CYPET
TECHNOLOGIES

PET PROCESSING MACHINES

for sustainable PET packaging

www.cypet.eu

PATENTED PET PROCESSING EQUIPMENT

INJECTION STRETCH BLOW MOULDING MACHINES

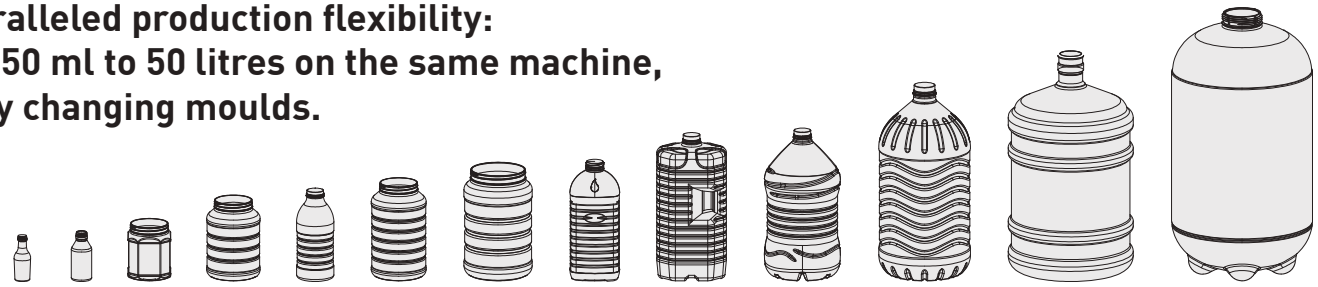
Patented process with many benefits and quick investment pay-back.

Servo-Hydraulic technology for the lowest energy consumption.

Long-Stroke Machine Models for higher productivity.

All-electric machines for clean room applications. WORLD FIRST!

Unparalleled production flexibility: From 50 ml to 50 litres on the same machine, just by changing moulds.



PET PREFORM PRODUCTION SYSTEMS

Flexible, cost-effective, PET preform systems of 12 - 32 cavities:

For medium outputs of PET preforms, CYPET offers turn-key production systems with optimized technical specifications for machine, moulds and auxiliary equipment, for fast cycle times and improved preform quality.

PET preform systems of 2 - 8 cavities, with intensive post-cooling, for large preforms:

CYPET offers a unique post cooling system for fast cycle times and improved quality for large preforms. After cooling in the mould, the preforms are additionally cooled for 1 extra cycle on the injection cores and for 4 extra cycles in cooling tubes.

PET - THE MOST SUSTAINABLE PLASTIC MATERIAL FOR INDUSTRIAL PACKAGING

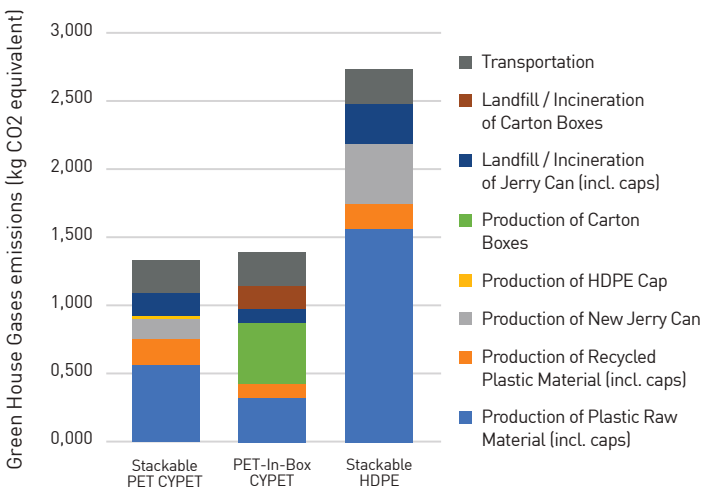
PET is the most sustainable plastic material for blow molded packaging.

Industrial PET packaging in particular (Canisters & Drums) has an extremely low carbon footprint. Life Cycle Analysis of a typical PET jerrycan shows that its carbon footprint is less than half that of an equivalent HDPE jerrycan, which is currently the mainstream solution in industrial packaging.

PET is the only plastic material that can be recycled over and over again, without losing its mechanical properties or food contact hygiene. Other plastics degrade each time they are recycled, so they cannot be re-used for the same application.

The transition from HDPE to PET packaging has begun and CYPET is at the forefront of this revolution, offering solutions that are ergonomic and with minimal impact on supply chain logistics. This transition is driven both by sustainability (half the greenhouse gas emissions) and by economics (30 – 40% weight savings).

kg CO2 equivalent Green House Gases emissions per Jerry Can (for 2 uses cycles before disposal)



FOR SUSTAINABLE PET PACKAGING

UNIQUE PET PACKAGING FOR NEW FIELDS OF APPLICATION

STACKABLE 5-25 Litres PET Packaging, for EDIBLE OILS and chemicals:

HALF THE CO_2 EMISSIONS vs HDPE

CYPET offers several alternative solutions for 5 -25 litre stackable PET containers with integrated handles for replacing outdated HDPE and tin can packages for edible oils, foodstuffs and chemicals.

WATER-DISPENSER BOTTLES with ergonomic, strong, integrated handles:

Only on CYPET machines

A revolutionary integrated rigid handle, makes the CYPET returnable 5 gallon bottles the easiest and most convenient to carry and place on the water dispensers.

World's first open-mouth PET DRUMS:

Only on CYPET machines

CYPET offers the only technology available for producing PET drums of up to 120 Litres capacity, to replace HDPE drums. Weighing 25-40% less than HDPE drums, PET drums offer tremendous savings in resources with substantial cost and sustainability benefits.

Patented PET BEER KEGS - the safest on the market:

Only on CYPET machines

CYPET's patented beer keg design, is the safest and most cost-effective on the market, as a result of a pressure relief valve on the neck of the keg and the integrated top chime and handles.

WIDE MOUTH JARS up to 25 Litres and 200 mm neck ∅:

CYPET's range of machines can produce wide mouth jars very efficiently. 120 mm neck jars of up to 8 litres can be produced with 8 cavities and 83 mm neck jars with 18 cavities.

RECTANGULAR NECK CONTAINERS up to 100 litres:

Only on CYPET machines

CYPET machines can produce large PET containers with rectangular mouth opening and shape, for household storage and agricultural crates, offering crystal transparency in such applications.

UNIQUE INTEGRATED HANDLES for PET bottles, jarrycans and drums:

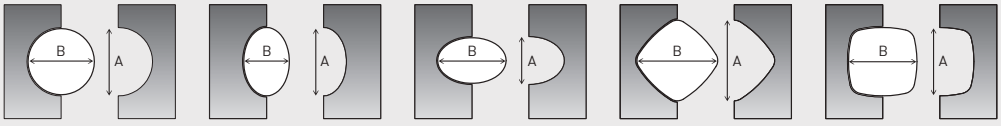
CYPET has developed an expertise in moulding PET containers having INTEGRATED HANDLES, with recyclability and cost benefits. Rigid or flexing handles, horizontal or vertical handles can be designed to be "fit for purpose", depending on the application. Suitable for containers from 1.5 to 60 litres.

CYPET MACHINES PRODUCTION CAPABILITIES

TOGGLE CLAMP MACHINE MODELS		NUMBER OF CAVITIES	MAXIMUM CONTAINER DIMENSIONS (mm)				MAX VOLUME (Litres)	MAX WEIGHT (Grams)
			NECK DIAMETER (T)	BODY DIAMETER*		TOTAL HEIGHT (H)		
				ALONG PARTING LINE (A)*	ACROSS PARTING LINE (B)*			
SERVO-HYDRAULIC	CYPET K 16	**1** (1x1)	150	280	260	330	15	330
		2 (1x2)	120	165	260	300	5	165
		3 (1x3)	83	110	200	300	2	110
		4 (1x4)	63	78	200	300	1.5	80
		4 (2x2)	38	160	78	250	1	80
		8 (2x4)	38	78		215	0.5	40
		12 (2x6)	25	52	100	200	0.2	28
	CYPET K 28	**1** (1x1)	180	400		550	50	900
		2 (1x2)	145	240	360	500	20	450
		3 (1x3)	110	155	300	380	6	300
		4 (1x4)	90	120	300	380	3	225
		4 (2x2)	63	220	140	360	5	225
		8 (2x4)	83	120		340	3	110
		12 (2x6)	63	80	120	280	1	75
		16 (2x8)	38	60	120	240	0.5	55
	CYPET K 38	**1** (1x1)	320	400		700	75	1400
		2 (1x2)	180	280	350	550	25	700
		3 (1x3)	120	180	300	450	8	460
		4 (1x4)	100	130	250	450	5	350
		4 (2x2)	55	270	190	400	10	350
		6 (2x3)	55	180		400	8	230
			120	180	140	260	6	230
		8 (2x4)	83	130	180	360	3	175
		12 (2x6)	63	88	130	360	1.5	115
		16 (2x8)	48	64	130	280	0.5	85
	CYPET K 53	**1** (1x1)	400	560	480	850	120	2900
		2 (1x2)	200	310	420	800	50	1450
		3 (1X3)	120	210	360	500	15	965
		4 (2x2)	120	260	210	460	20	725
		6 (2x3)	120	210		440	15	480
		8 (2x4)	120	160	210	400	8	360
		12 (2x6)	83	102	180	350	2	240
		16 (2x8)	53	74	200	350	0.75	180
		18 (3x6)	83	102		340	2	160
		24 (3x8)	53	74	100	320	0.5	120
WORLD FIRST! ALL-ELECTRIC	CYPET K 19E	**1** (1x1)	120	260		360	10	440
		2 (1x2)	120	210	260	380	10	220
		4 (1x4)	83	105	260	380	2	110
		8 (2x4)	38	105		300	1	55
		12 (2x6)	38	72	100	230	0.5	35
		16 (2x8)	38	52	100	180	0.25	27
	CYPET K 30E	**1** (1x1)	145	360		650	50	760
		2 (1x2)	145	260	360	550	20	380
		4 (1x4)	100	140	360	400	3	190
		4 (2x2)	48	190		420	10	190
		8 (2x4)	83	140	130	400	3	95
		12 (2x6)	38	92	130	320	1.5	60
		16 (2x8)	38	68	130	300	0.5	45
		24 (2x12)	28	44	130	250	0.25	30

LONG - STROKE MACHINE MODELS		NUMBER OF CAVITIES	MAXIMUM CONTAINER DIMENSIONS (mm)				MAX VOLUME (Litres)	MAX WEIGHT (Grams)
			NECK DIAMETER (T)	BODY DIAMETER*		TOTAL HEIGHT (H)		
				ALONG PARTING LINE (A)*	ACROSS PARTING LINE (B)*			
SERVO-HYDRAULIC	**CYPET K 6L**	**1** (1x1)	120	250	350	270	6	120
		2 (1x2)	90	120	165	270	2	60
		3 (1x3)	58	78	165	270	1	40
		8 (2x4)	25	58	68	150	0.25	15
		12 (2x6)	18	38	60	150	0.1	10
	CYPET K 12L	**1** (1x1)	150	280	260	380	15	330
		2 (1x2)	120	165	260	340	6	165
		3 (1x3)	83	110	200	340	2.5	110
		4 (1x4)	63	78	200	340	1	80
		4 (2x2)	63	165	140	250	1.5	80
		8 (2x4)	63	78	140	250	1	40
		12 (2x6)	25	52	100	200	0.2	28
		12 (3x4)	28	80	60	150	0.3	28
		18 (3x6)	25	52	60	150	0.15	18
		24 (3x8)	18	38	60	150	0.1	14
	CYPET K 25L	**1** (1x1)	180	400		600	50	900
		2 (1x2)	145	240	360	500	20	450
		3 (1x3)	110	155	300	380	6	300
		4 (1x4)	90	120	300	380	3	225
		4 (2x2)	83	220		340	8	225
		6 (2x3)	63	155		340	5	150
		8 (2x4)	83	120	180	340	3	110
		12 (2x6)	63	80	120	280	1	75
		16 (2x8)	38	60	120	240	0.5	55
		12 (3x4)	63	120	160	280	1	75
		18 (3x6)	48	72	140	280	0.75	50
		24 (3x8)	25	50	100	230	0.15	38
	CYPET K 35L & K 35XL	**1** (1x1)	320	400		700	75	1400 / 2900
		2 (1x2)	180	280	350	550	25	700 / 1450
		3 (1x3)	120	180	300	520	8	460 / 960
		4 (1x4)	100	130	250	520	5	350 / 725
		4 (2x2)	120	270		520	25	350 / 725
		6 (2x3)	55	180		430	8	230 / 480 L / XL
			120	180	220	260	8	
		8 (2x4)	83	130	180	360	3	175 / 360
		12 (2x6)	63	88	140	360	1.5	115 / 240
		16 (2x8)	48	64	120	280	0.5	85 / 180
		12 (3x4)	83	130	180	320	3	115 / 240
		18 (3x6)	63	88	130	360	1.5	75 / 160
		24 (3x8)	48	60	120	280	0.35	55 / 120

***BODY DIAMETER DIAGRAMS**
(A: Along Parting line;
B: Across Parting Line)



FOR A CYPET PROPOSAL, PLEASE PROVIDE THE FOLLOWING INFORMATION:

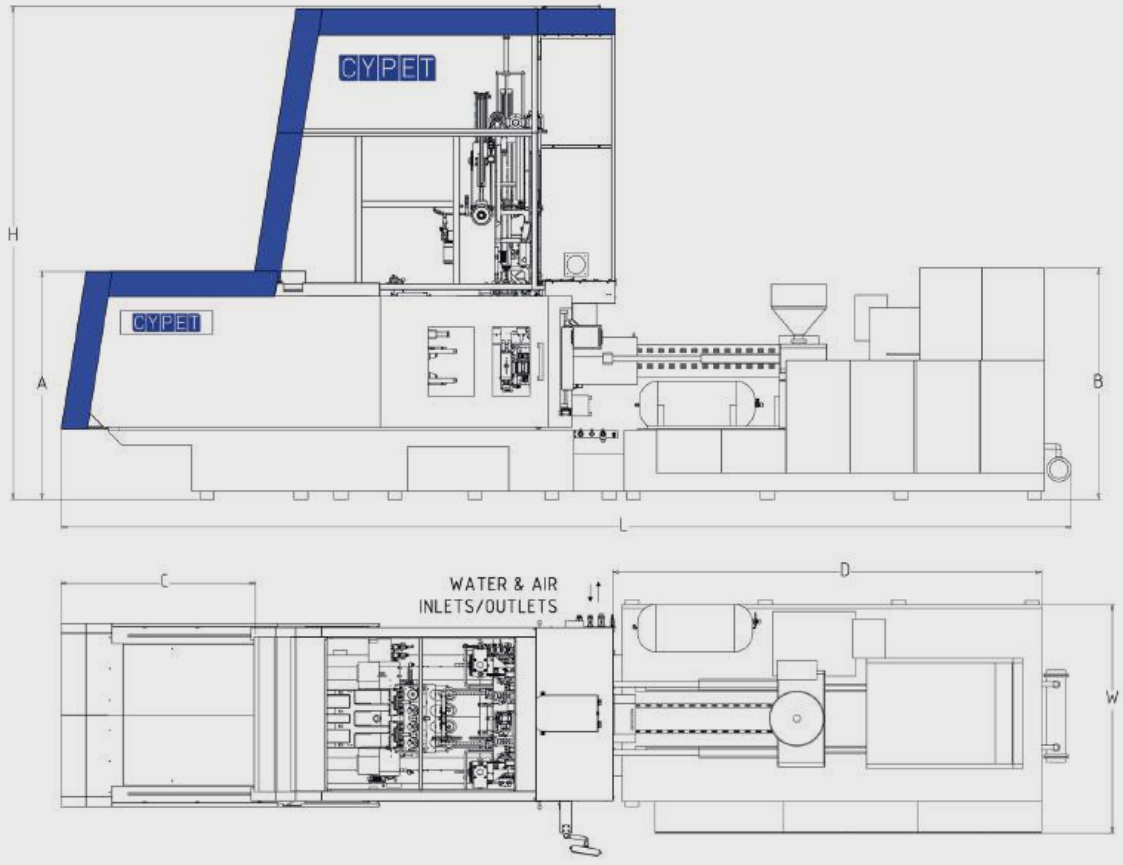
Working hours per year						
For EACH container to be produced:	Neck Diameter	Body Φ (A)	Body Φ (B)	Total Height	Target Weight	Pieces per year

FOR A CYPET MACHINE MODEL SELECTION GUIDE, PLEASE REFER TO OUR WEBSITE.

CYPET MACHINES TECHNICAL SPECIFICATIONS

CYPET MACHINE MODEL	K 16	K 28	K 38	K 53	K 6L	K 12L	K 25L	K 35L	K 35XL	K 19E	K 30E
MACHINE TYPE	SERVO - HYDRAULIC TOGGLE CLAMP				SERVO-HYDRAULIC LONG-STROKE CLAMP					ALL-ELECTRIC TOGGLE CLAMP	
Clamping Force (kN)	1600	2800	3800	5300	600	1250	2500	2500	2500	1900	3000
Tie-bar Clearance (horizontal)	470	630	730	840	350	450	630	730	730	570	720
Injection Screw Diameter (mm)	50	70	80	100	35	50	70	80	100	55	70
Maximum shot weight (gr. PET)	330	900	1400	2900	120	330	900	1400	2900	440	760
Installed Power - Motors (kW)	36	68	84	138	31	38	71	87	112	35	40
Installed Power - Heaters (kW)	14	34	42	59	10	16	36	45	62	26	32
Expected Actual Electricity Consumption - Depending on Product Produced (kW)	Min. 7 Max 17	Min. 12 Max 32	Min. 18 Max 36	Min. 20 Max 52	Min. 5 Max 10	Min. 8 Max 20	Min. 15 Max 40	Min. 22 Max 48	Min. 25 Max 65	Min. 6 Max 14	Min. 7 Max 25
Machine Weight (tons)	6.6	13.5	18.9	27.5	5.1	7.4	12.8	19.5	20.4	14.8	17.9
Footprint - L x W (m)	6.1 x 1.5	8.0 x 1.8	9.0 x 2.1	11.5 x 2.4	4.0 x 1.3	5.4 x 1.6	7.6 x 1.9	8.9 x 2.4	9.4 x 2.4	5.5 x 1.9	7.4 x 2.4
Height - H (m)	3.5	3.8	4.6	5.3	3.2	3.6	4.4	4.6	4.6	3.8	4.1
Other Dimensions - A (m)	1.8	2.1	2.3	2.4	1.6	1.8	2.0	2.2	2.2	2.0	2.2
Other Dimensions - B (m)	1.6	1.8	2.0	2.2	1.5	1.7	2.0	2.1	2.1	1.9	2.2
Other Dimensions - C (m)	1.3	1.7	2.1	2.2	0.8	1.2	1.8	2.1	2.1	1.0	1.3
Other Dimensions - D (m)	2.0	4.0	4.1	4.2	1.5	2.3	3.5	3.7	3.7	2.5	3.8

Machine Specifications can change without notice, due to machine improvements.



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