

ADVANCED PAVEMENT TESTING

BUYER'S GUIDE

Asphalt Specimen Preparation STANDARDS

ASTM D8079 | EN 12697-33 | AASHTO R83 |
AASHTO PP99

How to use the Buyer's Guide

IPC Global carries a wide range of advanced pavement testing equipment to fit the specific needs of an asphalt and bitumen materials testing laboratory.

We have developed this Buyer's Guide to help you decide which model of machine is suitable to compact, cut and core specimens in full conformity with your standards.

First, select and click the model you wish to use in the Index to your right. This will take you to a dedicated page for the selected model that includes a summary table with the suggested instrument and required accessories to perform the test.

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BUYER'S GUIDE | Asphalt Specimen Preparation


Asphalt Slab Roller Compaction 1

ASTM D8079

Sugg.Qty	Model	Description
1	77-PV41A02	Standard multi-size electromechanical slab compactor. 230V/50-60Hz/1ph
	77-PV41A04	Standard multi-size electromechanical slab compactor. 110V/60Hz/1ph
	77-PV41C05	Advanced multi-size electromechanical slab compactor. 380V/50Hz/3ph+N
	77-PV41C06	Advanced multi-size electromechanical slab compactor. 220V/60Hz/3ph+N
	Sector head compaction feet, standard model	
1	Choose one or more:	
	77-PV42001	Interchangeable sector head to produce slabs 320 mm long x 260 mm wide
	77-PV43001	Interchangeable sector head to produce slabs 300 mm long x 300 mm wide
	77-PV44001	Interchangeable sector head to produce slabs 400 mm long x 300 mm wide
	77-PV45001	Interchangeable sector head to produce slabs 500 mm long x 300 mm wide
1 - Alternative	Sector head compaction feet with heating system (alternative to standard model)	
	Choose one or more:	
	77-PV42011	Interchangeable sector head to produce slabs 320 mm long x 260 mm wide. Complete with heating system
	77-PV43011	Interchangeable sector head to produce slabs 300 mm long x 300 mm wide. Complete with heating system
	77-PV44011	Interchangeable sector head to produce slabs 400 mm long x 300 mm wide. Complete with heating system
1 - Alternative	77-PV45011	Interchangeable sector head to produce slabs 500 mm long x 300 mm wide. Complete with heating system
	77-PV46011	Interchangeable sector head to produce slabs 500 mm long x 400 mm wide. Complete with heating system
1 - Alternative	77-PV43012	Compaction sector head heating system for 77-PV41C0x and 77-PV41A0x series (to be ordered at the time of order)
Steel moulds (select same size as sector head compaction foot)		
1	Choose one or more:	
	77-PV42102	Steel mould 320x260 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
	77-PV43102	Steel mould 300x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
	77-PV44102	Steel mould 400x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
	77-PV45102	Steel mould 500x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
	77-PV46102	Steel mould 500x400 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
Vibrating option		
1 - Optional	77-PV43042	Motor vibrator roller option. For 380V/50Hz/3ph, 220V/60Hz/3ph, 110-230V/50-60Hz/1ph models (to be ordered at the time of order)
Mould base heating system*		
1 - Optional	77-PV41C00/UP*	Upgrade of 77-PV41C0X with heating system inbuild in mould base support (to be ordered at the time of order)

*Suitable for 77-PV41C0x models only

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1. Test method and configuration type
2. Name of main instrument or accessory
3. Choose one or several accessories
4. Go back to Index by clicking here "BACK TO INDEX" button

Introduction to Asphalt Specimen Preparation

Specimen preparation is paramount regardless of the tested material or the sophistication of your testing systems. It should ideally match the field conditions where the pavement will be built.

Specimen preparation entails the compaction of asphalt mix with either a Slab Compactor or a Gyratory Compactor (see the dedicated Buyers' Guide). If you need to reduce sample sizes by cutting, use an AUTOSAW II or a MULTISAW cutting machine. If you need to reduce a specimen's size by coring, select either a Multi Core-Drill or a KorBit Coring machine.

The product range includes:

Standard Asphalt Slab Roller Compactor

Standard Asphalt Slab Roller Compactor

The slab compactors can compact asphalt slabs to a target height or density applying specific loads corresponding to those of pavements rollers used in the highway construction.

The compacted slabs can be used for Wheel tracking tests or can be cored to provide specimens for indirect tensile, static and dynamic creep tests, or cut into beams for bending fatigue tests. Both models are electromechanically operated. → [Explore Online](#)

Advanced Asphalt Slab Roller Compactor

Advanced Asphalt Slab Roller Compactor

This model satisfies the compaction procedure of the brand new EN 12697-33 method 7.3 plus it enables the user to program via the included 21" All-in-one touchscreen PC interface his/her own procedures such as free combination of load and displacement (or combined) controlled cycles. The compaction direction is always in the longest (major) mold dimension in order to obtain specimens conforming to international Standards. → [Explore Online](#)

Advanced Automated Asphalt Saw

AUTOSAW II

AUTOSAW II is an automated specimen clamping and sawing system designed for fast and accurate cutting of beams from asphalt prisms prepared with the PRESBBOX or slab compactors. It is also used for trimming cylinders obtained from the GALILEO, GYROCOMP, SERVOPAC as well as with other gyratory compactors.

A nifty spacer system sets the specimen position allowing the beams or cores to be cut without the need for measurement. To guarantee user's safety, the saw blade automatically advances and retracts to the home position. → [Explore Online](#)

Universal Asphalt and Concrete Saw

MULTISAW

MULTISAW is a universal sawing system for fast and accurate cutting of beams from prisms and trimming cylinders. The spacer system sets the specimen position allowing the beams or cores to be cut without the need for measurement. The saw blade advances and retracts to the home position by a user-friendly hand wheel. MULTISAW includes the Multislab jig, complete with table and manual clamping device for slabs. → [Explore Online](#)

Introduction to Asphalt Specimen Preparation (continued)

Coring Machine Multi Core-Drill

Coring Machine Multi Core-Drill

The Multi Core-Drill is easy to use, flexible and adaptable providing users with precise drilling capabilities.

It is designed for coring samples 100 mm dia., 150 mm high for Dynamic Modulus (AMPT, AASHTO T378) and 38 to 75 mm high for Indirect Tensile Tests (EN 12697-24 and 26) coming, as example, from Gyratory compactors or from asphalt samples produced by the IPC Global's PResBOX.

→ [Explore Online](#)

Core Drilling Machine

KorBit

KorBit is designed to take samples from asphalt cores or cylinders up to 150 mm dia. It comes complete with adjustable clamps for cylindrical asphalt samples of up to 150 mm and is specifically adapted to coring samples 100 mm dia., 150 mm high for Dynamic Modulus (AMPT, AASHTO T378) and 38 to 75 mm high for Indirect Tensile Tests (EN 12697-24 and 26) coming, as example, from Gyratory compactors. Complete with protection device conforming to CE prescriptions. → [Explore Online](#)

Asphalt Slab Roller Compaction

ASTM D8079

Sugg.Qty	Model	Description
1	<i>Choose one</i>	
	77-PV41A02	Standard multi-size electromechanical slab compactor. 230V/50-60Hz/1ph
	77-PV41A04	Standard multi-size electromechanical slab compactor. 110V/60Hz/1ph
	77-PV41C05	Advanced multi-size electromechanical slab compactor. 380V/50Hz/3ph+N
	77-PV41C06	Advanced multi-size electromechanical slab compactor. 220V/60Hz/3ph+N
Sector head compaction feet, standard model		
1	<i>Choose one or more:</i>	
	77-PV42001	Interchangeable sector head to produce slabs 320 mm long x 260 mm wide
	77-PV43001	Interchangeable sector head to produce slabs 300 mm long x 300 mm wide
	77-PV44001	Interchangeable sector head to produce slabs 400 mm long x 300 mm wide
	77-PV45001	Interchangeable sector head to produce slabs 500 mm long x 300 mm wide
	77-PV46001	Interchangeable sector head to produce slabs 500 mm long x 400 mm wide
Sector head compaction feet with heating system (alternative to standard model)		
1 - Alternative	<i>Choose one or more:</i>	
	77-PV42011	Interchangeable sector head to produce slabs 320 mm long x 260 mm wide. Complete with heating system
	77-PV43011	Interchangeable sector head to produce slabs 300 mm long x 300 mm wide. Complete with heating system
	77-PV44011	Interchangeable sector head to produce slabs 400 mm long x 300 mm wide. Complete with heating system
	77-PV45011	Interchangeable sector head to produce slabs 500 mm long x 300 mm wide. Complete with heating system
	77-PV46011	Interchangeable sector head to produce slabs 500 mm long x 400 mm wide. Complete with heating system
1 - Alternative	77-PV43012	Compaction sector head heating system for 77-PV41C0x and 77-PV41A0x series (to be ordered at the time of order)
Steel moulds (select same size as sector head compaction foot)		
1	<i>Choose one or more:</i>	
	77-PV42102	Steel mould 320x260 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
	77-PV43102	Steel mould 300x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
	77-PV44102	Steel mould 400x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
	77-PV45102	Steel mould 500x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
	77-PV46102	Steel mould 500x400 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
Vibrating option		
1 - Optional	77-PV43042	Motor vibrator roller option. For 380V/50Hz/3ph, 220V/60Hz/3ph, 110-230V/50-60Hz/1ph models (to be ordered at the time of order)
Mould base heating system*		
1 - Optional	77-PV41C00/UP*	Upgrade of 77-PV41C0X with heating system inbuilt in mould base support (to be ordered at the time of order)

*Suitable for 77-PV41C0x models only

Asphalt Slab Roller Compaction

EN 12697-33

Sugg.Qty	Model	Description
1	Choose one	
	77-PV41C05	Advanced multi-size electromechanical slab compactor. 380V/50Hz/3ph+N
	77-PV41C06	Advanced multi-size electromechanical slab compactor. 220V/60Hz/3ph+N
Sector head compaction feet, standard model		
1	Choose one or more:	
	77-PV42001	Interchangeable sector head to produce slabs 320 mm long x 260 mm wide
	77-PV43001	Interchangeable sector head to produce slabs 300 mm long x 300 mm wide
	77-PV44001	Interchangeable sector head to produce slabs 400 mm long x 300 mm wide
	77-PV45001	Interchangeable sector head to produce slabs 500 mm long x 300 mm wide
	77-PV46001	Interchangeable sector head to produce slabs 500 mm long x 400 mm wide
Sector head compaction feet with heating system (alternative to standard model)		
1 - Alternative	Choose one or more:	
	77-PV42011	Interchangeable sector head to produce slabs 320 mm long x 260 mm wide. Complete with heating system
	77-PV43011	Interchangeable sector head to produce slabs 300 mm long x 300 mm wide. Complete with heating system
	77-PV44011	Interchangeable sector head to produce slabs 400 mm long x 300 mm wide. Complete with heating system
	77-PV45011	Interchangeable sector head to produce slabs 500 mm long x 300 mm wide. Complete with heating system
	77-PV46011	Interchangeable sector head to produce slabs 500 mm long x 400 mm wide. Complete with heating system
1 - Alternative	77-PV43012	Compaction sector head heating system for 77-PV41C0x and 77-PV41A0x series (to be ordered at the time of order)
Steel moulds (select same size as sector head compaction foot)		
1	Choose one or more:	
	77-PV42102	Steel mould 320x260 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor
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Vibrating option		
1 - Optional	77-PV43042	Motor vibrator roller option. For 380V/50Hz/3ph, 220V/60Hz/3ph, 110-230V/50-60Hz/1ph models (to be ordered at the time of order)
Mould base heating system		
1 - Optional	77-PV41C00/UP	Upgrade of 77-PV41C0X with heating system inbuilt in mould base support (to be ordered at the time of order)

Laboratory Asphalt Specimen Coring

AASHTO R83 | AASHTO PP99

Sugg.Qty	Model	Description
1	<i>Choose one:</i>	
	77-PV75202	Multi-Core Drill, laboratory coring machine. 2200 W, 230V/50-60Hz/1 ph.
	77-PV75204	Multi-Core Drill, laboratory coring machine. 2050 W, 110V/60Hz/1 ph.
	77-PV75302	Kor-Bit Laboratory core drilling machine. 2200 W, 230V/50-60Hz/1 ph.
	77-PV75304	Kor-Bit Laboratory core drilling machine. 2050 W, 110V/60Hz/1 ph.
Upgrades for Multi-Core Drill laboratory coring machine*		
1 - Optional	77-PV75200/UP*	Upgrading with translation device for transversal movement of the drill (up to 80 mm translation) for parallel coring. Suitable for 38, 50 and 75 mm diameter cores. Not compatible with 77-PV75210.
1 - Optional	77-PV75210*	Accessory for Multi-Core Drill coring machine suitable for cylindrical specimens from 50 mm to 150 mm diameter
1 - Optional	77-PV75220*	Accessory for transversal coring on 100 or 150 mm dia. samples, lenght up to 300 mm
1 - Optional	77-PV75230*	Spacer for vertical coring on samples thinner than 120 mm
Coring bits		
1	<i>Choose one or more:</i>	
	83-C0319	Coring bit for 38 mm dia x 350 mm long cores, with permanently attached head 1 1/4 W.
	83-C0320	Coring bit for 50 mm dia x 400 mm long cores, with permanently attached head 1 1/4 W.
	83-C0321	Coring bit for 75 mm dia x 400 mm long cores, with permanently attached head 1 1/4 W.
	83-C0322	Coring bit for 100 mm dia x 400 mm long cores, with permanently attached head 1 1/4 W.
	83-C0323	Coring bit for 150 mm dia x 400 mm long cores, with permanently attached head 1 1/4 W.
Core extractors		
1 - Optional	<i>Choose one or more:</i>	
	83-C0310/2	Core extractor dia 50 mm
	83-C0311/2	Core extractor dia 75 mm
	83-C0312/2	Core extractor dia 100 mm
	83-C0313/2	Core extractor dia 150 mm

*Suitable for 77-PV7520x models only

Asphalt Specimen Cutting

AASHTO R83 | AASHTO PP99

Sugg.Qty	Model	Description
1	<i>Choose one:</i>	
	77-PV47005	MULTISAW, asphalt saw, complete with asphalt multi-slab jig. Blade not included. 400V/50Hz/3ph+N
	77-PV47006	MULTISAW, asphalt saw, complete with asphalt multi-slab jig. Blade not included. 220V/60Hz/3ph+N
	77-PV47105	AUTOSAW II, Automated universal asphalt saw, complete with asphalt multi-slab jig and protection cabinet. Blade not included. 400V/50-60Hz/3ph+N
	77-PV47106	AUTOSAW II, Automated universal asphalt saw, complete with asphalt multi-slab jig and protection cabinet. Blade not included. 220V/60Hz/3ph+N
Cutting blade		
1	<i>Choose one or more:</i>	
	77-PV47000/1	Diamond blade 650mm dia. for asphalt, suitable for Autosaw II and Multisaw
	77-PV47000/C1*	Multisaw Diamond blade 650mm dia. for concrete elements
Core cutting upgrade		
1 - Optional	<i>Choose one:</i>	
	77-PV47011**	Universal jig for cores, for AUTOSAW II models only, to automatically perform single or double parallel cut on cores (100 or 150 mm dia., 10 to 200mm length), or manual cut on cores with diameter between 100 and 150 mm, 10 to 300 mm length
	77-PV47014	Jig for round cores, from 38 to 200 mm dia, for manual cut of samples from 10 to 300 mm length
1 - Optional	77-PV47000/2	Sacrificial PVC tube for 100mm dia. cores
Other cutting jigs		
1 - Optional	77-PV47020	Jig for trapezoidal specimens, to be used in Two Point Bend test according to EN 12697-24A and 26A
1 - Optional	77-PV47025	Jig for Wheel Tracking cores, Semi-Circular Bend test samples (except the notch) and Disk Shaped Compact Tension samples(except the notch and two holes). 77-PV47011 or 77-PV47014 are required.
1 - Optional	77-PV47030	Jig for Overlay test samples according to TX-248-F. 77-PV47011 or 77-PV47014 are required.

*Suitable for 77-PV4700x models only

**Suitable for 77-PV4710x models only

IPC Global Customer Care

IPC Global is the Advanced Pavement Testing Division of CONTROLS. As one of the longest established manufacturing companies in the world of Construction Materials Testing solutions, we are dedicated to supplying high quality, accurate, affordable, easy to use systems.

As a valued customer of CONTROLS, you will receive continuous, expert support and advice for your IPC Global equipment. Furthermore, we can offer full installation and training in the correct operation of your equipment.

For support from our expert Customer Care Team, contact your local CONTROLS office / distributor or email **support@controls-group.com**.

For more information, please visit **www.controls-group.com**.

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