



# TM COLDLAY MIXING EQUIPMENT

Specially developed for :

Cold Emulsion Asphalt Production Ready Mix Concrete Production Organic and Inorganic Soil Stabilisation Hydraulic Bound Materials

Innovative solutions for our Roads and Pavements





### Bertoli Mixing Equipment.

The Bertoli mixing equipment has been specially developed for the production of all types of Concretes, cold emulsion asphalts and cold regeneration and soil inertizations.



The complete range of Bertoli equipment can be configured as either a super mobile mixing plant with a variety of transportable options available, or as a static mixing plant for all types of ready mix concrete and cold emulsion asphalt production.

The mobile solutions can be configured as: Self Loading, Chasis Mounted, Trailer mounted and a Roll on Roll off solution is also available with certain models.

Each piece of equipment is available with a variety of options and can be configured to mix all types of ready mix concrete and cold emulsion asphalts from a single machine, offering the flexibility needed to meet industries ever demanding requirement for versatile cost effective solutions for concrete and asphalt production.

The Bertoli range of solutions start from the ZS210, which is capable of producing 10cmt's per hour of mixed material, up to the Innovative Ecotech 150 capable of producing up to 150 cmt's per hour.

All the Bertoli equipment is manufactured to the highest standards to meet industries demanding standards, making the Bertoli equipment a truly versatile, flexible, cost effective solution for all your mixing requirements.



### ZS Series Super Mobile Mixing Equipment



- Cold Emulsion Asphalt Production
- Ready Mix Concrete Production
- Organic and Inorganic soil stabilisation Production







### Super Mobile Mixing Equipment





- Cold Emulsion Asphalt Production
- Ready Mix Concrete Production
- · Organic and Inorganic soil stabilisation Production



### Cold Emulsion Asphalts



### Soil stabilisation







### **ZS Series Mixing Equipment**



The ZS line of systems is the feather in Bertoli's cap. The ZS line is a series of mobile systems for the production of concrete and mixtures in general, designed to fill every conceivable need in terms of system size, production rate and for practical solutions for unloading the product. The quality of final product of ZS Line has obtained from authoritative Swiss institute IMM SA, world-wide aknowledged, which verified the conformity to European laws requisites.

4) PLANT TRANSPORT

a) fixed-mounted on a truck

5) JOB SITE AUTONOMY

used on the job site as independent units.

b) as an independent unit.

6) QUALITY

Thanks to their configurability, Series ZS systems are easily transportable. The SERIES ZS is available

The SERIES ZS can also be mounted on railway cars.

SERIES ZS systems are completely autonomous. They

have their own engine and, due to their design, they provide

SERIES ZS systems allow obtaining a high-quality final product

through computerized control of the electro-hydraulic system for

the regulation of the two inert flows, the sophisticated positive

displacement system for injection water, the advanced system

proous management of the work flow and, thus, can be

#### 1) VERSATILITY

Due to their construction design, Series ZS systems can transport all the elements necessary for making concrete ater and chemical additives are carried separately, in suitable containers, and proportionally and continuously extracted following the parameters selected by the user through an on-board computer.

#### 2) SIMPLICITY OF USE

Thanks to its PLC control system, Series ZS systems pass simply from one step to the next in the work flow, from quality production, to cleaning without waste and maintenance.

#### 3) ECOCOMPATIBLE

Due to their construction characteristics, Series ZS systems ble for the recovery of materials destined for landfill disposal, such as mixed cements regenerated from masonry rubble or milled materials recenerated with emulsions





791260 on the job sit

## for cement extraction and weighing with load cells and the



Serie ZS systems transport all the elements needed for production separately: water, cement, inerts and, if the case, additives in suitable storage containers. In this way, the operator can produce exactly WHAT he wants, WHERE he wants and in the QUANTITY he wants.

### Versatilit 2 6 Quality Simplicity of Use Job Site Autonom Ecocompatible Machine Transport















### **ZS Series Mixing Equipment**





Serie ZS systems have a mixer designed for central unloading and have a greater mixer height than all other systems of the same type in existence today. This means that they can meet any need for the extraction and pouring of the finished product. In fact, depending on the specific ZS model, the mixer can be interfaced with different extraction and conveying systems. Either a fixed-length or telescoping final conveyor beit can be used. Either a fixed-length or telescopic channel can be used. Finally, even the mixer itself can be made suitable for the purpose.

WATER ADDITIVE	5

		Z\$210	ZS640	Z\$860	ZS1060	Z\$126
SYSTEM TYPE:	MOBILE	x	x	x	x	x
POWER TYPE:	AUTONOMOUS DIESEL/HYDRAULIC	x	x	x	x	x
MODE	FIXED-MOUNTED ON THREE-AXLE TRUCK	-	0			
	FIXED-MOUNTED ON FOUR-AXLE TRUCK			0	0	0
	INTERCHANGEABLE WITH HOOK ON 4 AXLES	x	0	0		
	INTERCHANGEABLE WITH PINS ON 4 AXLES	x	0	0	0	0
	RESTING ON A TIPPABLE BOX	0	0	-		
	WITH SUITABLE TROLLEY	0				
	RAILWAY CAR	0	0	0	0	0
AGGREGATE CAPACITY	2 M <sup>3</sup>	x		S		
	6 M <sup>2</sup>		x			
	8 M <sup>0</sup>			х		
	10 M <sup>3</sup>		-	-	x	
	12 M <sup>0</sup>					x
PRODUCTIVITY	5-10 M <sup>2</sup> /H	x				
	10-40 M <sup>0</sup> /H		x	_		
	10-60 M <sup>0</sup> /H	E		x	x	x
NUMBER OF INERTS	1	х	x	x	x	x
	2	0	0	0	0	0
CEMENT DOSING	BY WEIGHT	х	x	x	x	x
PRODUCTION TYPE	REGENERATION	0	0	0	0	0
	MIXED CEMENTS	x	x	x	x	x
	CONCRETE	x	x	x	x	x
	INERTIZATIONS	0	0	0	0	0
	SPECIAL MIXTURES	0	0	0	0	0
LEGEND:	x = standard					
	o = with option					





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### **Electrotech 150 Mixing Equipment**



### ELECTROTECH 150

The innovative line by BERTOLI - in the field of road working - keeps on a brand new machine for mixed concrete in carbon steel properly dimensioned: ELECTROTECH 150. This plant is extremely versatile and customizable upon customers specific requests.

#### VERSATILITY

ELEOTROTECH 150, compact and easy-to-use and transfer, allows adequate volume dosing through 2 hoppers (a 3 hoppers version is available on request) for inert material stocking (6 mc), with indicative length of about 3000 mm, complete of adequately dimensioned vibrators.

#### QUALITY

Near the discharge mouth of every hopper, there are two extracting belts connected to the main one. The main belt is gooseneck and is electrically motorized. The continuous mixer has got a variable speed and an interchangeable system of internal vanes; its length is about 2500 mm, mixing range regimen is about 150 ton/h and it is complete of water squirt guns; the installed power is 30 fw.

#### EASE OF USE

The plant is fitted with a cement hopper of 1,5 mc, an extraction cochiea with variable speed to change the cement loading from the control panel. A system of displaying the cement loading by a dynamic weighing cochea is available upon request.

#### CONTROL SYSTEM

The water injecting system in the mixer - composed of an electric pump adequately dimensioned with a local volume meter (with manual valves and by-pass) allows an optimal dosing of water in the mixing concrete. The operative control panel allows the variation of the mixer's rotating speed through an inverter.



of use





### ELECTROTECH 150





ert hoppers







TECH 150 production Control Panel





ELECTROTECH 150: regener





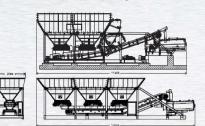
### ELECTROTECH 150 Mixing Equipment





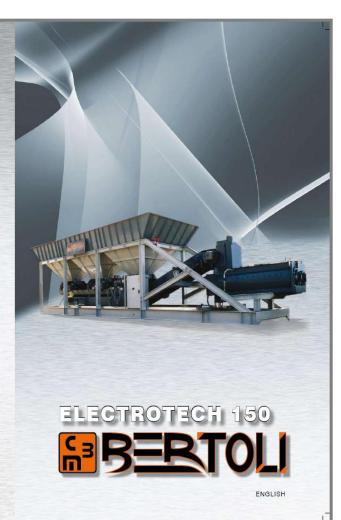


ELECTROTECH 150 TECHNIC	AL DAT	A				
Mobile mixing plant						
DESCRIPTION	U.M.					
OUTPUT		S				
fax production (according to materials and desages)	s/h	170				
Vorking temperature range		-20-+50 .0				
UANTITY		down of the second				
olume cement hopper	m3	1.5				
alume inert happer	m <sup>8</sup>	8				
PACE/WEIGHT DIMENSIONS (standard plant with 2 hoppers)						
fax height from support plane (with extensions)	mm	4000				
anght	mm	11400				
Vidth	0000	2500				
inal belt lenght	mm	12000				
inal belt vertical shift		22.				
inal belt height (plant on ground)	0000	4100				
etal weight vacuum machine	N	120000				
PACE/WEIGHT DIMENSIONS (plant with 3 hoppers)						
fax height from support plane (with extensions)	mm	4000				
enght	1000	13500				
Vidth	0000	2500				
atal weight vacuum machine	N	135000				
PACE/WEIGHT DIMENSIONS (skid aux 2 hoppers)						
fax height from support plane (with extensions)	mm	4000				
enght	mm	7500				
Vidth	mm	2500				
otal weight vacuum machine	N	80000				
NSTALLED POWER (may change according to hopper number)						
80 Vac power supply	kW	70				
20 Vac power supply	kW	2				
ONTROL PANEL						
20		6,5*				
lalar display						
etting menu		50				





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### **ECOMIX 40S Mixing Equipment**



### ECOMIX 40S

ECOMIX 405 is a unique and innovative system that is the very best in the sector of mobile systems for the production of: all types of concrete, mixed coments, cold-regenerations and inertizations of materials mixed with resin additives.

#### 1) VERSATILITY

Due to its construction design, the ECOMIX 405 mobile system allows transporting all the elements needed for making concrete: inets cement, water and chemical additives are carried separately, in suitable containers, and proportionally and continuously estracted following the parameters selected by the user through an on-board computer.

#### 2) SIMPLICITY OF USE

Thanks to its PLC control system, ECOMIX 40S, passes simply from one step to the next in the work flow, from quality production, to cleaning without waste and maintenance. 3) ECOCOMPATIBLE

Due to its construction characteristics, ECOMIX 40S is a system suitable for the recovery of materials destined for landfill dissocial, such as cement mixtures regenerated from masomy hubble or milled materials cold-regenerated with emulsions.



Thervis to its configurability, BCOMM 405 is easy to transport. ECOMM 405 is evailable: e) fixed-monated on a truck; h) mounted on a truck with tipoble loa; e) mounted on a truck with tipoble loa; e) mounted on a truck with tipoble loa; e) **JOB SITE AUTONOMY** ECOMM 405 is a completely automotous system. It has its connengine end, due to its design, it allows automotous control of the work flow and, fluxs, can be used as an independent unit on the job site.

4) PLANT TRANSPORT

#### ) QUAL

ECOMIX 40S allows obtaining a high-quality final product through computerized control of the electro-hydraulic system for the regulation of the two inert flows, the sophisticated positive displacement system for hijecting water, the advanced system for cement extraction and weighing with load cells and the management of chemical additives.



Quality production

ECOMIX40S transports all the elements needed for production separately: water, cement, inerts and, if the case, additives in suitable storage containers. In this way, the operator can produce exactly WHAT he wants, WHERE he wants and in the QUANTITY he wants.

#### (1) Versatility (2) Simplicity of Use (3) (1) Simplicity of Use (1) Simplicity of Use (1) Simplicity of Use (1) Simplicity of Use (1) Simplicity (1) Simplic

### ECOMIX 40S











Version on interchangeable cradle



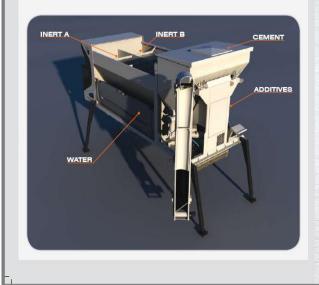
Production



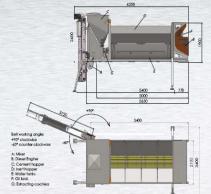
### ECOMIX 40S – Super Mobile Mixing Equipment



Ecomix40S is like a multiple container that separately transports all the elements necessary for the production of cement, or any other mixture, at the specific place of work desired. At this point, the operator uses the control panel to simply and intuitively set the characteristics of the type of product he wants to make at that moment. Once production is started, the various components enter the mixer in the required doses and the finished mixed product comes out continuously, ready for final use. Ecomix40S has features that are unique in the world and set it apart from all systems of the same type on the worldwide market. These features make Ecomix40S a technical jewel in the field of transportable systems for the production of concrete, mixed cements, coldregenerated materials and mixtures in general.



ECOMIX 40S TECHNICAL DATA Mebile unit for concretes production						
CAPACITY						
Maximum production	me/h	40				
Operating temperature range		-20~+50 ·C				
DOSING	1	16				
Water tank volume	me	2				
Cémént hopper volume	me	2.2 (2400 kg)				
inërt hoppër volume	me	9				
OVERALL DIMENSIONS AND WEIGHTS						
Meximum height from the support surface	mm	2400				
Length with conveyor in transport position	mm	6200				
Wickh	mm	2100				
Total weight (empty)	N	45000				
FINAL CONVEYOR BELT		and the second s				
Max. working vertical inclination		15.				
ENGINE						
Max engine power	HP	35				
Working speed	rpm	3000				
CONTROL PANEL		Percenter -				
Sze		6.5*				
Type: transflactive colour display with function buttons		12				
Recipe storage		50				







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### ECOTECH 150 – Super Mobile Mixing Equipment



#### Ecological and versatile

Ecotech 150 is a plant conceived in order to satisfy the most different working needs, maintaining maximum respect for the environment.

The plant can be loaded on a truck thanks to its hydraulic retractile stabilizers, controlled from the ground through an appropriate remote commander. Transfers between cantiers are extremely easy as no auxiliary

operation is required for any mounting-dismounting of machine components

The mobile plant ECOTECH 150 does not need any external electric supply as it is provided with a powerful diesel engine, allowing it to work totally selfsufficient from the hydraulic as well as from the electric point of view

Another important characteristic can be found in the production of cold mix adopting different technologies: hydraulic binders, bitumen binders, resins and glues. Aggregates (mill, inert) do not pass through a pre-heating process and can be suddenly sent, through dosing systems on the machine's edge, directly to the mixer to fulfil the productive cycle.

#### Reduces distances

Ecotech 150 finally solves the problem to produce the mix directly on the spot, reducing dramatically all transportations of finished material through production plant and cantier.

The plant can be loaded on a normal truck for ordinary means of transport - avoiding in this way any extra expenses. More, the charging-discharging operations of the plant from the touck are made easier thanks to a practical remote commander. The raising and reorganization of the system is assured by some powerful hydraulic jacks as to lift the plant up to 1100 mm from the ground. The plant is supported by an high productive capacity, an incredible flexibility and an easy maintainance





Technology easy to use

controlled by a microprocessors system).

sccording to the required datas

ECOTECH 150 is a technologically advanced machine, 'the

only one' of the kind. Every component that the machine has to use (hydraulic binders, bitumen binders, foamed bitumen,

inertes, mil, water, resins and glues) can be distributed and

The operator has only to set the different components quantities and save the datas inside a menu; ECOTECH 150

will do the rest, maintaining the finished product's excellence

Only one operator is needed for plant programming, charge

and discharge of finished material on truck and inertes/

mil charpe inside the pre-dosers, command the turn-over

of selection grids above charging mouths, manage the

machine's emergencies and temporary stops to allow the

finished product's charge from a truck to another, command

the swing of the final charge truck. The plant can dispose

of four pre-dosers. On every pre-doser can be put a steel

grating, bending through hydraulic jacks and determining the

exact granulometric sizes at every pre-doser input.











Software Display

ECOTECH 150 at work



















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