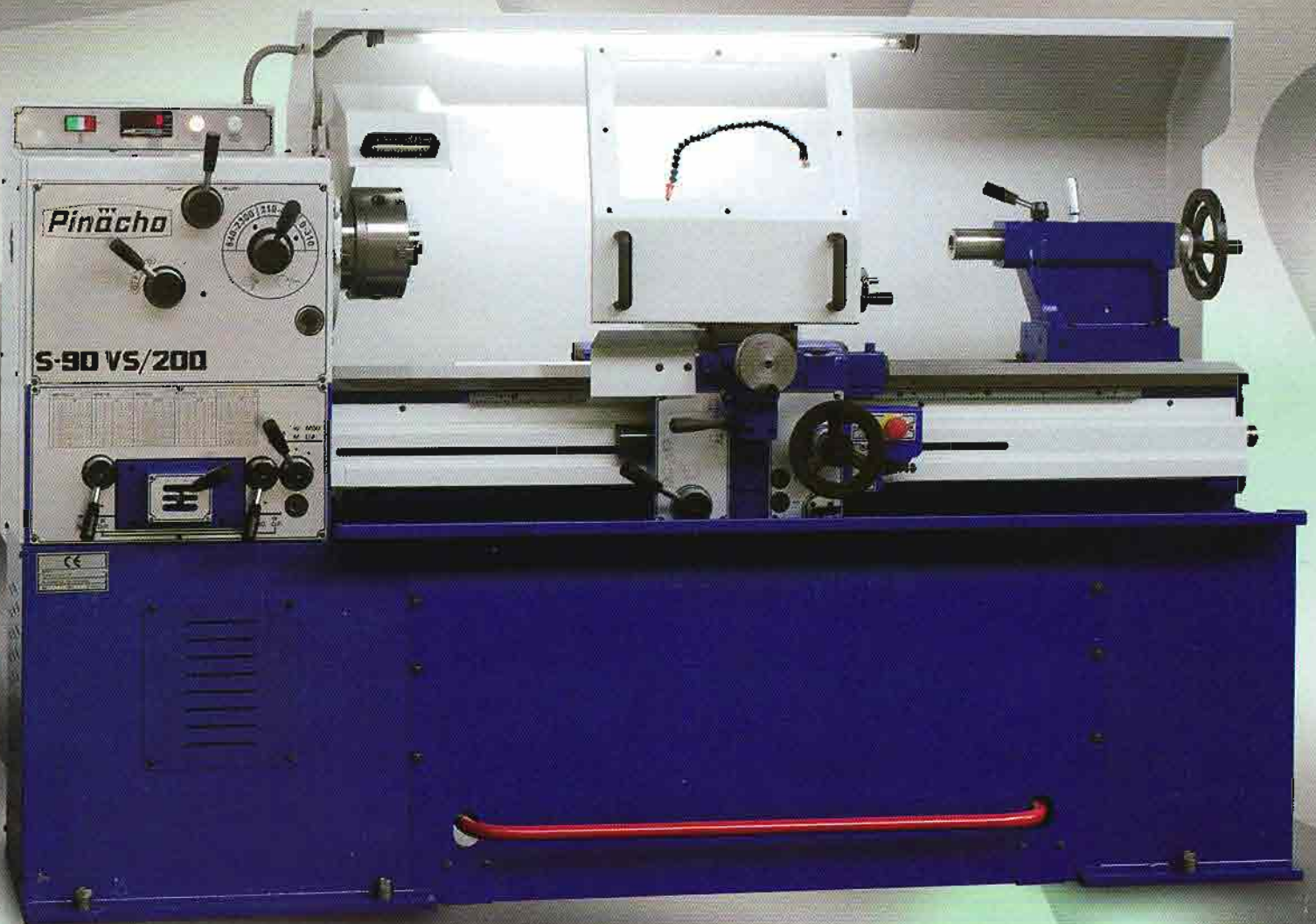


Pinacho

TORNOS · LATHES · TOURS · DREHMASCHINEN



conventional precision lathes
SP · S-90 · S-90 VS

main characteristics

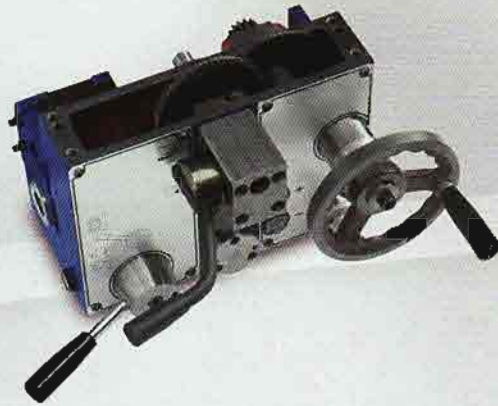


The machines are designed in accordance with **International Standards**. Employing proven technology, and manufactured using the best quality materials available.

Working out of spacious, modern facilities, equipped for **high productivity and quality**. Using high precision verification equipment and strict quality control.

Due to their **strength, accuracy and durability**, as well as ease of use, our machines are perfect for all kinds of industry, and educational purposes.

With a **high chip removal rate during the rough turning operation, and the ability to produce very fine surface finishes**, and are able to maintain strict tolerances.



The apron casing is completely enclosed. It is supplied with a safety device which prevents the screw cutting and feed mechanisms acting simultaneously.

You have access to a wide range of threads and feeds without having to perform any change of gears in the machine's quadrant plate.

All the gears and shafts of the Headstock, Feed Box, and Apron are made of high resistance steel, hardened and ground. Shafts are mounted on needle bearings, and everything is lubricated in an oil bath.

The well proportioned headstock has a high working capacity. The casing is made from 25 GG casting, strongly ribbed, giving the machine great rigidity.

The bed is built from high quality casting, which is strongly ribbed, giving the machine great rigidity. Bed ways are hardened and ground with high precision. Hardness: 400-450 Brinell.

The **balanced** main spindle duly proportioned and of high rigidity, is mounted on precision taper roller bearings, with high loading capacity.

Slides and carriages are well proportioned and move easily and smoothly.

The cross slide and the top slide are equipped with adjustable steel taper gids.

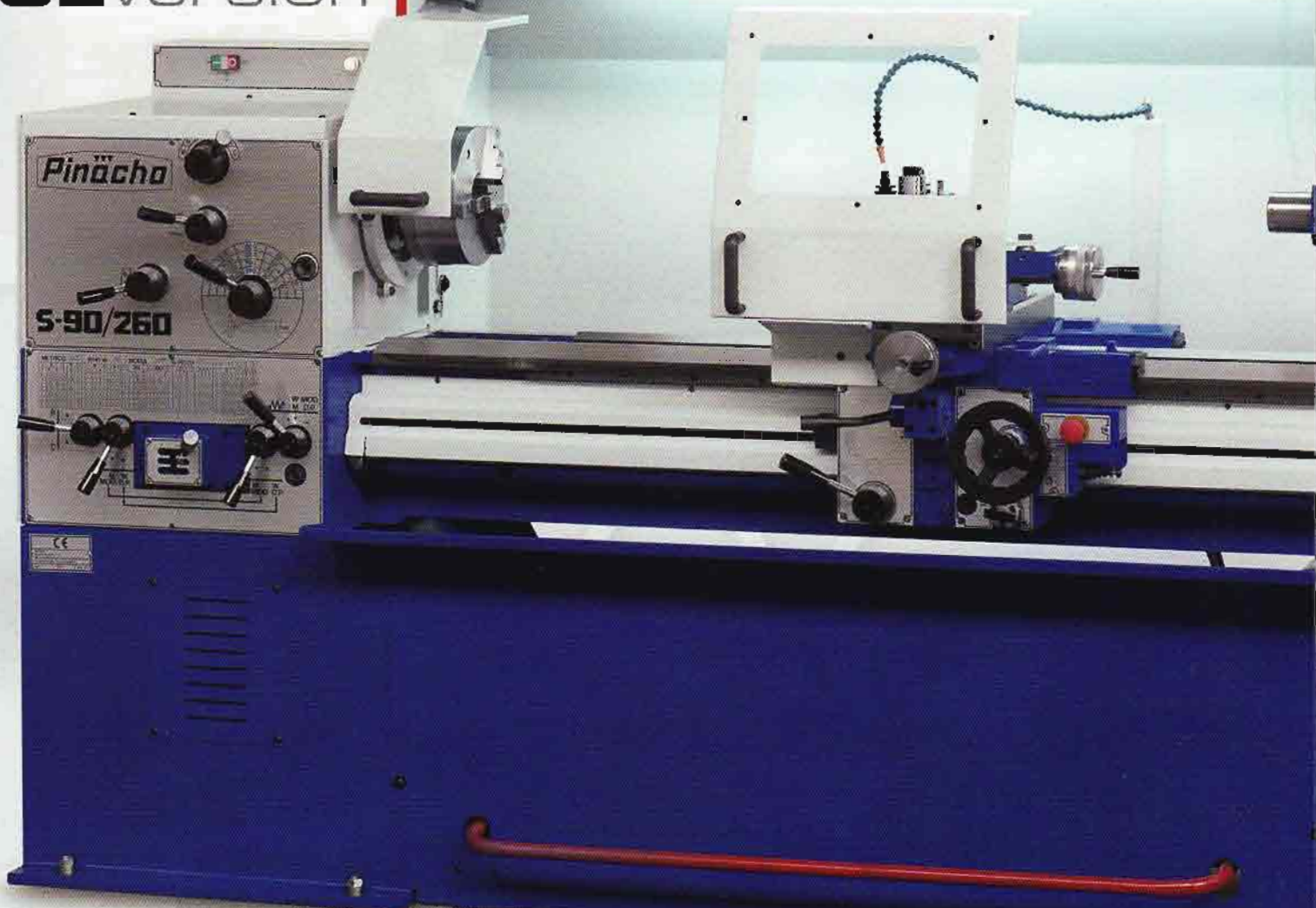
The **cross screw** is induction hardened and ground, and mounted on needle bearings providing great accuracy and durability.

Both the main electrical system (housed in an isolated cabinet), and the stop/start switch (centralized on the apron), are equipped with IP-44 protection.

The tailstock is strongly built. The hardened and ground shank is provided with an extractor. The screw is mounted on bearings with high load capacity.



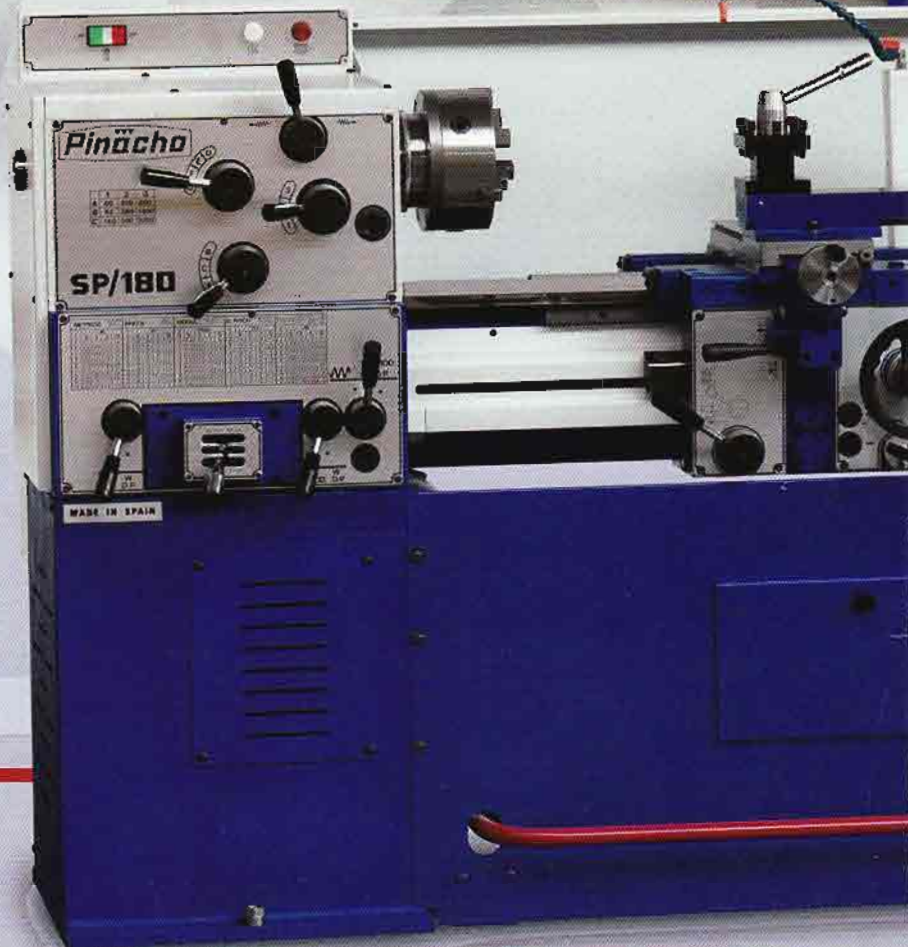
CE version



CE

Accessories meet CE safety norm
89/392/C.E. for machine tools:

- Special electrical installation.
- Rear splash guard.
- Chuck guard with microswitch.
- Top slide guard.
- Feed shaft and lead screw safety device.
- "CE" label.
- "CE" certificate.



standard
version

technical specifications

SP

CAPACITY

		SP/165	SP/180	SP/200	SP/250
Centre height	mm	165	180	200	250
Centre distance	mm	750 - 1000	750 - 1000	750 - 1000	1150 - 1650
Swing over bed	mm	335	360	400	495
Swing over gap	mm	490	520	560	700
Swing over carriage	mm	310	335	375	450
Swing over cross slide	mm	175	205	245	310
Bed width	mm	250	250	250	300
Gap length in front of face plate	mm	130	130	130	160

HEADSTOCK

Main spindle bore	mm	42	42	42	52
Main spindle nose		DIN 55027 N° 5 CAMLOCK N° 5	DIN 55027 N° 5 CAMLOCK N° 5	DIN 55027 N° 5 CAMLOCK N° 5	DIN 55027 N° 6 CAMLOCK N° 6
Main spindle taper	MT	4	4	4	4
Speed range	rpm	60 - 2000	60 - 2000	60 - 2000	40 - 2200
No. of speeds		9	9	9	12

THREADS AND FEEDS

Longitudinal feeds	44 55	0,05 - 0,75	0,05 - 0,75	0,05 - 0,75	0,05 - 0,75
Cross feeds	44 55	0,025 - 0,375	0,025 - 0,375	0,025 - 0,375	0,025 - 0,375
Metric threads	44 55	0,5 - 7,5	0,5 - 7,5	0,5 - 7,5	0,5 - 7,5
Whitworth threads in t.p.i.	44 55	60 - 4	60 - 4	60 - 4	60 - 4
Modular threads	44 55	0,25 - 3,75	0,25 - 3,75	0,25 - 3,75	0,25 - 3,75
Diametrical Pitch threads	44 55	120 - 8	120 - 8	120 - 8	120 - 8
Lead screw Pitch	mm	6	6	6	6

SLIDES AND CARRIAGE

Cross slide travel	mm	245	245	245	300
Top slide travel	mm	120	120	120	130
Maximum tool dimension	mm	16 x 16	20 x 20	20 x 20	25 x 25

TAILSTOCK

Tailstock shank diameter	mm	48	48	48	58
Tailstock shank travel	mm	140	140	140	155
Tailstock taper	MT	3	3	3	4

MOTORS

Main motor power In	Kw.	2,2	3	4	5,5
Pump motor power in	Kw.	0,06	0,06	0,06	0,06

STEADIES

Max-min capacity of fixed steady	mm	10 - 115	10 - 115	10 - 130	20 - 220
Max-min capacity of travelling steady	mm	10 - 70	10 - 70	10 - 80	20 - 135



S - 90

S - 90 VS

S90/165 S90/180 S90/200 S90/225 S90/250-105 S90/260 S90/310 S90/310-155

S90 VS/165 S90 VS/180 S90 VS/200 S90 VS/225 S90 VS/260 S90 VS/310

165	180	200	225	250	260	310	310
750 - 1000	750 - 1000	1150 - 1650	1150 - 1650	1150 - 1625	1150 - 1625 2225 - 3150	1150 - 1625 2225 - 3150	1150 - 1625 2225 - 3150
335	360	400	450	495	530	620	620
490	520	600	650	700	780	880	880
310	335	370	410	450	475	580	580
175	205	210	260	310	325	425	425
250	250	300	300	300	350	350	350
130	130	160	160	125	215	200	200

165	180	200	225	260	310
750 - 1000	750 - 1000	1150 - 1650	1150 - 1650	1150 - 1625 2225 - 3150	1150 - 1625 2225 - 3150
335	360	400	450	530	620
490	520	600	645	780	880
310	335	370	410	475	580
175	205	210	260	325	425
250	250	300	300	350	350
130	130	160	160	215	200

42	42	52	52	105	68	80	155
DIN 55027 Nº.5 CAMLOCK Nº.5	DIN 55027 Nº.5 CAMLOCK Nº.5	DIN 55027 Nº.6 CAMLOCK Nº.6	DIN 55027 Nº.6 CAMLOCK Nº.6	ASA B 5,9 Nº.8	DIN 55027 Nº.6 CAMLOCK Nº.6	DIN 55027 Nº.8 CAMLOCK Nº.8	ASA B 5,9 Nº.11
4	4	4	4	4	5	5	5
30 - 2000	30 - 2000	40 - 2200	40 - 2200	25 - 1200	30 - 1500	30 - 1500	16 - 750
18	18	12	12	12	12	12	12

42	42	52	52	80	80
DIN 55027 Nº.5 CAMLOCK Nº.5	DIN 55027 Nº.5 CAMLOCK Nº.5	DIN 55027 Nº.6 CAMLOCK Nº.6	DIN 55027 Nº.6 CAMLOCK Nº.6	DIN 55027 Nº.8 CAMLOCK Nº.8	DIN 55027 Nº.8 CAMLOCK Nº.8
4	4	4	4	5	5
I- 0-310 II- 310-890 III- 890-2500	I- 0-310 II- 310-890 III- 890-2500	I- 0-310 II- 310-840 III- 840-2300	I- 0-310 II- 310-840 III- 840-2300	I- 0-240 II- 240-630 III- 630-1700	I- 0-240 II- 240-630 III- 630-1700
variable	variable	variable	variable	variable	variable

0,05 - 0,75	0,05 - 0,75	0,05 - 0,75	0,05 - 0,75	0,05 - 0,75	0,05 - 1,5	0,05 - 1,5	0,05 - 1,5
0,025 - 0,375	0,025 - 0,375	0,025 - 0,375	0,025 - 0,375	0,025 - 0,375	0,025 - 0,75	0,025 - 0,75	0,025 - 0,75
0,5 - 7,5	0,5 - 7,5	0,5 - 7,5	0,5 - 7,5	0,5 - 7,5	0,5 - 15	0,5 - 15	0,5 - 15
60 - 4	60 - 4	60 - 4	60 - 4	60 - 4	60 - 2	60 - 2	60 - 2
0,25 - 3,75	0,25 - 3,75	0,25 - 3,75	0,25 - 3,75	0,25 - 3,75	0,25 - 7,5	0,25 - 7,5	0,25 - 7,5
120 - 8	120 - 8	120 - 8	120 - 8	120 - 8	120 - 4	120 - 4	120 - 4
6	6	6	6	6	6	6	6

0,05 - 0,75	0,05 - 0,75	0,05 - 0,75	0,05 - 0,75	0,05 - 1,5	0,05 - 1,5
0,025 - 0,375	0,025 - 0,375	0,025 - 0,375	0,025 - 0,375	0,025 - 0,75	0,025 - 0,75
0,5 - 7,5	0,5 - 7,5	0,5 - 7,5	0,5 - 7,5	0,5 - 15	0,5 - 15
60 - 4	60 - 4	60 - 4	60 - 4	60 - 2	60 - 2
0,25 - 3,75	0,25 - 3,75	0,25 - 3,75	0,25 - 3,75	0,25 - 7,5	0,25 - 7,5
120 - 8	120 - 8	120 - 8	120 - 8	120 - 4	120 - 4
6	6	6	6	6	6

245	245	300	300	300	355	365	365
120	120	130	130	130	165	165	165
16 x 16	20 x 20	25 x 25	25 x 25	25 x 25	25 x 25	25 x 25	25 x 25

245	245	300	300	355	365
120	120	130	130	165	165
16 x 16	20 x 20	25 x 25	25 x 25	25 x 25	25 x 25

48	48	58	58	58	72	72	72
140	140	155	155	155	180	180	180
3	3	4	4	4	5	5	5

48	48	58	58	72	72
140	140	155	155	180	180
3	3	4	4	5	5

2,2/3,4	2,2/3,4	4	4	4	5,5	5,5	7,5
0,06	0,06	0,06	0,06	0,06	0,06	0,06	0,06

4	4	5,5	5,5	7,5	7,5
0,06	0,06	0,06	0,06	0,06	0,06

10 - 115	10 - 115	10 - 130	10 - 130	20 - 220	10 - 185	10 - 185	25 - 250
10 - 70	10 - 70	10 - 80	10 - 80	20 - 135	15 - 125	15 - 125	20 - 160

10 - 115	10 - 115	10 - 130	10 - 130	10 - 185	10 - 185
10 - 70	10 - 70	10 - 80	10 - 80	15 - 125	15 - 125

standard accessories



- Electrical contactor.
- Spindle brake.
- Reducing bush.
- 2 fixed centers.
- Thread dial indicator.
- Square toolpost and key.
- Chip collecting tray.
- Instruction manual.
- Centralized lubrication of carriage and cross slide.
- Coolant equipment.



optional accessories

- Universal 3-jaw chuck.
- Face plate.
- Driving plate.
- Independent 4-jaw chuck.
- Face plate.
- Universal 4-jaw chuck.
- Fixed steady rest.
- Follow steady rest.
- Steady rest arms with rollers.

- Rear toolpost.
- Quick-change toolpost with 4 tool holders.
- Tool holders for quick-change toolpost.
- Morse taper live center.
- 4 position stop for carriage.
- 4 position stop for cross slide.
- Micrometer carriage stop.
- Telescopic taper turning attachment.
- Digital readout.

- Soft starter.
- Drillchuck.
- Collet chuck.
- Collets.
- Jaws for universal chucks.
- Set of spanners and keys.
- Leveling plates.
- Cast iron pedestals.

- Rear splash guard.
- Top slide guard.
- Chuckguard.
- Emergency stop.
- Main switch.
- Low voltage lighting.

Including in version GE.
Optional in standard version.

Further information about accessories in our website www.metosa-pinacho.com

models S-90VS

- Option: constant surface speed, including digital readout in X & Z axis for models VS.

