



SPI “AI”

INDUSTRY 4.0



in compliance
with EN 453
regulation rev.
2015

Spiral mixer with fixed bowl

The new SPI “AI” is the outcome of Esmach culture and know-how in quality processing of all kinds of dough kneading for bakeries, pizzerias and confectionery industries as well as of our meticulous research in product technology. Structural strength, extraordinary versatility of use, reliability, high standard of safety features, accuracy in the manufacturing process, ergonomics and attractive design highlight our proven success in dough making and project our tradition onto the future.

Esmach has focused the attention not only on researching and monitoring successfully all aspects regarding the process and dough rising, the latest products, the rheological properties of the mixtures, their timing and their final temperature, but also on versatility of use with optimum results while processing both minimum and maximum capacity of dough to be achieved.

SPI “AI”, available in 10 models with a dough capacity ranging from 30 kg to 300 kg, is our cutting-edge range of spiral mixers, with a simple and modern line. It presents an elegant touch panel without roughness, easy to clean. Thanks to the multiple possibilities of connection, WiFi and LAN, no more problems with technical assistance and online diagnostics. Everything becomes easy, intuitive and smart.

PLUS and STANDARD Features

- Steel frame properly enlarged and strengthened to confer firm stability to the machine structure even during the most demanding processes and to transfer entirely the mechanical energy, developed by the tool, to dough kneading,
- Outer paneling painted with an anticorrosion double epoxy powder coating and suitable for food contact.
- Stability and levelling on the floor assured by three casters with non-slip feet useful for handling the machine while cleaning it deeply in the area underneath the frame.
- Stainless steel bowl with stainless steel rim for extra support, dividing blade and spiral arm.
- Transparent bowl lid suitable for food contact in compliance with the strictest hygienic and safety regulations.
- Innovative flat cover top in scratch-resistant ABS, divided in two sections.
- Electric panel in an IP55 protection box against flour dust and water sprays.
- Direct power transmission for the rotation of both spiral arm and bowl generated by trapezoidal drive belts on multi-groove pulleys.
- Independent motors for bowl and spiral arm in the models from 60 to 300 kg. Available in 2 motor option also for the 30 and 45 kg models.
- Two working speeds for bowl and spiral arm.
- Reversal of bowl rotation at first speed; (also available for the 30 and 45 kg models IF in 2 motor option)
- Functional and innovative control console with rotation in both left and right directions and with an operative angle of 120°, allowing ideal ergonomic comfort also in narrow working rooms.
- “AI” touch control panel of the latest generation with a 7” color display, visible from afar and with an excellent viewing angle from every position. The machine has a state-of-the-art processor that can store up to 99 recipes using 20 processes and 30 ingredients.
- Eight selectable languages
- Power supply: 400V/3/50 Hz (different voltage upon request)
- Dough temperature detector with infrared sensor, visualization on display and stop option of the working process (except for 30 and 45 models, but available for them as optional)
- LED light inside the tank
- WI-FI and LAN connection
- Optimum balance between bowl rotation and spiral arm enabling a right kneading flow and a soft and gentle dough kneading.
- Perfectly shaped spiral arm rotation inside the bowl and right accurate proportions among bowl, spiral arm and dividing blade well matched together to get homogeneous, soft and distinguished dough also while using small dough amounts.
- Accurate bowl and spiral arm speed for an excellent dough kneading and its processing through stretching and lengthening, allowing continuous and constant dough kneading with a significant reduction of the processing time and limited heating up of the dough.



"AI" touch control panel



Regular mixtures even with minimum quantities of dough



Accessories - Options

The machine can be supplied with the following accessories:

- Small trolley suitable for spiral mixer handling



- Lid + grid: stainless steel grid in addition to transparent lid
- Water dispenser directly on the bowl with liter counter, manual temperature mixer or automatic with mini motor, fine dosing of water during the mixing process and fast filling of water



SPI "AI" Spiral mixer with fixed bowl

Optional PLUS EDITION SPI 60-80-100

AUTOMATIC WATER DISPENSER

Evolution of the semi-automatic version: allows you to dispense water at the desired temperature without the need for mechanical interventions (such as adjusting the mixer). The machine self-regulates based on the set parameters, temperature without the need for mechanical interventions (such as adjusting the mixer). The machine self-regulates based on the set parameters.

SECONDARY OUTLET FOR WATER DISPENSER

Added a function that allows the machine to be used, when not in use, as a water dispenser for other laboratory equipment.

LOAD CELLS

The load cells allow you to measure the ingredients placed in the bowl and are integrated into the recipe logic.

ROOM TEMPERATURE PROBE

When combined with the water dispenser, it ensures consistently optimal dispensing thanks to an algorithm that constantly monitors the temperature of the flour, the environment, and the water, also taking into account the heat generated during kneading.

DOUGH TEMPERATURE PROBE

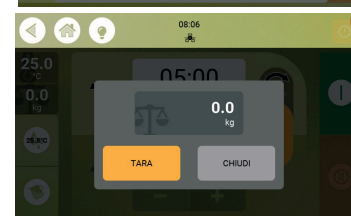
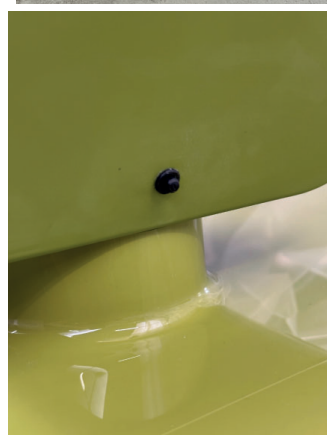
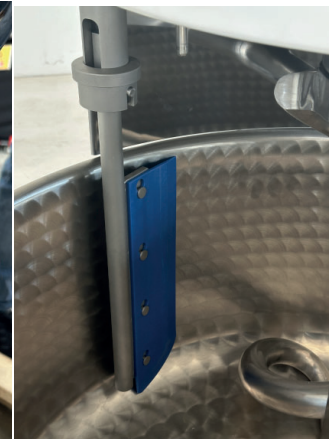
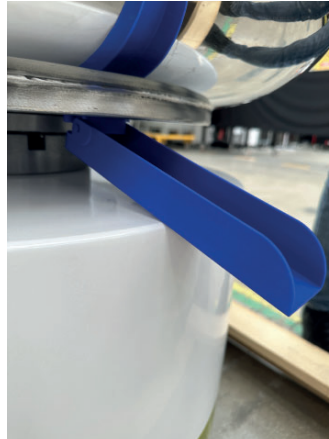
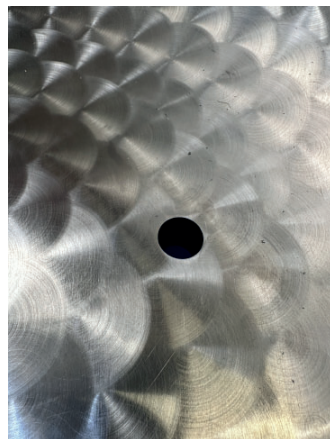
Pasta temperature detector with infrared sensor display and machine shutdown possibility.

SCRAPER

Improves processing efficiency by keeping the bowl walls clean and promoting better dough mixing. It optimizes mixer performance, especially with highly hydrated doughs. It directs the dough toward the center of the bowl, reducing processing times (it is removable).

TANK PLUG WITH MAGNETIC CHUTE

The drain plug at the bottom of the tub allows water to drain during cleaning. An optional magnetic chute is available to direct the flow to a floor drain or container.



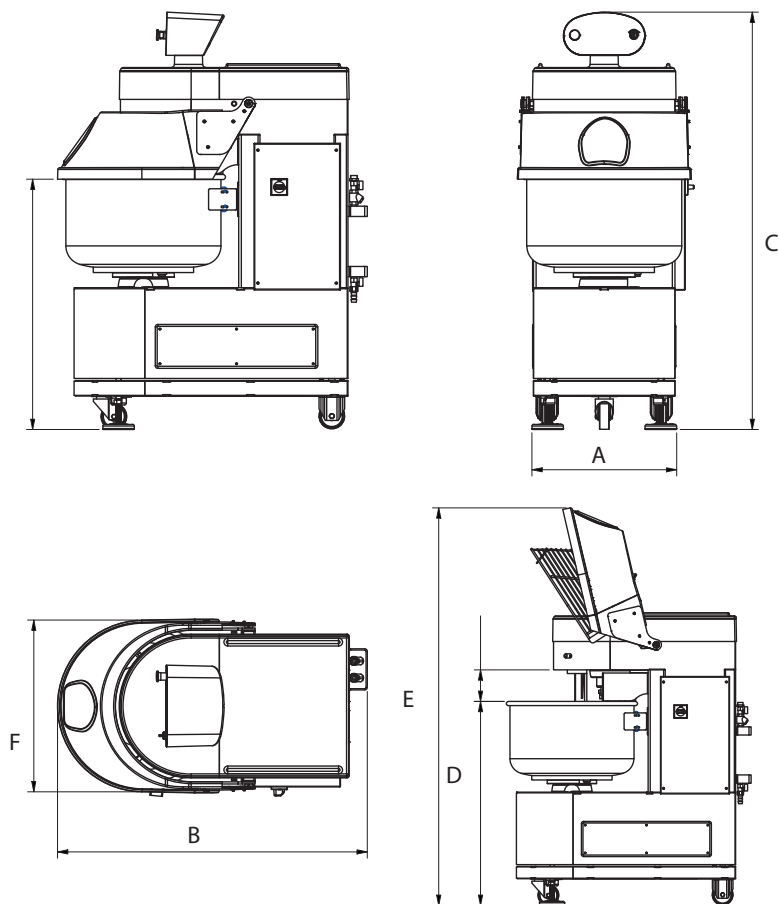
few touch panel details



Impastatrice a spirale a vasca fissa SPI "AI"

IMPASTATRICE A SPIRALE SPI "AI" CORE

SPI "AI" CORE SPIRAL MIXER



DATI TECNICI / TECHNICAL DATA		SPI 60 "AI"	SPI 80 "AI"	SPI 100 "AI"	SPI 130 "AI"	SPI 160 "AI"	SPI 200 "AI"
A	mm	563	586	586	735	735	735
B	mm	1204	1291	1291	1413	1495	1495
C	mm	1622	1661	1661	1610	1610	1610
D	mm	911.5	985.5	1035.5	962	983	1043
E	mm	1932	1868	1893	1964	2045	2075
F	mm	668	770	770	947	1048	1048
Capacità impasto minima/ massima (a) / Min - max dough capacity (a)	kg	3/60	3,5/80	4/100	4/130	4,5/160	4,5/200
Capacità vasca / Bowl capacity	L	95	120	145	200	250	290
Potenza installata / Installed power	kW	2,57	4,55	4,55	6,8	8,4	8,4
Alimentazione/power supply	V	400 V 50 Hz 3Ph + Gr					



SPI "AI" Spiral mixer with fixed bowl

MODELS

SPI 30 "AI"	Spiral mixer with approx. kg 30 dough capacity (approx. kg 18-20 flour capacity). Bowl diameter: 530 mm. "AI" touch control panel.
SPI 45 "AI"	Spiral mixer with approx. kg 45 dough capacity (approx. kg 30 flour capacity). Bowl diameter: 530 mm. "AI" touch control panel.
SPI 60 "AI"	Spiral mixer with approx. kg 60 dough capacity (approx. kg 40 flour capacity). Bowl diameter: 550 mm. "AI" touch control panel.
SPI 80 "AI"	Spiral mixer with approx. kg 80 dough capacity (approx. kg 50-54 flour capacity). Bowl diameter: 700 mm. "AI" touch control panel.
SPI 100 "AI"	Spiral mixer with approx. kg 100 dough capacity (approx. kg 62-65 flour capacity). Bowl diameter: 700 mm. "AI" touch control panel.
SPI 130 "AI"	Spiral mixer with approx. kg 130 dough capacity (approx. kg 75-80 flour capacity). Bowl diameter: 800 mm. "AI" touch control panel.
SPI 160 "AI"	Spiral mixer with approx. kg 160 dough capacity (approx. kg 100 flour capacity). Bowl diameter: 900 mm. "AI" touch control panel.
SPI 200 "AI"	Spiral mixer with approx. kg 200 dough capacity (approx. kg 125 flour capacity). Bowl diameter: 900 mm. "AI" touch control panel.
SPI 250 "AI"	Spiral mixer with approx. kg 250 dough capacity (approx. kg 150 flour capacity). Bowl diameter: 1045 mm. "AI" touch control panel.
SPI 300 "AI"	Spiral mixer with approx. kg. 300 dough capacity (approx. kg. 200 flour capacity). Bowl diameter: 1045 mm. "AI" touch control panel.

ACCESSORIES

	Small trolley suitable for spiral mixer handling
	Lid + grid: stainless steel grid in addition to transparent lid
	Water dispenser directly on the bowl with liter counter, manual temperature mixer or automatic with mini motor, fine dosing of water during the mixing process and fast filling of water





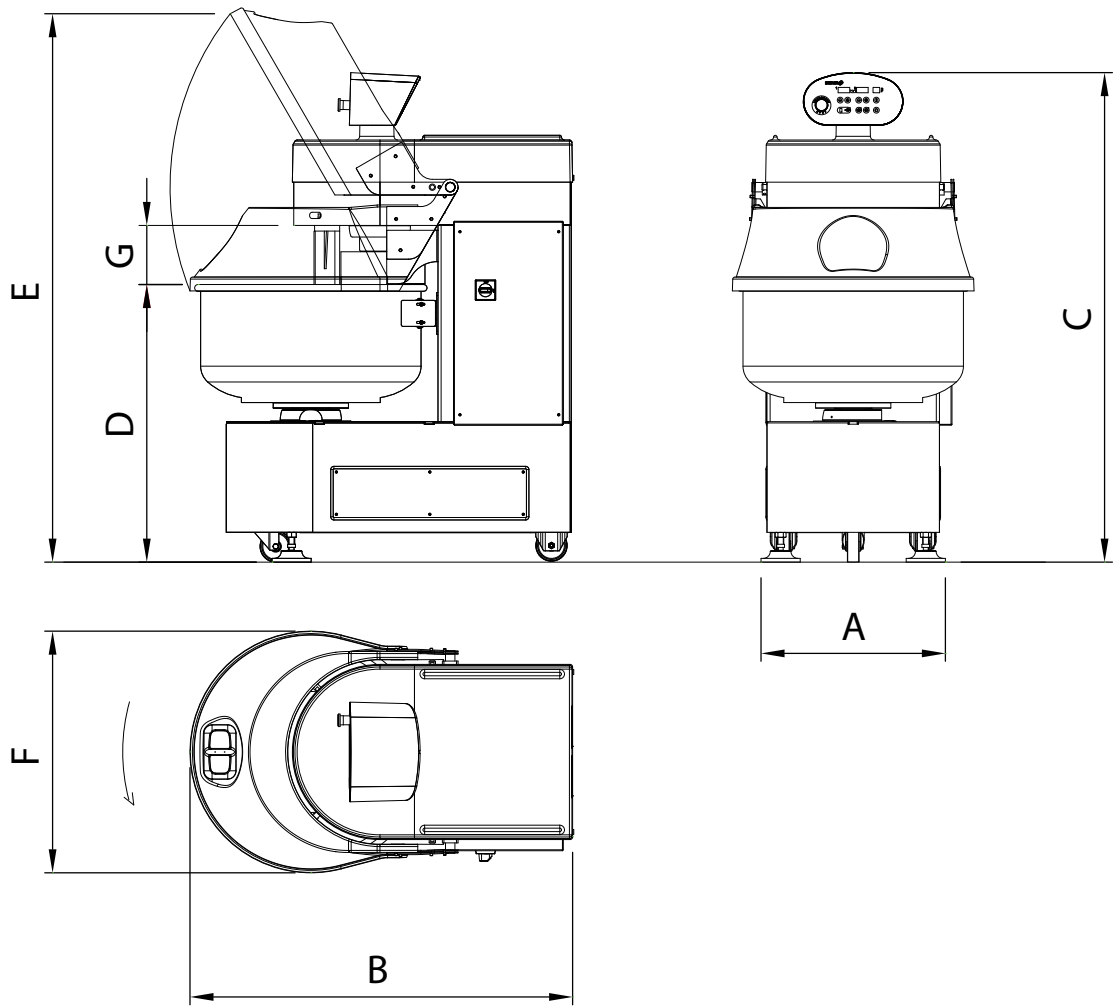
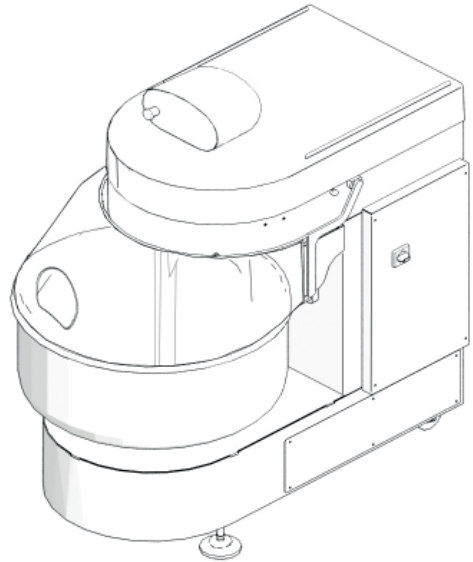
DATI TECNICI / TECHNICAL DATA		SPI 30 "AI"	SPI 45 "AI"	SPI 60 "AI"	SPI 80 "AI"	SPI 100 "AI"	SPI 130 "AI"	SPI 160 "AI"	SPI 200 "AI"	SPI 250 "AI"	SPI 300 "AI"
A	mm	477	477	565	588	588	735	735	735	735	735
B	mm	978	978	1150	1207	1207	1413	1495	1495	1640	1640
C	mm	1378	1378	1530	1563	1563	1610	1610	1610	1719	1719
D	mm	741	791	911	886	936	862	883	943	932	1009
E	mm	1879	1864	1705	1751	1776	1864	1945	1975	2144	2182
F	mm	562	562	675	741	741	847	948	948	1069	1069
G	mm	181	131	153	189	139	222	202	142	219	142
Massa macchina / Machine mass	kg	218	222	360	417	417	624	680	705	843	850
Massa con solo pallet / Mass with pallet only	kg	226	230	380	452	445	640	716	741	893	900
Massa con gabbia / Mass with crate	kg	256	260	415	487	480	690	800	825	968	975
Massa con cassa / Mass with case	kg	296	300	455	527	520	720	821	846	1038	1045
Dimensioni esterne (macchina su pallet) / Overall dimensions (machine on pallet)	mm	1150x650x1550		1300x850x1600			1650x1050x1750			1800x1250x1930	
Dimensioni esterne Imballo (gabbia/cassa) / Overall packing dimensions (crate/case)	mm	1200x700x1550		1350x900x1700			1650x1050x1750			1900x1350x2030	
Capacità impasto minima/ massima (a) / Min - max dough capacity (a)	kg	2/30	2,5/45	3/60	3,5/80	4/100	4/130	4,5/160	4,5/200	10/250	10/300
Capacità vasca / Bowl capacity	L	50	60	95	120	145	200	250	290	360	430
1a/2a Velocità rot. spirale / 1 st /2 nd Spiral arm rotation speed	r.p.m.	103/206			107/214					97-194	
1a/2a Velocità rot. vasca / 1 st /2 nd Bowl rotation speed	r.p.m.	10/20		7,5/15	8/16		10,8/21,6			10/20	
Potenza installata / Installed power	kW	1,5	1,5	2,57	4,55	4,55	6,8	8,4	8,4	11,8	11,8
Potenza motore spirale / Spiral arm motor power	kW	1,5-0,75 (b)		2,2 - 1,5	4 - 3	4 - 3	5,9 - 4,05	7,5 - 4,8	7,5 - 4,8	10,3-7	10,3-7
Potenza motore vasca / Bowl motor power	kW	-	-	0,55-0,37	0,55-0,37	0,55-0,37	0,9-0,45	0,9-0,45	0,9-0,45	1,5-0,75	1,5-0,75
Tensione (c) / Voltage (c)	V	400									
Frequenza (c) / Frequency (c)	Hz	50									
Numero fasi (c) / No. of phases (c)	-	3 Ph + Gr									

(a) la capacità massima di impasto indicata si riferisce a un rapporto acqua/farina non inferiore al 60% (farina W = 250, P/L = 0,4); essa si riduce al diminuire del rapporto (quantità acqua)/(quantità farina) / (a) the max. mixture capacity shown refers to a water/flour ratio not less than 60% (flour W= 250, P/L= 0,4); it reduces in the ratio decrease:(water quantity)/(flour quantity)
 (b) motore unico per spirale e vasca / (b) same motor both for spiral arm and bowl
 (c) questi valori rappresentano il caso più frequente; ove tensione e/o frequenza e/o numero di fasi fossero diversi, farà comunque fede quanto riportato nella targa identificativa della macchina / (c) these values represent the most frequent case; should voltage and/or frequency and/or no. of phases be different, the specifications shown on the identification plate will be valid only.



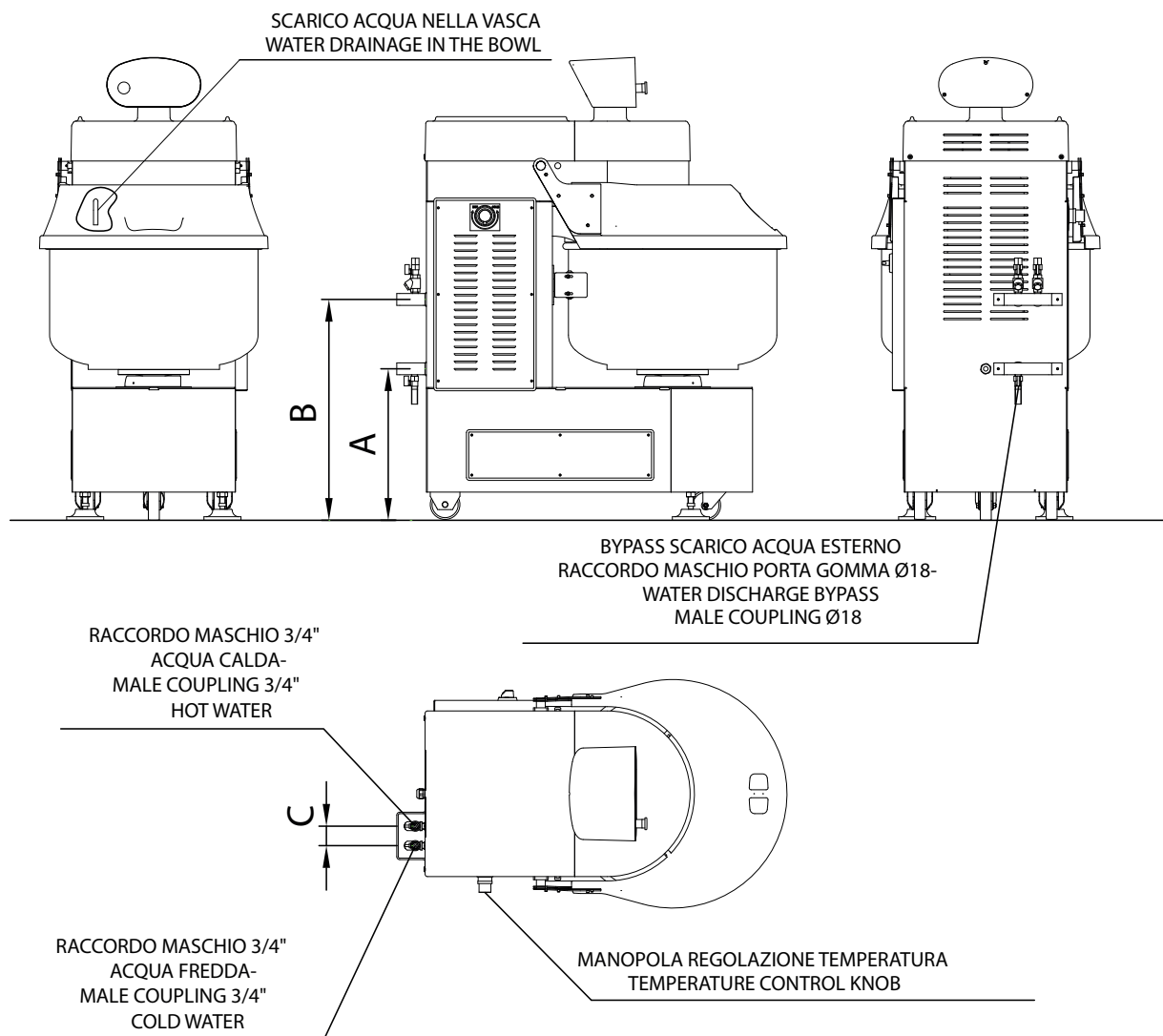
IMPASTATRICE A SPIRALE SPI “AI”

SPI “AI” SPIRAL MIXER





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SPI "AI" - ALLACCIAMENTO IDRAULICO (solo per macchine dotate di sistema di dosaggio acqua)**SPI "AI" - HYDRAULIC CONNECTION** (for machines equipped with water dispenser system only)

** l'impianto viene fornito con due tubi flessibili l=1.5 m f-f 3/4" per l'ingresso acqua e un tubo flessibile l=1.5 m diametro 18 per lo scarico bypass

** the water dispenser includes 2 hoses l=1.5 m f-f 3/4" for water input and a hose l=1.5 m diameter 18 for bypass discharge

DATI TECNICI SPI "AI"		30 / 45	60 / 80 / 100	130 / 160 / 200	250 / 300
SPI "AI" TECHNICAL FEATURES					
A	mm	510	511	313	430
B	mm	570	745	805	664
C	mm	66	66	66	66