

10-mold Toilet High Pressure Casting Machine

10 模座便高压成型机

Date: 2025.05.19

BATHMATE[®]

One time flush, one time clean

Internal Communication : For internal & partner use only

广州圣穆斯进出口贸易有限公司

GUANGZHOU SMOOTH IMPORT AND EXPORT CO., LTD.

10-mold One Piece Toilet High Pressure Casting Machine

10 模连体座便高压成型机

Those 10-mold one piece toilet high pressure casting machines, or 10-mold one piece toilet HPCMs, have been spreading wider in the ceramic corporations in China and overseas, those HPCMs could be used to casted the toilet bowl efficiently

10 模连体座便高压成型机在国内外卫浴工厂已经得到普遍的应用，该设备能高效的完成连体座便坯体的高压注浆生产



1. PARAMETERS AND SPECIFICATIONS 技术规格参数

Items 项目	Parameters 规格	Remark 备注
1-1. Size 设备尺寸 (mm)	13000*4000*3500 (mm)	
1-2. Weight 设备重量 (t) :	20t	
1-3. Power 装机功率 (kW)	horizontal type 10.8 kW	
	vertical type 11 kW	
1-4. Max Mold Capacity 模型数量(sets)	10 sets	
1-5. Toilet Greenwares Casted per Time(每个注浆循环生产座便坯体数量)	10	
1-6. Casting Automatically 自动注浆 (Yes / No)	Yes	
1-7. De-molding Automatically 自动脱模 (Yes / No)	Yes	
1-8. Greenwares Removal Automatically 自动取坯 (Yes / No)	No	
1-9. Greenware Sticking Automatically 自动粘接 (Yes / No)	No	
1-10. Estimated Time For Each Casting Cycle 每个注浆循环时间 (minutes)	45~55	
1-11. Min Slip Pressure 低注压力 (MPa)	0.05~0.2MPa	
1-12. Max Slip Pressure 高注压力 (MPa)	0.65~0.8MPa	
1-13. Pneumatic Control Cabinet Included 含气控箱(Yes / No)	Yes	
1-14. Electrical Control Cabinet Included 含电控箱(Yes / No)	Yes	

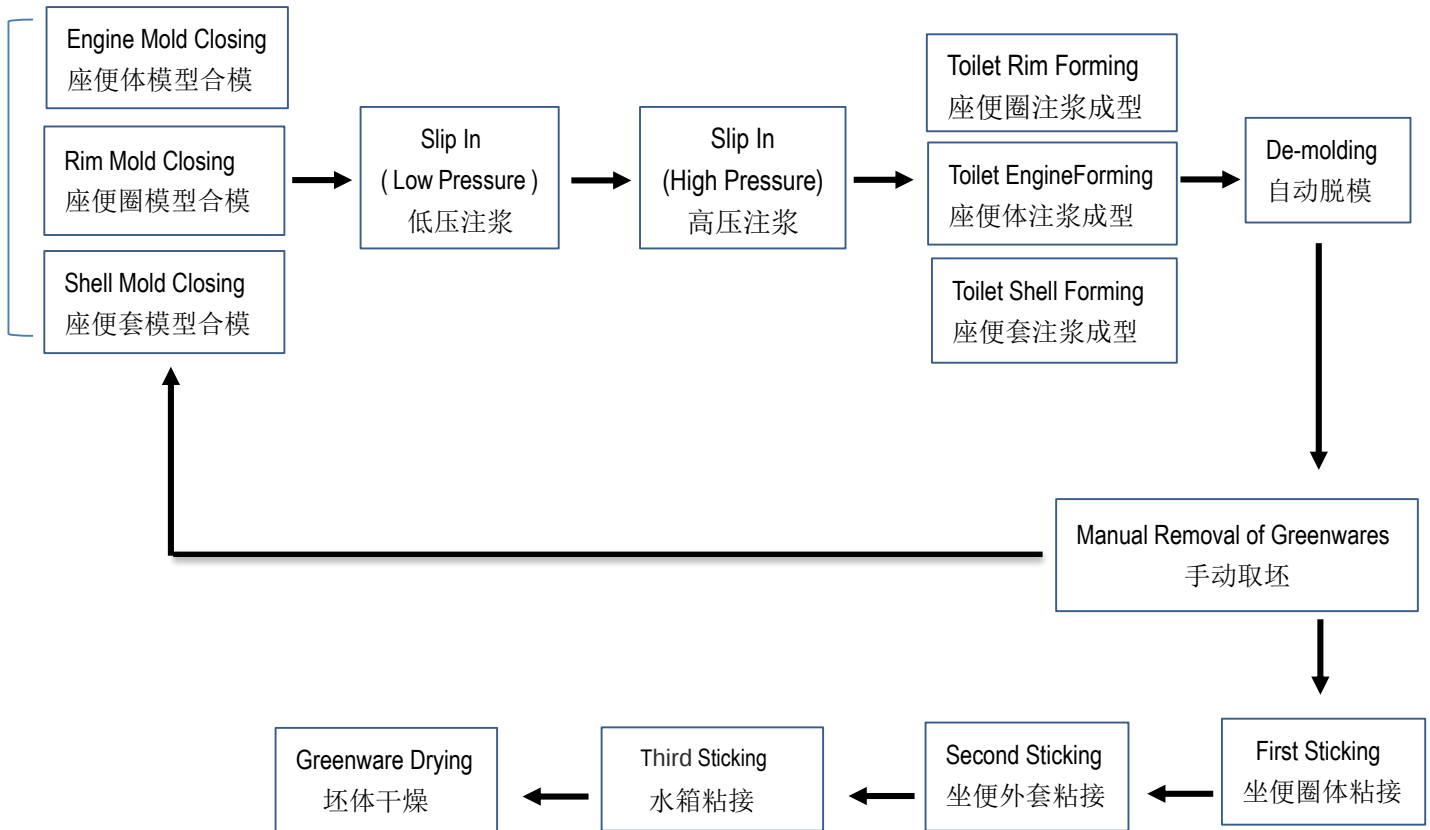
2. Parts and Components 主要组成部分

Parts部件	Pictures图片	Specifications规格	Quantity数量
HPCM Frame 主机		to hold the high pressure casting molds 用于安装高压模型	1
Hydraulic Unit 液压站		to drive the HPCM 驱动高压成型机完成各机械动作	1
Hydraulic Cylinder 油缸		to drive the HPCM 驱动高压成型机完成各机械动作	1
Piping System 管道系统		to transfer slip, water, compressed air to HPCM 泥浆, 水, 压缩空气输送	1
Pneumatic Control Cabinet 气控箱		to set the air pressure parameters 设置气控参数	1
Electrical Control Cabinet 电控箱		to set the casting parameters 设置各项注浆参数	1
Toilet Rim Molds 坐便圈模型		two cavities on each mold 双胞胎	5
Toilet Engine Molds 坐便体模型		two cavities on each mold 双胞胎	5
Toilet Shell Molds 坐便套模型		two cavities on each mold 双胞胎	5

3.Toilet Type Available on HPCM 适用产品

Toilet Style 座便类型	Pictures 图片	Remark 备注
Washdown one/two piece toilet 冲落式全包分体/连体座便器 Siphonic one/two piece toilet 虹吸式全包分体/连体座便器		Toilet will be separated into three parts, the engine, the rim and the shell 座便器分成座便体, 座便圈, 座便套 3 部分, The water tank is divided into the main body and the cover 水箱分成水箱主体, 水箱盖

4. HPCM WORKING PROGRESS 成型工艺



4-1. Mold Closing 模型合模:

Molds close automatically and prepare for slip in
模型自动合模

4-2. Slip-In(Ordinary Pressure) 低压注浆:

Fill slip into mold under a certain pressure(0.2-0.5Mpa) 低压注浆(0.2-0.5Mpa)

4-3. Slip-In(High Pressure)高压注浆 :

Fill slip into mold under a certain pressure(0.6-0.8Mpa) 高压注浆(0.6-0.8Mpa)

4-4. Forming 注浆成型 :

Greenwares form

座便体, 座便圈, 座便套坯体注浆成型

4-5. De-molding automatically 自动脱模:

Greenwares de molding automatically

座便体, 座便圈, 座便套坯体自动脱模

4-6. Manual Removal of Greenwares:

Remove Greenwares manually

座便体, 座便圈, 座便套坯体自动脱模

4-7. First Sticking 第一次粘接:

Sticking toilet engine to toilet rim manually

座便圈体手动粘接

4-8.Second Sticking 第二次粘接:

Sticking toilet shell to toilet engine/rim manually

座便套手动粘接

4-9. Third Sticking 第三次粘接:

Manual bonding of the water tank

水箱手动粘接

4-10. Greenware Drying 坯体干燥:

Greenwares will be delivered on convey line and store for drying

座便坯体干燥和输送

5. Auxiliary Device and Equipment 辅助设备

Products设备	Pictures图片	Specifications规格和参数	Remark备注
Slip Tank 泥浆罐		The slip tank is used to store and agitator the slurry, then supply the slip to the HPC Cell. 304SS pipe coiled inside the tank for hot water getting through to heat the slip inside the tank 泥浆罐用于泥浆的存储，搅拌和加温 - Slip Tank: 泥浆罐 - Tank Capacity 容积(m3) : 6 - Tank Made From 材质 : 304SS - Blunger 搅拌机: - Power of blunger 搅拌机功率 (kW) : 2.2 - Speed of blunger 搅拌机转速 (rpm) : 14 - Layers of Blade 桨叶层数 : 2 - Blades Made From 桨叶材质 : 304SS - Hot Water Pipe/electric heattwo ways 热水盘管 / 电热两种方式: - Water Pipe Made From 盘管材质 : 304SS - RTD(Resistance Temperature Detector) Included 包含温度探头 : Yes - Top Platform 泥浆罐: - Ladder Included 是否包含梯子 : Yes - Electrical Control Cabinet 电控箱: - Electrical Control Cabinet Included 是否包含电控箱 : Yes - Slip Serving Pipes Between Two Tanks Included 包含罐之间管道 : Yes	
vacuum pump 真空泵		An air pump that removes gas from sealed objects to create a vacuum 抽除密封器物中的气体从而造成真空的气泵	
Diaphragm pump 隔膜泵		The back-and-forth pulsation of a diaphragm plate changes the volume of the working chamber to draw in and discharge the liquid, thereby extending the service life of the mold 依靠一个隔膜片的来回鼓动改变工作室容积从而吸入和排出液体，延长模具使用寿命	2
Vertical water tank forming machine 立式水箱成型机		The mold for making the water tank blank 制作水箱坯体的模具	2
Water tank machine control box 水箱机控制箱		Control the vertical water tank machine to produce the product blank 控制立式水箱机制作产品坯体	2
Pneumatic slurry high-pressure pump 气动泥浆高压泵		Link the slurry bucket and the slurry inlet pipe to pump the slurry into the mold 链接泥浆桶和进浆管，将泥浆泵入模具	3
Water Filter System 水处理系统		to filter the city water for cleaning the molds on HPCM 过滤洗型用水	

6. ESTIMATED MANPOWER NEEDED 预计配套人员

No.	Job工种	Quantity数量	Job Description岗位描述	Remark备注
1	Casting Director 成型主任	1	1. to decide how many shift per day according the order quantity 确定生产计划 2. to decide which molds will be loaded or unloaded 确定模型上机计划	
1.1	HPCM Supervisor 机台长	1	1. to inspect the cast procedure and handle the malfunction of HPCM 检查注浆参数，处理设备运行故障 2. to inspect the loading and unloading of the pressure casting molds 检查上机和下机模型 3. to commission the molds which are loaded first time 新模型上机调试 4. to maintain the molds not in use 下机模型维护	
1.1.1	General Worker 普工	6	1. to clean the mold surface after each casting cycle 高压模型清洗 2. to inspect the all the casting process and report the malfunctions to supervisor or technician 检测注浆过程，上报模型和设备故障 3. to take the greenware setters back to the place where the setters were 坯体托板处理 4. to inspect all the greenwares and bring the unpassed greenwares to the slip blunger 成型后坯体处理，废坯处理 5. to clean, polish the surface of the greenwares, stick toilet rims to bolws, make holes... 坯体表面处理，坯体粘接，坯体打孔.... 7. to carry the passed greenwares onto the trolleys 合格品上坯车	

7. CUSTOMER'S SUPPLY 甲方提供

Customer's Supply甲方提供	Specifications说明	Remark备注
Electricity 供电	Supply 380V electricity and connect the cable to electrical control cabinet 提供380伏电，并将电缆接入乙方电控箱	
Compressed Air 供气	Supply compressed air at 6.5 bar and connect the air pipe to pneumatic control cabinet 提供不低于6.5公斤压力的压缩空气，并将压缩空气管道接入乙方气控箱	
City Water 供水	Supply city water at 2 bar and connect water pipe to the water filter system 提供不低于2公斤压力的自来水，并将自来水管接入乙方的水处理设备	
Hot Water	Supply hot water and connect the hot water pipe to the slip tank	

热水	提供热水，并将热水管道接入泥浆罐	
Slip 泥浆	Supply slip and the slip parameter should be suitable for high pressure casting method 提供适合高压成型工艺的泥浆	
Fans and Lights 风扇和灯	Supply fans and lights 提供成型车间用的照明灯和风扇	
Setters 坯体托板	Supply setters to transfer the toilet greenwares 提供座便流转用托板	

----THE END---