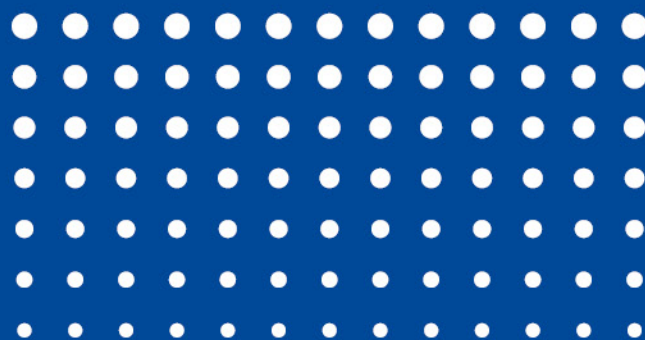




格瑞德
GRAD

您身边的中央空调定制专家
GRAD--the central air conditioning
customization expert around you



SMC模压系列产品

山东格瑞德集团
SHANDONG GRAD GROUP

低碳节能格瑞德，绿色健康新生活！
Low-carbon and Energy-saving
GRAD brings you Green and Healthy new life

集团简介

山东格瑞德集团有限公司位于德州市，集中央空调、复合材料、太阳能新能源产品的研发、设计、生产、销售、维护于一体，是中国制冷空调工业协会命名的“德州·中央空调城”的支柱企业，全国中央空调系统、复合材料的主导企业之一。

格瑞德集团致力于打造您身边的中央空调定制专家并提供综合能源解决方案，格瑞德集团拥有国家机电设备安装壹级资质，空气净化工程贰级资质，具备整体项目承揽能力。多次承担国家、省市级科技攻关项目，累计获专利技术成果110多项。300多位高级工程师量身设计中央空调解决方案。70万平米制造基地生产从主机到末端全系列产品，高效降膜离心式冷水机组国内领先，风机盘管空气处理机组填补国内空白，被列入国家火炬计划。格瑞德中央空调性能检测中心作为国家级检测中心，已通过CNAS认证，确保产品品质。格瑞德集团在北京、天津、沈阳、西安、武汉、南京等城市建有30多个办事处，销售、设计、安装、售后网络覆盖全国，产品出口40多个国家。

目前，格瑞德集团下设销售工程公司、主机公司、空调公司、复合材料公司、风电公司等五个分公司，已全面通过ISO9001国际质量管理体系、ISO14001国际环境管理体系认证和OHSAS18001职业健康安全管理体系认证。



跨越，是一种不断向上的方式；飞翔，是一种精神的标榜，代表一种坚持理想，不断前行的力量！格瑞德集团与全球同步创新，与您分享更多超凡科技……
GRAD would like to cooperate with friends home and abroad. Seeking existence from quality from management and development from renovation. Share developed technology with each other.

Brief Introduction Of The Group

Shandong GRAD Group is situated in Dezhou, Shandong. It is a large modern enterprise with the research & development, design, production, sales, installation and maintenance for central air conditioning products, composite material products and solar energy products. Is named the pillar enterprise by China Refrigeration and Air Conditioning Industry Association(CRAA) and is one of the leading enterprises in central air conditioning and composite material industry.

GRAD Group devotes itself to be a central air conditioning customization expert around you and provides you a comprehensive energy solution, GRAD possesses national mechanical and electrical equipment installation Class I qualification and purification equipment installation Class II qualification. GRAD has the overall project contacting ability. It has contracted national class and provincial class technology research projects for many times. The accumulated patents for technological achievements has passed 110 items. There are more than 300 senior engineers available for central air conditioning design and solution. The 700,000 m² manufacturing base includes the whole central air conditioning series: from chiller to terminal products. The high efficient falling film centrifugal chiller maintains domestic leading position and the large fan wall air handling unit has filled domestic blank and been listed in the national torch plan. GRAD has the national class air conditioning testing center and has passed CNAS certification. The products quality can be well guaranteed. At the mean while, GRAD has established more than 30 offices all over China, such as Beijing, Tianjin, Shenyang, Xi'an, Wuhan, Nanjing, etc. The sales, design, installation and after sales network has covered every corner of China. Moreover, its products have been exported to more than 40 countries.

Until now, GRAD Group has established five subsidiaries: Sales Engineering Company, Chiller Company, Air-conditioning Company, Composite Material Company and Wind Power Company. It has already passed ISO 9001 quality management system certification, ISO 14001 environmental management system certification and OHSAS 18001 occupational health safety management system certification.



企业资质

低碳节能格瑞德，绿色健康新生活！

Low-carbon and Energy-saving

GRAD brings you Green and Healthy new life

Enterprise Qualification



格瑞德集团始终以“以德为基，以人为本，顾客至上”的经营理念，建立以客户为导向的质量管理体系，注重全员参与和团队协作，用产品的高技术、高品质，服务的高效率、高质量持续赢得客户。

2008年获得国家机电设备安装一级资质，空气净化工程二级资质，成为行业内获得两项殊荣的企业之一。集团通过了ISO9001国际质量管理体系和产品质量双认证，ISO14001: 9006国际环境管理体系认证，OHSAS18001职业健康安全管理体系认证，是国内第一批获得制冷生产许可证的企业，公司生产的空调产品先后取得国家制冷设备生产许可证，3C中国国家强制性产品认证、CRAA中国制冷空调行业权威性产品性能认证，在国内同行业中率先获得了压力容器设计制造许可证，风机产品荣获中国节能产品认证；冷却塔产品荣获中国节水产品认证；SMC模压产品荣获山东省卫生厅卫生许可认证。



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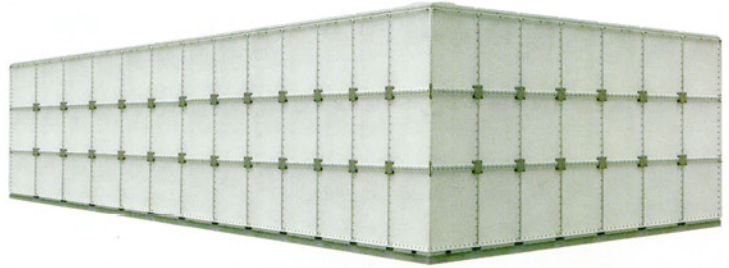
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SMC组合式水箱 SMC combined water tank

水箱特点

Water tank Characteristic

SMC组合式水箱是由SMC模压单板、密封材料、金属结构件及配管系统组合拼装而成（见图），可以根据用户需要组装0.125~1000³水箱。若原有水箱需要更换，不需要改造房屋，有门可入即可组装，适应性很强，给设计和施工带来极大的方便。



水箱密封采用专门研制的定型产品——密封带。该密封带无毒、耐水、耐氧化、密封性能好，使用期在30年以上。

SMC组合式水箱是目前国际上普遍采用的新型水箱。其独特性能彻底解决了混凝土水箱重量大、易渗透和钢板水箱易腐蚀及防腐涂层脱落对水质的污染等问题，具有无渗透、重量轻、水质好、外形美观、使用寿命长和安装方便等优点。

The SMC combined water tank is combined by the SMC mould pressing veneer, the airproof material, the metal structural element and tubing system (see the chart), we can according to the customers' requirements to assemble the water tank from 0.125 to 1000³. If your original tank needs renewing, it is not necessary to rebuild your house because it is very easy to assemble.

It has the good compatibility of designing and constructing

The water tank airproof adopts the special product which develops specially--- the seal belt. This seal belt is non-toxic, waterresistant, anti oxidation, good sealing property, the lifetime is more than 30 years.

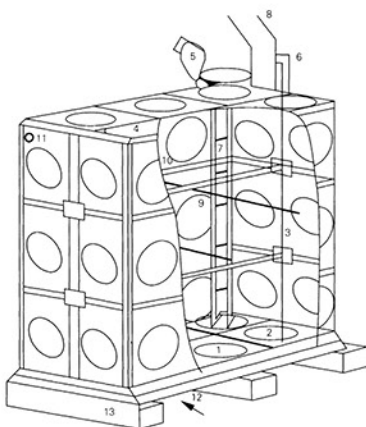
The SMC water tank produced by GRAD Group is a new kind of tank, which is widely used in the world, It has many advantages. Such as no water leakage, light weight, good water quality, attractive in appearance, long service life, easy to install and etc. Its special characteristic can solve (the concrete tank's big weight the characteristic of seeping easily and the steel plate water tank corrodes easily and the anticorrosion coating falls off easily and caused the water quality pollution and so on)

卫生安全性 Hygienic security characteristic

我公司生产的SMC组合式水箱符合国家卫生安全标准。经山东省卫生防疫站进行水质检测和毒理学检测，结果显示：提供的合成材料浸泡水质中未发现具有毒性和禁用化合物；以水质联机鉴定及挥发物等23项指标结果均符合GB/T17219-1998。毒理学试验中：SMC水箱浸泡的动物试验结果表明无毒性和蓄积毒性。

Our company's SMC combined water tank conforms to the national health security standard. Carries on the water quality examination and the toxicology examination. In the Shandong Province health and epidemic prevention station, the final result showed: The supplied composition material soaks in the water. The result shows there is no toxicity and the forbidden compound. By the stimulus on-line appraisal and the volatile material. The 23 targets results conform to GB/T17219-1998. In toxicology experiment: The SMC water tank soaks the animal test the result shows the characteristic of non-toxic and stores up the toxicity.

水箱结构 The structure of the water tank

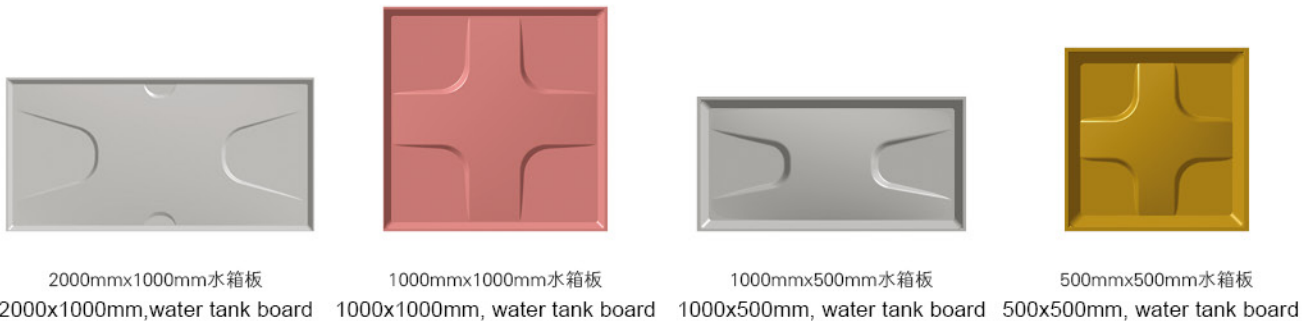


- | | |
|----------|----------------------------|
| 1、底板 | 1. base board |
| 2、排水板 | 2. draining water board |
| 3、壁板 | 3. wall board |
| 4、顶板 | 4. top board |
| 5、人孔板 | 5. cover board |
| 6、出气孔 | 6. air outlet |
| 7、内梯 | 7. ladder in the tank |
| 8、外梯 | 8. ladder out the tank |
| 9、拉筋 | 9. Enlace |
| 10、支柱 | 10. supporting |
| 11、接管法兰 | 11. connecting pipe flange |
| 12、钢制底座 | 12. steel base |
| 13、混凝土撑条 | 13. concrete supporter |

SMC模压单板规格、性能及执行标准

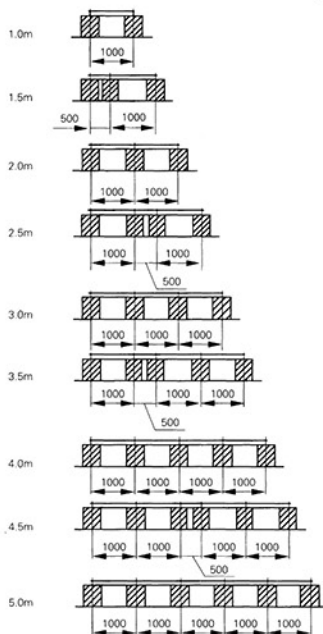
The specification characteristic and the executes standard of the SMC mould pressing veneer

SMC模压单板规格（若需其它规格可协商）：2000×1000mm、1000×1000mm、1000×500mm、500×500mm。厚度有5mm、6mm、8mm、10mm、12mm、14mm、16mm、18mm；其中5mm厚度的单板专作水箱盖板。SMC模压水箱执行国家建材行业标准JC658.1-2007，单板性能：拉伸强度>70MPa，弯曲强度>120MPa，弯曲模量≥10GPa，巴士硬度>60，吸水率<0.5%。SMC模压水箱执行国家建材行业标准JC658.1-2007，单板性能：拉伸强度>70MPa，弯曲强度>120MPa，弯曲模量≥10GPa，巴士硬度>60，吸水率<0.5%。

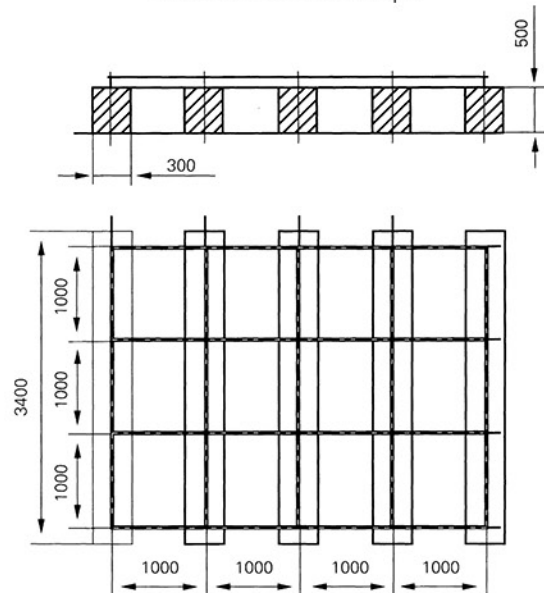


水箱基础 The foundation of the water tank

水箱长度 混凝土撑条间距
The length of the water tank
The distance of the concrete support bar



4x3x3水箱基础图
4x3x3 Water tank aircscape



SMC坐椅产品 SMC chairs product



体育场看台座椅
Gymnasium Platform chairs



玻璃钢座椅大型组合
FRP chairs big combination

SMC座椅由内着色之SMC模压而成，具有可设计性好、强度高、防水、耐腐蚀、不易污染等特点，这种座椅表面光洁色泽艳丽，质感好、使用舒适，并且具有良好的耐久性，广泛应用于体育场、馆、公园、街道和公共汽车等公共场所。

SMC chairs SMC molded chairs have many advantages such as high strength, waterproof, corrosion resistance, clean, bright color, comfortable and long service life. They are widely used in gymnasium, airport, station, cinema, dining hall, park and etc. The SMC chair product is mould pressing by the in coloration, It has the characteristic of good design, high intensity, waterproofing, anti-corrosive, is not easy to pollute. This kind of chair surface is bright and clean and gorgeous, it has the good durability, widely applies to the stadium, the hall, the park, the street and the bus and so on the public place.



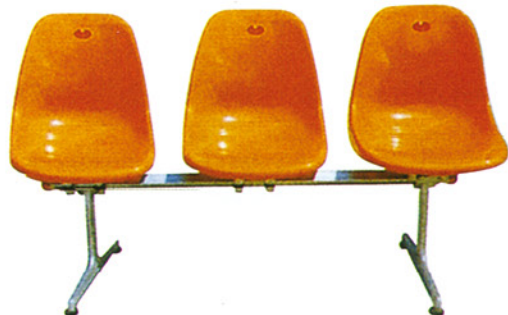
四联座椅
Four combined chairs



单联座椅
Single Chair



二联座椅
Two Combined Chair



三联座椅
Three Combined Chairs



四联座椅
Four Combined Chairs



体育场座椅
Gymnasium Chair

SMC汽车配件 SMC automobile parts



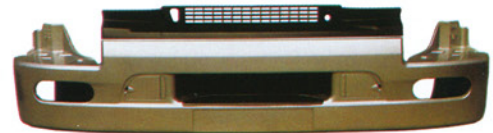
为迎合全球汽车轻量化的需求，山东格瑞德集团采用复合材料质轻、高强、易成型改性、耐腐蚀等特点，运用高新技术，投入大量资金新上SMC（热固性模压）和GMT（热塑性模压）汽配生产线，通过了ISO9001质量体系及产品质量双认证。

先进的工艺，精密优良的设备，多年严谨的管理经验，保证了产品的质量，先后与中国重型汽车集团、北汽福田汽车股份公司等厂家配套生产的保险杠、面罩、导流罩、A立柱、发动机隔音罩、电池托架、车下体保护罩、挡泥板、翼子板、仪表板骨架、行李箱搁板等部件，合作十分成功。

In order to cater to the global automobile light weight demand, the Shandong GRAD Group adopts the light material, the high temperature, is easy to be moulding and modification, anti-corrosive and so on. Using the high technology, put big funds investment to buy the new SMC (thermosetting mould pressing) and GMT (thermosetting plastic mould pressing) the vehicle production line, It has passed the ISO9001 Advanced craft and the precise equipment, many years rigorous managerial experience, had guaranteed the product's quality, successively with the Chinese heavy automobile group to produce the product for them, such as the bumper, the face guard, the conduction current cover, the A column, the engine sound-insulated cover, the battery carrier, the vehicle lower part veil guard, fender, the display board skeleton, and suitcase baggage shelf, the cooperation is extremely successful



面罩
the face guard



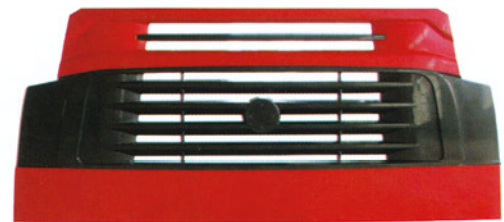
保险杠
bumper



导流罩
the conduction current cover



前侧外板
The front outer plate



面罩
the face guard



导风板
conduction wind plate



翼子板
wing plate



外顶盖
The out cover



脚踏板
footplate

质量控制基本仪器 Quality control basic instrument.



电子式拉力试验机
The electronic tensile testing machine



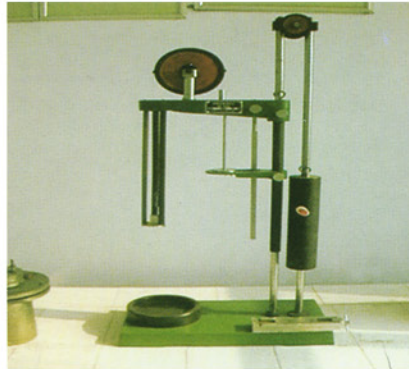
老化实验箱
older experimental box



硫化仪
sulfuration instrument



可塑性试验机
plasticity testing machine



耐寒系数测定仪
cold resistant coefficient testing machine



溶体流动速率仪
liquid moving speed meter

先进设备 Advanced equipment

领先于世界的RTM注射机，再加上格拉斯公司先进的模具成型工艺，所生产的玻璃钢注射制品，高贵华丽，美观实用。

The advanced world RTM injection machine, in addition the GLASS company's advanced mold craft The FRP injection product is noble magnificent and artistic.



RTM生产线
RTM product line



注射机
Injection machine



锻压机
Forge press machine

Phone number/ Address 联系电话/地址

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低碳节能格瑞德，绿色健康新生活！

Low-carbon and Energy-saving

GRAD brings you Green and Healthy new life



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