



Pressure Pipe Fittings and Valves Made of Ductile Cast Iron

Drainage Pipe Systems Made of Grey Cast Iron





### Düker GmbH

### The Company Düker

The company's first mention in records dates back to the year 1469. The village of Laufach holds the origins of a medium-sized company, which is today among the leading manufacturers of valves and pressure pipe fittings for water and gas supply as well as pipes and fittings for drainage of waste water.

Furthermore, Düker manufactures custom-made castings for the printing, automotive and mechanical engineering sectors.

At the two sites of Karlstadt and Laufach in Lower Franconia (Bavaria), there are today approximately 500 employees, among them up to 10% of apprentices. Düker is therefore among the largest German iron foundries.







### Production and Sales Programme at a Glance

Site	Product Sector	Products
Karlstadt	Drainage Technology	drainage pipe systems for drainage of buildings and sites
Laufach	Fittings and Valves	for water supply systems (underground construction):  • pressure pipe fittings and flanged pipes  • valves for water and gas supply  • thrust-resisting joint systems for the connection of cast iron and PE-HD pipelines
Karlstadt / Laufach	Jobbing Foundry	<ul> <li>small, medium and large production series in various cast iron qualities</li> </ul>





## **Certified Quality**



Regular tests, such as pressure tests, guarantee a permanently high product quality.

Düker makes high demands on product quality and therefore introduced a modern certified quality management system as per EN ISO 9001, as early as in 1993

Furthermore, Düker and the Düker products have been tested and approved against many other rules and standards, part of which are specific to certain products or markets.

In the framework of certain quality assurance associations, Düker observes voluntarily criteria which surpass the standard requirements by far.





Düker feels obliged to the environment as well as to the economic and social needs of their staff and of society.

Sustainability is an integral part both of the business culture and of everyday activities, and is based on the three pillars economy, social responsibility and environmental responsibility.

This goes hand in hand with a continuous examination of the matter of energy efficiency, which is crucial in a company with elevated use of material and energy. Therefore, Düker took part in the project "ÖKOPROFIT" and received the corresponding award in 2010.

In 2011, Düker introduced an environmental management system as per EN ISO 14001 and an energy management system as per EN 50001.





# **Fittings**

#### **Pressure Pipe Fittings**

Düker pressure pipe fittings and flanged pipes are manufactured exclusively from ductile cast iron. Due to the positive material features, the products withstand temperature changes, elevated inside and outside pressures and other external influences. All fittings for water supply systems are in accordance with EN 545 and ISO 2531. In addition, the Düker fittings for sewage systems observe the requirements of EN 598.

#### **Surface Protection**

Corrosion resistance can only be obtained through an effective and durable surface protection. The requirements vary strongly according to the application. Therefore Düker offers surface protection systems suitable for their application.

### Range of Coatings:

- 1. inside: cement-mortar lining as per EN 545 outside: Friazink "R" and bituminous coating
- inside and outside: epoxy powder coating, heavy-duty corrosion protection as per the directives of GSK; blue for potable water or red for sewage
- 3. inside: enamel, the best protection against corrosion, abrasion and incrustation
- inside and outside: etec enamel, the best protection against corrosion, abrasion and incrustation
- 5. special coatings on request



Düker fittings correspond to the DVGW directives, the largest European certifying institute of the gas and water sector, which covers all certifying processes required in the sector.

Furthermore, Düker is a member of FGR /EADIPS, a technical and scientific association whose membership comprises European companies producing ductile cast iron pipes, fittings and valves.









# Socket and Flange Fittings

With our wide and varied range of fittings in accordance with DIN EN 545, completed with our special fittings, we offer the most suitable solution for almost every application.

With the addition of the thrust-resisting joint systems, developed in part by Düker, Düker SMU, Düker SPEZIAL, TYTON® SIT®, TYTON SIT PLUS®, NOVO-SIT® and NOVO-Grip® you can be sure to have safe and reliable connections.

### **Socket Fittings**

DN		40	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000	1200	1400	1600
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MMK 11°- 45°	$\sim$	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MMQ	2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
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U	$\bowtie$	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

### **Flanged Fittings**

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single flange be	II	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		

# Socket and Flange Fittings with Reduction

### **Socket Fittings with Reduction**

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### Flanged Fittings with Reduction

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DN₁						500									60	00									700	)		
$DN_1$ $DN_2$		80	100	150	200	250	300	350	400	500	80	100	150	200	250	300	350	400	500	600	100	150	200	250	300	400	500	600
FFR	$\boxtimes$					•	•	•	•							•	•	•	•							•	•	•
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# **KS** Fittings

DN <sub>1</sub>		5	0		65			8	0				100					12	25		
DN <sub>1</sub> DN <sub>2</sub>		40	50	40	50	65	40	50	65	80	40	50	65	80	100	40	50	65	80	100	125
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F-KS	<b>—</b>		•			•				•					•						•
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MMI-KS	>(		•			•				•					•						•
MMR-KS	$\bowtie$				•			•	•			•	•	•					•	•	

DN <sub>1</sub> DN <sub>2</sub>		40	50	65	150 80	100	125	150	40	50	80	200 100	125	150	200	40	80	100	250 125	150	200	250
E-KS	$\vdash$							•							•							•
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DN <sub>1</sub> DN <sub>2</sub>		80	100		00 200	250	300	80	100	150		00 250	300	350	400
E-KS	$\vdash$						•								•
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For technical details, please ask for our detailed fittings catalogue online or printed.

E-KS

# **Special Fittings**

### **Special Fittings**

DN <sub>1</sub> DN <sub>2</sub>		40	_	65	80	40	50	100 65	80	100	40	50		25 80	100	125
MMC	)국-(	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
hatchbox					•					•						•

DN <sub>1</sub> DN <sub>2</sub>		40	50	65	150 80	100	125	150	40	50	80	200 100	125	150	200	40	80	100	250 125	150	200	250
MMC	) <del>7 (</del>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
hatchbox								•							•							•

DN <sub>1</sub> DN <sub>2</sub>		80	100		00 200	250	300	80	100		350 200	250	300	350	80	100	150		00 250	300	350	400
MMC	) <del>7 (</del>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
hatchbox							•							•								•

DN <sub>1</sub> DN <sub>2</sub>		80	100	150	200	500 250	300	350	400	500	80	100	150	200		00 300	350	400	500	600
MMC	کجر	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
hatchbox										•										

$DN_1 \\ DN_2$		100	150	200	250	700 300	400	500	600	700	100	200	300	80 400		600	700	800
MMC	)국-(	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
hatchbox																		

### Every socket fitting is available with the following socket types:

- TYTON® socket
- bolted-gland socket
- Novo socket
- KS socket
- screw-gland socket
- partly STANDARD socket

### **Valves**

#### **Valves**

cast iron. Modern production processes and numerous controls assure the approved quality.

### Range of Products

Just like all pressure pipe fittings and flanged pipes, The Düker range of valves includes among other things gate valves, butterfly Düker valves are also manufactured from ductile valves, hydrants as well as house connection and tapping valves.

#### Surface Protection

In order to ensure the corrosion resistance, Düker offers a durable surface







Butterfly valve type 4510 with electric actuator



Butterfly valve type 4510 with handwheel



Butterfly valve type 451 for underground installation



Butterfly valve type 4510 with Novo sockets connections

Butterfly valve type 451 with bypass



Pillar fire	hydrant
type 494	



Pillar fire hydrants	Design	PN
Туре 494	Design AUD	16 (water)
Type 495	Design AFUD	16 (water)

Underground fire hydrants	Design	PN
Type 304	with flange	16 (water)
Type 305 (with double obturator)	with flange	16 (water)
Type 304 S	with spigot	16 (water)

### **Valves**



Non-slam check valve	Design	DN	PN
Type 8015	H+V = horizontal and vertical upwards V = vertical downwards	150-300	10-40 (water)

required back pressure for tightness: 0.5 bar



Plunger Valve	DN	PN
Type RKV 7015	150-300	10-40 (water)

## **Thrust-Resisting Joints**

For all fittings and valves with screw-gland, TYTON® or Novo socket, Düker offers the appropriate joint system for a thrust-resisting and safe connection. The structured thrust-resisting joint systems, targeted on the individual field of application, are suitable for any range of application.

Due to faster installation, the saving of efforts and material and the reduction of stockholding, the Düker plug-in connections save time, cost and material in comparison to flanged systems. Appropriate thrust-resisting joint systems secure the connections optimally and keep them movable.



### Thrust-Resisting Joint Systems at a Glance

thrust-resisting joint	nominal width	operating pressure PN	deflection angle
TYTON SIT PLUS®	80 - 600	10 - 32	2°- 3°
NOVO-SIT®	80 - 800	10 - 25*	1°- 3°
NOVO-Grip® III	90 - 225	16	

<sup>\*</sup> up to 40 bar on request



# Cast Iron Drainage Pipe Systems

Drainage pipe systems as per EN 877 and DIN 19522 for the evacuation of water from buildings and sites, made of grey cast iron with flake graphite, type at least EN-GJL-150.

Cast iron drainage pipe systems contribute to the preventive fire protection and to the noise protection in buildings. They are used primarily in public buildings such as hotels, hospitals, stadiums etc.

The conformity with EN 877 is demonstrated through the CE marking and the Declaration of Performance (DOP) as per the European Construction Products Regulation (CPR). The superior quality of Düker drainage pipe systems, above the requirements of the standard, is proven by various international test symbols and certificates, some of which are shown here.





	Pipe system	Colour	Nominal width	Pipe inside coating	Pipe outside coating
	SML	brown-red	DN 50 up to 300 or 400	ocre-coloured completely cross-linked epoxy	anti-corrosive primer
	MLK-protec	dark grey	DN 50 up to 400	ocre-coloured completely cross-linked epoxy in double layer thickness	spray zinc coating, min. 130 g/m², 2-components cover coat
	MLK-indoor	dark grey	DN 50 up to 400	ocre-coloured completely cross-linked epoxy in double layer thickness	anti-corrosive primer
	TML	brown	DN 100 up to 200	see SML	spray zinc coating, min. 130 g/m², 2-components cover coat
	MLB	silvery grey	DN 100 up to 500 or 600	see SML	two-layered spray zinc coating (min. 40 µm), 2-components epoxy coating (80 µm)
	MLB	•	•	see SML	two-layered spray zinc coating (min. 40 μm),



Coating of fittings	Typical application
wet epoxy dip coating brown-red inside and outside	domestic waste water and rain water installed inside buildings and on the outside of buildings
	aggressive waste waters such as grease-
epoxy powder coating	containing waste waters from professional
dark grey inside and outside	kitchens, underground installation
amana manadan adatina	aggressive waste waters such as grease-
epoxy powder coating dark grey inside and outside	containing waste waters from professional
dark grey inside and outside	kitchens, indoor installation
epoxy powder coating	domestic waste water and rain water
brown inside and outside	in underground installation
epoxy and zinc powder coating (70 μm),	1.1
epoxy cover coat (80 µm)	bridge drainage



No. 04/1 SML DN 50 - 400 MLK-protec DN 50 - 400



No. 04/4189 SML/TML



No. KM 613802 SML/TML





# Couplings

Model	Nominal width	Material metal collar	Locking parts	Rubber s EPDM	ealing NBR*	
Dükorapid <sup>®</sup>	DN 50 - 200	stainless steel	galvanised	•	-	
Dükorapid <sup>®</sup> Inox	DN 50 - 200	inox/austenitic stainless steel	stainless steel	•		
Rapid Inox	DN 50 - 300	inox/austenitic stainless steel	stainless steel	•	•	
CV	DN 50 - 300	stainless steel	galvanised	•	-	
CE	DN 50 - 300	austenitic stainless steel	stainless steel	•	-	
CE dual ring coupling	DN 400	austenitic stainl. steel	stainless steel	•	-	
Connect-G Inox	DN 50 - 600	inox/austenitic stainless steel	stainless steel	•	-	
Connect-F Inox	DN 100 - 600	inox/austenitic stainless steel	stainless steel	•	-	
SVE	DN 70 - 200	polypropylene-Co	-	-	-	
Düker EK Fix	DN 50 - 125	EPDM	stainless steel	-	-	
Konfix Multi	DN 100	EPDM	stainless steel	-	-	
Multiquick	DN 100	EPDM	stainless steel	-	-	
BSV 90	DN 80 - 150	stainless steel	galvanised	•	-	

### Grip collars with axial restraint



Niiker	Kombi	arin	collar	

Model	Nominal width	To be installed with	Material	Axial restraint
Düker Kombi grip collar	DN 50 - 300	Dükorapid® , Rapid Inox, CV, CE	steel galvanised	up to 10 bar
Düker grip collar	DN 400	CE dual ring coupling	galvanised	up to 1 bar

Typical applications: in the back water area, in siphonic roof drainage, in pressure pipelines of waste water pumps

NBR as an option for waste waters containing oil, grease, solvents, petrol and fuel pressure tightness of all metallic couplings, measured without axial forces: 5 bar up to DN 200, 3 bar above DN 200. The axial restraint mentioned in the table can vary according to the nominal diameter.

Axial restraint**	Typical application
up to 0.5 bar	inside buildings, in concrete
up to 0.5 bar	underground installation, outside installation
up to 0.5 bar	underground installation, outside installation
-	for repairs
-	inside buildings
-	inside buildings
up to 10 bar	bridge drainage
-	bridge drainage
-	underground installation
-	connection to plastic pipes
-	connection to plastic pipes
-	connection to plastic pipes
-	ceiling penetrations with fire rating









Konfix Multi



Dükorapid®



Connect-G Inox



Connect-F Inox



FITTINGS AND VALVES
DRAINAGE TECHNOLOGY

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