



Supercooling™. METHOD AND APPARATUS OF COOLING PRODUCT WITHIN A MOLD

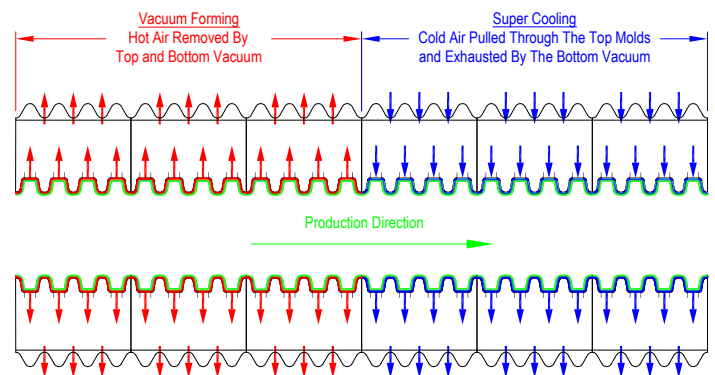
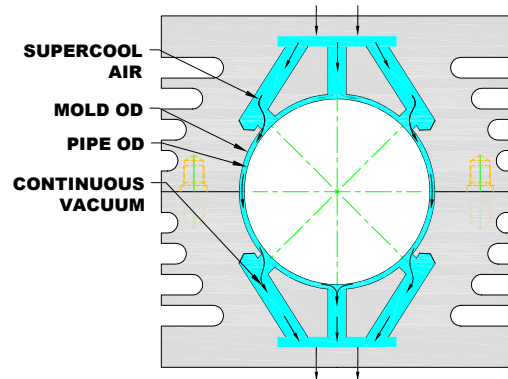
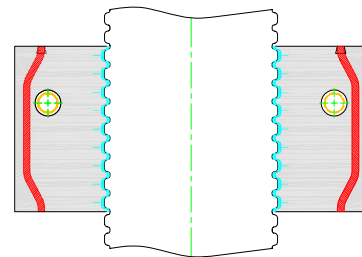
TECHNOLOGY SHOWCASE

In 1973 Corma introduced our first air-cooled, vertically constructed corrugator. Since then our corrugators have been air-cooled, making it a defining feature of our product line. It has evolved to include our patented Supercooling™ and Insulated Cooling Enclosure Systems, combining to make **Corma air-cooled corrugators** some of the **most energy efficient** and **productive** machines available. By comparison water cooled systems require more maintenance, are prone to water leaks, require more time to change mold blocks and create stress within the pipe.

When the plastic sets up and cools down, it shrinks and pulls away from the mold blocks, creating a surface gap between the pipe and the mold blocks which effectively acts as an insulator. The concept of our Supercooling™ Technology is to channel cold air into the gap between the pipe and mold blocks to maximize cooling efficiency. Cold air travels through the vacuum forming slits on one end of our mold blocks into the gap, then exiting out through the slits on the other end. This method efficiently cools both the pipe as well as the mold blocks.

Our Insulated Cooling Enclosure is a climate controlled system that maintains optimal operating temperature throughout the year. This means energy consumption is lower than conventional cooling systems that continuously blow air into the operating environment. Our Cooling Enclosure only requires the energy to cool the corrugator when needed, which prevents overcooling issues as well.

The combination of our Supercooling™ Technology and Insulated Cooling Enclosure **increases productivity from 25% up to 50%** with **less energy usage**, **low maintenance**, quick and easy moldblock changes and **consistently produces high quality pipes** that have **minimal inherent stress**. As an innovation leader, Corma is developing new technologies to further enhance the capabilities of your corrugator line. Please stay tuned for more information on how Corma can make a positive impact on your bottom line!



Technical Data

Corrugator Model Number* Vacuum Forming or Blow Molding	Pipe Range				Maximum Line Speed**		Maximum Output**	
	mm		inches					
	Min.I.D.	Max. O.D.	Min.I.D.	Max. O.D.	M/min	ft/min	Kg/hr	lbs/hr
054	3	40	0.12	1.6	50	165	40	88
130	6	110	0.25	4.5	55	180	360	790
430	6	160	0.25	6.3	35	115	450	990
630***	50	200	2.0	8.0	35	115	1040	2300
830***	50	300	2.0	12.0	35	115	1040	2300
840	50	300	2.0	12.0	25	80	840	1850
1030	50	365	2.0	14.4	30	100	750	1650
1230***	50	500	2.0	20.0	27	90	910	2000
1530***	50	700	2.0	27.5	26	85	1000	2200
2430	100	800	4.0	32.0	10	33	1300	2860
3630	100	1200	4.0	48.0	6	20	1300	2860
4830	200	1500	8.0	60.0	5	16.5	1400	3100
6030	450	1800	18.0	72.0	3	10	1500	3300
P 30/60	750	1800	30.0	72.0	1	3.3	1300	2860
P 30/120	750	3000	30.0	120.0	1	3.3	1500	3300
Vertical Corrugator Model Number								
V 053	1	20	0.04	0.8	50	165	30	66
V 130	4	110	0.16	4.5	50	165	215	475
Rib-Pipe Model Number								
R 2030	100	700	4.0	28.0	10	33	1100	2420
R 3030	100	1000	4.0	40.0	10	33	1300	2860

* Mold blocks are interchangeable within family (shaded) groupings. Also, mold blocks from smaller corrugators can be used on larger corrugators, using Corma's Unified Mold Block System and Mold Block Adapter Shoes.

** Line speeds and outputs are theoretical and depend on: pipe diameter; type of plastic; machine model; cooling options; mold track length; temperature and quantity of cooling water; profile configuration; extruder capacity, etc.

*** 630-12, 830-12, 1230-12 and 1530-12 line speed and output based on high speed corrugator configuration.

Head office

10 McCleary Court
Concord (Toronto)
Ontario, Canada
L4K 2Z3
T 905 669 9397
F 905 738 4744
E info@corma.com

International Sales and Service Offices

Corma Deutschland GmbH
Oststraße 54 40211
Düsseldorf
Germany
T 49 211 434688
F 49 211 9350150

Corma India
1123, Regus Grandeur,
Earth Arise Building,
S.G Road, Makarba
Ahmedabad - 380015
Gujarat, India
T 91 79 6134 4542
E bpawar@corma.com

Corma Latin America
Avenida los Eucaliptos 3-C,
Brisas de las Mercedes
Zaragoza, La Libertad
El Salvador, CA
T 503 2566 2297
F 503 7797 5667
E fsolano@corma.com

Corma Shanghai Co., Ltd.
759 Qiangye Road
Sheshan Industrial Zone
Songjiang District, Shanghai
201602, P.R. China
T 86 21 5779 4175 & 6
F 86 21 5779 4159
E ryang@corma.com

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