SERMAC®

SINCE 1989

GENERAL CATALOGUE

A FAMILY COMPANY

OPERATIONAL HEADQUARTERS


TWINSTAR PRODUCTION

SERMAC Srl is an Italian manufacturer company, founded in Milan in 1989. **SERMAC** is a global player, leader in the concrete pumps industries and offers a wide range of reliable equipment for construction.

Thanks to the high level of specialization and continuous investment in R&D, and to the professional experience for more than 30 years, **SERMAC** is well recognized for design and production:

TRUCK MOUNTED PUMPS

12 different pump models with modern front “X” outriggers provided with booms with different fold configurations from 20 m to 65 m length from ground.

MIXER PUMPS

4 models with “Z” distribution booms from 21 m to 33 m from ground.

TRAILER PUMPS

7 different models combined in Series 6” or Series 8“ available in high and low pressure models.

STATIONARY BOOM

Stationary boom: model of 33 m in length.

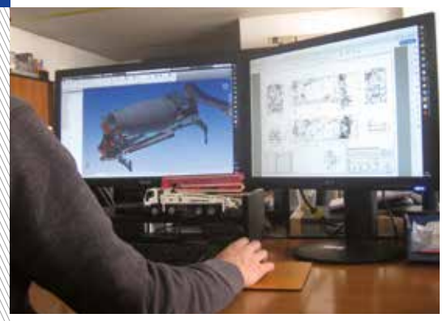
MADE IN ITALY

OUR MISSION

"We **design, build and deliver concrete pumps** and equipment all over the world within the construction industry. Our pumps are considered to be extremely reliable, superior in quality and easy to use, which makes work on site more productive"

TRUCK MOUNTED PUMPS

- Civil and Industrial Building
- Large Civil Projects
- Renovations and Pavements
- Residential Building



S-DESIGN

MAIN ITALIAN AND GERMAN COMPONENTS

HIGH QUALITY COMPONENTS

OPERATIONAL HEADQUARTERS TWINSTAR PRODUCTION CARPENTRY

WIDE RANGE AND CUSTOMIZATION OF THE EQUIPMENT OFFERINGS

HIGH QUALITY COMPONENTS, MAIN ITALIAN AND GERMAN COMPONENTS

EXCELLENT ASSEMBLY ON ALL TRUCK BRAND

S-DESIGN SERIES SUPERLIGHT

CERTIFICATION
UNI EN ISO 9001:2015

MIXER PUMPS

- Laying and Reinforcement
- Excavations and Foundation
- Masonries, Town Planning
- Residential Building

ASSEMBLY ON TRUCKS

CARPENTRY

CUSTOMIZATION

TRUCK MOUNTED PUMPS

DISTRIBUTION BOOMS

Vanguard technology for every demand with a complete range of concrete pumps with placing booms from 20 m to 65 m.

CONTROLS SYSTEM

Functionality at operator's disposal.

PUMPING GROUP

Maximum efficiency and minimum wear.

STABILIZATION

Great stability in every pumping phase.

DISTRIBUTION BOOMS

VANGUARD TECHNOLOGY FOR EVERY DEMAND

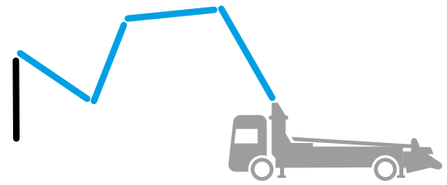
SERMAC offers a complete range of concrete pumps with **placing booms from 20 m** (4 sections) **to 65 m** (6 sections) **height** with different fold configurations in **"Z"** and **"ZR"** (series Zenith) or **"RZ"** (series Sirio).

THE **SERMAC** MODEL BOOMS ARE AVAILABLE IN THE FOLLOWING FOLDING TYPES:

"ZR" FOLDING

It offers the advantage of the folding type "Z" and "R" in terms of operations and rapidity of execution. Ideal for small works of urban construction indoor and outdoor where workspaces are particularly tight.

Concrete pump: **4ZR20**



"Z" FOLDING

It's ideal to operate in horizontal spaces also limited in height where it is required great agility and rapidity of opening and manoeuvre of the boom.

Concrete pumps: **4Z27, 4Z38**

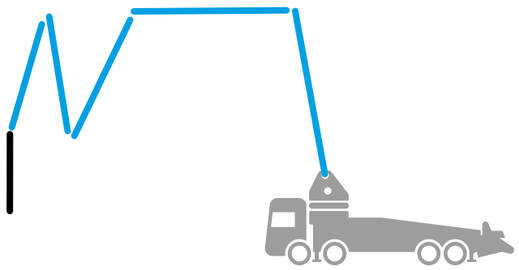
Concrete pumps: **5Z33, 5Z36, 5Z38, 5Z42**

"RZ" FOLDING

It offers the advantage of the folding type "R" and "Z", utilized with the booms 5 and 6 sections. Ideal for large building sites where the boom need to operate in wide working areas.

Concrete pumps: **5RZ46, 5RZ51, 6RZ56, 6RZ60**

Concrete pumps: **6RZ65**



CONCRETE PIPELINE

The concrete pipeline of distribution boom, with standard diameter **Ø 125 mm (5")** on all models Zenith & Sirio is supplied as follows:

- **Straight pipes** made in induction hardened **Double Layer** steel with high resistance against abrasion wear
- **Bends** made in **Double Layer** steel with chromium carbide inner

The terminal rubber hose (without collar on exit) is supplied with security chain, and stop-flow group on request.

STABILIZATION

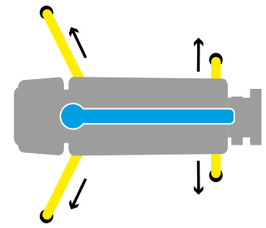
GREAT STABILITY IN EVERY PUMPING PHASE

THE CONCRETE PUMPS **SERMAC** COMBINES EACH MODEL OF THE BOOM WITH A SPECIFIC STABILIZATION, CHARACTERIZED BY THE FOLLOWING OPENINGS:

FRONT: X-TYPE SINGLE TELESCOPIC
REAR: FIXED

Stabilization versatile and compact that allow rapid positioning in small spaces or difficult to access. Solution used with booms small size folding type with “Z” and “ZR”. Rear outriggers simple diagonal extension and ensure a rapid and effective placement in tight spaces.

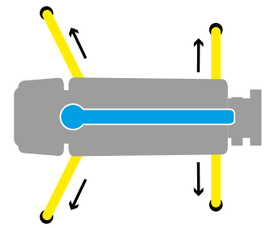
Models: **4ZR20, 4Z27**



FRONT: X-TYPE SINGLE TELESCOPIC
REAR: HORIZONTAL

Excellent stabilization which guarantees a high functionality joined to a great stability in all working positions. Solution used with boom medium size folding type with “Z”. Rear outriggers simple diagonal extension and ensure a rapid and effective placement in tight spaces.

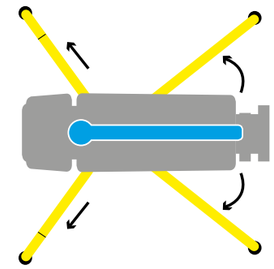
Models: **5Z33, 5Z36**



FRONT: X-TYPE DOUBLE/TRIPLE TELESCOPIC
REAR: SWING-OUT

Stabilization of rapid placement.
Solution used with booms medium-high size with folding “Z” and “RZ”.
The rear outriggers have fixed length and ensure stability to the height booms also in the works where it is used throughout the horizontal extension.

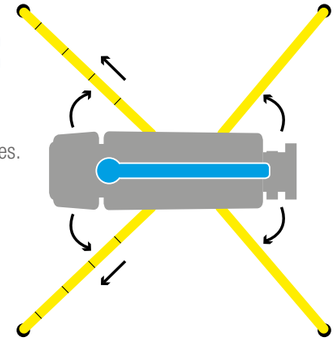
Models: **4Z38, 5Z38, 5Z42, 5RZ46, 5RZ51, 6RZ56**



FRONT: X-ORIENTABLE TYPE TRIPLE/QUADRUPLE TELESCOPIC
REAR: SWING-OUT

Stabilization of the latest generation for major projects with potential placement also in confined spaces.
Solution that allows total opening outriggers steerable with a rotation angle of 44°.
The rear outriggers have fixed length and ensure stability to the height booms also in the works where it is used throughout the horizontal extension.

Model: **6RZ60, 6RZ65**



PUMPING GROUP

MAXIMUM EFFICIENCY AND MINIMUM WEAR

The pumping unit utilises a specific concrete **S-valve**, whose innovative geometry guarantees great outputs and low maintenance under hard working conditions to ensure high flexibility and reliability. **The concrete S-valve completely satisfy the Customer's demands in terms of capacity and pressure.**

ALL OF **SERMAC** CONCRETE PUMPS OFFER
THE FOLLOWING 10 BENEFITS:

1. Pumping unit with open hydraulic circuit
2. Concrete S-valve 8" or 9" made of cast iron wear-resistant
3. Chrome-lined concrete cylinders of high thickness
4. Automatic lubrication of the pumping unit on all moving parts
5. Automatic oil lubrication for pumping pistons
6. Wears compensation system between plate and ring
7. High resistance with carbide insert
8. Hydraulic pumps with variable displacement and constant capacity adjuster
9. Accumulator
10. Maximum pumping efficiency, reliability and low operating costs

THE PUMPING GROUPS ARE AVAILABLE IN DIFFERENT MODELS:

S8

Max theoretical concrete output from 130 m³/h to 150 m³/h and pressures from 61 to 76 bar.

G9

Max theoretical concrete output from 158 m³/h to 195 m³/h and pressures from 80 to 85 bar.

PUMPING UNIT "S8" – SPECIFICATIONS

MODEL	Model Type	S valve	Stroke lenght [mm]	Piston Ø ["]	Th. Concrete output (Max) [m³]	Concrete pressure (Max) [bar]	Nr. of cycles per minute ['/min]
4ZR20	A	S8	M	08	80	80	27
	A	S8	M	09	100	61	25
4Z27	A	S8	M	08	80	80	27
	A	S8	M	09	100	61	25
	A	S8	L	09	130	61	27
	A	S8	L	09	150	76	30
5Z33 5Z36	A	S8	L	09	130	61	27
	A	S8	L	09	150	76	30
4Z38 5Z38	A	S8	L	09	130	61	27
	A	S8	L	09	150	76	30
5Z42 5RZ46 5RZ51	A	S8	L	09	150	76	30
6RZ56 6RZ60 6RZ65	A	S8	L	09	150	76	30

PUMPING UNIT "G9" – SPECIFICATIONS

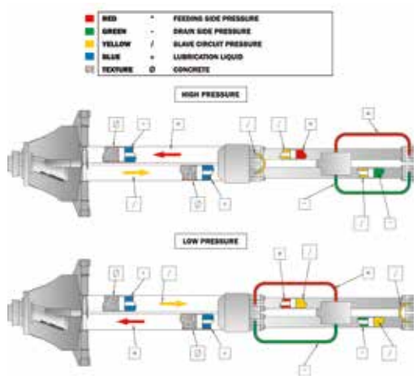
MODEL	Model Type	S valve	Stroke lenght [mm]	Piston Ø ["]	Th. Concrete output (Max) [m³]	Concrete pressure (Max) [bar]	Nr. of cycles per minute ['/min]
4ZR20*	A	G9	M	09	94	85	24
4Z27	A	G9	M	09	94	85	24
	A	G9	L	09	148	80	30
	A	G9	L	10	158	80	27
5Z33 5Z36	A	G9	L	09	148	80	30
	A	G9	L	10	158	80	27
4Z38 5Z38	A	G9	L	09	148	80	30
	A	G9	L	10	158	80	27
5Z42 5RZ46 5RZ51	A	G9	L	09	148	80	30
	A	G9	L	10	158	80	27
	A	G9	L	10	194	80	33
6RZ56 6RZ60 6RZ65	A	G9	L	09	148	80	30
	A	G9	L	10	158	80	27
	A	G9	L	10	194	80	33
	A	G9	X	10	195	85	28

A = Truck mounted concrete pump

M = 1.600 mm
L = 2.000 mm
X = 2.400 mm

08" = Ø 200 mm
09" = Ø 230 mm
10" = Ø 250 mm

*only wheelbase 4.500 mm



THE HOPPER

EXCELLENT GEOMETRY FOR CONCRETE PUMPING:

- Hopper made of wear-resistant steel with a grille equipped with an electric vibrator
- High torque of the mixer allow to operate under the most severe conditions with low-slump concrete
- Optimum combination between the conveying chamber made of casting steel and the mixing shaft equipped with blades with specific helical geometry
- Large capacity 650 l (G9)
- Large capacity 600 l (S8)

CONTROL SYSTEM

FUNCTIONALITY AT OPERATOR'S DISPOSAL

1	JOYSTICK: Boom 1st and 2nd section control
2	JOYSTICK: Boom clockwise/anticlockwise rotation - 5th section control
3	JOYSTICK: Boom 3rd and 4th section control
4	SELECTOR SWITCH: Switch engine on/off
5	SELECTOR SWITCH: Accelerate and decelerate engine
6	LEVER-OPERATED SELECTOR: Hopper vibrator control
7	POTENTIOMETER: Concrete flow rate adjustment
8	SELECTOR SWITCH: Slow/fast selection control
9	MUSHROOM-SHAPED BUTTON: Emergency
10	SELECTOR SWITCH: Horn control
11	SELECTOR SWITCH: Stop
12	SELECTOR SWITCH: Pumping/suctioning control
13	SELECTOR SWITCH: Auxiliary functions ON-OFF
14	CAP: Spare
15	SOCKET: Serial cable connection

RADIO REMOTE EQUIPMENT

The boom and pump functions are managed by a proportional radio remote control ergonomic and lightweight with: double speed boom movement, automatic free frequency research, concrete charge variation, RPM regulation control, start-up and emergency stop. The standard equipment includes two proportional remote control connected in cabin.

PROPORTIONAL BOOM DISTRIBUTION

The boom movements are controlled by the **proportional distributor that enables to obtain the maximum maneuver accuracy** by a radio control with proportional control, while the pumping function is managed through hydraulic distributor and continuous rephasing.

PROPORTIONAL STABILIZATION DISTRIBUTION

The pumping unit stabilizers are hydraulically managed by two distributors placed on both sides of pump to ensure safe use. **The lifting cylinders are fitted with check valves, which hold the cylinders in position**.

REAR CONTROLS

The rear controls are mounted near the hopper and are complete of: **regulator RPM, horn, start and emergency stop**.

SERIES SUPERLIGHT

THE MASTER OF THE STEEL

The concrete pumps **5RZ46** & **6RZ56 SUPERLIGHT** have been thoroughly designed by **S-Design** with special five (5) and six (6) articulated boom with the mixed **"RZ"** folding configuration that can reach a vertical height respectively of **46** and **56 meters**.

The equipment has been designed both for assembly on standard **4-axis** due to the total weight extremely content, that permit:

5RZ46 < 32 t

Exemption of road circulation permits thanks to the underweight legal.

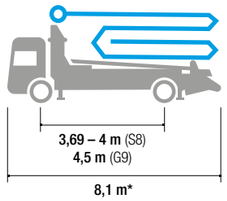
6RZ56 < 41 t

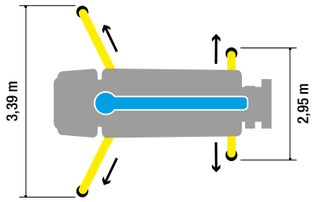
Underweight than the potential of the chassis.

The use of **special high strength steel** for the entire structure of the boom allow **SERMAC** to obtain a stabilization very contained and compact to the benefit of operations in shipyards that have difficulty in the spaces of stabilization and achieve the **best ratio cost-performance**, furthermore **without the use of composite materials**.

ZENITH
TRUCK MOUNTED PUMPS

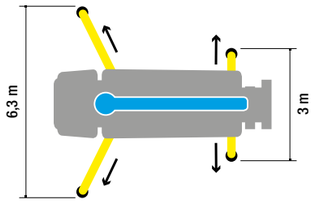
4ZR20 CITY PUMP





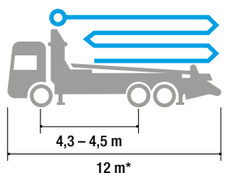
DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	19,4 m
MAX. HORIZONTAL REACH	15,4 m
MAX. DOWNWARD REACH	-12 m
SECTION NUMBER	4
MIN. UNFOLDING HEIGHT	4,2 m

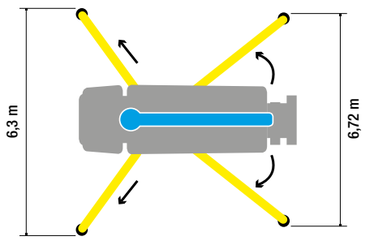
4Z27



DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	26,4 m
MAX. HORIZONTAL REACH	22,4 m
MAX. DOWNWARD REACH	-16,4 m
SECTION NUMBER	4
MIN. UNFOLDING HEIGHT	5,9 m

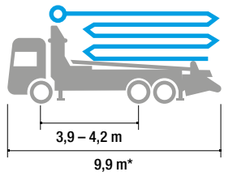
4Z38

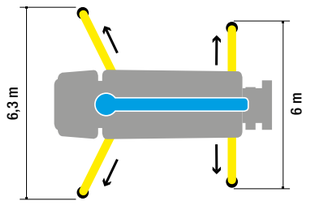




DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	37,15 m
MAX. HORIZONTAL REACH	33,15 m
MAX. DOWNWARD REACH	-24,8 m
SECTION NUMBER	4
MIN. UNFOLDING HEIGHT	8,8 m

5Z33

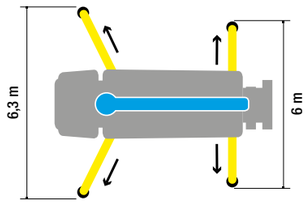




DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	32,3 m
MAX. HORIZONTAL REACH	28,3 m
MAX. DOWNWARD REACH	-22,2 m
SECTION NUMBER	5
MIN. UNFOLDING HEIGHT	6,3 m

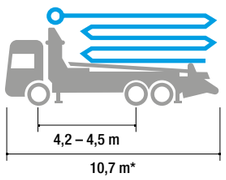
*Dimensions variable according to the truck assembly

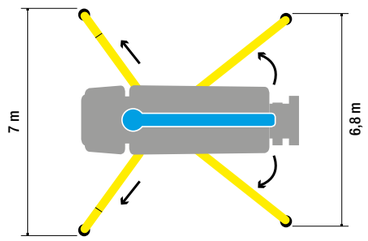
5Z36



DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	35,3 m
MAX. HORIZONTAL REACH	31,3 m
MAX. DOWNWARD REACH	-24,7 m
SECTION NUMBER	5
MIN. UNFOLDING HEIGHT	6,75 m

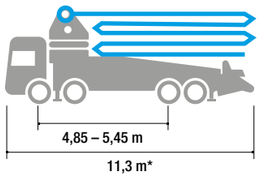
5Z38

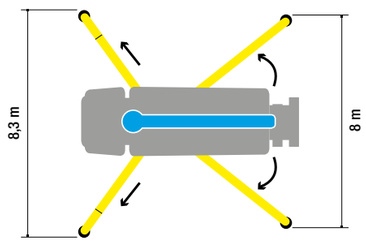




DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	37,35 m
MAX. HORIZONTAL REACH	33,35 m
MAX. DOWNWARD REACH	-26,3 m
SECTION NUMBER	5
MIN. UNFOLDING HEIGHT	7,2 m

5Z42



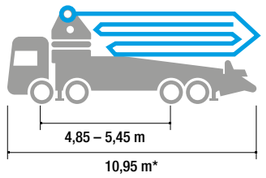


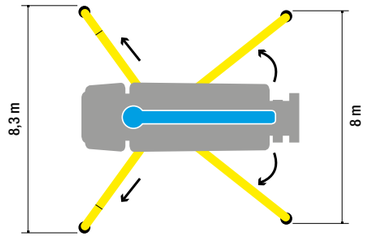
DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	41,1 m
MAX. HORIZONTAL REACH	37,1 m
MAX. DOWNWARD REACH	-28,8 m
SECTION NUMBER	5
MIN. UNFOLDING HEIGHT	8 m

*Dimensions variable according to the truck assembly

SIRIO
TRUCK MOUNTED PUMPS

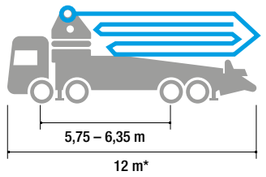
5RZ46 SUPERLIGHT

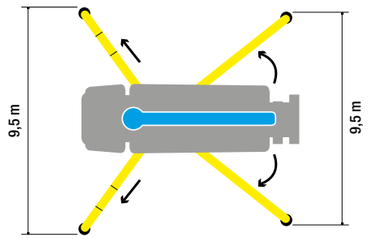




DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	45,1 m
MAX. HORIZONTAL REACH	41,1 m
MAX. DOWNWARD REACH	-33,1 m
SECTION NUMBER	5
MIN. UNFOLDING HEIGHT	9,10 m

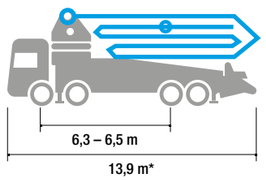
5RZ51

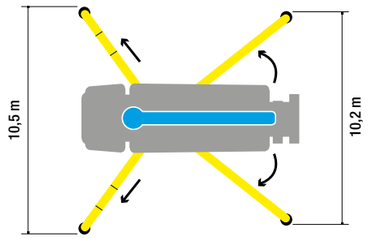




DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	50,1 m
MAX. HORIZONTAL REACH	46,3 m
MAX. DOWNWARD REACH	-37,5 m
SECTION NUMBER	5
MIN. UNFOLDING HEIGHT	10,75 m

6RZ56 SUPERLIGHT

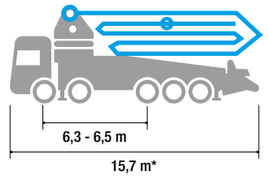


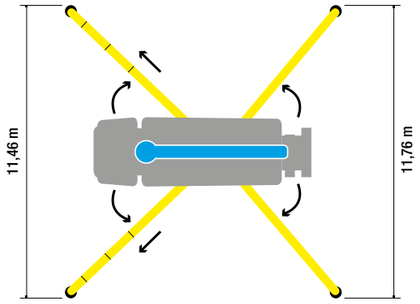


DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	55,2 m
MAX. HORIZONTAL REACH	51,2 m
MAX. DOWNWARD REACH	-39,77 m
SECTION NUMBER	6
MIN. UNFOLDING HEIGHT	11,20 m

*Dimensions variable according to the truck assembly

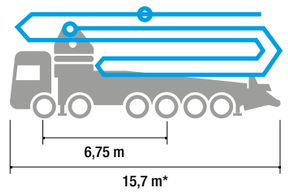
6RZ60

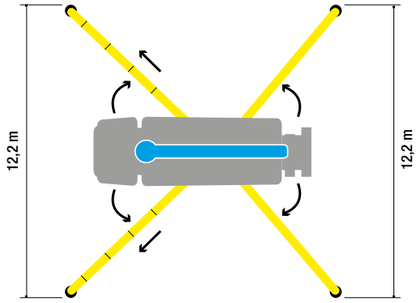




DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	59,2 m
MAX. HORIZONTAL REACH	55,2 m
MAX. DOWNWARD REACH	-43,04 m
SECTION NUMBER	6
PIPELINE	125 mm

6RZ65





DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	64,35 m
MAX. HORIZONTAL REACH	60,35 m
MAX. DOWNWARD REACH	-50 m
SECTION NUMBER	6
PIPELINE	125 mm

*Dimensions variable according to the truck assembly

MIXER PUMPS

STABILIZATION

Operation at the highest levels, hydraulically controlled.

DISTRIBUTION BOOMS

With “Z” folding, ideal for handling in limited spaces.

DRUM

High loading capacity.

CONTROLS SYSTEM

Ease of use in all conditions.

PUMPING GROUP

Reliability and high performance.

PLACING BOOMS

HIGH PERFORMANCE TECHNOLOGY FOR EVERY NEEDS

Designed and produced by **SERMAC**, the **TWINSTAR** models are supplied with placing boom **"Z"** folding type made by welded box section.

THE MODELS **TWINSTAR** ARE:

Model: **3Z21**		Model: **3Z24**		Model: **4Z28**		Model: **4Z33**	
boom	**3 SECTIONS**	boom	**3 SECTIONS**	boom	**4 SECTIONS**	boom	**4 SECTIONS**
height	**21 m**	height	**24 m**	height	**28 m**	height	**33 m**
pipeline	**Ø 100 mm (4")** **Ø 125 mm (5")**	pipeline	**Ø 100 mm (4")**	pipeline	**Ø 100 mm (4")**	pipeline	**Ø 112,5 mm (4"½)**

All the joints use hinges with double support pass-through pins that increase resistance and simplify maintenance.

CONCRETE PIPELINE

The concrete pipeline of distribution boom on all models Twinstar is supplied as follows:

TWINSTAR 3Z24 and **4Z28**:

- **Straight pipes** made in **Single Layer** steel and **bends** made in casting (standard)
- **Straight pipes** made in induction hardened **Double Layer** steel with high resistance against abrasion wear, and bends hardened in **Double Layer** steel with chromium carbide inner (on request)

TWINSTAR 4Z33:

- **Straight pipes** made in **Single Layer** steel, and **bends** made of **manganese alloys** with high wear-resistance and differentiated thickness (standard)
- **Straight pipes** made in induction hardened **Double Layer** steel with high resistance against abrasion wear, and **bends** made of **manganese alloys** with high wear-resistance (on request)

The terminal rubber hose (without collar on exit) is supplied with security chain, and stop-flow group on request.

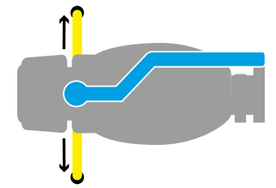
STABILIZATION

OPERATIONS AT THE HIGHEST LEVELS

The outriggers are hydraulically controlled by two distributors placed on both sides of the equipment. **The lifting cylinders are equipped with hydraulic check valves that ensure stability of position**.

FRONT: SINGLE HORIZONTAL TELESCOPIC
REAR: FIXED

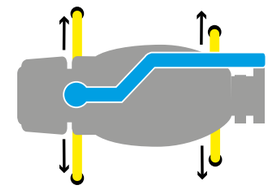
Stabilizations versatile and compact to allow rapid positioning in tight spaces or difficult to access areas. Rear outriggers with fixed extension.



Models: **3Z21, 3Z24**

FRONT: SINGLE HORIZONTAL TELESCOPIC
REAR: HORIZONTAL

Stabilization which provides stability to the equipment with the minimum area engaged: excellent functionality joined to high stability in all working positions guaranteed by modern stabilizers with hydraulic control. Rear outriggers simple horizontal extension.



Models: **4Z28, 4Z33**

THE DRUM

Drum at double helix made by steel with different thickness, high load capacity, made with **4 bands** to reduce the concentration of wear, with elliptical bottom and cone reinforcement to attack flange reducer. Load volume **8,5 m³** or **9 m³** and center of gravity decentralized to optimize the balance of the equipment. Rolling rollers of the drums on all models **TWINSTAR** is able to prevent wear of the slopes and structural deformations. Safety catch for the anti-rotation of the drum.

PUMPING GROUP

TOP EFFICIENCY FOR WEAR PREVENTION

The pumping unit utilises a specific concrete **S-valve**, whose innovative geometry guarantees great outputs and low maintenance under hard working conditions to ensure high flexibility and reliability. **The concrete S-valve completely satisfy the Customer's demands in terms of capacity and pressure**.

ALL OF **SERMAC** MIXER PUMPS OFFER THE FOLLOWING **BENEFITS**:

1. Pumping unit with open hydraulic circuit
2. Concrete S-valve 6" or 7" made of cast iron wear-resistant
3. Chrome-lined concrete cylinders of high thickness
4. Automatic lubrication of the pumping unit on all moving parts
5. Automatic oil lubrication for pumping pistons
6. Wears compensation system between plate and ring. High resistance with carbide insert and maximum pumping efficiency
7. Hydraulic pump with variable displacement and constant capacity adjuster
8. Excellent performance, reliability and low operating costs

PUMPING UNIT "S6" & "G7" – SPECIFICATIONS

MODEL	Model Type	S-valve	Stroke lenght [mm]	Piston Ø ["]	Th. Concrete output (Max) [m³]	Concrete pressure (Max) [bar]	Nr. of cycles per minute [°/min]
3Z21 3Z24 4Z28 4Z33	B	S6	C	07	73	54	48
	B	S6	C	07	73	70	48
	B	G7	C	08	80	80	42

B = mixer pump | **C = 1000 mm** | **07" = Ø 180 mm** **08" = Ø 200 mm**

THE PUMPING GROUPS ARE AVAILABLE IN DIFFERENT MODELS:

S6

Max theoretical concrete output from 73 m³/h and pressures from 54 to 70 bar.

G7

Max theoretical concrete output from 80 m³/h and pressures from 80 bar.

THE HOPPER

EXCELLENT GEOMETRY FOR CONCRETE PUMPING:

- Hopper made of wear-resistant steel with a grille equipped with an electric vibrator
- High torque of the mixer allow to operate under the most severe conditions with low-slump concrete
- Discharge of the concrete automatic and controlled by a level feeler
- Optimum combination between the conveying chamber made of casting steel and the mixing shaft equipped with blades with specific helical geometry
- Large capacity 450 l (S6)
- Large capacity 400 l (G7)

CONTROL SYSTEM

AT OPERATOR'S SERVICE

1	JOYSTICK: Boom 1st and 2nd section control
2	JOYSTICK: Drum rotation and boom rotation control
3	JOYSTICK: Boom 3rd and 4th section control
4	MUSHROOM-SHAPED BUTTON: Emergency stop
5	LEVER-OPERATED SWITCH: Boom speed preselection
6	LEVER-OPERATED SWITCH: Connect alternated/continuous vibrator
7	LEVER-OPERATED SWITCH: Start chassis engine
8	ROTARY REGULATOR: Increase/decrease concrete flow rate
9	LEVER-OPERATED SWITCH: Connect pumping/suctioning
10	LEVER-OPERATED SWITCH: Accelerate/decelerate engine
11	BUTTON: Start engine
12	BUTTON: Connect remote control
13	KEY-OPERATED ON-OFF SELECTOR

RADIO REMOTE EQUIPMENT

The boom and pump functions are managed by a **proportional radio remote control ergonomic and lightweight** with: double speed boom movement, automatic free frequency research, concrete charge variation, RPM regulation control, start-up and emergency stop. The standard equipment includes two proportional remote control connected in cabin.

PROPORTIONAL BOOM DISTRIBUTION

The boom movements are controlled by the proportional distributor that enables to obtain the maximum maneuver accuracy by a radio control with proportional control, while the pumping function is managed through hydraulic distributor and continuous rephasing.

ELECTRONIC MANAGEMENT CONTROL

The electronic management control operation of the mixer is obtained by adjusting system of automatic drive speed control (CSD) that maintain the constant rotation of the drum to vary the engine speed, during the transfer.

PROPORTIONAL STABILIZATION DISTRIBUTION

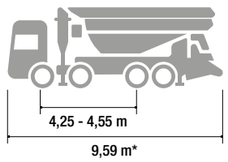
The pumping unit stabilizers are hydraulically managed by two distributors placed on both sides of pump to ensure safe use with two hands. The lifting jacks are fitted with check valves, which hold the cylinders in position.

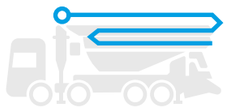
REAR CONTROL BOX

The rear control panel complete with all the functions of the machine is mounted to the hopper side and protected by lockable casing.

TWINSTAR
MIXER PUMPS

3Z21

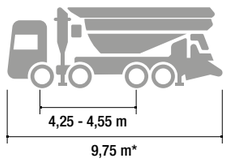


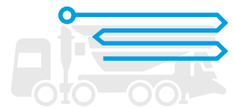


DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	20,9 m
MAX. HORIZONTAL REACH	16,9 m
MAX. DOWNWARD REACH	-9,94 m
SECTION NUMBER	3
MIN. UNFOLDING HEIGHT	5,4 m

MIXER PUMPS	
NOMINAL CAPACITY	8,5 m^3
GEOMETRICAL DRUM VOLUME	12 m^3
NUMBER OF RPM	0-16
ROLLING ROOLS	2
WATER TANK CAPACITY	500 l
OIL TANK CAPACITY	430 l

4Z28

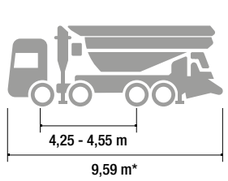


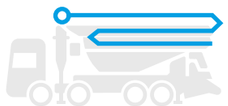


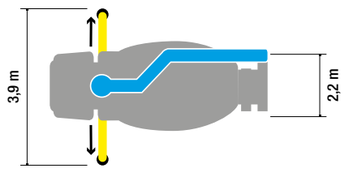
DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	28,1 m
MAX. HORIZONTAL REACH	24,1 m
MAX. DOWNWARD REACH	-18 m
SECTION NUMBER	4
MIN. UNFOLDING HEIGHT	6,35 m

MIXER PUMPS	
NOMINAL CAPACITY	9 m^3
GEOMETRICAL DRUM VOLUME	14 m^3
NUMBER OF RPM	0-16
ROLLING ROOLS	4
WATER TANK CAPACITY	800 l
OIL TANK CAPACITY	300 l

3Z24



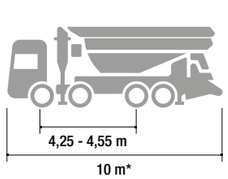


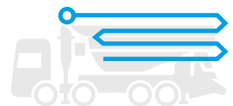


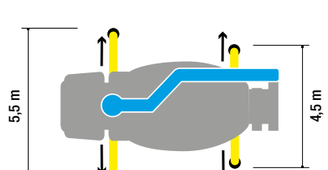
DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	24 m
MAX. HORIZONTAL REACH	20 m
MAX. DOWNWARD REACH	-13,7 m
SECTION NUMBER	3
MIN. UNFOLDING HEIGHT	6,9 m

MIXER PUMPS	
NOMINAL CAPACITY	8,5 m^3
GEOMETRICAL DRUM VOLUME	12 m^3
NUMBER OF RPM	0-16
ROLLING ROOLS	2
WATER TANK CAPACITY	800 l
OIL TANK CAPACITY	300 l

4Z33







DISTRIBUTION BOOMS	
MAX. VERTICAL REACH	32,2 m
MAX. HORIZONTAL REACH	28,2 m
MAX. DOWNWARD REACH	-22 m
SECTION NUMBER	4
MIN. UNFOLDING HEIGHT	7,4 m

MIXER PUMPS	
NOMINAL CAPACITY	8,5 m^3
GEOMETRICAL DRUM VOLUME	12 m^3
NUMBER OF RPM	0-16
ROLLING ROOLS	4
WATER TANK CAPACITY	635 l
OIL TANK CAPACITY	360 l

*Dimensions variable according to the truck assembly

*Dimensions variable according to the truck assembly

CONTROL STABILITY

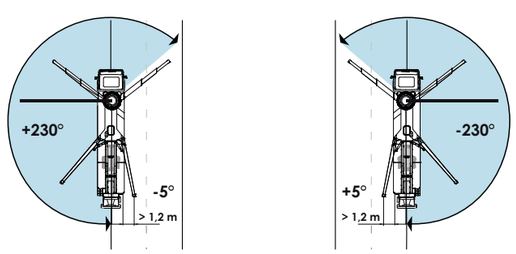
CONCRETE PUMPS AND MIXER PUMPS

The new European regulations **UNI EN 12001:2012** provide for the control of the machine stability with total or partial opening of the stabilization. **SERMAC**, in compliance with law, has created a new stability control system **SCS 2.2 (Sermac Control Stability)**, applicable on all concrete pumps ZENITH & SIRIO and truck mixer pumps TWINSTAR of its range.

The new stability control system allows the operator to work safely with the boom in its maximum extension according to the predetermined opening of the outriggers.
The system **SCS 2.2** monitors continuously the boom position in reference to the position and the load on the outriggers, allowing to operate only in verified security positions. Two displays mounted in correspondence of the stabilizers commands allows to verify the correct opening and the value of the loads on each stabilizer cylinder. A display on the remote control makes possible to visualize the exact position of the boom and the admitted work area.

The system **SCS 2.2** developed by **R&D SERMAC**, reaches the top of technology applicable to concrete pumps, thanks to the constant monitoring of the overturning moment, through the checking of the loads on the outriggers.

Example of concrete pump model 5RZ51 with first section boom open in vertical position.



Example of concrete pump model 5RZ51 with three outriggers open.

STATIONARY BOOM

TRAILER PUMPS

- Large Civil Projects
- Skyscrapers
- Towers and Facilities
- Power Stations

TRAILER PUMPS

The trailer concrete pumps **STAR series 8”** and **Star series 6”** allow high flow of concrete both in vertical and in horizontal plan; results obtained from research and testing in the yards, in severe working conditions for any type of use.

SERIE 8” ST

Engine power reaches **175 kW** (diesel motor), with max theoretical concrete output till **120 m³/h** (rod side) and pressure on concrete till **172 bar** (piston side).

SERIE 6” ST

Engine power reaches **54 kW** (diesel motor), with max theoretical concrete output till **70 m³/h** (rod side) and pressure on concrete till **50 bar** (rod side).

PUMPING GROUPS

RELIABILITY AND HIGH PERFORMANC

The pumping unit utilises a specific concrete S-valve that completely satisfy the Customer’s demands in terms of capacity and pressure.

THE HOPPER

EXCELLENT GEOMETRY FOR CONCRETE PUMPING

- Hopper made of wear-resistant steel with a grille equipped with an electric vibrator
- High torque of the mixer allow to operate under the most severe conditions with low-slump concrete
- Optimum combination between the conveying chamber made of casting steel and the mixing shaft equipped with blades with specific helical geometry
- Large capacity 550 l

SERIE 8” - SERIE 6”

MAIN TECHNICAL CHARACTERISTICS

- Frame composed of high quality steel
- Pumping unit with open hydraulic circuit
- Concrete S-valve made of casting wear-resistant steel
- Automatic lubrication of the pumping unit on all moving parts
- Automatic wears compensation system between plate and ring
- Diesel engine 129 kW or 175 kW (Serie 8”)
- Diesel engine Kubota 54 kW (Serie 6”)
- Electric auxiliary engine on request
- Single axle with plugged pneumatics
- Tow shaft with eyelet
- Support wheel iron made adjustable in height
- Manual stabilization on 4 points adjustable in height
- Radio remote control
- Concrete capacity adjustment from electric box and radio remote control
- Hydraulic pumps Bosh-Rexroth at variable capacity
- Automatic greasing system pumping group
- High pressure water pump 40 l/min, 20 bar (Serie 6”)
- Washing nozzle
- Exit pipeline with bend and section 7” + reduction 5” (Serie 8”)
- Large capacity concrete hopper made by anti-wear steel equipped with alternate blades mix
- Electric vibrator on hopper grid
- Maintenance kit
- Acoustic alarm
- Water tank: 700 l (Serie 8”) or 210 l (Serie 6”)
- Diesel tank: 200 l (Serie 8”) or 70 l (Serie 6”)
- Monochromatic painting

SERIE 8” - SERIE 6”

OPTIONALS EXTRAS

- Light on hopper
- Connection high pressure to pumping group
- Exit pipeline with bend and section 6” + reduction 5” (Serie 6”)
- Air compressor, 10 bar
- Heating coil water tank
- Polychromatic painting

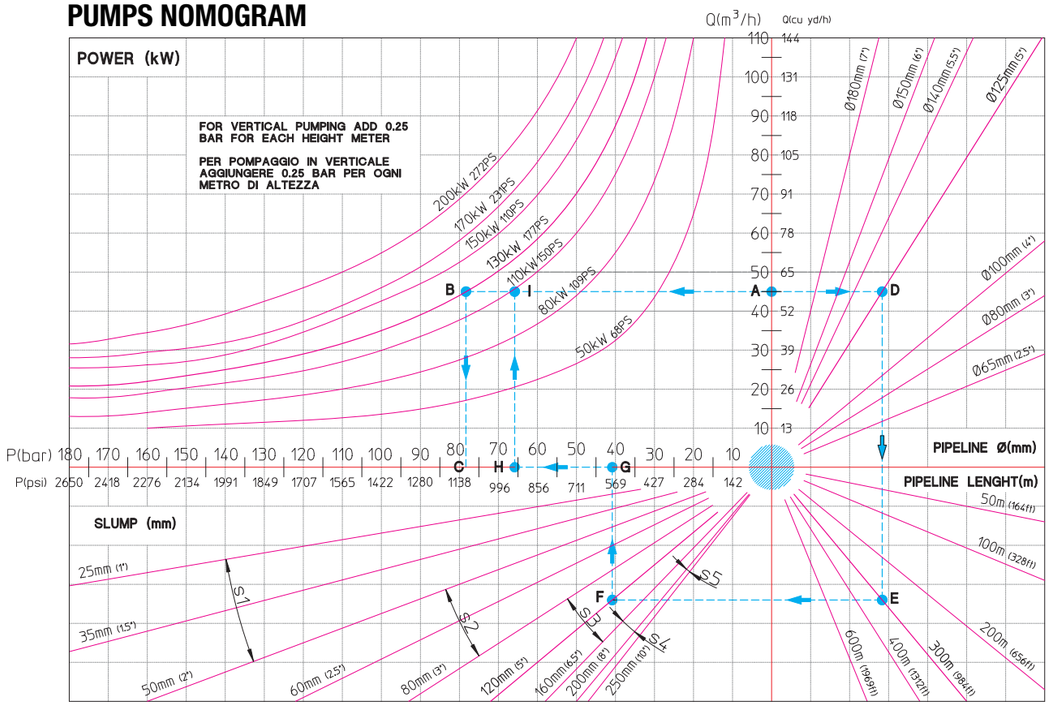

STAR SERIE 6”


STAR SERIE 6”


STAR SERIE 6”

TRAILER
PUMPS

PUMPS NOMOGRAM



A From **POINT A** with desired concrete output moving horizontal left and intersect the curve engine power installed. **POINT B**

B From **POINT B** decreases vertically and intersect the value of pressure. This represents the value obtained by pressure selected power and output. Verify if these values coincided with the technical data of the machine. **POINT C**

D Back to **POINT A**, moving horizontal right and cross the line corresponding to the pipeline diameter used. **POINT D**

E From **POINT D** decreases vertically and intersect the line corresponding to the total concrete length (horizontal + vertical). **POINT E**

F From **POINT E** moving horizontal left and intersects the line corresponding to the concrete slump used, **POINT F**

G From **POINT F** increases vertically and intersects the line corresponding to the pressure. **POINT G**. The obtained value, represent the concrete pressure in the condition according to the initial data and with a pipeline only horizontal

CASE 1: if the pipeline in working condition is only horizontal check that the value at **POINT G** must be less of **POINT C**. If the condition is fulfilled the pump choice is correct.

CASE 2: if the pipeline in working condition is horizontal and vertical, multiplied the vertical length of pipeline of 0.25 [bar]; add the obtained value of **POINT G**. **POINT H**. Check that the value at **POINT G** must be less of **POINT C**. If the condition is fulfilled the pump choice is correct.

Both in **CASE1** and in **CASE2**, if the value of **POINT G** greater than **POINT C** means that the pump can't work in choice condition.

STAR SERIE 8" ST80-100-120

*Indicative measures

SERIE 8" PUMPING UNIT - SPECIFICATIONS	ST 80	ST 80 HP	ST 100	ST 100 HP	ST 120
Th. Concrete output (max)* Rod side	80 m³/h (104 yd³/h)	80 m³/h (104 yd³/h)	100 m³/h (131 yd³/h)	100 m³/h (131 yd³/h)	120 m³/h (157 yd³/h)
Th. Concrete output (max)* Piston side	53 m³/h (69 yd³/h)	52 m³/h (68 yd³/h)	66 m³/h (86 yd³/h)	65 m³/h (85 yd³/h)	79 m³/h (103 yd³/h)
Concrete pressure (max)* Rod side	81 bar 1174 psi	101 bar 1450 psi	81 bar 1174 psi	101 bar 1450 psi	81 bar 1174 psi
Concrete pressure (max)* Piston side	137 bar 1986 psi	172 bar 2479 psi	137 bar 1986 psi	172 bar 2479 psi	137 bar 1986 psi
No. of strokes (max)* Rod side	27	21	27	27	32
No. of strokes (max)* Piston side	18	14	18	17	21
Piston Diameter	200 mm	200 mm	200 mm	200 mm	200 mm
Stroke length	1,600 mm	2,000 mm	2,000 mm	2,000 mm	2,000 mm
Powered by	AUS D/E	AUS D/E	AUS D/E	AUS D/E	AUS D/E
Diesel auxiliary engine	129 KW	129 KW	129 KW	175 KW	175 KW
Electric auxiliary engine	110 KW	110 KW	110 KW	160 KW	160 KW

*Cannot be reached simultaneously

STAR SERIE 6" ST40-70

SERIE 6" PUMPING UNIT - SPECIFICATIONS	ST 40	ST 70
Th. Concrete output (max)* Rod side	40 m³/h (52 yd³/h)	70 m³/h (92 yd³/h)
Concrete pressure (max)* Rod side	54 bar 783 psi	50 bar 725 psi
Number of strokes (max)* Rod side	26	46
Piston diameter	180 mm	180 mm
Stroke lenght	1,000 mm	1,000 mm
Powered by	AUX D/E	AUX D/E
Diesel auxiliary engine	KUBOTA 54 KW	KUBOTA 54 KW
Electric auxiliary engine	45 KW	45 KW

*Cannot be reached simultaneously

STATIONARY BOOMS

BS34

The placing boom **SERMAC** has folding type “Z” with **4 sections** and is supplied with the following equipment:

- Joint for continuous turret rotation
- Speed joint of the under turret group to the bearing structure (turret or frame work column) with four fixing pivots which can be disassembled and two fix centring pivots
- Concrete pipeline Ø 125 mm (5”)
- Rubber end hose, standard length
- Proportional radio remote control for the boom activation and proportional emergency radio remote control with maximum branching cable length 30 m
- Climbing tower electro-hydraulic gear case with electric motor three phase (15 kW) utilizable by power 380V – 415V – 440V
- Automatic anchoring system (mechanic) of 2nd section on 1st section
- Working platform on 1st section for assembling and maintenance

BS34

OPTIONAL EXTRAS

- Fixed base with log bolts
- Double wall concrete pipeline with tempered core

THE RANGE OF STATIONARY BOOM BEARING STRUCTURES ARE AS FOLLOWS:

ASSEMBLY ON CLIMBING COLUMN

Standard square section boxed column with self-climbing system, applicable both on a mobile base (with ballast) or on a fixed base. The column provides a height of 16 m consisting of two modules for rapid assembly (length 10 m + 6 m), with concrete pipe Ø 125 mm (5”) outside the column. The lower module (lg.10 m), has an interlocking and sliding function while the upper one (lg.6 m) acts as a connection to the arm. The union between the two columns is achieved by means of a bolted coupling while interfacing with the undermount with four hinges that connect to the arm. On the same extremity there are the connections for the assembly of the work platform and for the hydraulic power unit. Both modules are pre-assembled, complete with concrete pipe (double wall on request), ladders and lifting hooks.

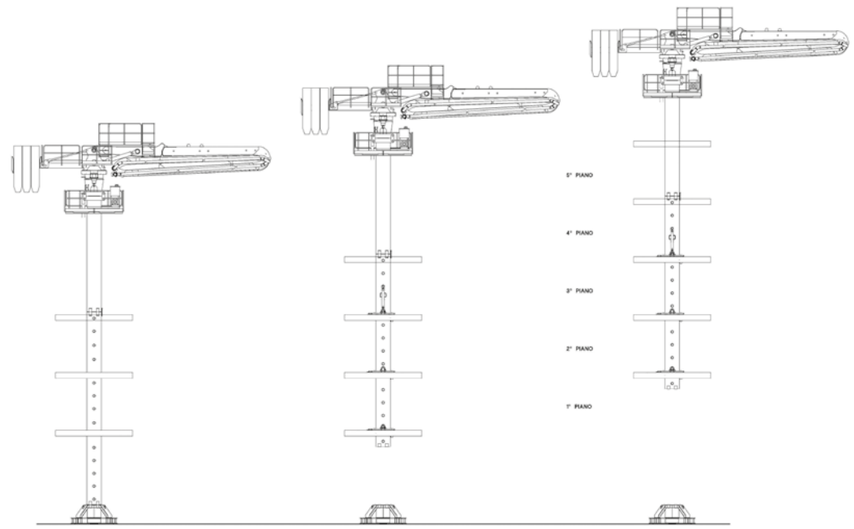
TECHNICAL CHARACTERISTICS AND USE MODE:

PLACEMENT IN LIFT SPACE OR IN OPENINGS ON THE SLABS WITH ANCHORAGE ON TWO LEVELS

The slinging and support system between the slabs is made up of three kits. Every kit includes a removable collar provided with sliding blocks in plastic material with blocking wedges, which can be placed in openings made on the structure during the construction phase.

LIFT SYSTEM WITH TWO HYDRAULIC CYLINDERS (WITH BLOCK VALVES)

which operate on the sling kits and on the lift up pivots. The cylinders are hydraulically linked with flexible tubes with fast clutches to the hydraulic boom switchboard controlled by an on-off push button panel.

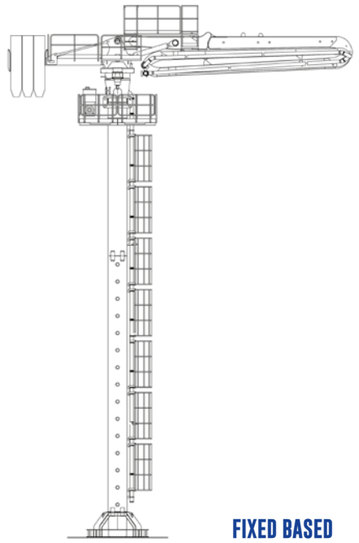


1ST phase **2ND** phase **3RD** phase

STATIONARY
BOOMS

ASSEMBLY ON FIXED BASE COLUMN

Column mounted on a base anchored to the ground with special floor pullers, of unified dimensions for all the models and to be assembled on site for the assembly of the tower. Alternatively, the arm will be set up on a special base with counterweights (commissioned by the customer and made according to the **SERMAC** technical specifications in compliance with the International Safety Regulations).



FIXED BASED COLUMN

ASSEMBLY ON CRANE COLUMN

Anchoring to a crane column inside or outside the building (not supplied directly by **SERMAC**).

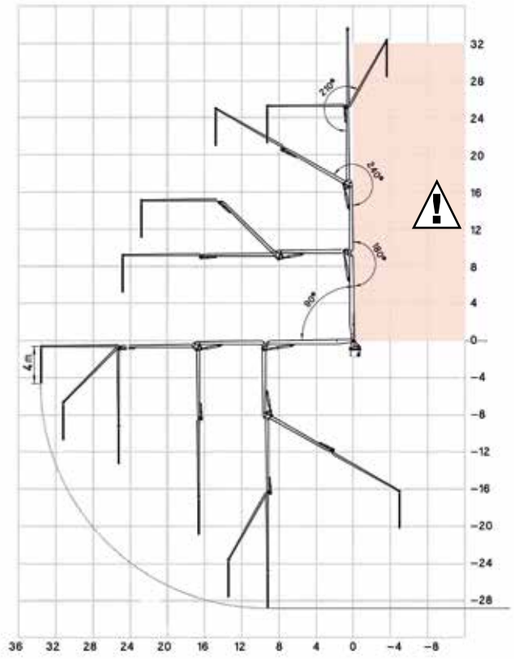
If this type of assembly is envisaged, an adaptation interface will be designed and implemented by **SERMAC**. The **BS** stationary arms can also be mounted on lattice tower columns made and / or supplied by the client according to the **SERMAC** technical specifications in compliance with the International Safety Standards. In this case, the weights and loads of the equipment will be communicated to the Customer for the choice of the most suitable reticular column.

SERMAC will also define and implement, according to the specific applications, the connection interface for the assembly between the undermount unit and the end of the crane column as well as the positioning of the control unit and the balcony.

BS34
WORKING DIAGRAM

BS34

NO WORKING AREA



STATIONARY BOOM - SPECIFICATION

	BS34
Section number	4
Pipeline diameter (mm)	Ø 5 (125 mm)
Max horizontal reach (m)	33,6
Max downward reach (m)	28,8
Section length: 1°- 2° (m) 3°- 4° (m)	9,30 - 7,70 8,10 - 8,50
Rotation angle (°)	continue
Flexible terminal hose (m)	4
Fixe column height (m)	16 (+2)
Installed power (kW)	15
Number of counterweight - Optional	3
Static tilting moment (nm)	60000
Boom weight (kg)	6400

AFTER SALES SERVICE & SPARE PARTS

PROFESSIONALISM AND COMPETENCE

AFTER SALES SERVICE

The after sales assistance, guaranteed by our qualified staff, offers a fast and efficient service in any place and time. This ensures constant first-class global support in terms of the rapid supply of original spare parts, technical assistance and staff training.

The SERMAC after-sales service is part of the aim of guaranteeing a highly efficient Assistance Service, ready to intervene locally with speed and competence. The network of authorized **SERMAC** service points and distributors spread throughout Italy, as in all continents, ensures an effective global service of first quality in terms of sales, technical assistance, problem diagnosis and supply of original spare parts. Each Service Center is constantly equipped with a spare parts warehouse that is suitable for local needs and guarantees fast and direct supply.

The **SERMAC** after-sale service, carried out and professionally organized by a constantly trained and specialized technical staff, is able to offer immediate response in terms of support and advice directly on the territory, guaranteeing the maximum level of satisfaction of the machine after the purchase. **SERMAC**, synonymous with strength and innovation, is also confirmed in post-sales as the ideal partner for companies projected into the future.

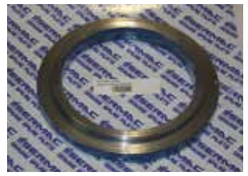
ORIGINAL SPARE PARTS A CERTAIN CHOICE

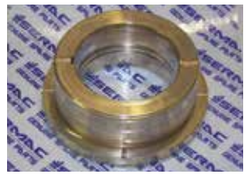
SERMAC only supplies genuine spare parts and protects its customers by certifying the main wear parts with an electronically stamped trademark. The use of original **SERMAC** spare parts guarantees they are of a high quality and are easy to interchange, which ensures that they have a long life and minimises the cost of replacing spare parts.

SERMAC's workshops and authorized distributors ensure the assembly of original spare parts for both ordinary and extraordinary maintenance.

SERMAC provides an excellent spare parts service as it has an extensive stock-holding of spare parts. All orders that are placed during normal working hours are dispatched on the same day using national and international express-courier services.

For further information visit the web site: **sermacpumps.com**





CASE HISTORY

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