using the DIABLOC.

When the same composite plate is used for two lapping steps each with different abrasive liquids, using a DIABLOC between the two steps avoids cross-contamination of abrasives.

2. Features of DIABLOC

The DIABLOC is delivered stuck to a rigid and flat aluminium support which fits the conditioning ring. (See diagram below)



Depending on the plate to be reconditioned, the right DIABLOC can be chosen (See table below).

Main plates Ø	EVOLAM Ultimate	NEW LAM M'M' Blue	NEW LAM M'M' Green	NEW LAM M'M' Yellow
381 mm (15")				
480 mm				
610 mm (24")				
700 mm				
914 mm (36")				
1000 mm				
1200 mm (48")				

Black DIABLOC
Purple DIABLOC
Blue DIABLOC
Green DIABLOC

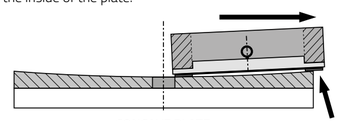
3. Parameters of usage of the DIABLOC

Before using a DIABLOC, the lapping plate must be cleaned with water and detergent 742.

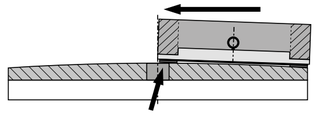
Place the DIABLOC on the plate and place the lapping ring upside down on the DIABLOC, only one DIABLOC is necessery to reconditionning a plate.

Positionning the DIABLOC

To correct a concave deformation, place the DIABLOC towards the outside of the plate and conversely, to correct a convex deformation, place the DIABLOC towards the inside of the plate.

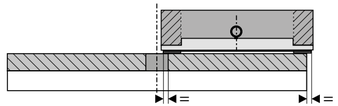


CONCAVE PLATE



CONVEX PLATE

To correct a surface defect, when the plate doesn't have a concave or convex deformation, place the DIABLOC in between the two positions discussed above (See figure below).



FLAT PLATE WITH DEFECT SURFACE

Parameters for reconditioning

A rotational speed between 40 and 90 rpm is uptimum for reconditioning.

Lubrication

When regenerating the plate the surface of the plate must be lubricated with sufficient quantity of fluid M.M.712 or water. If needed, use a wash bottle.

Work pressure

When using the DIABLOC, the work pressure is the weight of the DIABLOC and one conditioning ring.

After a certain time, it may be possible to increase the weight but never exceed 50% more.

Plate Ø	Ø in mm	Load to apply
381 mm (15")	178	4,5 kg
480 mm	224	11 kg
610 mm (24")	286	12 kg
700 mm	315	14 kg
914 mm (36")	419	30 kg
1000 mm	451	35 kg
1200 mm (48")	545	51 kg

Important remark

Plate flatness must be checked regularly in order to avoid excessive wear of the lapping plate.

Suggested reconditioning times to obtain a flat plate

M.M. 9700 MACHINE (Ø plate 700 mm)	DIABLOC	Concavity = 0,02 mm	Convexity = 0,02 mm
COARSE plate NEW LAM M'M' BLUE	Violet / Noir	5 minutes	10 minutes*
FINISHING plate NEW LAM M'M' GREEN YELLOW	Green	2,5 minutes	10 minutes*

* convexity takes longer to correct than concavity because of the machine kinematics.

4. After reconditionning

A good reconditioning cycle corrects the plate's geometry and prepares the surface for the consequent lapping step.

After reconditioning, the surface of the plate will be scratched. These scratches do not diminish the quality of the lapping but, on the contrary, increase the performance of the plate and shorten lapping times.

5. Replacing DIABLOC REFILL

A DIABLOC REFILL is the active part that contains diamond abrasives embedded on a plastic sheet that is responsible for the reconditioning actions. Once the DIABLOC is worn out, the DIABLOC REFILL can be replaced by peeling off the worn-out REFILL and sticking a new REFILL on the aluminium support.

The surface of the aluminium support has to be cleaned thoroughly before replacement.

6. Maintenance

To maintain the efficiency of the DIABLOC, periodically run an abrasive stone 400 grit (available in our catalogue Ref. 98 59401 00) on the active part of the DIABLOC under a stream of water.

7. Cleaning

Clean the DIABLOC with water a brush or with ultrasound. Do not use chlorinated products or alcohol.

Complete DIABLOC

BLACK DIABLOC 1 holder + 1 disc

Plate Ø	Color	Ø in mm	Ref.
381 mm	Black	178	08 00907 60
480 mm	Black	224	08 00907 64
610 mm	Black	286	08 00907 70
700 mm	Black	315	08 00907 90
914 mm	Black	419	08 00907 80
1000 mm	Black	451	08 00907180
1200-1500 mm	Black	545	08 00907 00

PURPLE DIABLOC 1 holder + 1 disc

Plate Ø	Color	Ø in mm	Ref.
381 mm	Purple	178	08 00906 60
480 mm	Purple	224	08 00906 64
610 mm	Purple	286	08 00906 70
700 mm	Purple	315	08 00906 90
914 mm	Purple	419	08 00906 80
1000 mm	Purple	451	08 00906180
1200-1500 mm	Purple	545	08 00906 00

BLUE DIABLOC 1 holder + 1 disc

Plate Ø	Color	Ø in mm	Ref.
381 mm	Blue	178	08 00900 60
480 mm	Blue	224	08 00900 64
610 mm	Blue	286	08 00900 70
700 mm	Blue	315	08 00900 90
914 mm	Blue	419	08 00900 80
1000 mm	Blue	451	08 00900180
1200-1500 mm	Blue	545	08 00900 00

GREEN DIABLOC 1 holder + 1 disc

Plate Ø	Color	Ø in mm	Ref.
381 mm	Green	178	08 00901 60
480 mm	Green	224	08 00901 64
610 mm	Green	286	08 00901 70
700 mm	Green	315	08 00901 90
914 mm	Green	419	08 00901 80
1000 mm	Green	451	08 00901180
1200-1500 mm	Green	545	08 00901 00

DIABLOC refills

BLACK DIABLOC 1 refill

Plate Ø	Color	Ø in mm	Ref.
381 mm	Black	178	08 01907 60
480 mm	Black	224	08 01907 64
610 mm	Black	286	08 01907 70
700 mm	Black	315	08 01907 90
914 mm	Black	419	08 01907 80
1000 mm	Black	451	08 01907180
1200-1500 mm	Black	545	08 01907 00

PURPLE DIABLOC 1 refill

Plate Ø	Color	Ø in mm	Ref.
381 mm	Purple	178	08 01906 60
480 mm	Purple	224	08 01906 64
610 mm	Purple	286	08 01906 70
700 mm	Purple	315	08 01906 90
914 mm	Purple	419	08 01906 80
1000 mm	Purple	451	08 01906180
1200-1500 mm	Purple	545	08 01906 00

BLUE DIABLOC 1 refill

Plate Ø	Color	Ø in mm	Ref.
381 mm	Blue	178	08 01900 60
480 mm	Blue	224	08 01900 64
610 mm	Blue	286	08 01900 70
700 mm	Blue	315	08 01900 90
914 mm	Blue	419	08 01900 80
1000 mm	Blue	451	08 01900180
1200-1500 mm	Blue	545	08 01900 00

GREEN DIABLOC 1 refill

Plate Ø	Color	Ø in mm	Ref.
381 mm	Green	178	08 01901 60
480 mm	Green	224	08 01901 64
610 mm	Green	286	08 01901 70
700 mm	Green	315	08 01901 90
914 mm	Green	419	08 01901 80
1000 mm	Green	451	08 01901180
1200-1500 mm	Green	545	08 01901 00