



**GF HAKAN PLASTİK**  
**DEEP WELL PIPES & FITTINGS**

**GF HAKAN PLASTİK** is one of the world's largest plastic piping systems manufacturers. The company develops, produces and markets a comprehensive range of piping systems and components in a variety of materials used worldwide to transport water and gas at the highest quality, service and the right price. GF HAKAN PLASTİK operates in three core segments of piping systems; Building Technology, Utility and Agriculture. Its certified products are used in more than 70 countries in 5 continents worldwide.

With more than 10.000 products, GF HAKAN PLASTİK manages a land and maritime transport operation seamlessly and is able to meet the needs of its clients fully wherever they may be in the world.

▪ **HISTORY**

**HAKAN PLASTİK** was founded in 1965 by the Karadeniz family. Since its foundation, Hakan Plastik has continuously expanded its presence in the manufacturing and sales of plastic piping systems with a focus on innovation.

In 2002, the company invested in a state of art modern facility in Çerkezköy Industrial Zone (ÇOSB), one of the three largest industrial zones in Turkey. To increase its production capacity, HAKAN PLASTİK opened up its second facility in Şanlıurfa. Both facilities totally cover an area of 170.000 m<sup>2</sup>.

In 2013, the leading plastic pipe manufacturer of Europe and the Middle East, HAKAN PLASTİK and the world's leading manufacturer of piping systems, Swiss-based Company, GEORG FISCHER joined forces under the name of "**GF HAKAN PLASTİK**" to provide a unique platform for further growth worldwide.

**GEORG FISCHER**, founded in 1802 is headquartered in Switzerland and has 125 companies, 48 of which are production facilities, in 32 countries with a workforce of 13,500 employees. The company generated sales of 3.6 billion Swiss francs in 2012. Georg Fischer operates in three core businesses GF Piping Systems, GF Automotive and GF Machining Solutions.

GF Piping System Division is a global supplier of plastic piping systems for the conveyance of liquids and gases in industry, building technology and utility applications. With over 5,000 employees, GF Piping Systems generated sales of about CHF 1.3 billion in over 100 countries in 2012.

▪ **ABOUT GF HAKAN PLASTİK**

GF HAKAN PLASTİK operates in 2 production facilities equipped with the latest manufacturing technologies in Çerkezköy and Şanlıurfa with a workforce of 730 employees. Its headquarters is in Çerkezköy. The company has 6 regional directorates, offices and warehouses in Turkey.

The company has taken its place among the top 500 Enterprises in Turkey according to the worldwide known, prestigious Fortune 500 ranking and also one of the Top 500 Largest Companies in Turkey according to "Istanbul Chamber of Industry (ISO)."



GF Hakan Plastik Çerkezköy Factory

The system quality of GF HAKAN PLASTİK has been certified by BVQI, ISO 9001 and ISO 14001. As a result of a meticulous quality control approach and continuous research and development, product quality of GF HAKAN PLASTİK is confirmed by its international quality certificates.



The company gives top priority to using the highest standards of technology to manufacture user-friendly products with the highest quality and service.

**DEEP WELL PIPES & FITTINGS**  
**APPROVALS & CERTIFICATES**



TURKEY  
TURKISH STANDARDS INSTITUTE  
[TS 11794 - 59/14.01/201-7]



UKRAINE  
UKR SEPRO  
[ UA1.081.0050619-12 ]



TURKEY  
AGRICULTURAL CREDIT REPORT  
[777/2011-561]  
[777/2006-266] [PVC-FLAT-CLASS 2]  
[777/2013-1364] [PVC-FILTER-CLASS 2]  
[777/2011-560] [PVC-FLAT CLASS 3]



UKRAINE  
HYGIENE  
[ 05.03.02-03/27260 ]

GF HAKAN PLASTİK Deep Well Pipes and Fittings are produced from 100% pure PVC in accordance with TS 11794 and DIN 4925 standards. PVC-U, also known as rigid PVC, is unplasticized polyvinyl chloride.

#### GENERAL INFORMATION

- A pipe type used in wells opened to benefit from ground waters.
- With a special formulation deep well pipes meet well pressures safely.
- Long-lasting, rust-free and resistant to chemicals.
- Composed of spur, reducer, maneuver head, tie and centering spring as fittings.
- As PVC material is used in the production of these products, they are not used in hot water systems.
- These pipes are used in well drilling and for cold water. They're used at temperatures not exceeding 25-30 °C.
- Instead of internal pressure, there is external pressure effect in deep well pipes. Therefore, there are two types of pipe production that can be buried to the depths of 100m and 300m. The determinant in these two pipes is wall thickness.
- **GF HAKAN PLASTİK** Deep Well Pipes are produced with diameters of 88-330mm in white colour as filtered and unfiltered for the depths of 0-100 m (class 3), 100-300 m (class 2).



#### BENEFITS

- Its special design prevents "incrustation" which causes blockage of filters.
- The trapeze gears on the both ends of the pipes open at the same time so quick and easy installation is provided during the piping of the well. It is full centered and equal space leaves around it so pump assembly and graveling are done properly.
- Compared to steel pipes it is lighter, therefore it is easy to use.
- Resistant to chemicals, minimum 50 years lifetime.
- Economical because it provides operation continuity.

## PRODUCT PROPERTIES



### PVC-U DEEP WELL PIPES (CLASS 3)

External Diameter (mm)	Wall Thickness (mm)	Muffed Length (mm)	Slot PCS	Slot Length (mm)	Tooth Length (mm)	Tooth Depth (mm)	Filter Length (mm)	Pitch	Unfiltered Size (mm)	Tooth Outer Diameter (mm)	Tooth Inner Diameter (mm)
88	4	4070	3	56	60	2	3762	6	154	87,5	84,5
113	5	4070	5	43,2	60	2	3762	6	154	112,5	109,5
125	5,5	4070	5	47,4	60	2	3762	6	154	124,5	121,5
140	6,5	4080	5	48	70	2,6	3762	6	159	139,5	135,3
175	8	4080	5	64	70	2,6	3762	6	159	174,5	170,3
200	9	4090	5	68,8	80	2,6	3762	6	164	199,5	195,3
225	10	4090	6	65	80	2,6	3762	6	164	224,5	220,3
280	12,5	4100	6	75	95	4,5	3762	12	169	278	270
330	14,5	4100	6	88,33	95	4,5	3762	12	169	327	319

### PVC-U DEEP WELL PIPES (CLASS 2)

External Diameter (mm)	Wall Thickness (mm)	Muffed Size (mm)	Slot PCS	Slot Length (mm)	Tooth Length (mm)	Tooth Depth (mm)	Filter Length (mm)	Pitch	Unfiltered Size (mm)	Tooth Outer Diameter (mm)	Tooth Inner Diameter (mm)
88	5	4070	3	56	60	2	3762	6	154	87,5	84,5
113	6,5	4070	5	43,2	60	2	3762	6	154	112,5	109,5
125	7,1	4070	5	47,4	60	2	3762	6	154	124,5	121,5
140	8	4080	5	48	70	2,6	3762	6	159	139,5	135,3
175	10	4080	5	64	70	2,6	3762	6	159	174,5	170,3
200	11,5	4090	5	68,8	80	2,6	3762	6	164	199,5	195,3
225	13	4090	6	65	80	2,6	3762	6	164	224,5	220,3
280	16	4100	6	75	95	4,5	3762	12	169	278	270
330	19	4100	6	88,33	95	4,5	3762	12	169	327	319



## ASSEMBLY

### INSTALLATION RULES

- Do not use oils such as grease for easy pipe joint.
- Pipe threads should not be covered with adhesives in order to maintain good attachment. Adhesives damage threads and dissolve the pipe. Appropriate tools should be used for the assembly of deep well pipes (e.g. belt wrench, appropriate swivel, tie, centering spring etc.) Do not use chain wrench or pipe wrench.

A centering spring should be used in max. every 8 meter so that the pipe stay vertical in the well. Pay attention to have one especially in the bottom of closed pipe.

- If the pipe moves slowly while going down to the well, the pipe is filled with well mud through a pistol or via a bucket and the pipe is prevented from getting hit.

- If the pipe is stuck in the well, push back and try again and if the pipe doesn't go down, drill again and down the deep well pipe into the well.

- After the pipe touch the bottom of the well, it must be pulled up at least 10 cm and kept suspended until graveling is completed. This process will provide the deep well pipe to stand upright.

- An iron sheet pipe should be located at well end except PVC well equipment pipe and the pump should be connected to that pipe. (Figure 1) PVC equipment pipe should not carry the pump. (This also disarrange the graveling order)

Gravels should be put continuously as well as evenly and orderly around the equipment pipe by means of a shovel.

### POINTS TO TAKE INTO ACCOUNT!

- Geared parts should be protected from impacts during transportation. The external protectors on trapeze geared pipes shouldn't be removed until pipes are used.
- They should be protected from direct sun light.
- The pump selection should be made by considering the inner diameter of the pipes.
- Centering springs should be used in order to provide the pipes to stay vertical in the wells.
- While assembling the pipes, nondestructive tools such as belt-driven chuck key should be used.
- The vertical shafted pumps and related parts for pump connection should not be placed on pipes.
- Scientific documents and technical data should be used in all stages from the selection of location to the selection of pipe while opening wells.

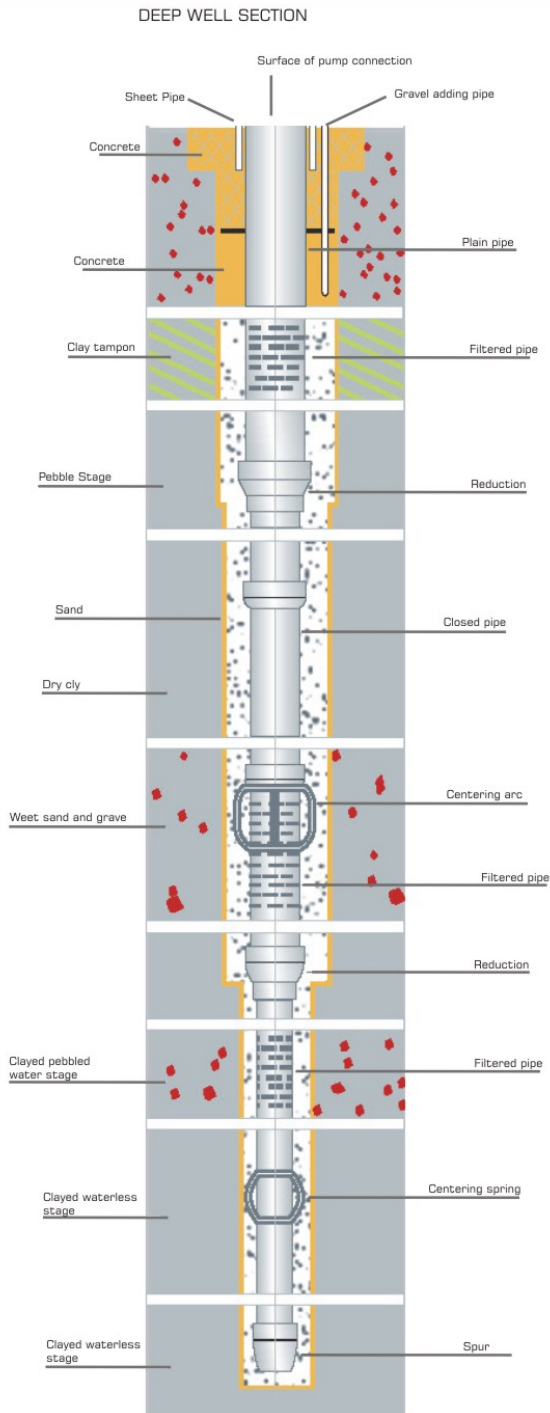




Figure 1

**PRODUCT RANGE**


**0-100 m DEPTH PLAIN TYPE DEEP WELL PIPE**

	Codes	Diameter (mm)	Size (mm)	Packing PCS
	1800008800111	88	2000	1
	1800008800211	88	3000	1
	1800008800311	88	4000	1
	1800011301011	113	2000	1
	1800011301111	113	3000	1
	1800011301211	113	4000	1
	1800012502011	125	2000	1
	1800012502111	125	3000	1
	1800012502211	125	4000	1
	1800014003011	140	2000	1
	1800014003111	140	3000	1
	1800014003211	140	4000	1
	1800017504011	175	2000	1
	1800017504111	175	3000	1
	1800017504211	175	4000	1
	1800020005011	200	2000	1
	1800020005111	200	3000	1
	1800020005211	200	4000	1
	1800022506011	225	2000	1
	1800022506111	225	3000	1
	1800022506211	225	4000	1
	1800028007011	280	2000	1
	1800028007111	280	3000	1
	1800028007211	280	4000	1
	1800033008111	330	2000	1
	1800033008211	330	3000	1
	1800033008311	330	4000	1


**0-100 m DEPTH FILTERED TYPE DEEP WELL PIPE**

	Codes	Diameter (mm)	Size (mm)	Packing PCS
	1800008809011	88	2000	1
	1800008809111	88	3000	1
	1800008809211	88	4000	1
	1800011310011	113	2000	1
	1800011310111	113	3000	1
	1800011310211	113	4000	1
	1800012511011	125	2000	1
	1800012511111	125	3000	1
	1800012511211	125	4000	1
	1800014012011	140	2000	1
	1800014012111	140	3000	1
	1800014012211	140	4000	1
	1800017513011	175	2000	1
	1800017513111	175	3000	1
	1800017513211	175	4000	1
	1800020014011	200	2000	1
	1800020014111	200	3000	1
	1800020014211	200	4000	1
	1800022515011	225	2000	1
	1800022515111	225	3000	1
	1800022515211	225	4000	1
	1800028016011	280	2000	1
	1800028016111	280	3000	1
	1800028016211	280	4000	1
	1800033017011	330	2000	1
	1800033017111	330	3000	1
	1800033017211	330	4000	1

**0-300 m DEPTH PLAIN TYPE DEEP WELL PIPE**


	Codes	Diameter (mm)	Size (mm)	Packing PCS
	1800008800411	88	2000	1
	1800008800511	88	3000	1
	1800008800611	88	4000	1
	1800011301311	113	2000	1
	1800011301411	113	3000	1
	1800011301511	113	4000	1
	1800012502311	125	2000	1
	1800012502411	125	3000	1
	1800012502511	125	4000	1
	1800014003311	140	2000	1
	1800014003411	140	3000	1
	1800014003511	140	4000	1
	1800017504311	175	2000	1
	1800017504411	175	3000	1
	1800017504511	175	4000	1
	1800020005311	200	2000	1
	1800020005411	200	3000	1
	1800020005511	200	4000	1
	1800022506311	225	2000	1
	1800022506411	225	3000	1
	1800022506511	225	4000	1
	1800028007311	280	2000	1
	1800028007411	280	3000	1
	1800028007511	280	4000	1
	1800033008411	330	2000	1
	1800033008511	330	3000	1
	1800033008611	330	4000	1

**0-300 m DEPTH FILTERED TYPE DEEP WELL PIPE**

	Codes	Diameter (mm)	Size (mm)	Packing PCS
	1800008809311	88	2000	1
	1800008809411	88	3000	1
	1800008809511	88	4000	1
	1800011310311	113	2000	1
	1800011310411	113	3000	1
	1800011310511	113	4000	1
	1800012511311	125	2000	1
	1800012511411	125	3000	1
	1800012511511	125	4000	1
	1800014012311	140	2000	1
	1800014012411	140	3000	1
	1800014012511	140	4000	1
	1800017513311	175	2000	1
	1800017513411	175	3000	1
	1800017513511	175	4000	1
	1800020014311	200	2000	1
	1800020014411	200	3000	1
	1800020014511	200	4000	1
	1800022515311	225	2000	1
	1800022515411	225	3000	1
	1800022515511	225	4000	1
	1800028016311	280	2000	1
	1800028016411	280	3000	1
	1800028016511	280	4000	1
	1800033017311	330	2000	1
	1800033017411	330	3000	1
	1800033017511	330	4000	1


## PRODUCT RANGE

### SPUR



	Codes	Diameter (mm)
	1900908801211	88
	1900911301311	113
	1900912501411	125
	1900914001511	140
	1900917501611	175
	1900920001711	200
	1900922501811	225
	1900928001911	280

### REDUCER



	Codes	Diameter (mm)
	1900408800111	88/113
	1900411300211	113/125
	1900412500311	125/140
	1900414000411	140/175
	1900417500511	175/200
	1900420000611	200/225
	1900422500711	225/280
	1900428000812	280/330

+GF+

hp  
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PLASTİK

## Quality Certificates

 GERMANY - DVGW

ORGANIZED BY  
 GERMANY - SKZ

 GERMANY  
FRAUNHOFER INSTITUT

 RUSSIA, BELARUS,  
UKRAINE GOST-r

 SCANDINAVIAN  
COUNTRIES - SWEDCERT

 BULGARIA  
BULGARKONTROLA

· INSTA-CERT ·  
SCANDINAVIAN COUNTRIES  
INSTA-CERT

 SCANDINAVIAN  
COUNTRIES  
NORDIC POLYMARK

 HUNGARY - EMI

AENOR SPAIN - AENOR

 SOUTH AFRICA  
SABS

 GERMANY, RUSSIA  
HYGIENE INSTITUT

 GREECE  
EBETAM

 SWEDEN  
SP REPORT

 TURKEY - TSE

 TURKEY - TSEK

 TURKEY  
YILDIZ TECHNICAL  
UNIVERSITY REPORT

 TURKEY  
HIFZISSIHA REPORT

 POLAND  
REKOMENDACJA

 UKRAINE  
UKR - SEPRO

 GERMANY  
HOCH

 TURKEY  
AGRICULTURAL CREDIT REPORT

 UKRAINE  
HYGIENE

 UNITED KINGDOM  
WRAS

### GEORG FISCHER HAKAN PLASTİK BORU VE PROFİL SANAYİ TİCARET A.Ş.

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