



# FROM BRAZIL TO THE WORLD

# RAMOS MULTIWIRES,

the Brazilian multiwire leader, now opens its doors to the world.









#### **ROBUSTNESS**

Reinforced and robust structure, offers high performance and operational stability





#### **EFFICIENCY**

Precise and fast cuts, bringing more savings and quality at low costs





#### **SAFETY**

Independent sensors interconnected to the central control system brings total safety to the operator and the equipment





SALES

250+

equipment sold

**PERFORMANCE** 

90 K +

hours of use per month **MARKET** 

20 years+ 6 MM+

producing machines innovative with cutting edge technology

**PRODUCTIVITY** 

m<sup>2</sup> of sheets sawn per month

Innovation and Proactivity in the constant search for what is the most modern on the market, this is our commitment. Our vision of **Continuous Improvement** of the production process gives us the certainty that we will remain at the forefront of the multiwire market for cutting natural stones.

We invest time and resources in Cutting-Edge Technology and Engineering, encouraging the generation of new solutions to improve our products. This, combined with our policy of

After-sales monitoring, Technical Advice and Support, and personalized attention to each customer, keeps us at the top of the list of preferences of current and potential new customers.



### **WHO WE ARE**



Founded in 1990, the then **RAMOS UNIVERSO** was initially dedicated to the extraction and processing of slate stone, as well as the manufacture of equipment suitable for this activity. An abundant resource in the region where the company is located, in the state of Santa Catarina, the vast majority of the processed slate was exported for the assembly of high-performance billiard and snooker tables, being used by recognized companies in the sector throughout the world.

Restless, and always in search of the perfect cut and the excellence of his products, the company's founder and CEO, **Gervasio Ramos**, developed the first multi-wire machine with a triangular circuit for stone's cutting, which would, in a short period of time, become a leader in sales in the most solid and sought-after natural stone market in the world, the Brazilian market. Always looking for innovation and cutting-edge technology, the company has developed the most modern, robust and safe machines for natural stone blocks' cutting.







Currently in the **second generation of the family**, director **Marcos Ramos** brings even more energy, vigor and dynamism to the company, helping it to gain new markets, especially the international market. What was already good now becomes even better!

RAMOS UNIVERSO, now **RAMOS MULTIWIRES**, continues to be a leader in the Brazilian domestic multiwire market and opens its doors to the world, offering a competitive, efficient and excellent cost-benefit product for the international market.

Welcome to RAMOS MULTIWIRES!



# **WHY RAMOS?**



Investing in **Ramos Multiwires** machines for the raw stone cutting sector, such as marble and granite, is a smart decision for any business.

Our machines are designed with cutting-edge technology, ensuring precise and uniform cuts that minimize material waste.

Moreover, they are built for **durability and high performance**, reducing downtime and increasing productivity. With excellent technical support and easy maintenance, you can trust that your operation will run efficiently and continuously.

Investing in **Ramos Multiwires** machines guarantees quality, efficiency and a solid return on investment.

# **MAIN FEATURES**



Innovative anticorrosion protection

Precise chute control with servo motor

3

Individual

compensation

with bearings

Shaft and

bearing seals

Lower rubber

5

consumption

Hydraulic tensioning

18

Automation system with easy and intuitive software



**Braking Resistor** 

16

Shaft with anticorrosion protection



Hydraulic pretensioning



Triangular Cutting Circuit

9

Car entry parallel or across the wires



robust chassis

14

Easy operational

accessibility

13

Lower energy consumption 12

profile

**Rubbers with** 5.3mm, 6.3mm innovative or 7.3mm wires

11 **Availability for** 

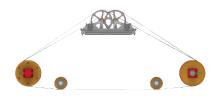
system





# Ramos

### **Hydraulic Tensioning System and Triangular Rolling Circuit**



#### **Triangular Rolling Circuit:**

Created by Ramos Multiwires and adopted by several multiwire machines around the world, it ensures excellent wire management and cutting reliability. In addition, the triangular circuit reduces wire fatigue and allows more precise control of the tensioning system. Important components of this circuit, the self-aligning wheel assemblies are all made of aluminum, so they do not rust or crack under work stress, and allow the wires to work freely, finishing the cut faster without vibration and noise.



#### **Tensioner Set:**

The tensioning wheels have a triple labyrinth sealing system, which ensures that contaminants or water with residues do not infiltrate the bearing, prolonging their useful life. The set of knives and wheels are tensioned by hydraulic cylinders that maintain stable wire pressure, guaranteeing ideal cutting conditions.



### Sistema de Tensionamento Hydraulic e Circuito Rodante Triangular



#### **Compensator Set:**

The compensator set has individual aluminum wheels with a bearing system mounted on a stationary axle coated with hard chrome, which facilitates assembly and disassembly. This way, there is no fatigue nor excessive strain on the cables. Equipment from 54 wires up has a hydraulic pre-tensioning system to assist in the wire changing process.



#### **Guide roller set:**

The aluminum guide wheels have individual bearings and are mounted on an axle coated with hard chrome, which allows the assembly to work independently, facilitates assembly and disassembly, helps to compensate for differences in the circuits and increases the performance of the profiles, bringing greater productivity yield.



#### **Traction Set:**

The traction drum is made up of a set of independently locking aluminum wheels and mounted on a bearing axle at two supporting points.

### **Lifting System**

The lifting system consists of two box-shaped columns with a screw-nut system and trapezoidal threaded spindle inside them. This system is what allows the up and down movement, which, assisted by the hydraulic cylinders, guarantees greater smoothness, safety, and longer useful life for the entire lifting assembly.

In case of breakage of the thread nut, there is a reinforcement system made up of an extra nut that prevents the machine from descending suddenly. Furthermore, the hydraulic cylinders also perform the function of reinforcing safety as they have check valves that ensure the descent speed is always smooth and slow, even in the event of a rupture of the nut-thread system.

This entire system that operates inside the column boxes is sealed and protected from contamination by means of double rubberized bellows.



### **Structural System**

Robustness is one of the main characteristics of our equipment. This is mainly because they have a reinforced and resistant structure, made up of modular chassis built in a tubular shape, with thick walls made of steel sheets. This reinforced structure ensures greater robustness and stability to the tensioning system, guaranteeing the correct positioning of the wires, which reduces the need for constant adjustments.

Fundamental to ensuring the high performance of the machines, the structural system is what ensures stable, safe operation, and lower need for adjustments. The robust structural system developed by Ramos Multiwires is what makes our machines unique and incomparable with others on the market.



### **Automation System**

Our automation system was developed with the best electrical and electronic components to ensure better efficiency for the equipment. The management and control software stands out for its ease of operation, allowing quick response and total interactivity with the user, in addition to being a very dynamic and intuitive tool, as all components are interconnected via an internet network.





### **Automation System**

#### Main features:

Intuitive and interactive interface screen: easy to operate as graphic commands are available on the 15" touch screen, enabling control of all command and monitoring functions through the screen. The operating software is available in 3 languages (Portuguese, English and Spanish) and allows configuration for up to 10 users.

**Remote IO:** all sensors interconnected to remote IO allowing communication between panel and machine using just one network cable.



### **Automation System**

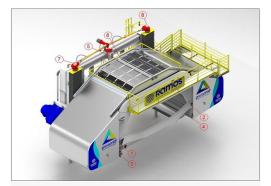
#### Main features:

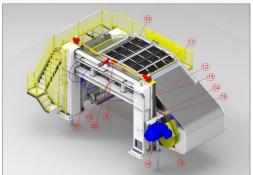
**Platforms:** allows remote monitoring via the internet of the equipment's performance in real time, and productivity report containing cutting information such as cutting time, possible failures and stops, energy consumption, amperage, machine descent speed, etc. and other information.

Safety devices: the machine has 20 safety sensors positioned at strategic points, which allows immediate diagnoses that can be checked via the interface screen. These sensors are connected to the operating system and guarantee the safety and integrity of the equipment, stone blocks/slabs and operators.



### **Security system**





Safety is one of the main features of our machines. A constant concern of our engineering team, our machines have several safety solutions for both the operator and the machine itself and the stone blocks/slabs.

#### Among the main solutions we can highlight:

**Stairs and walkways:** provide easy access to all machine maintenance areas, allowing operators to carry out maintenance and prevention services safely and comfortably.

**Extra nut:** in case of rupture of the lifting system's screw nut, there is a reinforcement system made up of an extra nut that prevents the machine from descending suddenly.



### **Security system**



**Safety hydraulic cylinder:** the machine's hydraulic lifting cylinder is also designed to prevent the machine from falling suddenly in case of rupture of the lifting system and the extra safety nut. This feature is designed so that the machine lowers slowly and at a uniform speed without sudden downward movement.

**Braking resistor:** emergency device that causes a quick stop in the event of a serious failure, for example, a wire break. When activated, the braking resistor automatically stops the machine in 30 seconds.

Fenced safety area (optional): we offer the civil design of the minimum operational safety area that must be isolated around the machine. The access door to this area has a sensor connected to the control panel that does not allow the machine to be activated while it is open and automatically turns the machine off if someone opens it to access the area while the machine is operating.



### **Automatic Lubrication System**

Poor lubrication is responsible for approximately 80% of premature breaks and defects in a gear system. In order to make our machines more efficient and reliable, we adopted an automatic lubrication system for the most critical components of the equipment, thus ensuring continuous and adequate lubrication of them. This solution also brings agility and more productivity to our machines, as they do not need to constantly stop operating to be lubricated. Another advantage of this solution is the injection of the correct amount needed to lubricate the components, which saves lubricant and avoids waste, while also preventing low lubrication if carried out inappropriately manually.









Nossos produtos, que se destacam pela tecnologia de ponta e inovação, são o que há de mais moderno, seguro e durável no atual mercado mundial de corte de pedras naturais. Se respeitadas as devidas manutenções e revisões preventivas, nossas máquinas duram seguramente mais de uma década, conservando a mesma eficiência e precisão de corte. Mais que isso, se observados esses cuidados, os custos de operação e manutenção são insignificantes, restringindo-se basicamente à reposição de peças desgastadas pelo próprio uso.



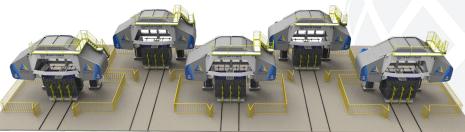
# **CONFIGURATION**

Ramos Multiwires can be configured during the purchase phase for block entry either transversely or parallel to the wires. This solution allows the equipment to be adapted according to the factory layout, occupying less space for the installation of multiple machines.



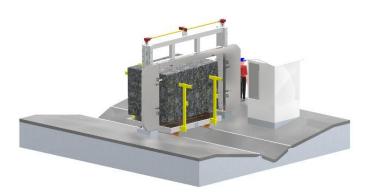




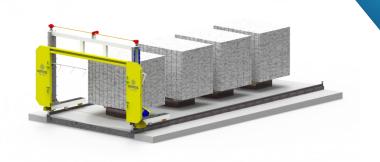




# **MONOWIRE FIXED E MOBILE**



MONOFIO FIXED				
Wire length	18 m ou 20 m	Total installed power	14,75 KW	
Wire diameter	7,3 mm ou 6,3 mm	Length	6.940 mm	
Tension	Pneumatic	Width	878 mm	
Wire Tension	180 á 225 Lbf	Height	5.380 mm	
Equipment weight 3 Ton.				



MONOFIO MOBILE					
Wire length	18 m ou 20 m	Length	6.940 mm		
Wire diameter	7,3 mm ou 6,3 mm	Width	878 mm		
Tension	Pneumático	Height	4.305 mm		
Total installed power	10,50 KW	Equipment weight	3 Ton.		

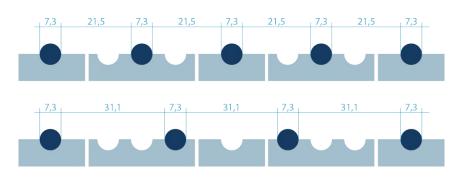


## **PYRAMID ROBUST 5 WIRES**



CHARACTERISTICS					
Wire Length 20 m Motoreductor water pipe 0,5 KW					
Wire Diameter	7,3 mm	Total installed power	27,5 KW		
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz		
Wire Tension	225 Lbf	Length	9.844 mm		
Main Engine	20KW	Width	3.235 mm		
Motoreductor of the cala	3 KW	Height	6.946 mm		
Main Hydraulic 1 KW Average water consumption 78,5 L/min.					
Motoreductor of the wagor	1,5 KW x 02	Weight of the equipment	9 Ton.		

Ø WIRE 7,3 mm
WIDTH 144 mm
PLATE THICKNESS 21,5 mm | 31,1 mm
NUMBER OF PLATES 4 | 3



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.

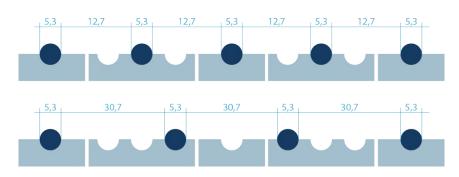


## **PYRAMID ROBUST 10 WIRES**



CHARACTERISTICS					
Wire Length 20 m Motoreductor water pipe 0,5 KW					
Wire Diameter	5,3 mm	Total installed power	67,5 KW		
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz		
Wire Tension 170-180 Lbf		Length	9.844 mm		
Main Engine	60 KW	Width	3.522 mm		
Motoreductor of the cala	3 KW	Height	6.946 mm		
Main Hydraulic	1 KW	Average water consumption	157,0 L/min.		
Motoreductor of the wagon 1,5 KW x 02 Weight of the equipment 10 Ton.					

Ø WIRE 5,3 mm
WIDTH 162 mm
PLATE THICKNESS 12,7 mm | 30,7 mm
NUMBER OF PLATES 9 | 4



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.

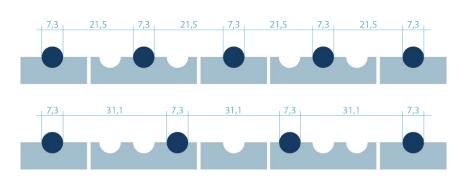


## **PYRAMID ROBUST 20 WIRES**



CHARACTERISTICS					
Wire Length 20 m Motoreductor water pipe 0,5 KW					
Wire Diameter	7,3 mm	Total installed power	107,5 KW		
Tensioning <b>Hydraulic</b>		Electric voltage / frequency 380 Volts/6			
Wire Tension	225 Lbf	Length	9.844 mm		
Main Engine	100 KW	Width	3.650 mm		
Motoreductor of the cala	3 KW	Height	6.946 mm		
Main Hydraulic 1 KW Average water consumption 320 L/mir					
Motoreductor of the wagon	1,5 KW x 02	Weight of the equipment	15 Ton.		

Ø WIRE 7,3 mm
WIDTH 547,2 mm
PLATE THICKNESS 21,5 mm | 31,1 mm
NUMBER OF PLATES 19 | 14



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.

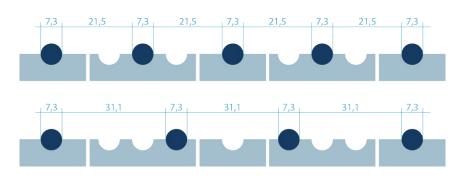


## **PYRAMID ROBUST 26 WIRES**



CHARACTERISTICS						
Wire Length 20 m Motoreductor water pipe 0,5 KW						
Wire Diameter	7,3 mm	Total installed power 132,5 KW				
Tensioning	Hydraulic	Electric voltage / frequency 380 Volts/				
Wire Tension	225 Lbf	Length	9.840 mm			
Main Engine 125KW		Width	3.997 mm			
Motoreductor of the cala	3 KW	Height	6.600 mm			
Main Hydraulic 1 KW Average water consumption 416 L/min.						
Motoreductor of the wagon 1,5 KW x 02 Weight of the equipment 16,5 Ton.						

Ø WIRE 7,3 mm
WIDTH 720 mm
PLATE THICKNESS 21,5 mm | 31,1 mm
NUMBER OF PLATES 25 | 19



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.

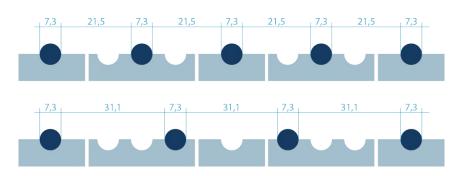


## **PYRAMID ROBUST 32 WIRES**



CHARACTERISTICS						
Wire Length 20 m Motoreductor water pipe 0,5 KW						
Wire Diameter	7,3 mm	Total installed power	157,5 KW			
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz			
Wire Tension	225 Lbf	Length	9.840 mm			
Main Engine	150KW	Width	4.170 mm			
Motoreductor of the cala	3 KW	Height	6.600 mm			
Main Hydraulic 1 KW Average water consumption 512 L/min.						
Motoreductor of the wagon	1,5 KW x 02	Weight of the equipment	19,5 Ton.			

Ø WIRE 7,3 mm
WIDTH 892,8 mm
PLATE THICKNESS 21,5 mm | 31,1 mm
NUMBER OF PLATES 31 | 23



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.

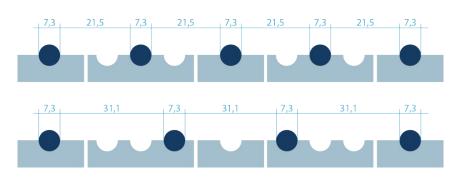


## **PYRAMID ROBUST 42 WIRES**



CHARACTERISTICS						
Wire Length 20 m Motoreductor water pipe 0,5 KW						
Wire Diameter	7,3 mm	Total installed power	215 KW			
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz			
Wire Tension	225 Lbf	Length	9.840 mm			
Main Engine 200 KW		Width	4.459 mm			
Motoreductor of the cala	7,5 KW	Height	6.600 mm			
Main Hydraulic 4 KW Average water consumption 660,0 L/min.						
Motoreductor of the wagon	1,5 KW x 02	Weight of the equipment	25 Ton.			

Ø WIRE 7,3 mm
WIDTH 1181 mm
PLATE THICKNESS 21,5 mm | 31,1 mm
NUMBER OF PLATES 41 | 31



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.



### **PYRAMID ROBUST 44 WIRES**



Wire Length	20 m	Motoreductor water pipe	0,5 KW
Wire Diameter	6,3 mm	Total installed power	215 KW
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz
Wire Tension	180 - 200 Lbf	Length	9.840 mm
Main Engine	200 KW	Width	4.459 mm
Motoreductor of the cala	7,5 KW	Height	6.600 mm

Average water consumption

Weight of the equipment

704 L/min.

25 Ton.

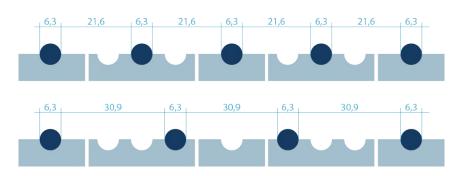
4 KW

Motoreductor of the wagon 1,5 KW x 02

Main Hydraulic

**CHARACTERISTICS** 

Ø WIRE 6,3 mm
WIDTH 1200 mm
PLATE THICKNESS 21,6 mm | 30,9 mm
NUMBER OF PLATES 43 | 32



<sup>\*</sup> As informações desta tabela são para nossos equipamentos padrão. Também produzimos máquinas com outras quantidades e diâmetros dos cabos, tensão elétrica, amperagem e outras variáveis que se adaptem às necessidades do cliente, tudo sob consulta.

<sup>\*\*</sup> As espessuras das chapas podem variar de 12mm a 230mm ou mais, a depender do modelo da máquina, diâmetro e posição dos cabos, ver catálogo.



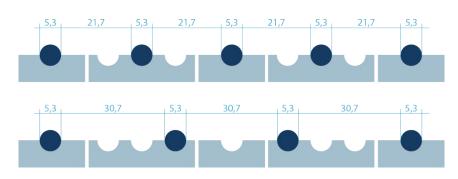
## **PYRAMID ROBUST 46 WIRES**



		$\alpha$ T		$\sim$ T	00
CH/	$\mathbf{M}$	U = II	- 54		

Wire Length	20 m	Motoreductor water pipe	0,5 KW
Wire Diameter	5,3 mm	Total installed power	215 KW
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz
Wire Tension	170 Lbf	Length	9.840 mm
Main Engine	200 KW	Width	4.459 mm
Motoreductor of the cala	7,5 KW	Height	6.600 mm
Main Hydraulic	4 KW	Average water consumption	736 L/min.
Motoreductor of the wagon	1,5 KW x 02	Weight of the equipment	26 Ton.

Ø WIRE 5,3 mm
WIDTH 1215 mm
PLATE THICKNESS 21,7 mm 30,7 mm
NUMBER OF PLATES 45 33



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.



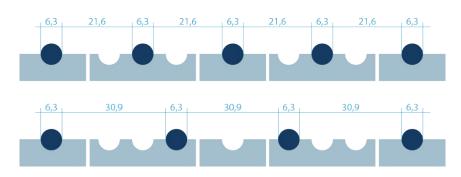
### **PYRAMID ROBUST 54 WIRES**



$\sim$ 11			 IST	
	$\sim$		 	
		V = \ _ /	 11-1	

OTAKAOTEKISTIOS				
Wire Length	20 m	Motoreductor water pipe	1,5 KW	
Wire Diameter	6,3 mm	Total installed power	273 KW	
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz	
Wire Tension	180-200 Lbf	Length	9.843 mm	
Main Engine	250KW	Width	4.850 mm	
Motoreductor of the cala	12,5 KW	Height	6.670 mm	
Main Hydraulic	6 KW	Average water consumption	864 L/min.	
Motoreductor of the wagon	1,5 KW x 02	Weight of the equipment	30 Ton.	

Ø WIRE 6,3 mm
WIDTH 1479 mm
PLATE THICKNESS 21,6 mm | 30,9 mm
NUMBER OF PLATES 53 | 41



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.

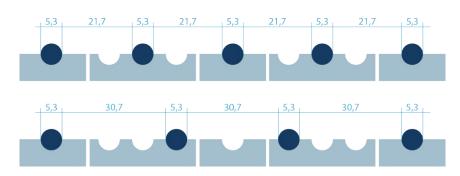


## **PYRAMID ROBUST 64 WIRES**



CHARACTERISTICS				
Wire Length	1,5 KW			
Wire Diameter	5,3 mm	Total installed power	323 KW	
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz	
Wire Tension	170 Lbf	Length	9.843 mm	
Main Engine	300KW	Width	4.850 mm	
Motoreductor of the cala	12,5 KW	Height	6.670 mm	
Main Hydraulic	6 KW	Average water consumption	1024 L/min.	
Motoreductor of the wagon	1,5 KW x 02	Weight of the equipment	32 Ton.	

Ø WIRE 5,3 mm
WIDTH 1701 mm
PLATE THICKNESS 21,7 mm | 30,7 mm
NUMBER OF PLATES 63 | 47



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.



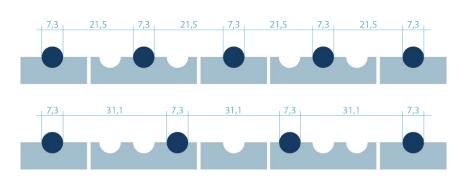
### **PYRAMID ROBUST 72 WIRES**



$\alpha$		$\sim$		
		_	 IST	122

SHARASTERISTISS				
Wire Length	20 m	Motoreductor water pipe	1,5 KW	
Wire Diameter	7,3 mm	Total installed power	323 KW	
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz	
Wire Tension	225 Lbf	Length	9.843 mm	
Main Engine	300 KW	Width	5.420 mm	
Motoreductor of the cala	12,5 KW	Height	6.670 mm	
Main Hydraulic	6 KW	Average water consumption	1132,0 L/min.	
Motoreductor of the wagor	1,5 KW x 02	Weight of the equipment	37 Ton.	

Ø WIRE 7,3 mm
WIDTH 2045 mm
PLATE THICKNESS 21,5 mm 31,1 mm
NUMBER OF PLATES 71 53



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.



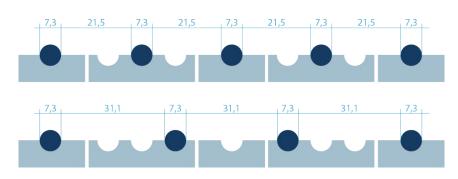
### **PYRAMID ROBUST 74 WIRES**



$\mathbf{n}$	225		
 -			
		RISTI	10101

STAKASTEKISTISS				
Wire Length	20 m	Motoreductor water pipe	1,5 KW	
Wire Diameter	7,3 mm	Total installed power	323 KW	
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz	
Wire Tension	225 Lbf	Length	9.843 mm	
Main Engine	300 KW	Width	5.420 mm	
Motoreductor of the cala	12,5 KW	Height	6.670 mm	
Main Hydraulic	6 KW	Average water consumption	1164,0 L/min.	
Motoreductor of the wagor	1,5 KW x 02	Weight of the equipment	38 Ton.	

Ø WIRE 7,3 mm
WIDTH 2102 mm
PLATE THICKNESS 21,5 mm | 31,1 mm
NUMBER OF PLATES 73 | 54



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.



## **PYRAMID ROBUST 76 WIRES**



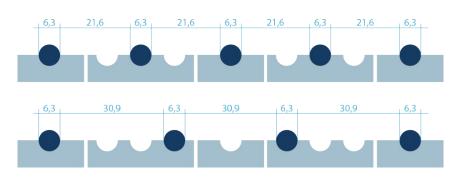
$\alpha$		-		ST	$\mathbf{a}$
	$\Lambda$	-			1 44

OHARASTERISTISS				
Wire Length	20 m	Motoreductor water pipe	1,5 KW	
Wire Diameter	6,3 mm	Total installed power	323 KW	
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz	
Wire Tension	180-200 Lbf	Length	9.843 mm	
Main Engine	300KW	Width	5.420 mm	
Motoreductor of the cala	12,5 KW	Height	6.670 mm	
Main Hydraulic	6 KW	Average water consumption	1216 L/min.	
Motoreductor of the wagor	1,5 KW x 02	Weight of the equipment	38 Ton.	

Ø WIRE 6,3 mm
WIDTH 2093 mm

PLATE THICKNESS 21,6 mm | 30,9 mm

NUMBER OF PLATES 75 | 55



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.



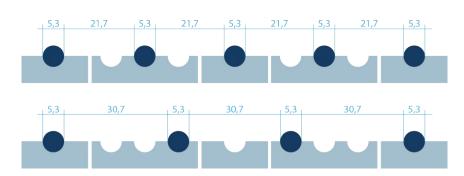
# **PYRAMID ROBUST 80 WIRES**



<b>CHA</b>	RΔ	СТ	FRI	STI	CS
		$\mathbf{U}$		$\mathbf{U}$	

SHARASTERISTISS				
Wire Length	20 m	Motoreductor water pipe	1,5 KW	
Wire Diameter	5,3 mm	Total installed power	373 KW	
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz	
Wire Tension	170 Lbf	Length	9.843 mm	
Main Engine	350KW	Width	5.420 mm	
Motoreductor of the cala	12,5 KW	Height	6.670 mm	
Main Hydraulic	6 KW	Average water consumption	1280 L/min.	
Motoreductor of the wagor	1,5 KW x 02	Weight of the equipment	38,5 Ton.	

Ø WIRE 5,3 mm
WIDTH 2133 mm
PLATE THICKNESS 21,7 mm | 30,7 mm
NUMBER OF PLATES 79 | 59



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.



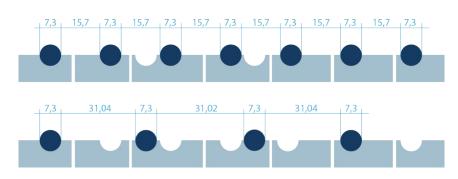
## **PYRAMID ROBUST 90 WIRES**



CHA	RA	CT	ER	IST	CS
<b>U</b> 1111			ш.	. •	$\overline{}$

5.17 tt 0.15 1 Ett 0.15 5				
Wire Length	20 m	Motoreductor water pipe	1,5 KW	
Wire Diameter	7,3 mm	Total installed power	373 KW	
Tensioning	Hydraulic	Electric voltage / frequency	380 Volts/60Hz	
Wire Tension	225 Lbf	Length	9.843 mm	
Main Engine	350 KW	Width	5.420 mm	
Motoreductor of the cala	12,5 KW	Height	6.670 mm	
Main Hydraulic	6 KW	Average water consumption	1415 L/min.	
Motoreductor of the wagor	1,5 KW x 02	Weight of the equipment	45 Ton.	

Ø WIRE 7,3 mm
WIDTH 2047 mm
PLATE THICKNESS 15,7 mm | 31,04 mm
NUMBER OF PLATES 89 | 53



<sup>\*</sup>The information in this table relates to our standard equipment. We also produce machines with other quantities and diameters of wires, electrical voltage, amperage and other variables that adapt to the customer's needs, all upon request.

<sup>\*\*</sup> Plate thicknesses can vary from 15mm to 230mm or more, depending on the machine model, diameter and position of the cables, see our brochure.







#### **ROTATING CAR**

Drive System Motoredutor Installed Power 1,5KW/1,1Kw Rotation System Manual

Equipment Weight 3.155kg

Load Capacity 40 Ton.



#### **ROTATING PLATFORM**

Drive System Motoredutor Installed Power 1,5KW/1,1Kw

Load Capacity 50 Ton. Equipment Weight 2.000kg

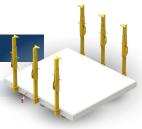
#### **FIXED CAR**

Drive System Motoredutor

Installed Power 1,5KW/1,1Kw

Load Capacity 40 Ton.

Equipment Weight 1.740kg



### **CARRIAGE**

Drive System Motoredutor

Load Capacity 45 Ton.

Installed Power 1,5KW/1,1Kw

Equipment Weight 1.610kg

# **CONTACTS**



Santa Catarina e Espírito Santo +55 (47) 3544-0362

Rodovia BR 470 – Km 161,7 Bracatinga, Trombudo Central SC – CEP: 89176 -000

#### **International Partners**



#### **TURKEY**

Adress: Fatih Mahallesi Süleyman Demirel Bulvarı No. 213

Bucak/ Burdur/ Türkiye Postal Code 15300

Phone: +90 248 325 90 86



#### **MÉXICO**

Suministros Mexicanos de Equipos de Minería S.A. de C.V. Av. Insurgentes Sur - No. 1458 Piso 13, Col. Actipan, C.P. 03920 Alcaldía Benito Juárez, CDMX



