

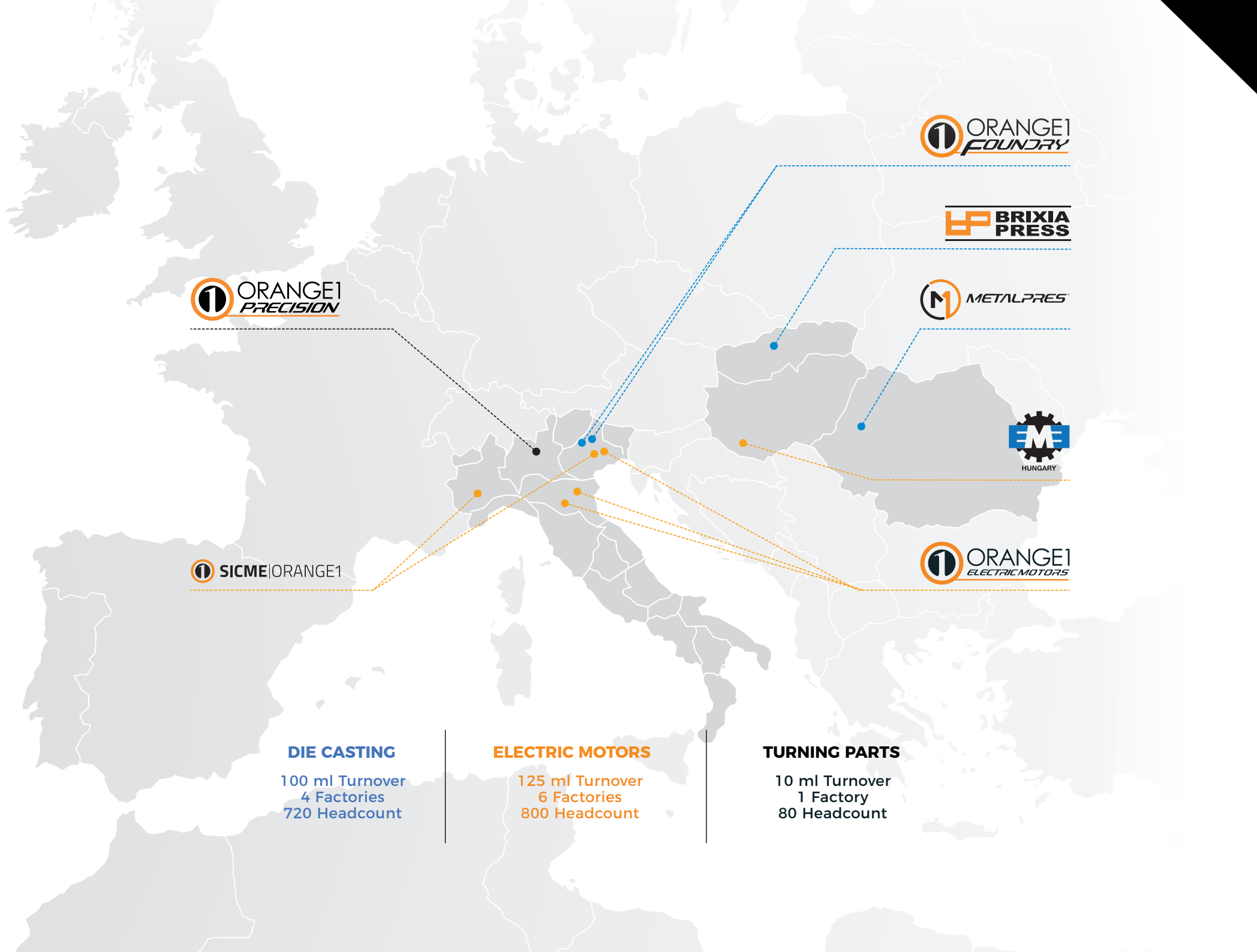


# Spa & Pools

**MOTOR INVERTER**  
Variable Frequency Drive  
integrated



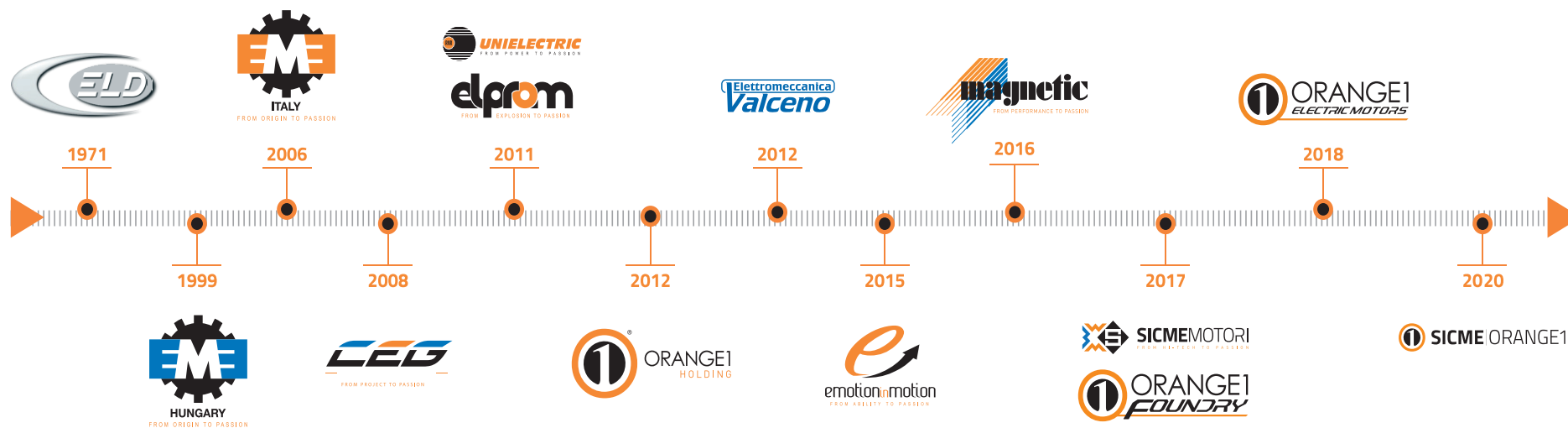
**ORANGE1**  
HOLDING





## A dynamic, strong and ambitious Group

Orange1 Holding is an international renown Group, one of the most important European manufacturers of single-phase and three-phase asynchronous electric motors. It has an annual capacity of more than 1 million motors and 5 million electric stators with an annual turnover of approx 235 million euro and more than 1600 workers in 15 production facilities. The group, established in 1971 by Leone Donazzan, chaired today by his son Armando Donazzan, is strongly focused on technological innovation, performance and customization to meet individual clients requirements.



€ 235.000.000 TURNOVER  
 11 COMPANIES  
 1600 HEADCOUNT





Elettromeccanica Leone Donazzan was established on 1971 in Bassano del Grappa. In 1983 the company turned into Eld Spa. In 1998 Armando Donazzan took over the running of the company; thanks to his determination and intuition he applied new financial and commercial policies which increased the level of reliability and visibility. In March 2006 the company changed its name to EME Spa and finally become Orange1 Electric Motors in 2018. The aim of O1EM is to manufacture custom made motors to meet clients and market expectations. The actual production covers a large range of AC and DC motors, as well as brushless motors and Variable Frequency Drives , to provide total solution. This know how in supplying products to the Textile markets makes O1EM reliable and skilled for the ideal motor settings to secure long terms performances in heavy environment conditions.



## ENERGY SAVING, RELIABILITY AND VERSATILITY

make different our solution.

Orange1 Electric Motors has matched the know how in pumps and drives to define as priority the development of drives integrated into the motors to be applied in Water Health Club. The first range has targeted the Spa and Pool applications. In taking care of human welfare we want our drives integrated into the motors to be able to save energies in properly driving the water pumps. Our R&D team developed an integrated solution to manage different speeds optimizing the current according to the specific needs.

## ORANGE1 APP FOR WI-FI REMOTE CONTROL





# Electrical Data



MODEL POOL DRIVE		IMPD 2015F#1	IMPD 2022F#1
Sizes	IP55	[105x152x75] mm	
POWER SUPPLY	Voltage Vin	230Vac ± 15% single-phase	
	Frequency	47 ÷ 63 Hz	
	EMC Compatibility	EN 61800-3	
	EMC Filte	r Class A – Category C3 / Optional Class A – Category C2	
	Protection	None	
OUTPUT	Current (A)	6,8	10
	Voltage	Trifase 0 ÷ Vin	
	Frequency	0 ÷ 200 Hz	
	KW	1,5	2,2
	HP	2	3
CONTROL	Control method	V/F with Space Vector Modulation	
	Frequency Resolution	0,1 Hz	
	Frequency Precision	± 0,1% ± 0,5 RPM	
	Response times	10 ms	
	Supporting	4...14KHz	
	Surcharge capacity	100 ÷ 150 % (200% for 1 second)	
	Surcharge time	10 ÷ 60 S	
OPERATION	Referring Speed	HW inputs Optional Remote keyboard / RS485 or TTL owner / Analog input / Potentiometer / Orange1 App with WI-FI	
	Acc / Dec Times	0,1 ÷ 59,000 s	
INPUT/OUTPUT	Input	3 NPN multifunction optoisolated digital inputs	
PROTECTION FUNCTION	Motor inverter block	Over current – Under voltage – Over voltage – Over charge Over temperature – Possible motor PTC – Short between phases	
	7th IGBT brake resistor	NO	
OPERATING CONDITIONS	Temperature of working	-5 °C / +45 °C	
	Temperature of storage	15 °C / +80 °C	
	Relative humidity	20 ÷ 85 % without condensation	
	Height	till 1000 m above sea level, no drift	
	Service	S2	
	Energy saving	Night circulation	
	Cooling system	Natural	

# Technical Data

## Standard Single Phase

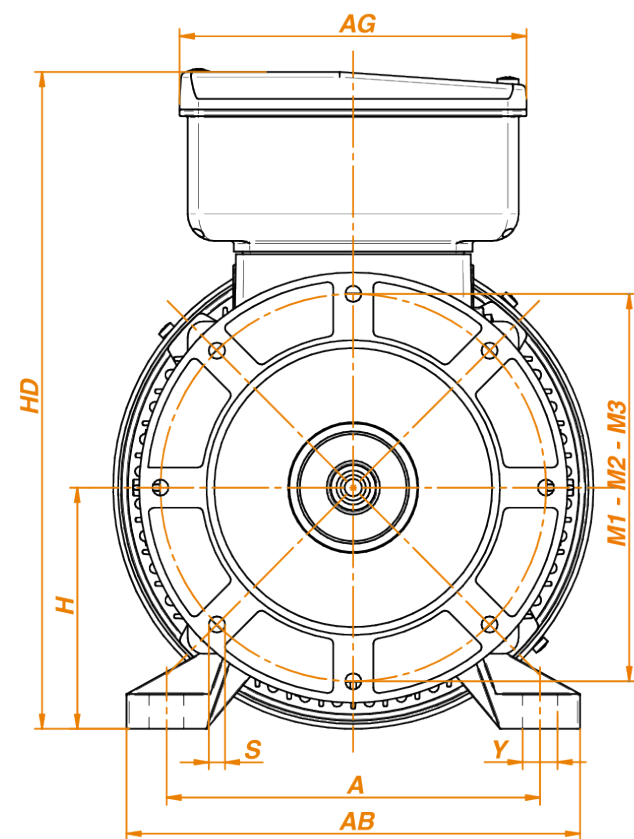
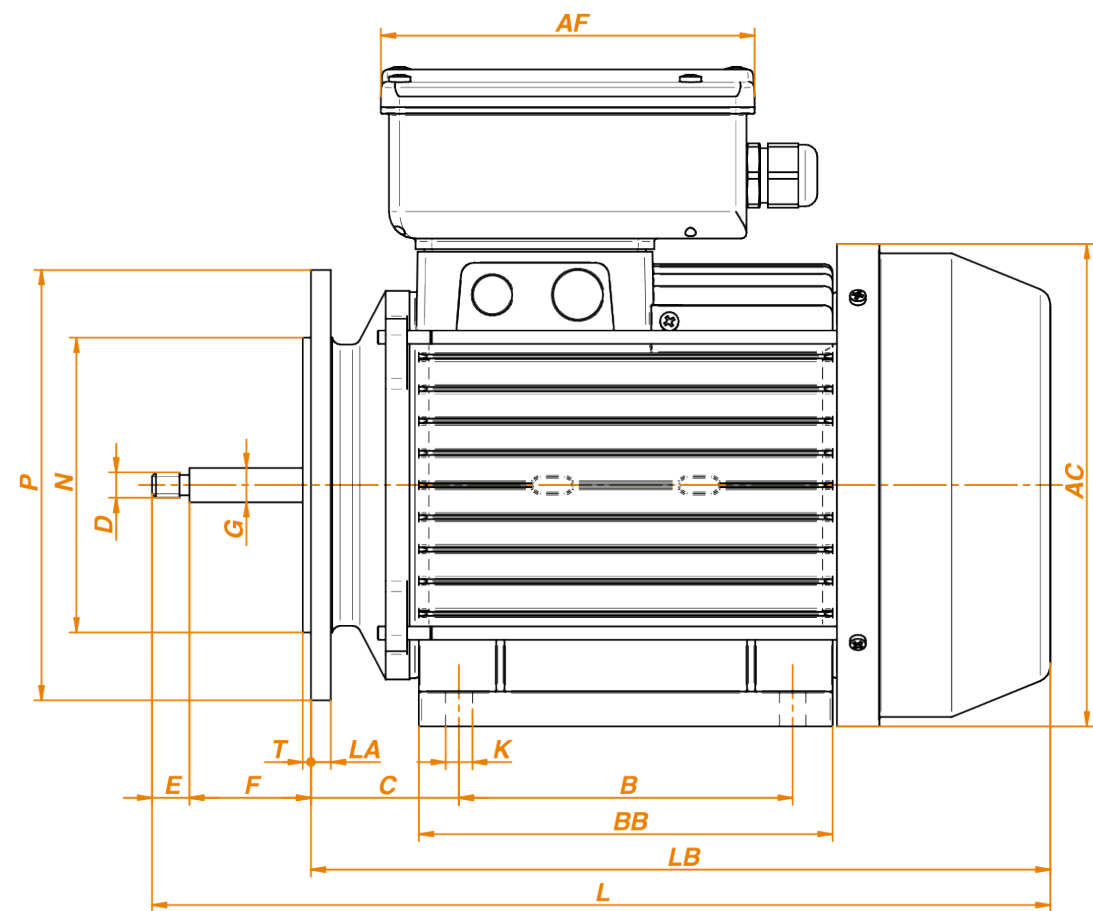
SIZE	Pn RATED OUTPUT		n		f	Speeds	In (230V)		Cosφ	
	kW	Hp	min-1		Hz	-	A		-	
mec 80	1.5	2.0	2860		50	1	9.0		0.92	
mec 80	1.5	2.0	2840	1420	50	2	9	1.8	0.95	0.96
mec 90	2.2	3.0	2840		50	1	12.8		0.99	
mec 90	1.85	2.5	2810	1420	50	2	12.7	2.2	0.97	0.97
mec 80	1.5	2.0	3450		60	1	9.0		0.95	
mec 80	1.5	2.0	3450	1720	60	2	9.6	2.5	0.94	0.85
mec 90	2.2	3.0	3450		60	1	13.1		0.95	
mec 90	2.2	3.0	3380	1725	60	2	12.7	2.7	0.98	0.95

## AC Motor with integrated drive

SIZE	Pn RATED OUTPUT		n		f	Speeds	In (230V)		Cosφ	
	kW	Hp	min-1		Hz	-	A		-	
mec 80	1.5	2.0	2860		50	1	9.0		0.9	
mec 90	2.2	3.0	2840		50	1	12.8	1.8	0.92	
mec 80	1.5	2.0	3450		60	1	9.0		0.9	
mec 90	2.2	3.0	3450		60	1	13.1	2.5	0.9	



# Technical Drawing



SIZE	A	AB	AC	AF	AG	B	BB	C	D	E	F	G	H	HD	K	L	LA	LB	M1	M2	M3	N	P	S	T	Y
P80	125	152	162	140	130	100	124	50	3/8W	14	46	12.7	80	231	9	300	8	241	144.5	148	147.5	110	160.5	6	3	13
P90L	140	170	180	140	130	125	155	55.5	3/8W	14	46	12.7	90	245	10	337	8	277	144.5	148	147.5	110	160.5	6	3	13



Note





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