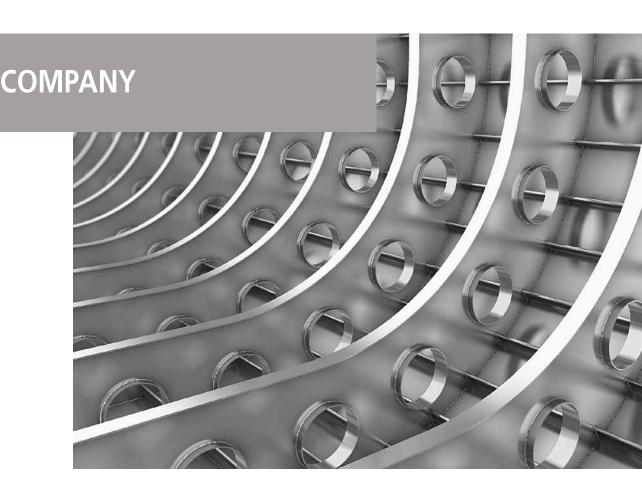




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ATT Inox $\operatorname{Drain}^{\circledR}$ is the leading producer of stainless steel draining systems.

All our actions are based on the following principles: sustained high quality of products and services, constant improvement and expansion of our range products as well as reliability and timeliness.

We work for Customers in food, chemical, pharmaceutical and wide variety of construction and installation industries.

Through combining innovative projects with advanced technology, modern machine park and years of experience, we offer products and services which meet the highest standards.

Our solutions reflect needs of our Customers, such as on-site adaptation processes during product installation. Each phase of the order completion - from design, through workmanship to installation - is supervised and consulted with you by our specialists,

just to make sure you get your final product according to your plans.

ATT is a team of engineers who combine their know-how and passion with creativity and long-standing experience. The combination of these features brings about a certain, unique quality of projects. Their comprehensive technical knowledge of construction and industry realities makes it possible to adjust complex solutions to individual needs of our Customers.

OFFER



WE OFFER

- point and linear drainage systems (floor drains, standard and slot channels, rodding eyes),
- furniture and fittings (tables, closets, cabinets, bathtubs, wash-basins),
- manhole covers, media boxes,
- architectural elements (roofs, finishing elements)
- protective elements (pillars and other protective profiles),
- tailor-made solutions.





STAINLESS STEEL CHARACTERISTICS

The term "stainless steel" is applied to the steel grades with enhanced corrosion resistance in comparison to normal alloy steels.

The stainless steels are iron alloys containing minimum 11% of chromium. Excellent anticorrosion properties are owed to surface layer of chromium oxides, which is very durable.

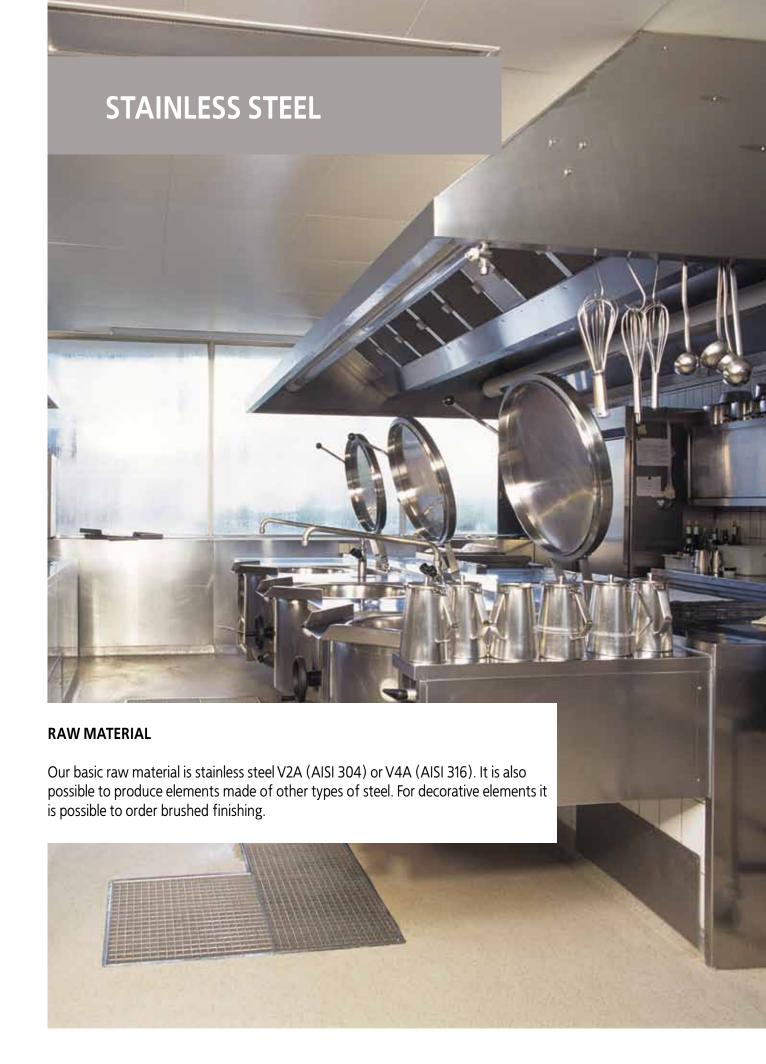
The anticorrosion properties are maintained in case of mechanical or chemical damage to the steel surface.

TYPES OF STAINLESS STEEL

Austenitic - it has very good anticorrosion properties with carbon content of approximately 0.02%. It is used in the food processing, chemical and pharmaceutical industries.

Martensitic - posses the highest mechanical strength of all steel types. It is heat treatable, it has magnetic properties and high carbon content (about 0.3%).

Austenitic-ferritic - this type of steel is smelted in the duplex process. This type of steel has good anticorrosion properties and high crack resistance. It is however magnetic steel, not suitable for plumbing components.



STAINLESS STEEL

Below information is developed based on our knowledge and experience and it is indicative. We ensure this information is carefully prepared from technical point of view, however it cannot be treated as the valid standard.

In order to achieve the guarantee of material resistance to a particular factor, laboratory tests need to be held.

MATERIALS' CHEMICAL RESISTANCE

MEDIUM	Temp. Cº	STEEL 1.4301 304	STEEL 1.4404 316L
acetic acid	20	< 0,1	< 0,1
acetic acid	20	< 0,1	< 0,1
acetic acid	20	< 0.1	< 0.1
acetic acid	20	< 0,1	< 0,1
acetic acid	boiling p.	< 0,1	< 0,1
acetic acid	20	< 0,1	< 0,1
acetone	20	< 0,1	< 0,1
alcohol (methanol or ethanol)	20	< 0,1	< 0,1
alcohol propyl	20	< 0,1	< 0,1
aluminium chloride	20	< 0,1	< 0,1
aluminum sulphate	20	< 0,1	< 0,1
ammonia	20	< 0,1	< 0,1
ammonia - gas (dry)	20	< 0,1	< 0,1
ammonium hydroxide	20	>1	>1
ammonium nitrate 10	0% 70	< 0,1	< 0,1
ammonium phosphate	20	0,1 - 1	0,1 - 1
ammonium sulfate 20	0% boiling p.	0,1 - 1 SP	< 0,1 SP
ammonium sulphide 4.	3% boiling p.	< 0,1 SP	< 0,1 SP
amonium chloride	20	< 0,1	< 0,1
amonium chloride	20	< 0,1	< 0,1
amonium chloride	20	0,1 - 1	0,1 - 1
amyl chloride	20	>1	< 0,1
aniline	20	< 0,1	< 0,1
barium chloride	20	0,1 - 1	0,1 - 1
barium hydroxide	20	>1	>1
barium sulfate	20	< 0,1	< 0,1
barium sulphide	20	>1	>1
beer	20	>1	>1
benzene benzeig seid	20 3% 20-60	< 0,1	< 0,1
benzoic acid bichloride of potassium	3% 20-60 20	0,1 - 1 P > 1	< 0,1 P 0,1 - 1
	0% 20	< 0,1 P	< 0,1 - 1 < 0,1 P
	0% boiling p.	0,1 - 1 SP	< 0,1 P
bromic acid	20	< 0,1	< 0,11
bromine water	20	0,1 - 1	0,1 - 1
butane	20	< 0,1	< 0,1
calcium carbonate	20	< 0,1	< 0,1
calcium chloride	20	< 0,1	< 0,1
calcium chloride	20	< 0,1	< 0,1
calcium chloride	20	< 0,1	< 0,1
calcium hydroxide	20	< 0,1	< 0,1
calcium hypochlorite	20	< 0,1	< 0,1
calcium sulfate	20	< 0,1	< 0,1
carbon dioxide	20	< 0,1	< 0,1
carbon disulphide	20	< 0,1	< 0,1
carbon monoxide	20	< 0,1	< 0,1
carbon tetrachloride	20	>1	< 0,1
carbonic acid	20	Х	< 0,1
caustic potash	20	< 0,1	< 0,1
caustic soda	20	< 0,1	< 0,1
caustic soda 59	% 20	< 0,1	< 0,1

MEDIUM		Temp. Cº	STEEL 1.4301 304	STEEL 1.4404 316L
caustic soda	37%	20	< 0.1	< 0.1
chlorinated water		20	0,1 - 1	>1
chlorinated water		20	Х	х
chlorinated water		20	< 0,1	< 0,1
chlorine (dry)		20	< 0,1	< 0,1
chlorine (wet)		20	< 0,1	< 0,1
chloroacetic acid		20	>1	>1
chlorobenzene		20	< 0,1	< 0,1
chloroform		20	< 0,1	< 0,1
chromic acid		20	< 0,1	< 0,1
chromic acid		20	< 0,1	< 0,1
citric acid		20	< 0,1	< 0,1
citric acid		20	>1	>1
copper sulphate		20	< 0,1	< 0,1
cottonseed oil		20	< 0,1	< 0,1
cresol	30%	boiling p.	< 0,1	< 0,1
cupric chloride	50% 65%	boiling p.	0,1 - 1	0,1 - 1
cupric cyanide	65%	80 boiling p	< 0,1	< 0,1 0,1 - 1
cupric nitrate cycloheksane	05%	boiling p. 20	0,1 - 1 < 0,1	< 0,1
cycloheksanone		20	< 0,1	< 0,1
diethylamine	20%	20	>1	>1
dimethylaniline	2070	20	0,1 - 1	0,1 - 1
distilled water		20	0,1 - 1	0,1 - 1
electroplating solutions	50%	20	>1	>1
ethyl acetate	10%	20	< 0.1	< 0,1
ethyl chloride	25%	boiling p.	>1	< 0.1
ethylene glycol	50%	20	< 0,1	< 0,1
fatty acids	20%	boiling p.	< 0,1	< 0,1
ferrous sulphate	40%	boiling p.	< 0,1	0,1 - 1
fluorine gas (wet)	85%	95	>1	< 0,1
formaldehyde		20	< 0,1	< 0,1
formic acid	10%	10-100	0,1 - 1	< 0,1
formic acid	25%	20	< 0,1	< 0,1
formic acid	50%	20-80	0,1 - 1	< 0,1
formic acid	50%	boiling p.	>1	0,1 - 1
formic acid	5-10%	20	< 0,1	< 0,1
fosforan amonu	10%	80	>1	< 0,1
freon 12	50% 50%	24-40	0,1 - 1 > 1	< 0,1
fruit juices and pulp	90%	boiling p. 20	>1	0,1 - 1 < 0,1
furfural	10%	20	>1	>1
glucose	70%	20	>1	>1
glycerine hydrobromic acid	1%	boiling p.	< 0,1	< 0,1
hydrochloric acid	10%	boiling p.	0,1 - 1	< 0,1
hydrochloric acid	20%	boiling p.	>1	< 0,1
hydrochloric acid	20%	20	< 0,1	< 0,1
hydrochloric acid	80%	20	>1	< 0,1
hydrogen peroxide	100%	boiling p.	>1	< 0,1
hydroquinone		20	< 0,1	< 0,1

MATERIALS' CHEMICAL RESISTANCE

MEDIUM		Temp. Cº	STEEL 1.4301 304	STEEL 1.4404 316L
hypochlorous acid (chlorine water) iodine lactic acid lactic acid lactic acid lactic acid lactic acid lactic acid linseed oil magnesium chloride magnesium sulfate maleic acid methyl chloride methyl ethyl ketone milk mineral oils nickel chloride nickel sulphate nitric acid nitric acid nitric acid oil oils and fats oleic acid palmitic acid palmitic acid perchloric acid perchloric acid perchloric acid perchloric acid perchloric acid perchloric acid possphorous trichloride photographic solutions picric acid phosphoric acid phosphoric acid phosphoric acid phosphoric acid potassium cyanide potassium cyanide potassium cyanide potassium permanganate propane gas prussic acid sea water (natural) silver nitrate silver sulfate	10% 1% 5% 5% 10% 10% 50% 70% 20-90% 93% 0.5% 0.5% 1% 40%		1.4301	1.4404
sodium bicarbonate sodium carbonate sodium chloride sodium cyanide		20 20 20 20 20	< 0,1 < 0,1 < 0,1 < 0,1 < 0,1	< 0,1 < 0,1 < 0,1 < 0,1 < 0,1

MEDIUM Temp. C° STEEL 1.4301 1.4301 3040 316L sodium disulfide sodium ferrocyanide sodium hydroxide sodium hydroxide sodium hydroxide sodium hypochlorite sodium principle sodium principle sodium principle sodium principle sodium principle sodium sulfide sodi					
sodium disulfide sodium ferrocyanide sodium principle sodium principle sodium principle sodium sulfide sodium principle sodium principle sodium sulfide sodi	MEDIUM		Temp.	STEEL 1.4301	STEEL 1.4404
sodium ferrocyanide sodium hydroxide sodium hydroxide sodium hydroxide sodium hydroxide sodium principle sodium principle sodium principle sodium principle sodium sulfide sodium thiosulfate 50% 20 <0,1 <0,1 <0,1 sodium thiosulfate 50% 20 <0,1 <0,1 <0,1 sugarcane sap 20 <0,1 <0,1 <0,1 sulfur dioxide (dry) 20 <0,1 <0,1 <0,1 sulfur dioxide (dry) 20 <0,1 <0,1 <0,1 sulfur dioxide (wet) 20 <0,1 <0,1 sulfuridioxide (wet) 20 <0,1 <0,1 sulfuric acid 20 <0,1 <0,1 <0,1 sulfuric acid 20 <0,1 <0,1 <0,1 tin function and the sulfuric acid 20 <0,1 <0,1 <0,1 tin function acid 20 <0,1 <0,1 <0,1 tin function acid 20 <0,1 <0,1 <0,1 <0,1 <0,1 <0,1 <0,1 <0,			Cº	304	
sodium ferrocyanide 20 < 0,1	sodium disulfide		20	< 0,1	< 0,1
sodium hypochlorite 20 < 0,1	sodium ferrocyanide				
sodium hypochlorite 20 < 0,1	sodium hydroxide		20	< 0.1	
sodium principle 20 < 0,1	sodium hypochlorite		20	•	
sodium principle 20 0,1-1 >1 sodium sulfide 20 0,1-1 <0,1	sodium principle		20		
sodium principle 20 0,1-1 >1 sodium sulfide 20 0,1-1 <0,1	sodium principle		20	X	X
sodium sulfide 20 0,1-1 < 0,1	sodium principle		20	0,1 - 1	>1
sodium sulphate 20% 20 < 0,1	sodium sulfide		20	0,1 - 1	< 0,1
sodium thiosulfate 50% 20 < 0,1 < 0,1 stannic chloride 80% 20 > 1 < 0,1	sodium sulfide		20	0,1 - 1	< 0,1
stannic chloride 80% 20 >1 <0,1 stearic acid 20 0,1-1 <0,1	sodium sulphate	20%	20	< 0,1	< 0,1
stearic acid 20 0,1-1 < 0,1	sodium thiosulfate	50%	20	< 0,1	< 0,1
stearic acid 20 0,1-1 < 0,1	stannic chloride	80%	20	>1	< 0,1
sugar beet syrupe 20 < 0,1	stearic acid		20	0.1 - 1	
sugarcane sap 20 < 0,1	sugar beet syrupe		20		
sulfur dioxide (dry) 20 < 0,1	sugarcane sap			•	
sulfur dioxide (dry) 20 < 0,1	sulfur				
sulfur dioxide (wet) 20 < 0,1	sulfur dioxide (dry)				
sulfuric acid 20 < 0,1	sulfur dioxide (wet)		20	< 0,1	
sulfuric acid 20 < 0,1	sulfuric acid		20	< 0,1	< 0,1
sulfuric acid 20 < 0,1	sulfuric acid		20	< 0,1	< 0,1
sulfuric acid 20 x x sulfuric acid 20 < 0,1	sulfuric acid		20	< 0,1	< 0,1
sulfuric acid 20 < 0,1	sulfuric acid		20	< 0,1	< 0,1
sulfuric acid 20 < 0,1	sulfuric acid		20	Х	Х
sulfuric acid 20 < 0,1	sulfuric acid		20	< 0,1	< 0,1
sulfuric acid 20 < 0,1	sulfuric acid		20	< 0,1	< 0,1
sulphurous acid 20 < 0,1	sulfuric acid		20	< 0,1	< 0,1
tan liquor 20 >1 >1 tannin (tannic acid) nasycona 20 >1 0,1-1P tartaric acid 1g/l 20 0,1-1P 0,1-1P toluene 1 mg/l 20 <0,1	sulfuric acid		20	< 0,1	< 0,1
tannin (tannic acid) nasycona 20 >1 0,1-1P tartaric acid 1g/l 20 0,1-1P 0,1-1P toluene 1 mg/l 20 <0,1	•		20	< 0,1	< 0,1
tartaric acid 1g/l 20 0,1-1 P 0,1-1 P toluene 1 mg/l 20 <0,1	·				>1
toluene 1 mg/l 20 < 0,1 < 0,1 trichlorethylene 20 < 0,1		nasycona			
trichlorethylene 20 < 0,1		٥,			
triethylamine 20 < 0,1		1 mg/l			
trisodium phosphate 20 0,1-1 P < 0,1 P	•			•	
Turpentine 20 < 0,1	•				
urea (carbamide) 20 < 0,1	· · ·				
urine 20 < 0,1 < 0,1 vinegar 10% 20 x x water ("acid mine") 20 < 0,1	•				
vinegar 10% 20 x x water ("acid mine") 20 < 0,1				•	
water ("acid mine") 20 < 0,1		100/			
water (fresh) 20 0,1-1 < 0,1	•	10%			
water (salt) 20 0,1 - 1 < 0,1 whisky 12,5% Cl 20 x x wine 20% 50 < 0,1				-	
whisky 12,5% Cl 20 x x wine 20% 50 < 0,1	· · ·				
wine 20% 50 < 0,1 < 0,1 xylene 20% 100 < 0,1		12 5% CI			
xylene 20% 100 < 0,1 < 0,1 zinc chloride 40% 100 0,1 -1 < 0,1	•	•			
zinc chloride 40% 100 0,1 -1 < 0,1					
Zine dinoride	•				
Zine suipriate		4070			
	Zinc sulpriate		_0	. 3,1	. 0,1

TABLE DESCRIPTION

corrosion coefficient (mm/year)

 <0,1
 complete
 partial
 non resistant
 lack of data

corrosion factor
stress corossion risk
pit corossion risk
pit corossion risk

FLOOR DRAINS





HOW TO READ CATALOGUE SYMBOLS

W	Wm	D	Dm	XXX	YYY	V	Н	В	D	K	P	S
						1	2					
W	heavy du			XXX up		H h	orizontal	В	Perfora	ted sheet	grating	
Wm	with squ mini floc				art mension	1 si	ingle part	D	Ladder	grating		
VVIII	square u						5 1	K	Anti-slip	o grating		
D	heavy du					V ve	ertical	Р	Plate gr	ating		
Dm	with rou mini floc round up	r drain w	⁄ith		utlet ameter	2 t\	wo part	S	Plate gra gasket (ating with so called	circumfe 'tight cove	rence er')

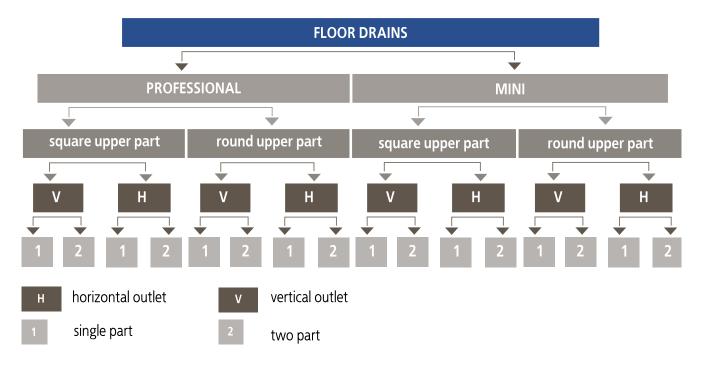
EXAMPLE 1

W300/110H2-B – it is professional floor drain with square lower part 300x300 [mm], with DN 110 [mm] outlet, horizontal, two-part, with perforated sheet grating.

EXAMPLE 2

D255/110V1-S is the floor drain: heavy duty with round upper part 255 [mm], with DN 110 [mm] outlet, vertical, single-part, with tight cover (plate grating with circumference gasket).

FIND THE FLOOR DRAIN YOU REQUIRE



SELECTING THE FLOOR DRAINS

The appropriate floor drains are selected based on 2 main parameters:

- 1. Amount of drained wastewater (appropriate draining diameter and upper part dimension).
- 2. The load value, type and intensity (the load-bearing component is the grating, which can withstand a given load depending on its type and height).

FLOOR DRAINS

THE EXAMPLE OF SINGLE-PART FLOOR DRAIN

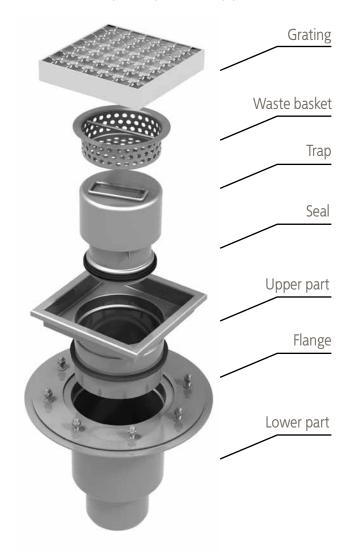


DESCRIPTION OF THE FLOOR DRAINS COMPONENTS

Bodies – round shape limits waste accumulation and enables easy waste removal. The welded joints are grinded to remove sharp edges and ensure safe installation or cleaning.

Gratings – available in various shapes, dimensions and finishing versions. The gratings are selected according to the loads and location of installation. We offer the following grating types: mesh anti-slip, ladder, plate and perforated sheet.

THE EXAMPLE OF TWO-PART FLOOR DRAIN



Waste baskets - recommended when the drained wastewater has a high content of solids.

Strainers – used when the amount of solids is small

Traps – very functional and easy to maintain. Ensures easy access to the sewer, quick cleaning and offers a possibility of checking for locks.

Flanges – used when it's necessary to drain water from horizontal systems installed under the floor.

PERMISSIBLE LOAD CLASSES FOR FLOOR DRAIN GRATINGS

Gratings for floor drains type W200, dimension 163x163 mm

Grating height [mm]	Perforated sheet grating - B	Mesh grating - K	Ladder grating - D	Plate grating - P
20	Н	K	M	M
30	L	L	M	M
40	L	M	M	M
н -	1,5 kN K	- 3 kN L -	15 kN M	- 125 kN

Gratings for floor drains type W250, dimension 213x213 mm

Grating height [mm]	Perforated sheet grating - B	Mesh grating - K	Ladder grating - D	Plate grating - P
20 30 40	- L L	– L M	– M M	– M M
Н -	1,5 kN K	- 3 kN L -	15 kN M	- 125 kN

Gratings for floor drains type W300, dimension 265x265 mm

Grating height [mm]	Perforated sheet grating - B	Mesh grating - K	Ladder grating - D	Plate grating - P
20	-	-	- NA	-
30 40	L	M	M M	M M
Н -	1,5 kN K	- 3 kN L -	15 kN M	- 125 kN

Gratings for floor drains type W400, dimension 365x365 mm

Grating height [mm] Perforated sheet graitng - B		Mesh grating - K	Ladder grating - D	Plate grating - P
20 30 40	– К К	- L L	– M M	– M M
Н -	1,5 kN K	- 3 kN L -	15 kN M	- 125 kN

Please note that the stated load classes are assumed for ideal load conditions (static). In reality the loads on gratings are much more complex (dynamic).

Therefore, when selecting gratings, one should pay attention to several important details and ask such questions as:

- Will the grating be loaded (with a pallet of specific weight)?
- Will it be loaded with a forklift, if yes, what wheel type and size will the forklift be fitted with?
- Should this be a forklift truck (vehicle), then what

will be the travel intensity. Several times a day, several dozen times a day or even several hundred times a day?

Only such information, together with the weight (forklift, pallet) will give us a full picture when selecting appropriate load class.

Bear in mind that with high intensity (repetitions) of even the smallest load, lower than the specified one, it is better to assume higher load class.

FLOOR DRAINS

LOAD RESSISTANCE OF FLOOR DRAINS MOUNTED INSIDE THE BUILDINGS ACCORDING TO PN-EN 1253-1 STANDARDS.

Below we present indications that need to be taken into consideration when selecting proper load class.

Class H 1.5

Appropriate for flat roofs (which do not perform any other function like terrace), covered with roofing paper with gravel.

Class K3

Covers the places for only pedestrian use (e.g. toilets, swimming pools built inside, balconies, basements, patios).

Class L 15

It is used when floor drains are installed in public use places, where vehicular traffic intensity is low, excluding fork lifts.

Class M 125

Required in areas with intensive vehicular traffic (e.g. halls, warehouses, garages)

INSTALLATION OF SINGLE-PART FLOOR DRAINS

- 1. Make sure the drain pipe is at the correct height.
- 2. During concrete pouring, the upper part should be

- 1-1,5 [mm] below the floor level.
- 3. Next floor layers can be made when the upper part is stabilized.
- 4. During concrete pouring make sure, that the upper part clearance is not narrowed.
- 5. Make sure concrete gets to all places, even difficult of access ones.

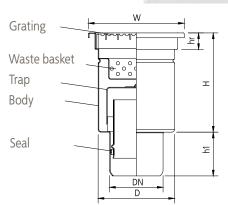
INSTALLATION OF TWO-PART FLOOR DRAINS

- 1. First, put the lower part of the floor drain in the structural part of the floor. The lower part should be placed in the hollow of 15-20 [mm] to ensure adequate draining of the condensate from the damp-proof course.
- 2. Make the damp-proof course and secure it with the clamping ring of the lower part.
- 3. Next, position the upper part on the required level. The upper part edge should be placed about 1-1,5 [mm] below the floor level.
- 4. Next floor layers can be made when the upper part is stabilized.
- 5. During concrete pouring make sure that the upper part clearance is not narrowed.
- 6. Make sure concrete gets to all places, even difficult of access ones.



heavy duty FLOOR DRAINS vertical with square upper part single-part





* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Symbol		W200/75V1	W200/110V1	W250/110V1	W300/160V1	W400/200V1
Catalogue number mat. 304		00.005075 - *	00.005110 - *	00.001110 - *	00.001160 - *	00.001200 - *
	DN	75	110	110	160	200
	Н	194	194	234	244	354
Dimensions [mm]	h1	90	90	90	90	90
Billiensions [min]	D	157	157	193	255	348
	W	200x200	200x200	250x250	300x300	400x400
	hr	30	30	30	30	30

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



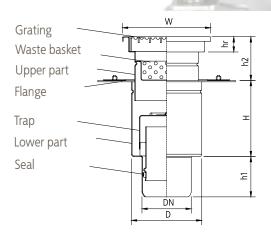
perforated sheet grating symbol – B



plate grating symbol - P

heavy duty FLOOR DRAINS vertical with square upper part two-part





* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Syn	nbol	W200/75V2	W200/110V2	W250/110V2	W300/160V2	W400/200V2
Catalogue number mat. 304		00.006075 - *	00.006110 - *	00.002110 - *	00.002160 - *	00.002200 - *
	DN	75	110	110	160	200
	Н	160	160	200	210	320
Dimensions [mm]	h1	90	90	90	90	90
Siliensions [illin]	h2	50-120	50-120	50-160	50-160	50-160
	D	157	157	193	255	348
	W	200x200	200x200	250x250	300x300	400x400
	hr	30	30	30	30	30

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



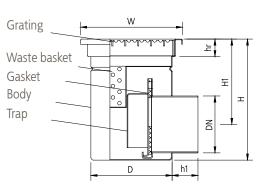
perforated sheet grating symbol – B



plate grating symbol - P

heavy duty **FLOOR DRAINS** horizon tal with square upper part single-part





* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Syn	nbol	W200/75H1	W200/110H1	W250/110H1	W300/160H1	W400/200H1
Catalogue number mat. 304		00.007075 - *	00.007110 - *	00.003110 - *	00.003160 - *	00.003200 - *
	DN	75	110	110	160	200
	Н	224	224	244	294	354
Dimensions [mm]	H1	170	150	170	194	232
Dimensions [mm]	h1	60	60	60	90	90
	D	157	157	193	255	348
	W	200x200	200x200	250x250	300x300	400x400
	hr	30	30	30	30	30

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



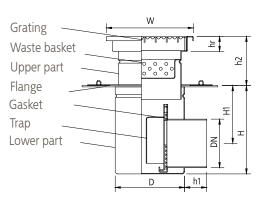
perforated sheet grating symbol – B



plate grating symbol - P

heavy duty **FLOOR DRAINS** horizontal with square upper part two-part





* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Syn	nbol	W200/75H2	W200/110H2	W250/110H2	W300/160H2	W400/200H2
Catalogue number mat. 304		00.008075 - *	00.008110 - *	00.004110 - *	00.004160 - *	00.004200 - *
	DN	75	110	110	160	200
	Н	190	190	210	260	320
Dimensions [mm]	H1	135	120	140	160	200
Dimensions [mm]	h1	60	60	60	90	90
	h2	50-120	80-120	50-160	50-160	50-160
	D	157	157	193	255	348
	W	200x200	200x200	250x250	300x300	400x400
	hr	30	30	30	30	30

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



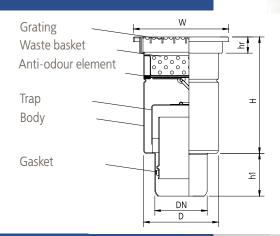
perforated sheet grating symbol – B



plate grating symbol - P

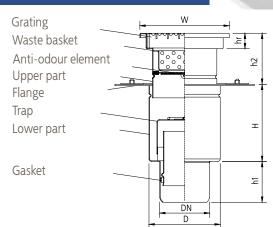
anti-scent FLOOR DRAINS vertical with square upper part single-part





anti-scent FLOOR DRAINS vertical with square upper part two-part



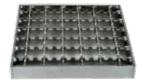


Symbol		Wa200/110V1	Wa200/110V2
Catalogue number mat. 304		00.021110 - *	00.022110 - *
	DN	110	110
	Н	245	160
Dimensions [mm]	h1	90	90
Dimensions [mm]	h2	-	50-120
	D	157	157
	W	200x200	200x200
	hr	30	30

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

You can find classes of permissible loads of floor drain gratings on page 17.

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mesh anti-slip grating symbol – K



ladder grating symbol – D



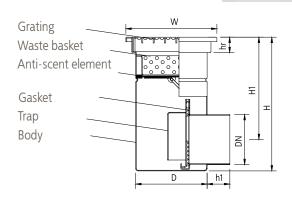
perforated sheet grating symbol – B



plate grating symbol - P

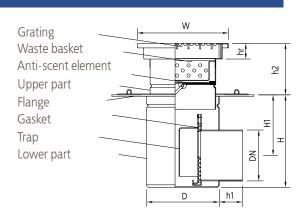
anti-scent FLOOR DRAINS horizontal with square upper part single-part





anti-scent FLOOR DRAINS horizontal with square upper part two-part





Symbol		Wa200/110H1	Wa200/110H2
Catalogue number mat. 304		00.023110 - *	00.024110 - *
	DN	110	110
	Н	274	190
Dimensions [mm]	H1	205	120
Siliterisions [illini]	h1	60	90
	h2	-	80-120
	D	157	157
	W	200x200	200x200
	hr	30	30

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



perforated sheet grating symbol – B

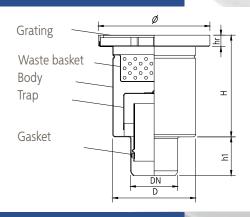


plate grating symbol - P

heavy duty **FLOOR DRAINS** vertical with round upper part single-part

WITH OUTLET DN 110

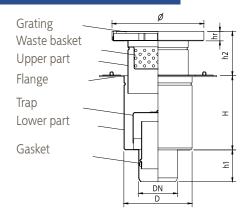




heavy duty FLOOR DRAINS vertical with round upper part two-part

WITH OUTLET DN 110





* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Syn	nbol	D200/110V1	D255/110V1	D200/110V2	D255/110V2
Catalogue nui	mber mat. 304	00.015110 - *	00.009110 - *	00.016110 - *	00.010110 - S
	DN	110	110	110	110
	Н	187	227	160	200
	h1	90	90	90	90
Dimensions [mm]	h2	-	-	45-110	45-160
	D	157	193	157	193
	Ø	200	255	200	255
	hr	25	25	25	25

You can find classes of permissible loads of floor drain gratings on page 17.

GRATING SYMBOLS



plate grating symbol – P



mesh anti-slip grating symbol – K



ladder grating symbol – B

Suction cup is used to remove floor drain's tight cover grating. Suction cup is an additional element – it is not sold as a part of floor drain.



In case of floor drains with tight cover grating we use 8mm thick plate grating with circumferential gasket.



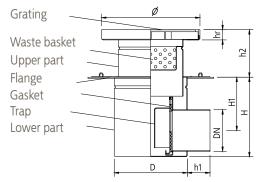
tight cover grating symbol - S

heavy duty FLOOR DRAINS horizontal with round upper part single-part



heavy duty FLOOR DRAINS horizontal with round upper part two-part





* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

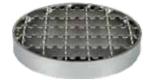
Sym	ıbol	D200/110H1	D255/110H1	D200/110H2	D255/110H2
Catalogue number mat. 304		00.017110 - *	00.011110 - *	00.018110 - *	00.012110 - *
	DN	110	110	110	110
	Н	217	237	190	210
	H1	145	165	120	140
Dimensions [mm]	h1	60	60	60	60
	h2	-	-	45-120	45-120
	D	157	193	157	193
	Ø	200	255	200	255
	Hr	25	25	25	25

You can find classes of permissible loads of floor drain gratings on page 17.

GRATING SYMBOLS



plate grating symbol – P



mesh anti-slip grating symbol – K



ladder grating symbol – B

Suction cup is used to remove floor drain's tight cover grating. Suction cup is an additional element – it is not sold as a part of floor drain.



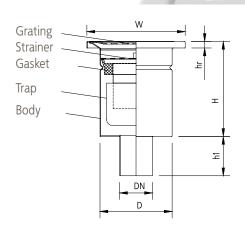
In case of floor drains with tight cover grating we use 8mm thick plate grating with circumferential gasket.



tight cover grating symbol - S

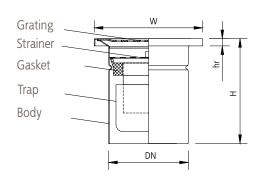
mini FLOOR DRAINS vertical with square upper part single-part





WITH OUTLET DN 50





WITH OUTLET DN 110

Symbol		Wmk150/50V1	Wmk150/75V1	Wmk150/110V1
Catalogue number mat. 304		00.056050 - *	00.056075 - *	00.056110 - *
	DN	50	75	110
	Н	150	150	150
Dimensions [mm]	h1	60	60	-
Dimensions (mm)	D	110	110	110
	W	150x150	150x150	150x150
	Hr	2	2	2

Symbols and numbers can be used alternatively.

You can find classes of permissible loads of floor drain gratings on page 17.

FOR MINI FLOOR DRAIN WMK150 THERE IS ONLY PERFORATED SHEET (B) GRATING AVAILABLE

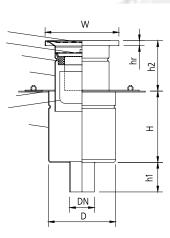


perforated sheet grating symbol – B

mini FLOOR DRAINS vertical with square upper part two-part



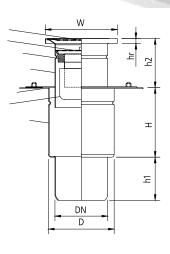
Grating Strainer Gasket Upper part Flange Trap Lower part



WITH OUTLET DN 50



Grating Strainer Gasket Upper part Flange Trap Lower part



WITH OUTLET DN 110

Symbol		Wmk150/50V2	Wmk150/75V2	Wmk150/110V2
Catalogue number mat. 304		00.057050 - *	00.057075 - *	00.057110 - *
	DN	50	75	110
	Н	140	140	140
Dimensions [mm]	h1	60	60	90
Difficusions [mm]	h2	50-130	50-130	50-130
	D	137	137	137
	W	150x150	150x150	150x150
	Hr	2	2	2

Symbols and numbers can be used alternatively.

You can find classes of permissible loads of floor drain gratings on page 17.

FOR MINI FLOOR DRAIN WMK150 THERE IS ONLY PERFORATED SHEET (B) GRATING AVAILABLE

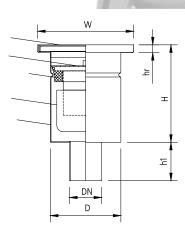


perforated sheet grating symbol – B

mini FLOOR DRAINS vertical with square upper part single-part



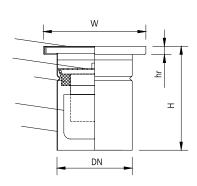
Grating Strainer Gasket Trap Body



WITH OUTLET DN 50



Grating Strainer Gasket Trap Body



WITH OUTLET DN 110

Symbol		Wm150/50V1	Wm150/75V1	Wm150/110V1
Catalogue number mat. 304		00.032050 - *	00.032075 - *	00.0032110 - *
	DN	50	75	110
	Н	150	150	150
Dimensions [mm]	h1	60	60	-
Dimensions (min)	D	110	110	110
	W	150x150	150x150	150x150
	Hr	10	10	10

Symbols and numbers can be used alternatively.

You can find classes of permissible loads of floor drain gratings on page 17.

FOR MINI FLOOR DRAIN WM150 THERE IS ONLY LADDER (D) GRATING AVAILABLE

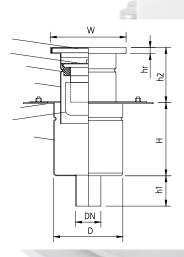


ladder grating symbol – D

mini FLOOR DRAINS vertical with square upper part two-part



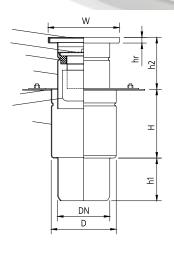
Grating Strainer Gasket Upper part Flange Trap Lower part



WITH OUTLET DN 50



Grating Strainer Gasket Upper part Flange Trap Lower part



WITH OUTLET DN 110

Symbol		Wm150/50V2	Wm150/75V2	Wm150/110V2
Catalogue number mat. 304		00.033050 - *	00.033075 - *	00.057110 - *
	DN	50	75	110
	Н	140	140	140
Dimensions [mm]	h1	60	60	90
Dimensions [mm]	h2	50-130	50-130	50-130
	D	137	137	137
	W	150x150	150x150	150x150
	Hr	10	10	10

Symbols and numbers can be used alternatively.

You can find classes of permissible loads of floor drain gratings on page 17.

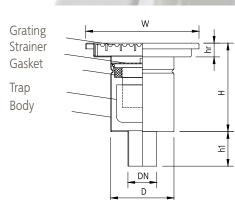
FOR MINI FLOOR DRAIN WM150 THERE IS ONLY LADDER (D) GRATING AVAILABLE



ladder grating symbol – D

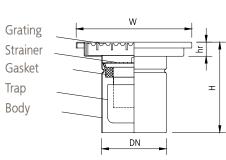
mini FLOOR DRAINS vertical with square upper part single-part





WITH OUTLET DN 50





WITH OUTLET DN 110

Symbol		Wm200/50V1	Wm200/75V1	Wm200/110V1
Catalogue number mat. 304		00.030050 - *	00.030075 - *	00.030110 - *
	DN	50	75	110
	Н	154	154	154
Dimensions [mm]	h1	60	60	-
Dimensions (mm)	D	110	110	110
	W	200x200	200x200	200x200
	Hr	20	20	20

*Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



perforated sheet grating symbol – B

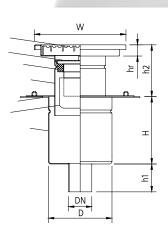


plate grating symbol - P

mini FLOOR DRAINS vertical with square upper part two-part



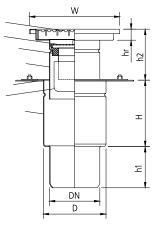
Grating Strainer Gasket Upper part Flange Trap Lower part



WITH OUTLET DN 50



Grating Strainer Gasket Upper part Flange Trap Lower part



WITH OUTLET DN 110

Symbol		Wm200/50V2	Wm200/75V2	Wm200/110V2
Catalogue number mat. 304		00.031050 - *	00.031075 - *	00.031110 - *
Dimensions [mm]	DN	50	75	110
	Н	140	140	140
	h1	60	60	90
	h2	50-130	50-130	50-130
	D	137	137	137
	W	200x200	200x200	200x200
	Hr	20	20	20

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



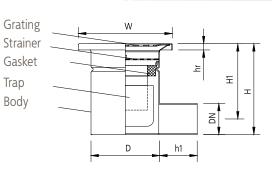
perforated sheet grating symbol – B



plate grating symbol - P

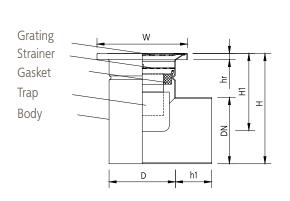
mini FLOOR DRAINS horizontal with square upper part single-part





WITH OUTLET DN 50





WITH OUTLET DN 110

Symbol		Wmk150/50H1	Wmk150/75H1	Wmk150/110H1
Catalogue number mat. 304		00.058050 - *	00.058075 - *	00.058110 - *
Dimensions [mm]	DN	50	75	110
	Н	150	150	185
	H1	120	105	130
	h1	60	60	60
	D	110	110	110
	W	150x150	150x150	150x150
	Hr	2	2	2

* Symbols and numbers can be used alternatively.

You can find classes of permissible loads of floor drain gratings on page 17.

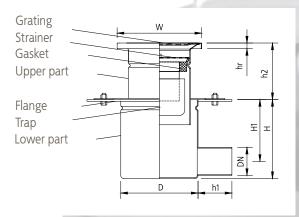
FOR MINI FLOOR DRAIN WMK150 THERE IS ONLY PERFORATED SHEET (B) GRATING AVAILABLE



perforated sheet grating symbol – B

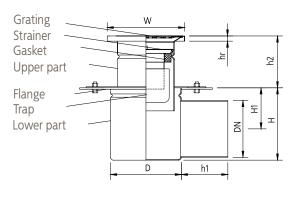
mini FLOOR DRAINS horizontal with square upper part two-part





WITH OUTLET DN 50





WITH OUTLET DN 110

Symbol		Wmk150/50H2	Wmk150/75H2	Wmk150/110H2
Catalogue number mat. 304		00.059050 - *	00.059075 - *	00.059110 - *
Dimensions [mm]	DN	50	75	110
	Н	140	140	140
	H1	103	90	80
	h1	60	60	60
	h2	50-130	50-130	50-130
	D	137	137	137
	W	150x150	150x150	150x150
	Hr	2	2	2

Symbols and numbers can be used alternatively.

You can find classes of permissible loads of floor drain gratings on page 17.

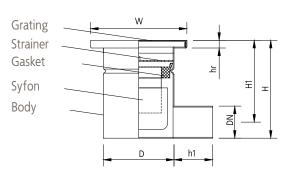
FOR MINI FLOOR DRAIN WMK150 THERE IS ONLY PERFORATED SHEET (B) GRATING AVAILABLE



perforated sheet grating symbol – B

mini FLOOR DRAINS horizontal with square upper part single-part

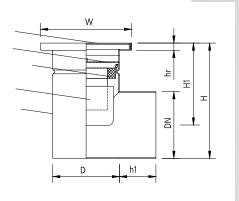




WITH OUTLET DN 50







WITH OUTLET DN 110

Symbol		Wm150/50H1	Wm150/75H1	Wm150/110H1
Catalogue number mat. 304		00.042050 - *	00.042075 - *	00.042110 - *
Dimensions [mm]	DN	50	75	110
	Н	150	150	190
	H1	120	110	135
	h1	60	60	60
	D	110	110	110
	W	150x150	150x150	150x150
	Hr	10	10	10

Symbols and numbers can be used alternatively.

You can find classes of permissible loads of floor drain gratings on page 17.

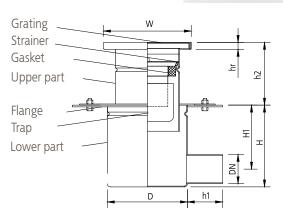
FOR MINI FLOOR DRAIN WM150 THERE IS ONLY LADDER (D) GRATING AVAILABLE



ladder grating symbol – D

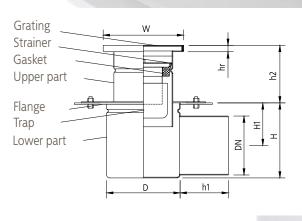
mini FLOOR DRAINS horizontal with square upper part two-part





WITH OUTLET DN 50





WITH OUTLET DN 110

Symbol		Wm150/50H2	Wm150/75H2	Wm150/110H2
Catalogue number mat. 304		00.043050 - *	00.043075 - *	00.043110 - *
	DN	50	75	110
	Н	140	140	140
Dimensions [mm]	H1	103	90	80
Billicisions [IIIII]	h1	60	60	90
	h2	50-130	50-130	50-130
	D	137	137	137
	W	150x150	150x150	150x150
	Hr	10	10	10

Symbols and numbers can be used alternatively.

You can find classes of permissible loads of floor drain gratings on page 17.

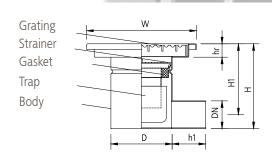
FOR MINI FLOOR DRAIN WM150 THERE IS ONLY LADDER (D) GRATING AVAILABLE



ladder grating symbol – D

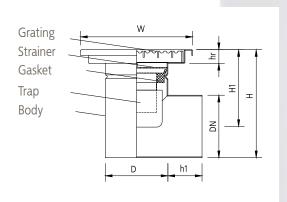
mini FLOOR DRAINS horizontal with square upper part single-part





WITH OUTLET DN 50





WITH OUTLET DN 110

Symbol		Wm200/50H1	Wm200/75H1	Wm200/110H1
Catalogue number mat. 304		00.040050 - *	00.040075 - *	00.040110 - *
	DN	50	75	110
	Н	154	154	194
Dimensions [mm]	H1	127	114	140
Dimensions [mm]	h1	60	60	90
	D	110	110	110
	W	200x200	200x200	200x200
	Hr	20	20	20

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).v

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



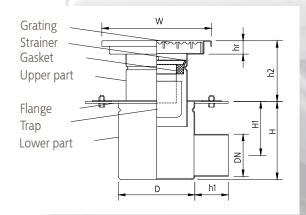
perforated sheet grating symbol – B



plate grating symbol - P

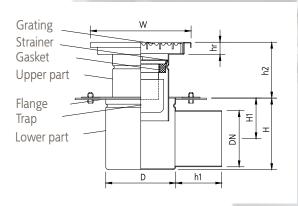
mini FLOOR DRAINS horizontal with square upper part two-part





WITH OUTLET DN 50





WITH OUTLET DN 110

Symbol		Wm200/50H2	Wm200/75H2	Wm200/110H2
Catalogue number mat. 304		00.041050 - *	00.041075 - *	00.041110 - *
	DN	50	75	110
	Н	140	140	140
Dimensions [mm]	H1	103	90	80
Dimensions [mm]	h1	60	60	90
	h2	50-130	50-130	50-130
	D	137	137	137
	W	200x200	200x200	200x200
	Hr	20	20	20

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

You can find classes of permissible loads of floor drain gratings on page 17.



mesh anti-slip grating symbol – K



ladder grating symbol – D



perforated sheet gratin1g symbol - B

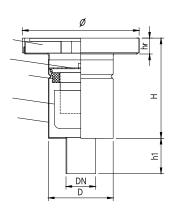


plate grating symbol - P

mini FLOOR DRAINS vertical with round upper part single-part

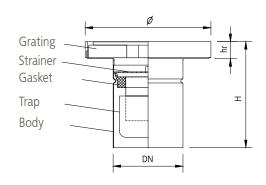


Grating Strainer Gasket Trap Body



WITH OUTLET DN 50





Suction cup is used to remove floor drain's tight cover grating. Suction cup is an additional element – it is not sold as a part of floor drain.

WITH OUTLET DN 110

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Syn	ıbol	Dm160/50V1	Dm200/50V1	Dm160/75V1	Dm200/75V1	Dm160/110V1	Dm200/110V1
Catalogue nur	nber mat. 304	00.036050 - *	00.034050 - *	00.036075 - *	00.034075 - *	00.036110 - *	00.034110 -*
	DN	50	50	75	75	110	110
	Н	165	165	165	165	165	165
Dimensions [mm]	h1	60	60	60	60	-	-
Dimensions [mm]	D	110	110	110	110	110	110
	Ø	160	200	160	200	160	200
	hr	25	25	25	25	25	25

You can find classes of permissible loads of floor drain gratings on page 17.

In case of floor drains with tight cover grating we use 8mm thick plate grating with circumferential gasket.



plate grating symbol – P



mesh anti-slip grating symbol – K



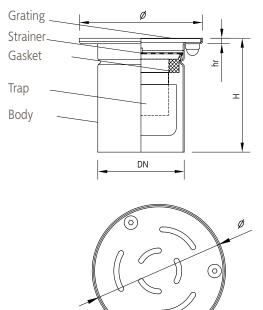
ladder grating symbol – B



tight cover grating symbol - S

mini FLOOR DRAINS vertical with round upper part single-part





* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Symbol		Dms160/110 V1	
Catalogue number mat. 304		00.038110 - P	
	DN	110	
	Н	145	
Dimensions [mm]	D	110	
	Ø	160	
	hr	5	

You can find classes of permissible loads of floor drain gratings on page 17.

GRATING SYMBOL



There is only 5mm thick plate perforated sheet (P) available for floor drain Dms160/110V1.

mini FLOOR DRAINS vertical with round upper part two-part

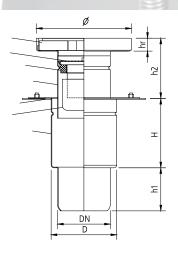


Grating
Strainer
Gasket
Upper part
Flange
Trap
Lower part

WITH OUTLET DN 50



Grating Strainer Gasket Upper part Flange Trap Lower part



Suction cup is used to remove floor drain's tight cover grating. Suction cup is an additional element – it is not sold as a part of floor drain.

WITH OUTLET DN 110

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Syn	ıbol	Dm160/50V2	Dm200/50V2	Dm160/75V2	Dm200/75V2	Dm160/110V2	Dm200/110V2
Catalogue nur	mber mat. 304	00.037050 - *	00.035050 - *	00.037075 - *	00.035075 - *	00.037110 - *	00.035110 - *
	DN	50	50	75	75	110	110
	Н	140	140	140	140	140	140
Dimensions [mm]	h1	60	60	60	60	90	90
Dimensions [mm]	h2	50-130	50-130	50-130	50-130	50-130	50-130
	D	137	137	137	137	137	137
	Ø	160	200	160	200	160	200
	hr	25	25	25	25	25	25

You can find classes of permissible loads of floor drain gratings on page 17.

In case of floor drains with tight cover grating we use 8mm thick plate grating with circumferential gasket.



plate grating symbol – P



mesh anti-slip grating symbol – K



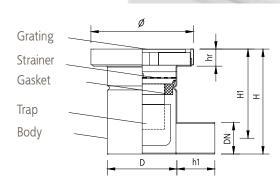
ladder grating symbol – B



tight cover grating symbol - S

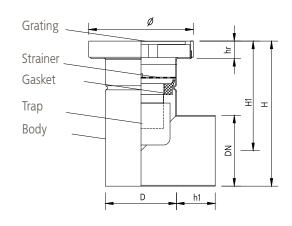
mini FLOOR DRAINS horizontal with round upper part single-part





WITH OUTLET DN 50





Suction cup is used to remove floor drain's tight cover grating. Suction cup is an additional element – it is not sold as a part of floor drain

WITH OUTLET DN 110

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

	•					•	
Syn	nbol	Dm160/50H1	Dm200/50H1	Dm160/75H1	Dm200/75H1	Dm160/110H1	Dm200/110H1
Catalogue nur	mber mat. 304	00.046050 - *	00.044050 - *	00.046075 - *	00.044075 - *	00.046110 - *	00.044110 - *
	DN	50	50	75	75	110	110
	Н	165	165	165	165	207	207
Dimensions [mm]	H1	140	140	127	127	152	152
Dimensions [mm]	h1	60	60	60	60	60	60
	D	110	110	110	110	110	110
	Ø	160	200	160	200	160	200
	hr	25	25	25	25	25	25

You can find classes of permissible loads of floor drain gratings on page 17.

In case of floor drains with tight cover grating we use 8mm thick plate grating with circumferential gasket.



plate grating symbol – P



mesh anti-slip grating symbol – K



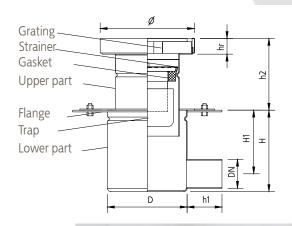
ladder grating symbol – B



tight cover grating symbol - S

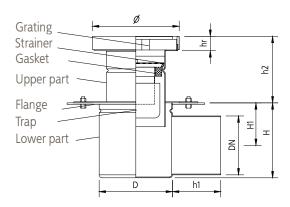
mini FLOOR DRAINS vertical with square upper part two-part





WITH OUTLET DN 50





Suction cup is used to remove floor drain's tight cover grating. Suction cup is an additional element — it is not sold as a part of floor drain

WITH OUTLET DN 110

* Number or symbol of the floor drain needs to be completed with the proper grating symbol (symbols and numbers can be used alternatively).

Syn	nbol	Dm160/50H2	Dm200/50H2	Dm160/75H2	Dm200/75H2	Dm160/110H2	Dm200/110H2
Catalogue nur	mber mat. 304	00.047050 - *	00.045050 - *	00.047075 - *	00.045075 - *	00.047110 - *	00.045110 - *
	DN	50	50	75	75	110	110
	Н	140	140	140	140	140	140
	H1	103	103	90	90	80	80
Dimensions [mm]	h1	60	60	60	60	90	90
	h2	50-130	50-130	50-130	50-130	50-130	50-130
	D	137	137	137	137	137	137
	Ø	160	200	160	200	160	200
	hr	25	25	25	25	25	25

You can find classes of permissible loads of floor drain gratings on page 17.

In case of floor drains with tight cover grating we use 8mm thick plate grating with circumferential gasket.



plate grating symbol – P



mesh anti-slip grating symbol – K



ladder grating symbol – B



tight cover grating symbol - S



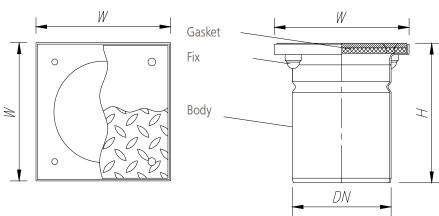
Our systems can be used to solve draining problems in different industrial areas (hospitals, hotels, restaurants, chemical and pharmaceutical plants). Rodding eyes are manufactured in austenitic stainless grades AISI304 or AISI316. Edge finishing allows installation in different types of floor.

We offer rodding eyes for severage tubes from DN110.

Symbol	Catalogue number	Dimensions [mm]		
		DN	110	
Rw 150/110	050110 - *	W	150	
		Н	150	
		DN	110	
Rw 200/110	05110 - *	W	200	
		Н	150	
		DN	160	
Rw 200/160	051160 - *	W	200	
		Н	140	
	052160 - *	DN	160	
Rw 250/160		W	250	
		Н	140	
		DN	200	
Rw 250/200	052200 - *	W	250	
		Н	140	
		DN	160	
Rw 300/160	053160 - *	W	300	
		Н	140	
		DN	200	
Rw 300/200	053200 - *	W	300	
		Н	140	



RODDING EYES



COVER TYPES

Anti-slip cover

Smooth cover



ANTI-SLIP COVER

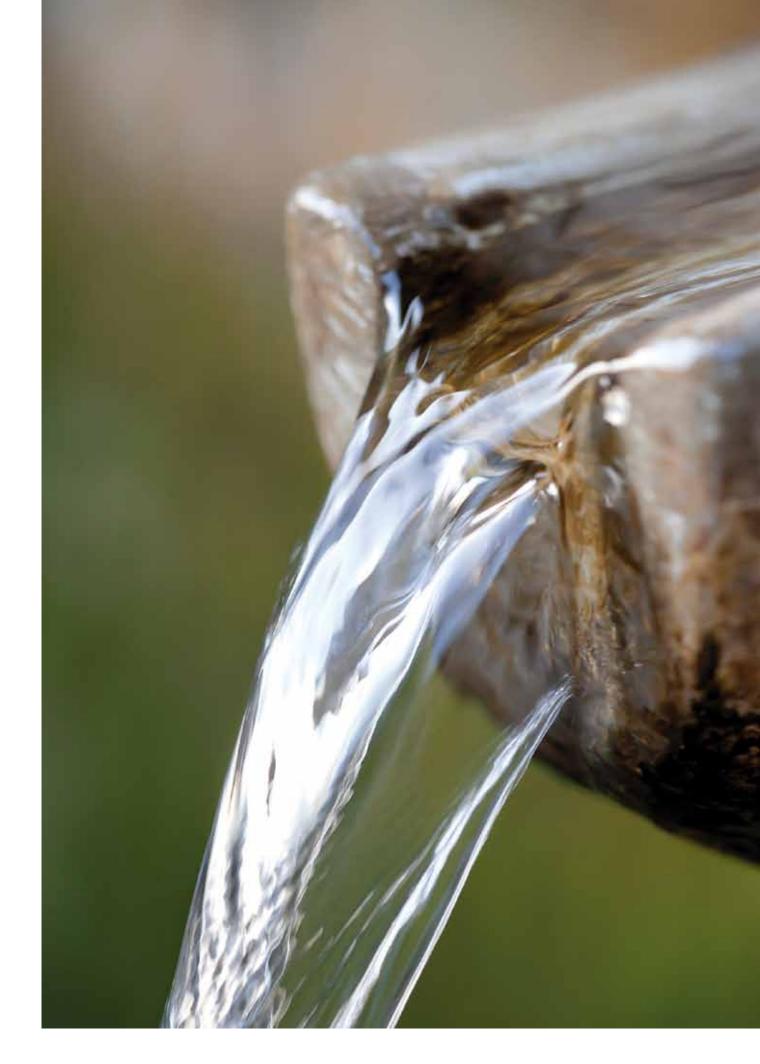
SMOOTH COVER



RODDING EYES COMPONENTS

- body,
- screw lock cover,
- gasket.

LINEAR DRAINAGE



STANDARD CHANNELS



Standard channels are made of stainless steel and they are used to drain water from the floor and discharge it to the sewerage. This type of drainage finds application in food processing plants (breweries, dairy plants, slaughterhouses), chemical plants, restaurants, hospitals etc. Standard channels are also used in the facilities, where the sanitary regulations and technological process require using stainless steel drainage systems.

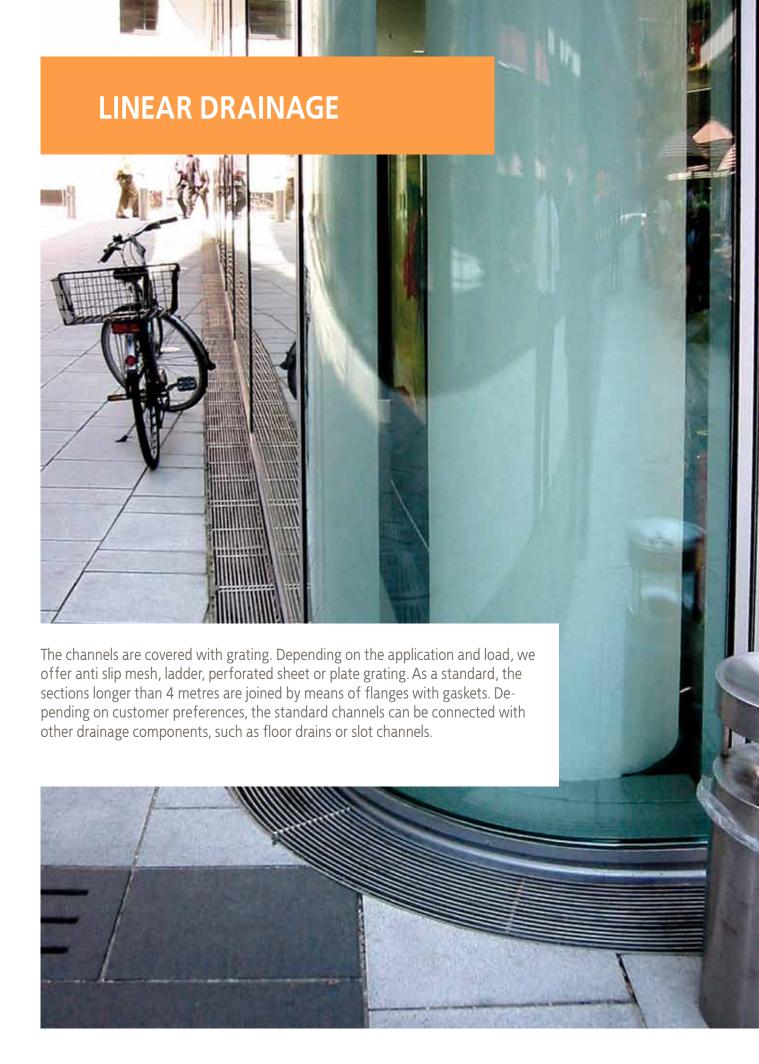
MANUFACTURING TECHNOLOGY

The standard drainage channels are manufactured in a wide range of sizes and shapes. They are made "to order"; the custom-made drawing is prepared as a result of cooperation between the client, its design or process engineer and the ATT staff. As a standard, the channels are made of 2 [mm] AISI 304 or AISI 316 sheets. The channels have in-built

inclination.

To facilitate installation, each channel is equipped with levelling bolts and anchoring elements for correct height adjustment and placement in concrete.







ADVANTAGES

- draining a large amount of water,
- are easily configurable and can be joined at a required angle with other standard or slot channels,
- can be covered with a variety of gratings,
- easy access in cleaning purposes (rounded internal edges, replaceable gratings, trapped waste basket),
- the channel edges can be adapted to floor type (additional tile flanging, angle for expansion joints),
- the rodding eye to the sewer is located in the outlet.

DESIGN SYMBOLS

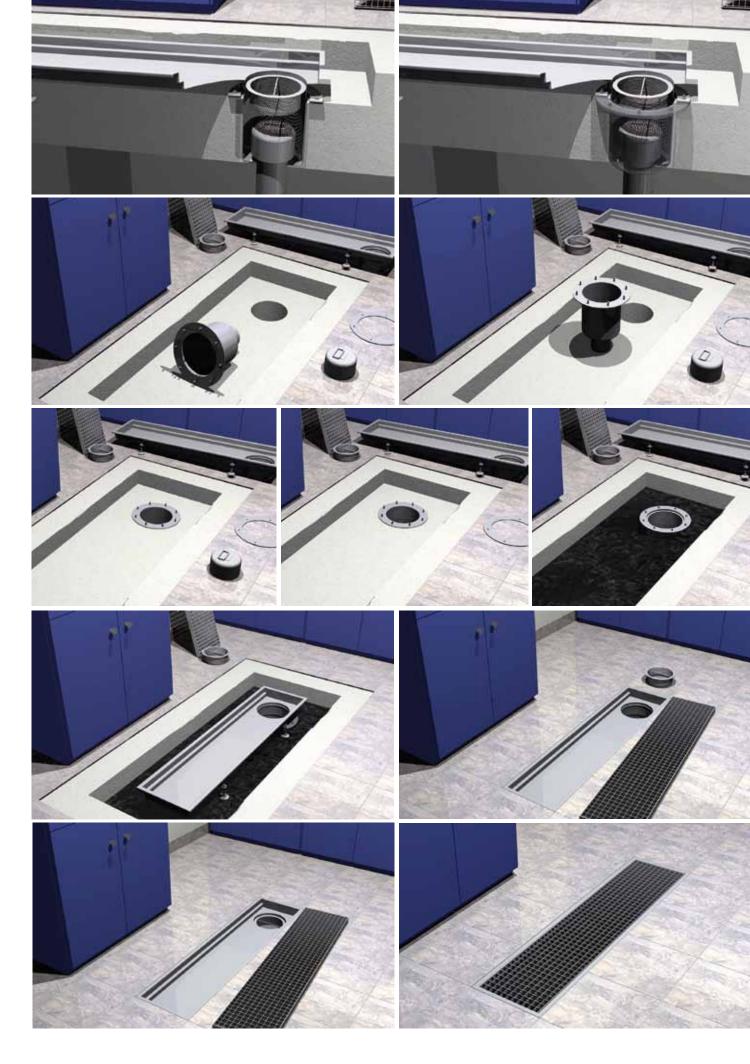
The standard channels are designated by their external width (S150, S200, S220......S600...... etc.).

EXAMPLE

S150 channel with the 150 [mm] external width.

For the S150 channel, the grating width will be 110 [mm], and the clearance 80[mm].

In addition to the width, the channel parameters should also include type and degree of fall and the drawing of the channel route in the plan.



STANDARD CHANNEL

GRATINGS

The most typical grating to cover the standard channels is the anti-slip mesh grating with 23 x 23 [mm] mesh size and the load-bearing angle 25 x 2 or 30 x 2[mm]. Our product range also includes the ladder, plate or perforated sheet gratings, all in different sizes and dimensions.

The grating type is selected according to the channel location, load and functionality requirements. In the areas where forklift trucks traffic is intense, we recommend the plate grating, whereas mesh type is preferable, if the amount of the water to be drained is significant.



perforated sheet grating



anti-slip mesh grating



ladder grating



ladder hygienic grating



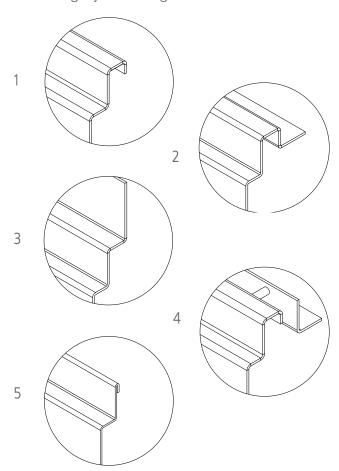
plate grating

CHANNEL EDGE FINISHING

The edge finishing should depend on the flooring and wastewater temperature.

We can offer the following options:

- 1 with downward flange (standard)
- 2 with flange
- 3 with raised back edge
- 4 with edge angle section for expansion joint in the floor
- 5 with tightly folded edges



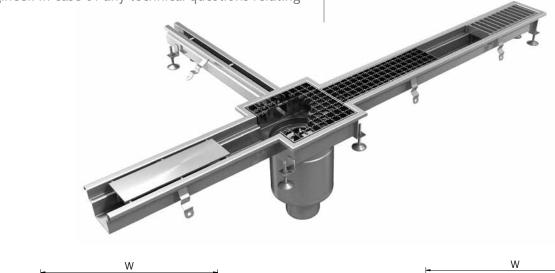
STANDARD CHANNELS

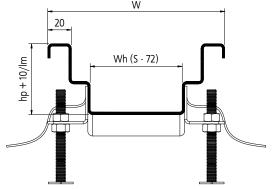
Typical layout of the channel is shown in the figure below. The placement of floor drains and the channel route depends on the needs and the amount of water to be drained from the floor. The two systems we offer standard and slot channels can be combined.

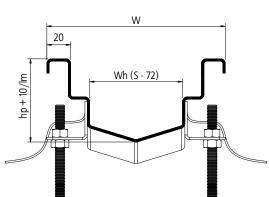
The channel route should be decided by the design engineer in cooperation with the process engineer. In case of any technical questions relating

to the drainage system, please do not hesitate to contact our consultants.

The channel outlet is fitted with trap and waste basket, securing the sewage system from solid impurities. We can insert horizontal water-proof insulation into the flange of the floor drain. This solution assures leak tightness in the area of outflow passage through the floor.





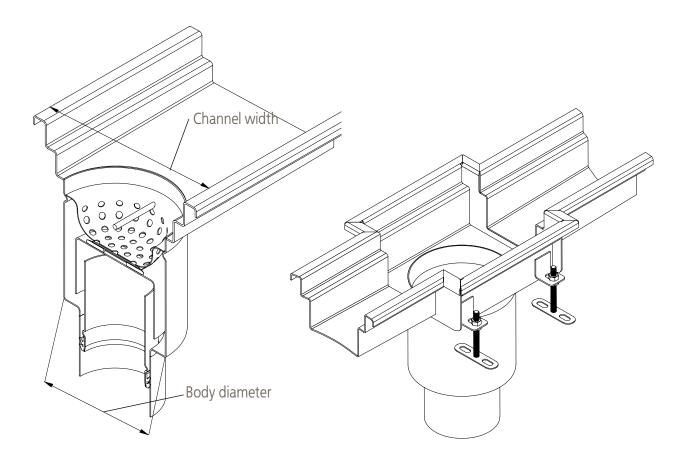


hp - initial height, channel's bottom fall depends on needs and installation abilities

W - channel width

Wh - hydraulic width

STANDARD CHANNEL



The table below shows standard dimensions of channel extension depending on type of used outlet. The extension is always 10 mm deeper than the channel it is connected to.

Due to the fact that the grating has bearing elements of one direction only, the extension is asymmetrical, which prevents incorrect installation.

	Outlet	Body	Extension size	Channel with	out extension	Flow
Outlet type	diameter [mm]	diameter [mm]	(length x width) [mm]	Min. channel's width [mm]	Min. Hydraulic width [mm]	rate (l/s)
Wm150,200/110V1/2,H1/2	110	110	205x200	S190	120	0,5
W200/110V1p,H1p	110	157	245x240	S240	170	2,2
W200/110V2p,H2p	110	142	245x240	S220	150	2,2
W250/110V1,H1	110	193	275x270	S270	200	3
W250/110V2,H2	110	172	275x270	S250	180	3
W300/160V1,H1	160	255	340x335	S330	260	9
W300/160V2,H2	160	234	340x335	S310	240	9
W400/200V1,H1	200	348	435x430	S430	350	12
W400/200V2,H2	200	308	435x430	S390	320	12

V1

vertical floor drain single part

V2

vertical floor drain two - part

H1

horizontal floor drain single part

H2

horizontal floor drain two part





ADVANTAGES

- good match to the interior design,
- cheaper option in comparison to standard drainage channels,
- possible connection to other channel types,
- grating is not required,
- easy installation.

A cheap and simple method for draining the surfaces where high flow capacity is not required. A perfect solution for rooms with condensate dripping from machinery or A/C systems: bakeries, dairies and swimming pools, as a separation of wet and dry areas.

MANUFACTURING TECHNOLOGY

The slot drainage channels are made of 1.5-2 [mm] sheets. They feature inclination and can be adapted to the floor thickness. Water drainage from the slot channel can be via a stub pipe or the trapped floor drain with a waste basket. Standard length of a channel with a single outlet should not exceed 10 [m]. The channel sections exceeding 4 [m] in length are joined by means of flanges with gaskets.

SLOT CHANNELS

MINI SLOT CHANNEL

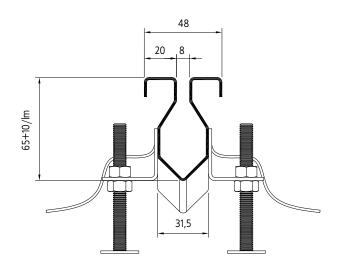
The mini slot channels are made of the 2 [mm] sheet. The channel is not covered with any grating and it is characterised by higher hydraulic efficiency against the standard channel. It has smaller inlet opening and clearance. It is used in the places where smaller amount of water need to be drained.

MAXI SLOT CHANNELS

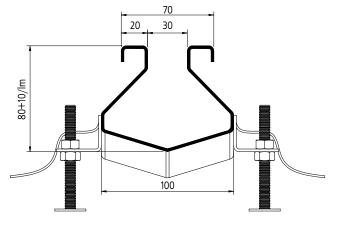
The maxi slot channels are made of the 2 [mm] sheet. This channel does not require grating, and features higher flow capacity than standard channels. One of its characteristic features is larger inlet opening and clearance. Used wherever there amount of wastewater to be drained is substantial and standard channel does not need to be used due to the production process requirements (absence of large solids).

STANDARD MINI CHANNEL

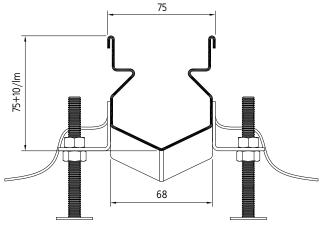
The standard mini channel combines the advantages of the standard and slot channels. It has small dimensions and features gratings. These channel types are used wherever the amount of water to be drained is small, but the rodding eye is necessary. As a standard, such channels are made of 1.5-2 [mm] V2A or V4A sheets.



Mini slot channel



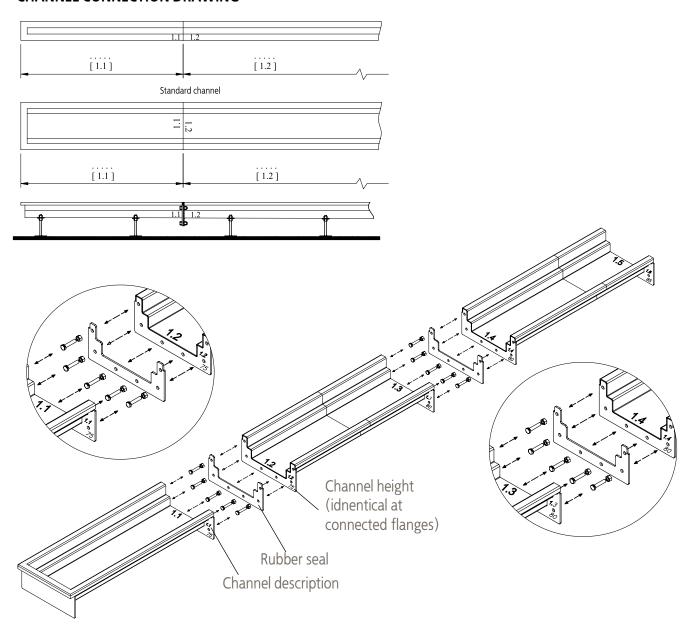
Maxi slot channel



Standard mini channel

LINEAR DRAINAGE

CHANNEL CONNECTION DRAWING



Channels are divided into sections appropriate for transport, as a standard their length does not exceed 4 or 6 meters.

Length of the sections also depends on manufacturing technology.

At the connection point the channel is approximately 25 mm lower, due to the presence of the rim. It is also possible to weld the channel directly at the construction site.



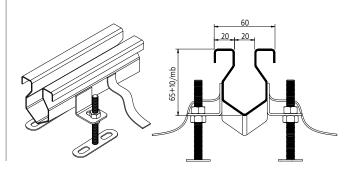
CHANNEL INSTALLATION

- 1. Before installing the channel, bolt all its parts according to the "installation guide" to ensure tightness of all flange connections (flange-gasket-flange).
- 2. Install the channel prepared as above in the sewer service pipe's spigot.
- 3. The next step involves placing of the channel on the required level. The channel edge should be 1-1.5 [mm] below the floor level.
- 4. When the channel is stabilized, we recommend to secure it against displacement during concrete pouring.
- 5. Pour concrete on the leveling legs and anchoring elements.
- 6. In hard to access areas subjected to highest loads, insert the concrete with a spatula.
- 7. Make sure the elements are clean, free of dirt. Remove gratings, waste baskets and traps.

CHANNEL DEPTH

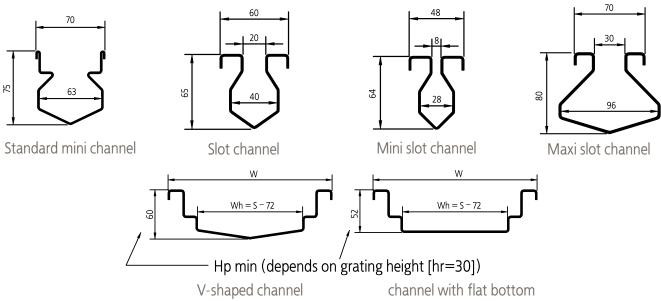
Regarding channels made with the bottom fall, the depth of the channels increases with its length. The channel depth at the outlet depends on the initial height, length and the channel fall.

Standard initial depth of the slot channel is 65 [mm], bottom fall equals 1% and the opening width is 20 [mm]. These parameters can be customized to meet the client's requirements.



LINEAR DRAINAGE

MINIMUM INITIAL HEIGHTS FOR STANDARD AND SLOT CHANNELS



EDGES FILLING

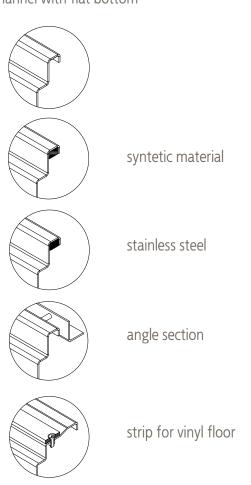
Standard edge (without backfilling).

Edge backfilled with syntetic material. It facilitates installation and prevents formation of a void between the concrete and the edge, protecting the channel perimeter against deformation in case of large loads.

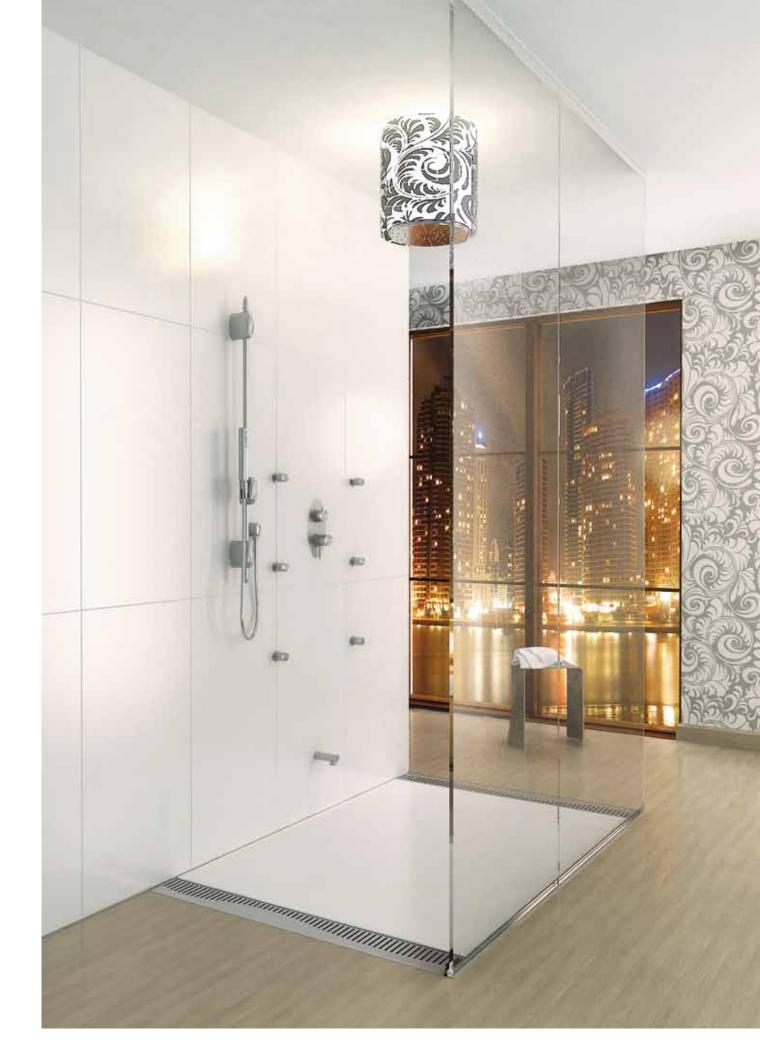
Edge backfilled with stainless steel. The edge backfilled with a steel profile should be used in the areas with intensive traffic and high loads.

Edge with a border angle section. The angle is connected with the channel edge by means of a bar. This edge type is used to make expansion joints along the channel, i.e. when the drained wastewater is hot.

Edge with a strip for vinyl flooring. The strip is installed on the channel edge to ensure tight joint between the channel and the vinyl flooring.

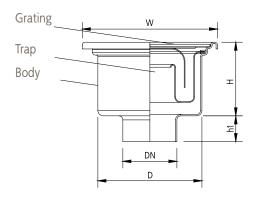


BATHROOM SOLUTIONS



BATHROOM FLOOR DRAINS

BATHROOM FLOOR DRAINS WL100/40 WITH VERTICAL OUTLET



Syn	WI100/40V1	
Catalogue nu	00.063040.02 - *	
	DN	40
	Н	54
Dimensions [mm]	H1	-
Dimensions [mm]	h1	20
	D	77
	W	100x100
	hr	2

Number or symbol of the floor drain needs to be completed with the proper grating symbol.



Cerchio - grating symbol C



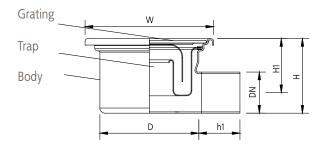
Fiore - grating symbol F



Goccia - grating symbol G

BATHROOM FLOOR DRAINS

BATHROOM FLOOR DRAINS WL100/32 WITH HORIZONTAL OUTLET



Syn	Wl100/32H1	
Catalogue nur	00.064040.02 - *	
	DN	32
	Н	58
Dimensions [mm]	H1	42
Dimensions [mm]	h1	30
	D	77
	W	100x100
	hr	2

Number or symbol of the floor drain needs to be completed with the proper grating symbol.



Cerchio - grating symbol C



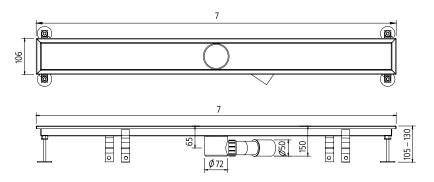
Fiore - grating symbol F

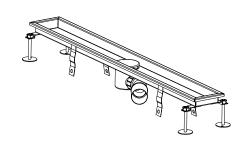


Goccia - grating symbol G



STANDARD CHANNEL





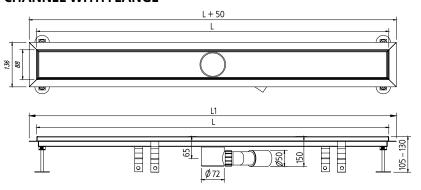
length	polished	sand-blasted
	catalogue no.	catalogue no.
700 mm	00.106007.01-*	00.106007.02-*
800 mm	00.106008.01-*	00.106008.02-*
900 mm	00.106009.01-*	00.106009.02-*
1000 mm	00.106010.01-*	00.106010.02-*
1200 mm	00.106012.01-*	00.106012.02-*

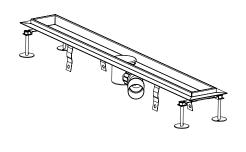
Catalogue number needs to be completed with the grating symbol given below:





CHANNEL WITH FLANGE





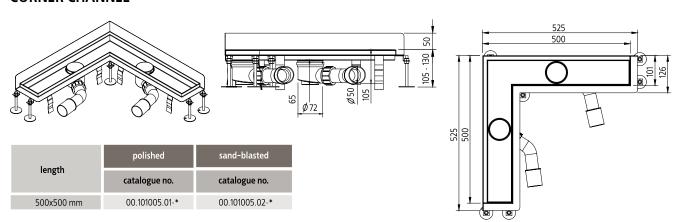
length	polished	sand-blasted
	catalogue no.	catalogue no.
700 mm	00.088007.01-*	00.088007.02-*
800 mm	00.088008.01-*	00.088008.02-*
900 mm	00.088009.01-*	00.088009.02-*
1000 mm	00.088010.01-*	00.088010.02-*
1200 mm	00.088012.01-*	00.088012.02-*

Catalogue number needs to be completed with the grating symbol given below:

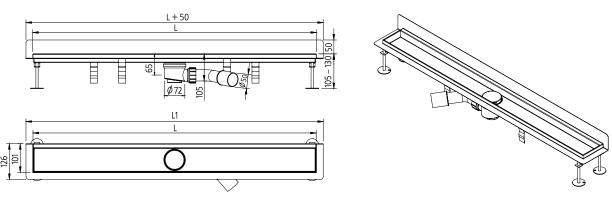


SPA CHANNELS

CORNER CHANNEL



CHANNEL WITH RISED BACK EDGE



length	polished	sand-blasted
	catalogue no.	catalogue no.
700 mm	00.100007.01-*	00.100007.02-*
800 mm	00.100008.01-*	00.100008.02-*
900 mm	00.100009.01-*	00.100009.02-*
1000 mm	00.100010.01-*	00.100010.02-*
1200 mm	00.100012.01-*	00.100012.02-*

Catalogue number needs to be completed with the grating symbol given below:



SHOWER BASE

Shower base is made of stainless steel AISI 304. We use 1.25 [mm] thick decorative metal panel as a production material.

Circle-style pressing finishing ensures the required rigidity of the construction and it also gives the steel anti-slippery attribute.

Runoff to the sewage system is possible through regular bathroom outlets available on the market.

APPLICATION

- all places for disabled people such as health centers, hospitals, rehabilitation facilities,
- bathroom furnishing for premises, sport centers, production halls.

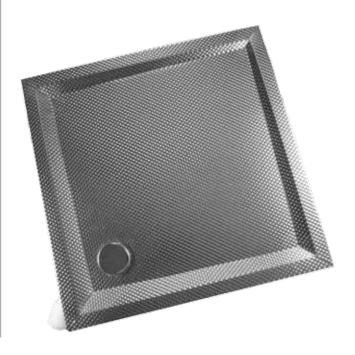
ADVANTAGES

- easy to clean,
- possiblity of using all sorts of disinfectants,
- antibacterial feature of stainless steel,
- comfortable wheelchair entry to shower enclosure without meeting any obstacles on the way,
- easy installation,
- aesthetic look.

catalogue number	dimensions [mm]	height [mm]
00.208008.07	800 x 800	40
00.209009.07	900 x 900	40



STAINLESS STEEL SHOWER BASE



MANHOLE COVERS





Manhole covers come in different shapes and sizes. They are used in industrial and public buildings, i.e. shops, exhibition halls, restaurants, warehouses etc., where it is necessary to have access to the systems installed under the floor. The manhole cover can be finished with floor tiles, terra cotta etc.

The manhole covers are made of the V2A steel and are 3 [mm] thick, which allows for installing them in the areas where sanitary requirements are very strict.

TYPES OF MANHOLE COVERS

Standard manhole covers – consist of upper and lower parts, bolting for safe and stable closing and the 'black steel' reinforcement

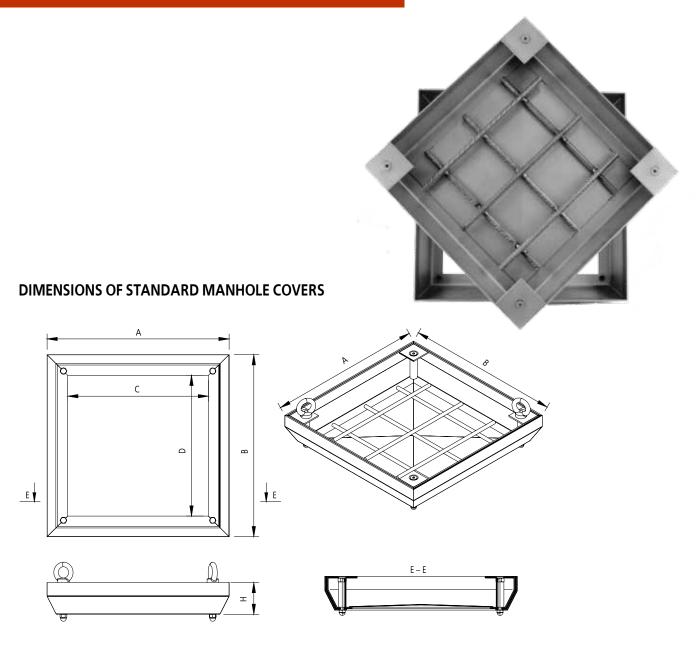
Gas-tight manhole covers - additionally feature an O-ring between the lower and upper **part**.

ADVANTAGES

- easy access to the systems installed under the floor,
- isolating from outside odours,
- water tightness,
- easy opening,
- high durability,
- aesthetics.



MANHOLE COVERS



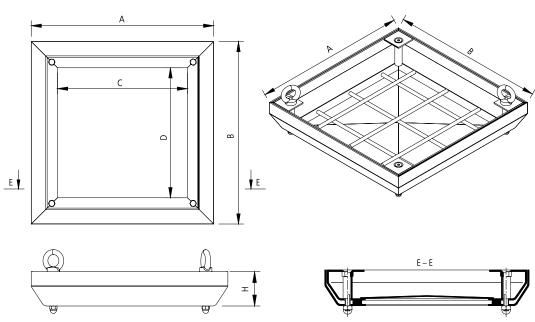
cover type	standard manhole cover	outside dimension A x B [mm]	inside dimensions C x D [mm]	height H [mm]
K 3x3	00.071033.00	300x300	160x160	70
K 4x4	00.071044.00	400x400	260x260	70
K 5x5	00.071055.00	500x500	360x360	70
K 5x7	00.071057.00	500x700	340x540	85
K 6x6	00.071066.00	600x600	440x440	85
K 6x8	00.071068.00	600x800	440x640	85
K 7x7	00.071077.00	700x700	540x540	85
K 8x8	00.071088.00	800x800	620x620	100
K 9x9	00.071099.00	900x900	720x720	100
K 10x10	00.071010.00	1000x1000	820x820	100

Ø10 bar is used for all types of manhole covers made of carbon steel.

MANHOLE COVERS



DIMENSIONS OF GAS-TIGHT MANHOLE COVERS



cover type	gas-tight manhole cover	outside dimension A x B [mm]	inside dimensions C x D [mm]	height H [mm]
K 3x3	00.070033.00	300x300	160x160	70
K 4x4	00.070044.00	400x400	260x260	70
K 5x5	00.070055.00	500x500	360x360	70
K 5x7	00.070057.00	500x700	340x540	85
K 6x6	00.070066.00	600x600	440x440	85
K 6x8	00.070068.00	600x800	440x640	85
K 7x7	00.070077.00	700x700	540x540	85
K 8x8	00.070088.00	800x800	620x620	100
K 9x9	00.070099.00	900x900	720x720	100
K 10x10	00.070010.00	1000x1000	820x820	100

Ø10 bar is used for all types of manhole covers made of carbon steel.

MANHOLE COVERS

Aluminum manhole covers are available in different shapes and sizes. They are used in industrial objects and public buildings, i.e. shops, exhibition halls, restaurants, warehouses etc., where it is necessary to have access to the systems installed under the floor. The manhole cover can be finished with floor tiles, terra cotta etc





cover type	gas-tight aluminium manhole cover	outside dimension A x B [mm]	inside dimensions C x D [mm]	height H [mm]
K 3x3	00.080033.00	320x320	200x200	77
K 4x4	00.080044.00	420x420	300x300	77
K 5x5	00.080055.00	520x520	400x400	77
K 6x6	00.080066.00	620x620	500x500	77
K 7x5	00.080075.00	720x520	600x400	77
K 7x7	00.080077.00	720x720	600x600	77
K 8x8	00.080088.00	820x820	700x700	77
K 9x7	00.080097.00	920x720	800x600	77
K 9x9	00.080099.00	920x920	800x800	77
K 11x7	00.080017.00	1120x720	1000x600	77
K 11x9	00.080019.00	1120x920	1000x800	77
K 11x11	00.080011.00	1120x1120	1000x1000	77

The following installation requirements must be met for the manhole to be used successfully:

- 1. During installation, the lower and upper part must be joined.
- 2. To avoid frame distortion (which can seriously damage the products and make it unable to use) place the distance pieces between the edges of upper and lower part.
- 3. Level and place the cover on previously made manhole.

- 4. The cover is stabilized with concrete with plastic consistency.
- 5. The upper part with reinforcement should be filled with the B30 or higher concrete class, depending on the dimensions and load.
- 6. The concrete should be poured to the height that enebles future installation of the floor.

MEDIA BOXES

Used in the areas where it is necessary to have access to telephone or electrical cables installed in the floor. The junction boxes can be used in public buildings, supermarkets, shopfloor, warehouses and other places, where a periodic need to connect a device or open a sales stand. The boxes are made of V2A or V4A steels. The body has the thickness of 2 [mm] and the cover with 5 [mm] lid.

All components are welded in the argon shield, subsequently etched and anti-corrosion protected. The box features glazed cover with a bolted gasket and swinging lid. Lid closing secures the box against unauthorised entry.



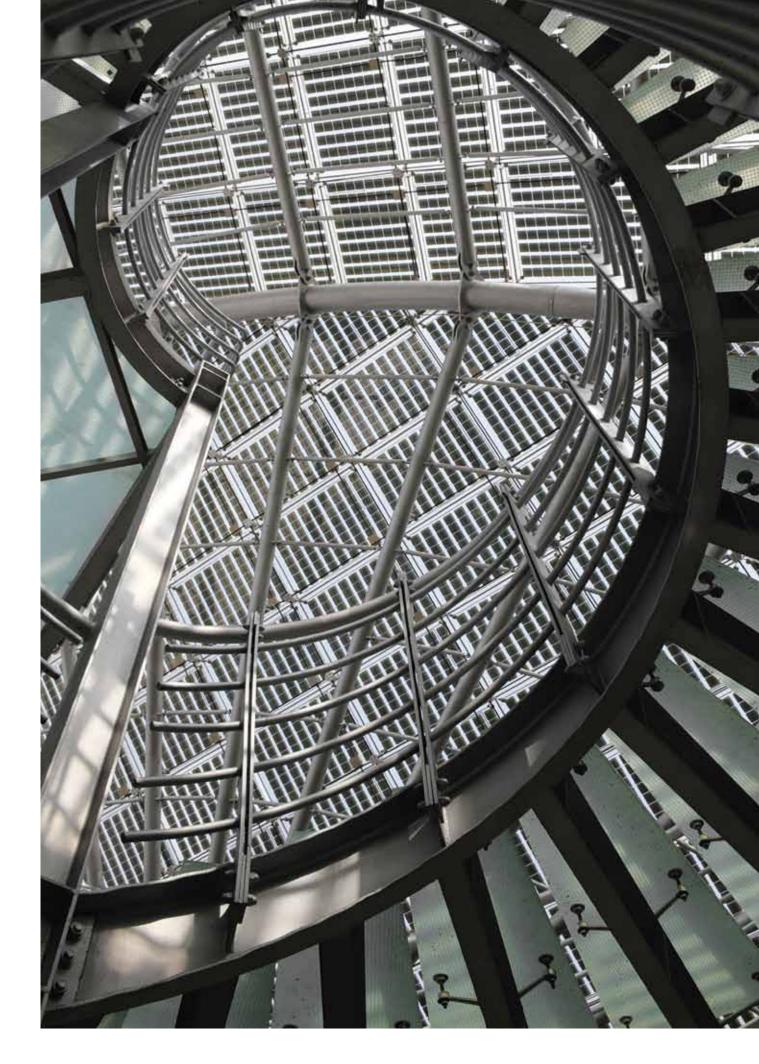
We manufacture single-chamber boxes SK1, double-chamber SK2 and bespoke multi-chamber on request.

Note!

The dimensions shown in the table below are for guidance purpose only and can be modified on Customer's request.

type	catalogue number	outside dimension A x B [mm]	inside dimension C x D [mm]	height H [mm]
SK-1	90001	168x300	114x242	70
SK-2	90002	300x300	242x242	70

SMALL ARCHITECTURE ELEMENTS





Lawn edgings are made of stainless steel AISI 304. They are used as a flexible separation of green areas in parks and gardens.

CHARACTERISTIC

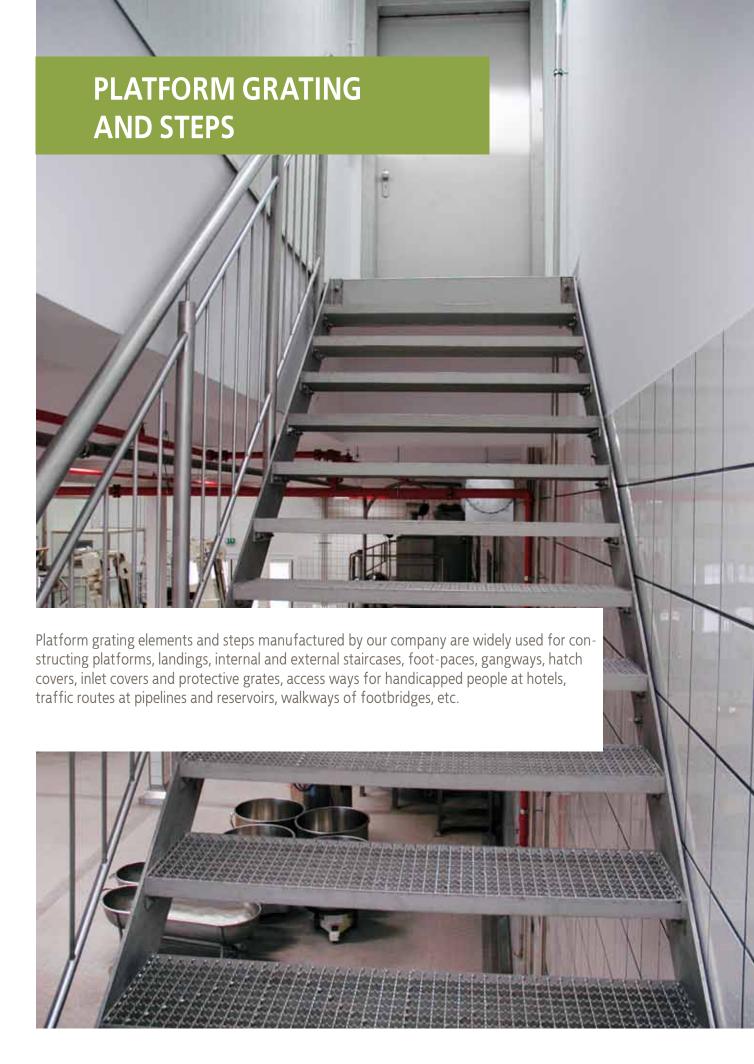
- flexibility,
- durability and resistance to fertilizers,
- sharp or tightly folded edges,
- simple installation using stainless steel special profile pins,
- standard height, wide scope of length.

STANDARD DIMENSIONS

- production length: 500, 1000, 1500, 2000, 3000 mm.
- width 175 mm,
- metal sheet thickness: 1; 1.5 mm.
- * There is possible to modify dimensions and the thickness of metal sheet according to individual Clients' requirements.

length	height	sheet	catalogue	e number
[mm]	[mm]	thickness [mm]	sharp edges	tightly folded edges
500	175	1	00.175005.01	01.175005.01
1000	175	1	00.175010.01	01.175010.01
1500	175	1	00.175015.01	01.175015.01
2000	175	1	00.175020.01	01.175020.01
3000	175	1	00.175030.01	01.175030.01
500	175	1,5	00.175005.02	01.175005.02
1000	175	1,5	00.175010.02	01.175010.02
1500	175	1,5	00.175015.02	01.175015.02
2000	175	1,5	00.175020.02	01.175020.02
3000	175	1,5	00.175030.02	01.175030.02





PLATFORM GRATING AND STEPS

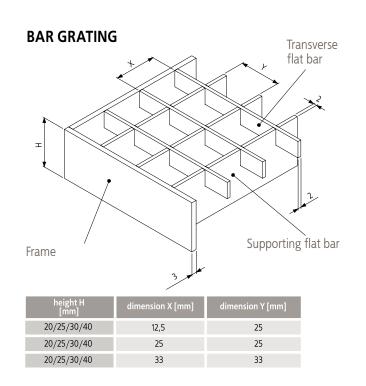
These products are used in all kinds of construction projects, irrespective of the industry branch, improving work safety and comfort and also easily blending into the surroundings.

Our products, manufactured of stainless steel, meet high strength standards, are resistant to unfavorable environmental conditions, are maintenance-free, guarantee work safety and stability. The feeling of stability is also important from psychological viewpoint, especially for users of platforms and gangways constructed in high locations.

WE OFFER TWO KINDS OF PLATFORM GRATINGS

Stainless steel bar grating - transverse bars are titghtly fit in supporting bars and afterwards welded in a 3 [mm] thick frame.

Serrated grating – thanks to cuts applied on supporting bars, serrated gratings are characterized by increased friction coefficient - it improves their antislip properties. Serrated grating are used in a places threatened by the presence of snow, ice, humidity or lubricants.





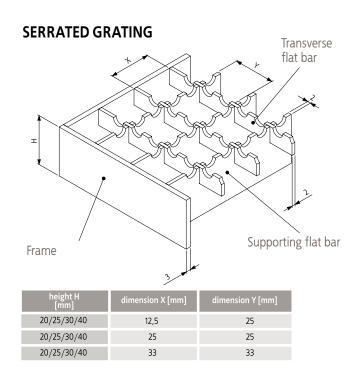


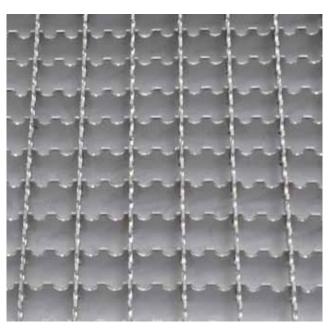
DESCRIPTION

Supporting flat bars – flat bars that carry the load of grating and are placed vertically at equal distances from each other.

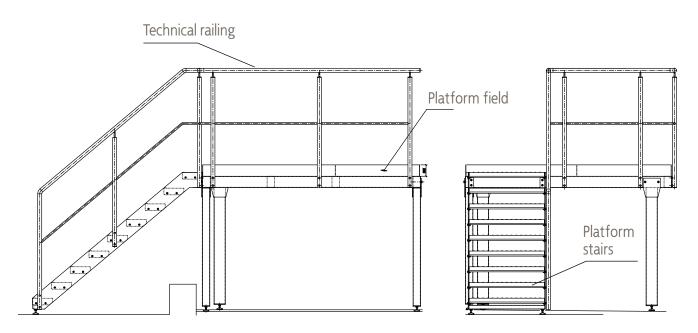
Transverse flat bars – link all supporting bars by their tight fitting in slots and by welding.

Mesh size – distance between axes of adjacent supporting and transverse bars.



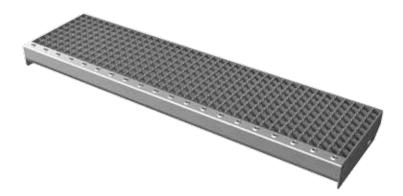


PLATFORM GRATING AND STEPS



DIMENSIONS OF STEPS [mm]

L		600			800			900			1000			1200	
В	240	270	305	240	270	305	240	270	305	240	270	305	240	270	305
h						su	pporting flat	: bars dimen	sions						
n	120	150	180	120	150	180	120	150	180	120	150	180	120	150	180



STAINLESS STEEL STEPS

Steps can be constructed using platform grating, however the step is fitted with special side framing that enables fast and easy assembly to the supporting structure.

It is also fitted with anti-slip front panel with special perforation on the upper surface. Appropriate profile

of the strip also stiffens the structure of the step itself. Steps can be manufactured in any dimensions.

- L carrying lenght
- B step's width
- h step's height
- n -holes spacing

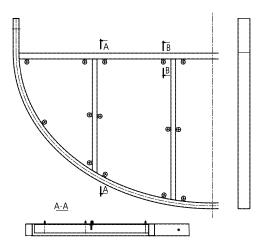


ROOFS



half-round roof

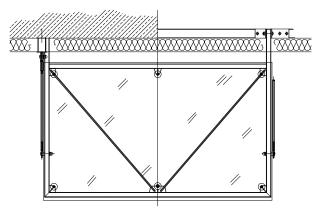
CONSTRUCTION OF HALF-ROUND ROOF



ATT roofs combine practical and aesthetic function of entrances to any building.

The roofs solutions offered by us, including bracing elements, are made of stainless steel. These are products of exceptional quality and durability, which guarantee long lifetime. They are available upon special order.

CONSTRUCTION OF RECTANGULAR ROOF



Rectangular roof





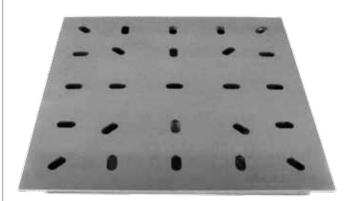
ATT steel plates are made of 2 [mm] thick stainless steel. They are resistant to any damages and breakages that occur in any industry or transport. Having considered the highest quality and aesthetics standards that need to be kept by our products, as well as hygienic and ecological requirements imposed by e.g. food industry, we introduced anti-corrosion, aesthetic and durable stainless steel products.

APPLICATION

- heavy industry plants,
- food industry plants,
- production halls,
- warehouses, storage yards,
- printing houses,
- loading ramps,
- foundries, steel plants.

ADVANTAGES

- high durability,
- safety,
- lack of work connected to floor renovation,
- technical advice during the whole order processing time,
- installation on Customer's request.



FURNITURE



FURNITURE

All furniture is made of stainless steel and meets the most rigorous sanitary requirements. As such, it is perfect choice for food processing, pharmaceutical and chemical industries, restaurants etc.

The basic range is as follows:

- tables (for carcass partitioning, auxiliary, for packing, with edge and drainage, with drawers),
- tables-cum-cabinets (with swinging doors, drawers).
- cabinets (ordinary, material),
- small tables (standing, on castors).

Widened range includes amongst others:

- pallets,
- pallet boxes,

ORDINARY CABINETS

catalogue number	width [mm]	depth [mm]	height [mm]
Sz80/180	800	600	1800
Sz80/210	800	600	2100
Sz100/180	1000	600	1800
Sz100/210	1000	600	2100

MATERIAL CABINETS

catalogue number	width [mm]	depth [mm]	height [mm]
SzM80/180	800	600	1800
SzM80/210	800	600	2100
SzM100/180	1000	600	1800
SzM00/210	1000	600	2100

NOTE! the dimensions can be modified on Customers' request.

- transporting counters,
- abattoir bathtubs.
- containers.
- bespoke, customized elements according to Clients' design and specification.

We can also offer you the professional consulting services to help you choose the best solution. On top of that, the non-standard components can be modified (in terms of dimensions, finishing or structural reinforcement).





FURNITURE

TABLES CARCASS PARTITIONING

catalogue number	width [mm]	depth [mm]	height [mm]
SJ50/85	600	500	850
SJ60/85	700	600	850
SJ70/85	800	600	850
SJ80/85	900	600	850



TABLES WITH SINKS

catalogue number	width [mm]	depth [mm]	height [mm]
SS140/70	1400	700	850
SS160/70	1600	700	850
SS180/70	1800	700	850
SS200/70	2000	700	850
SS220/70	2200	700	850



TABLES CUM-CABINETS WITH SWINGING DOORS

catalogue number	width [mm]	depth [mm]	height [mm]
SzSD120/70	1200	700	850
SzSD140/70	1400	700	850
SzSD160/70	1600	700	850
SzSD180/70	1800	700	850
SzSD200/70	2000	700	850



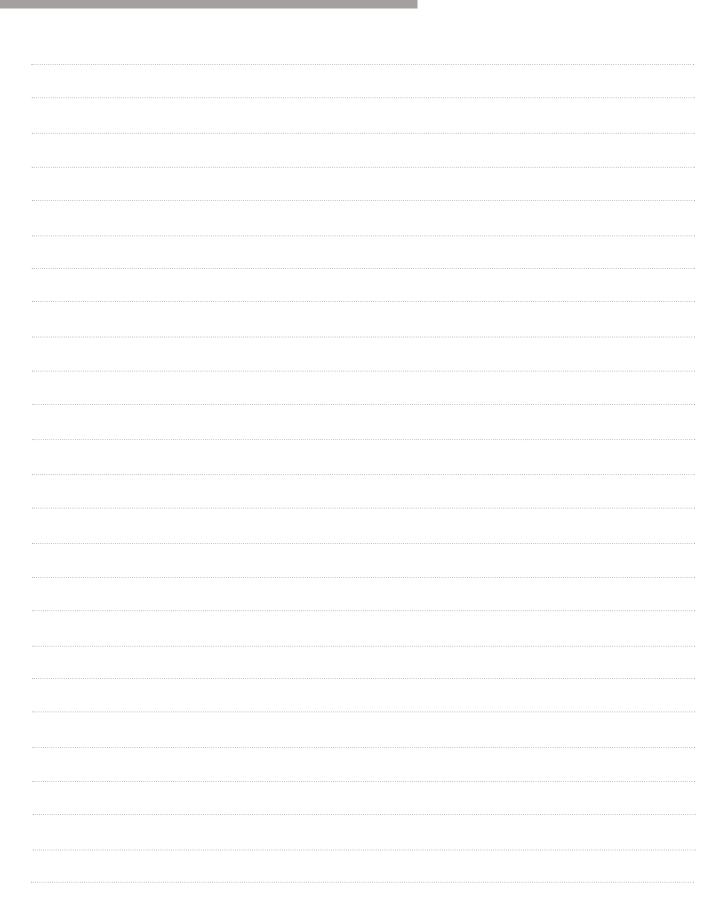
TABLES- CUM-CABINETS WITH DRAWERS

catalogue number	width [mm]	depth [mm]	height [mm]
SzSS120/60	1200	600	850
SzSS160/60	1600	600	850
SzSS200/60	2000	600	850
SzSS120/70	1200	700	850
SzSS160/70	1600	700	850
SzSS200/70	2000	700	850

NOTE! The dimensions can be modified on Customers' request



NOTES



NOTES

We reserve the right to make modification in this catalogue, including change in price, content, description at any time without previous notice.

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