



格瑞德  
GRAD

# GRAD FRP Tank

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Develop together with GRAD

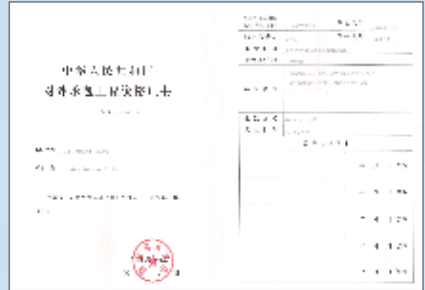


SHANDONG GRAD GROUP CO., LTD.

# GRAD INTRODUCTION

Shandong Grad Group Co., Ltd which was established in 1993 is a large Chinese enterprise specializing in the production of commercial air conditioning and FRP products. GRAD has a registered capital of RMB 100 million, an effective production area of 450,000 square meters.

GRAD now has more than 2,000 employees. It is a modern large enterprise group integrating R&D, design, production, testing, sales, installation and maintenance of commercial air conditioning and FRP products.





## GRAD HISTORY

In  
1993

Qinghe ventilation machinery factory was established, stepping into the production of terminal equipment for central air conditioner and the hand paste FRP products.

In  
2000

we enlarged our factory to cover an area of 80,000m<sup>2</sup>, signed agent cooperation agreement with American Owens Coming, and introduced advanced production technique of compound material.

In  
2005

we moved to the present industrial zone in No.6, Grad Road, Tianqu industrial park.

In  
1997

Our company changed name into Shandong Detong Industry Limited and successfully produced the first 100 tons FRP tank.

In  
2003

SMC branch company's production output was almost 4,000 tons, becoming the first in China.

In  
2006

Shandong FRP compound material & application engineering technical research center was approved to be the sole research center in Shandong compound material industry.

In  
2014

GRAD compound factory was moved to our new compound material industry park.

工程研究中心







# GRAD TANK - STRUCTURE AND FEATURE

## ➤ Safety

Safety is enhanced by developing exterior-wall-supporting structure through solving the problems of the traditional water tanks.

## ➤ Hygiene

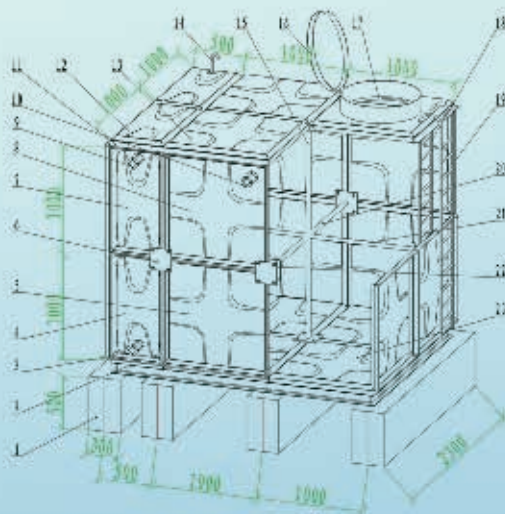
Unhygienic factors of the traditional water tanks are innovatively blocked by introducing perfect exterior-wall-supporting structure.

## ➤ Convenience

Convenience in installation by 2000\*1000 tank sheet.

## ➤ Long life

Life time can be up to 15 years based on excellent raw material and product design technology.

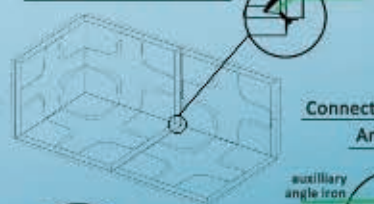


- |                           |                           |
|---------------------------|---------------------------|
| 1. concrete base          | 14. air-vent              |
| 2. tank base              | 15. supporting post       |
| 3. outlet                 | 16. manhole cover         |
| 4. side panel             | 17. manhole               |
| 5. side panel             | 18. internal ladder       |
| 6. external lacing board  | 19. external ladder       |
| 7. side panel             | 20. lacing bar            |
| 8. side panel             | 21. lacing bar            |
| 9. overflow port          | 22. internal lacing board |
| 10. inlet                 | 23. bottom panel          |
| 11. auxilliary angel iron |                           |
| 12. top panel             |                           |
| 13. top panel             |                           |

### Connection of Lacing Board



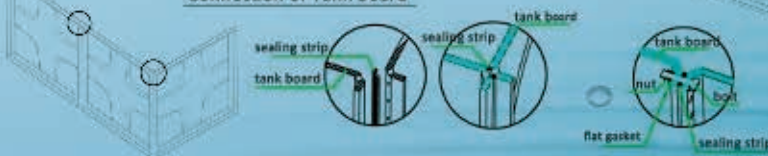
### Connection of Plugging



### Connection of Auxilliary Angle Iron



### Connection of Tank Board



# SPECIFICATION OF TANK BOARD

The specification of the FRP single moulding board (other specifications can be consulted if you need):  
2000×1000mm, 1000×1000mm, 1000×500mm, 500×500mm;

Thickness: 6mm,8mm,10mm .....22mm,24mm; And the 6mm is specialized for making the manhole cover.

FRP moulding single board will meet the following requirements:

Ability to resist stretching: > 59Pa, bending strength: > 78Pa, flexural strength and elastic modulus: 5900MPa, Barcol hardness: > 30, water absorption: < 1.0%

FRP moulding board executes the PRC building material profession standard JC658.1-1997.



500×500



1000×1000



1000×500



2000×1000

## PART OF OUR CERTIFICATES



ISO9001



ISO14001



ISO18001



SASO



Tank panel testing report



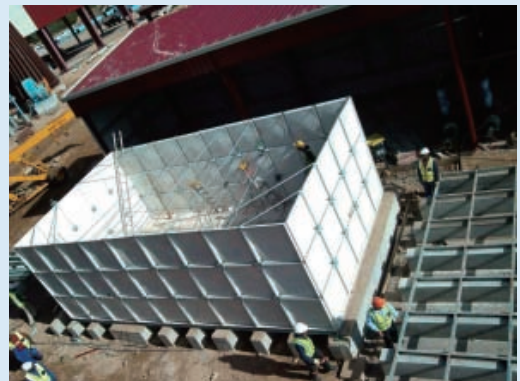
Drinking water hygiene license



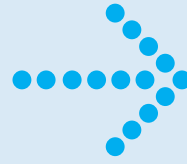
# INSTALLATION PICTURES

**In the past 20 years, GRAD tank has been installed around the world.**

Singapore Australia Maldives Saudi Arabia Philippine Bangladesh South Africa .....







## PART PROJECT ACHIEVEMENTS

Foreign Countries		China Projects
India	India Captive	"Shijiazhuang railway Co., ltd of China Railway 6th group"
Australia	Australia	"Wuhan Branch of China Petroleum Chemical Co., Ltd"
Singapore	Singapore	Tianjin Hotel
Maldives	Maldives	"Tianjin branch of China Construction Eighth Engineering Bureau Co., Ltd"
Maldives	Maldives	Shengli Oilfield Shengli Power Machinery Group Company LTD
Saudi Arabia	DORNA	"China Construction second Engineering Bureau Co., Ltd"
Philippine	DB group	"Henan Engineering Design Consultants of CSEEC Co., Ltd "
Bangladesh	KSRM Billet Industries	"Changchun West Station of China Construction second Engineering Bureau Co., Ltd"
South Africa	Coega IDZ	Shanxi Electric Power Corporation
India	India Captive	"China Fire and Safety Co., Ltd "
Saudi Arabia	DORNA	"Jilin Branch of China Petroleum Chemical Co., Ltd"
South Africa	Agni Steels SA Pty Ltd	Tianjin Development Committee
Mozambique	"AGUAS DE RIBAUE,LDA"	"Installation Branch of The Second Construction Co., Ltd of China Construction Third Engineering Bureau"
Mongolia	Water Treatment Co Ltd	"Jilin Petroleum Group Co., Ltd"
Columbia	"Soling Co., Ltd"	Hejin City of Shanxi
Columbia	"Soling Co., Ltd"	"Wuhan Branch of China Petroleum Chemical Co., Ltd"
Ghana	RAK	"Dagang Oilfield Group Co., Ltd"
Sudan	ELSHATI FOR INFRASTRUCTURE	The Second Urban Construction Engineering Company of Beijing
Saudi Arabia	GPOC Unity Base Camp	"China Tiesiju Civil Engineering Group Co., Ltd"
Monglia	PRESTIGE ENGINEERING CO LTD	"Jilin Branch of China Petroleum Chemical Co., Ltd"
India	India Captive	Huaijiang Construction company of China Construction First Bureau
Nigeria	Nigeria	The Second Construction Limited Company of China Construction Eight Engineering Division
Columbia	"Soling Co., Ltd"	"The Eight Beijing Branch of China Railway Airport Construction Group Co., Ltd"
India	India Captive	Beijing Urban Construction Group (BUCG)
South Sudan	GPOC Unity Base Camp	"Chian Construction Seventh Engineering Division Co., Ltd"
Burma	Burma	"SINOHYDRO Co., Ltd"
India	India Captive	"The third construction Engineering Co., Ltd of China Construction second Engineering Bureau Co., Ltd"
Nigeria	Segmahsen & Co.Nig Ltd	"China Construction First Building(group) Co., Ltd"
India	India CAPTIV	"China Xinxing Construction & Development General Co.,Ltd"
Philippine	DB group	"The third construction Engineering Co., Ltd of China Construction second Engineering Bureau Co., Ltd"
Ethiopia	Ethiopia	"Beijing Dongfang Yishui Realstate Development Co., Ltd"



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