

## Applicable standards

Düker SML meets the requirements of

ISO 6594  
EN 877  
DIN 19522

and other international standards.

## Approvals

Düker SML is officially approved in

Australia	No. SMK 20057
Czech Republic	No. J-30-20219-02 and J-30-20220-02
Denmark	No. VA 2.11/13104-13105
Germany	No. 110001436/01/01
Norway	No. 0370, 0401 and 0408
Poland	No. AT/99-02-0720
Russia	No. POCC DE. E01.B18999
Singapore	No. 030082
Sweden	No. 0041/04
Switzerland	No. 23005
United Kingdom	Agrément No. 93/2927

and numerous other countries.

## SML drainage pipe systems - Guarantee

Düker guarantees that the pipes, fittings and couplings supplied have been manufactured in accordance with the standards and approvals valid at the time of manufacturing. In the case of defects, Düker will, during a period of 5 years, replace the defective parts free of charge. Without specific agreement, Düker will not accept liability for consequential losses.

## IZEG Information centre / GEG quality association

Some non-European manufacturers destroy the quality reputation of cast iron sewage pipe systems. In order to withstand this trend and to fulfil the increasing safety requirements of our partners in plumbing, trade, planning and authorities, the European cast iron pipe industry as well as suppliers of accessories founded the IZEG. IZEG and the integrated quality association GEG award a RAL quality label to cast iron drainage pipes and fittings that have passed, among others, the following tests surpassing the requirements of EN 877:

Table 1-3. from RAL-GZ 698

Additional requirements for the testing of interior coatings				
Medium/solution	concentration	pH-value	duration of test	temperature in °C
Phosphoric acid	25 %	1.0	72 h	40
Acetic acid	10 %	2.0	48 h	25
Hydrogene pyroxide solution	10 %	3.5	48 h	25
Sulphuric acid	0.1 N	1.0	30 d	50
Lactic acid	1 %	2.0	48 h	25
Citric acid	5 %	1.5	30 d	50
Waste water according to EN 877		7.0	30 d	50
Natriumhydrogencarbonat	0.1 N	11.4	30 d	50
Salt water		5.6	10 d	50
(Completely desalted) water		6.4	30 d	50
Salt spray			1500 h	35

N=normal solution; d=days; h=hours

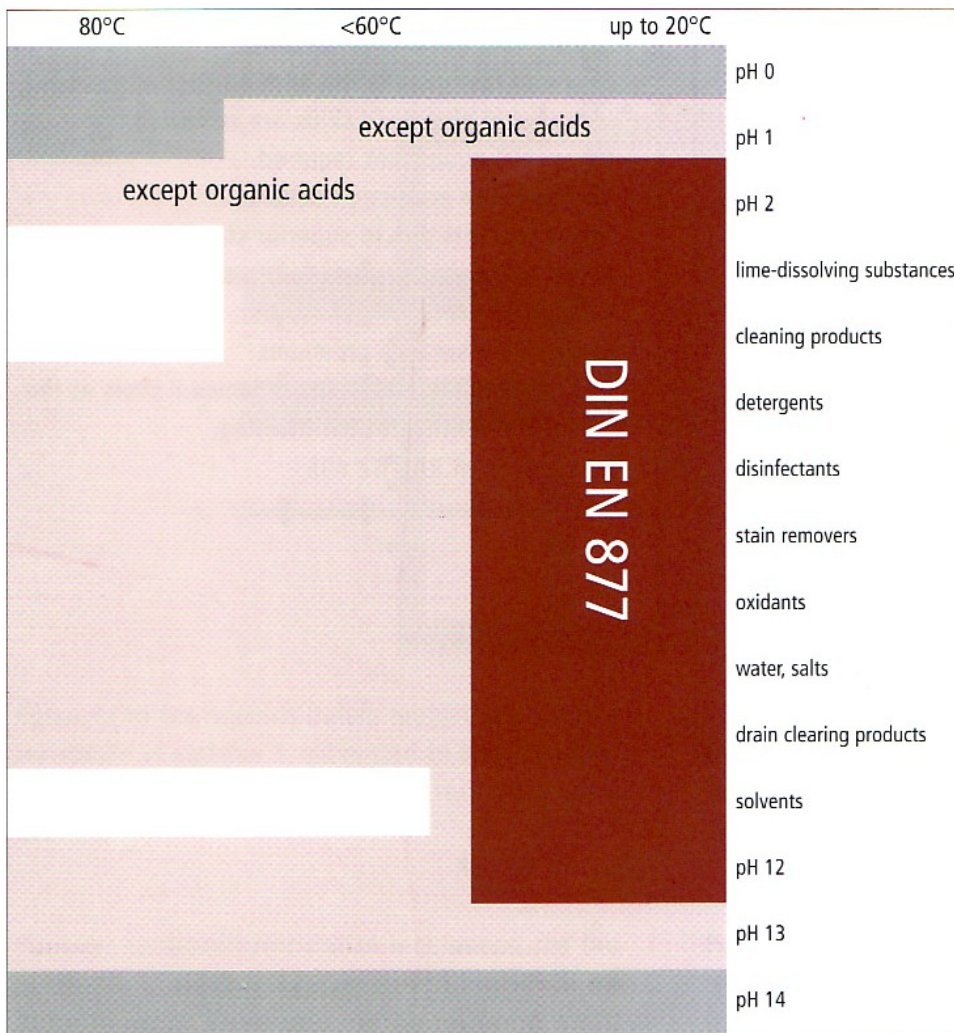


## Hubless cast iron drainage pipes from Düker

Since 1913 Düker has been offering all material-related advantages which are proven in cast iron - **high strength of material and resistance to wear, excellent temperature and corrosion resistance, considerable sound damping ability and above all the non-combustibility** - in cast iron drainage pipes.

Düker revolutionised the market in terms of building and laying techniques by developing cast iron spigot end drainage pipes which were approved for Düker for the first time in 1967 with the test certificate PA-I 1609. Just as before, the SML drainage pipe system today distinguishes itself by reliability and quality. For use in high-quality building drainage and on the basis of EN 877.

### Interior coating resistance of Düker SML pipes for domestic applications with discontinuous use



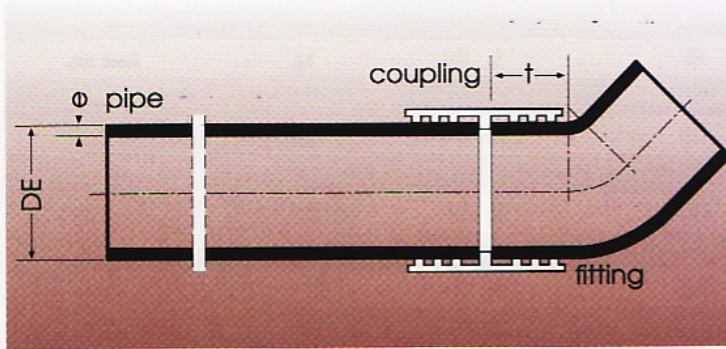
not resistant  
 resistant  
 requirements of EN 877  
 not applicable

EURO-NORM  
DIN EN 877  
DIN 19 522

- DENSITY:**  
Approx. 7.2 kg/dm<sup>3</sup> (71.5 KN/m<sup>3</sup>)
- MINIMUM TENSILE STRENGTH:**  
150 MPa for fittings,  
200 MPa for pipes
- COMPRESSIVE STRENGTH:**  
Approx. 3 to 4 times the value of the minimum tensile strength
- SHEARING STRENGTH:**  
1.1 to 1.6 times the value of the minimum tensile strength
- CRUSHING STRENGTH:**  
350 MPa (for DN < 250)  
or 332 MPa (for DN ≥ 250)
- POISSON'S NUMBER:** 0.3
- COEFFICIENT OF LENGTH EXPANSION:**  
0.0105 mm/mK (between 0° and 100 °C)
- THERMAL CONDUCTION COEFFICIENT:**  
50 - 60 W/mK (at 20°C)
- MODULUS OF ELASTICITY:**  
8 x 10<sup>4</sup> to 12 x 10<sup>4</sup> N/mm<sup>2</sup>
- TEMPERATURE RESISTANCE:**  
Cast iron does not burn!
- CHEMICAL RESISTANCE:**  
For use with domestic effluents within a range of pH 2 - pH 12. Well above the values required by EN 877.

For non-domestic applications and for aggressive waste water we recommend to consult with Düker and where applicable to use the inside and outside enamelled pipe system MLetec®.





Construction dimensions:

- Pipe diameter
- Wall thicknesses
- Insertion lengths (sealing zone)
- Pipe weights
- Surface

**SML-Pipes and Fittings (EN 877 and DIN 19 522)**

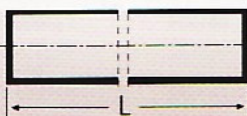
nominal diameter	interior diameter	exterior diameter		wall thickness		insertion lengths (sealing zone)	pipe weight empty	surface ca. m <sup>2</sup> per m
		DE	tolerance	e	tol.			
DN 40	42	48	+2/-1	3,0	-0,5	30	3,1	0,15
50	51	58		3,5	-0,5	30	4,3	0,18
70*	71	78		3,5	-0,5	35	5,9	0,25
80 <sup>1)</sup>	75	83		3,5	-0,5	35	6,3	0,26
100	103	110	+2/-2	3,5	-0,5	40	8,4	0,35
125	127	135		4,0	-0,5	45	11,8	0,42
150	152	160		4,0	-0,5	50	14,1	0,50
200	200	210		5,0	-1,0	60	23,1	0,65
250	263	274	+2,5/-2,5	5,5	-1,0	70	33,3	0,85
300	314	326		6,0	-1,0	80	43,2	1,02
400**								
500**								
600**								

\* obsolete model, \*\* on request

All dimensions in mm

<sup>1)</sup> The nominal diameter DN 80 with a minimum interior diameter of 75 mm corresponds to DN 80 as per EN 12056-2 as well as to DN 75 as per EN 877 (product standard)

**Pipes**



**SML-Pipe DIN 19522 – DN 40x3000**

L = 3000mm

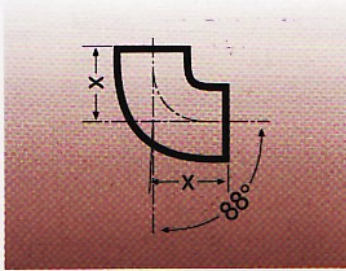
DN	kg	item no.
40	10,5	660744
50	13,5	660004
70*	18,3	660094
80	18,9	235145
100	26,5	660184
125	37,0	660274
150	43,5	660364
200	78,0	660454
250	113,0	660654
300	144,0	660664
400**		
500**		
600**		

\* obsolete model, \*\* on request

"Important notice: variable values in the item indications are printed in italics. (example: SML-pipe DIN 19522-DN 40x3000)"



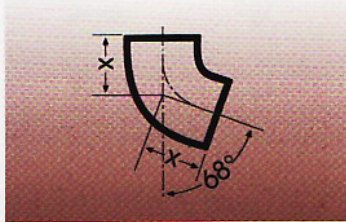
## Bend 88°



### SML-bend DIN 19522-100-88

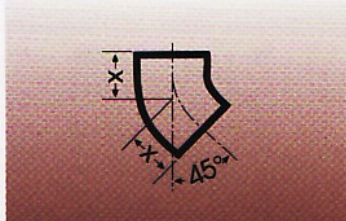
DN	X	kg	item no.
40	70	0,5	661414
50	75	0,7	661054
70*	90	1,1	661114
80	95	1,4	235150
100	110	2,1	661174
125	125	3,2	661234
150	145	4,9	661294
200	180	8,8	662784

## Bends 68°



DN	X	kg	item no.
50	65	0,7	661034
70*	75	1,1	661094
80	80	1,2	235149
100	90	1,9	661154
125	105	2,9	661214
150	120	4,9	661274
200	145	7,7	661334

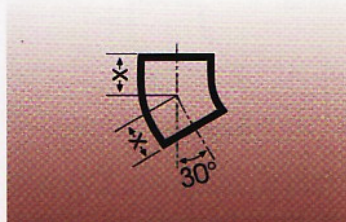
## Bends 45°



DN	X	kg	item no.
40	50	0,4	661404
50	50	0,5	661024
70*	60	0,9	661084
80	60	1,0	235148
100	70	1,2	661144
125	80	2,3	661204
150	90	3,5	661264
200	110	6,5	661324
250	130	10,3	661374
300	155	17,3	661394

further diameters on request.

## Bends 30°



DN	X	kg	item no.
50	45	0,5	661014
70*	50	0,7	661074
80	60	0,8	235147
100	60	1,3	661134
125	70	2,0	661194
150	80	3,0	661254
200	95	5,4	661314
250	110	9,7	661364
300	130	15,5	661384

## Bends 15°

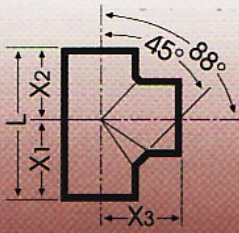


DN	X	kg	item no.
50	40	0,4	661004
70*	45	0,6	661064
80	50	0,7	235146
100	50	1,0	661124
125	60	1,7	661184
150	65	2,5	661244
200	80	4,6	661304

\* obsolete model



Branches 88°  
access angle 45°

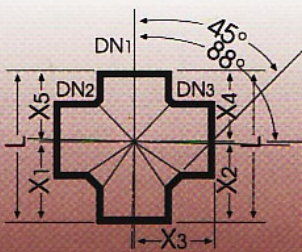


**SML-branch DIN 19522-70x50-88**

DN	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	L	kg	item no.
50x50	79	66	80	145	0,9	663024
70x50*	83	72	90	155	1,4	663054
80x50	95	85	90	180	1,5	235153
70x70*	97	83	95	180	1,7	663084
80x80	95	85	95	180	1,7	235155
100x50	94	76	105	170	2,1	663114
100x70*	102	88	110	190	2,4	663144
100x80	105	85	110	190	2,6	235157
100x100	115	105	120	220	2,9	663174
125x50	98	82	120	180	3,0	663204
125x70*	107	93	125	200	3,4	663234
100x80	110	94	125	205	3,4	235158
125x100	125	110	130	235	4,0	663264
125x125	137	123	135	260	4,6	663294
150x50	100	100	140	200	4,4	663324
150x100	130	115	145	245	5,5	663384
150x125	147	128	150	275	6,2	663414
150x150	158	142	155	300	6,9	663444

\* obsolete model

Double branches 88°  
access angle 45°

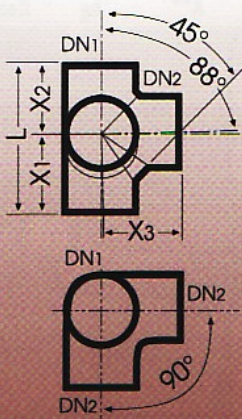


**SML-double branch DIN 19522-150x100-88 D**

DN <sub>1</sub> DN <sub>2</sub> DN <sub>3</sub>	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	L	kg	item no.
100 x 50 x 50	100 (94)	100 (94)	105	80 (76)	80 (76)	180 (170)	2,2	663814
100 x 70 x 70*	102	102	110	88	88	190	2,7	663844
100 x 100 x 100	120 (115)	120 (115)	120 (115)	110 (105)	110 (105)	230 (220)	3,2	663874
150 x 100 x 70*	130	112	145	133	115	245	6,3	664184
150 x 100 x 100	130	130	145	115	115	245	7,1	664084

\* obsolete model

Corner branches 88° (EA)  
access angle 45°;  
corner angle 90°

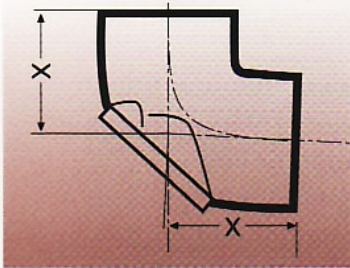


**SML-corner branch DIN 19522-100x70-88 EA**

DN <sub>1</sub> DN <sub>2</sub>	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	L	kg	item no.
100 x 70*	102	88	110	190	2,7	662044
100 x 100	115	105	120 (115)	220	3,4	662034
125 x 70*	107	93	125	200	3,7	662024
125 x 100	125	110	130	235	5,0	662014
150 x 100	130	115	145	245	7,1	664434

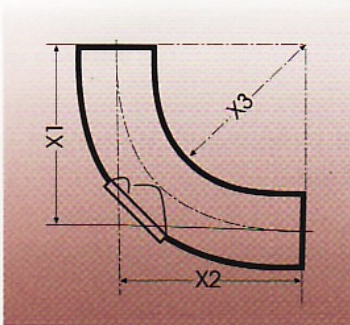
\* obsolete model



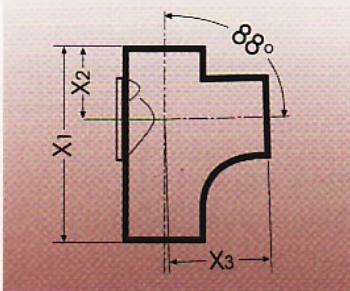
**SML short radius access bend - 88°**

DN	X	kg	item no.
70*	90	1,8	232740
100	110	3,3	100268
150*	145	6,1	232741

\* upon request

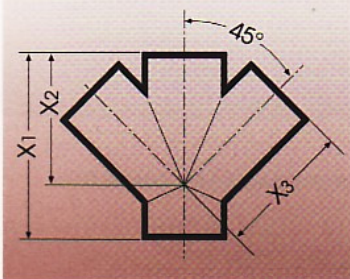
**SML long radius access bend - 88°**

DN	X1	X2	X3	kg	item no.
100	269	269	180	5,5	100262

**SML swept entry access branch - 88°**

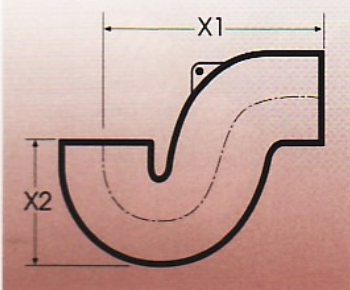
DN	X1	X2	X3	kg	item no.
70x70*	210	80	130	2,5	
100x50*	204	90	120	3,0	
100x70*	221	90	142	3,5	
100x100	270	102	150	4,3	100269
150x100*	300	117	202	10,4	
150x150*	400	140	260	13,9	232743

\* upon request

**SML double branch - 45°**

DN	X1	X2	X3	kg	item no.
100x100	260	190	190	4,0	100260
150x100*	280	225	225	8,4	
150x150*	355	265	265	12,6	235047
200x200*	455	340	340	24,0	

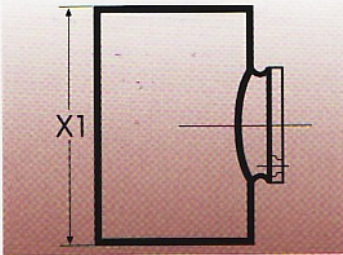
\* upon request

**SML plain trap**

DN	X1	X2	kg	item no.
100	255	160	4,5	100261

\* upon request

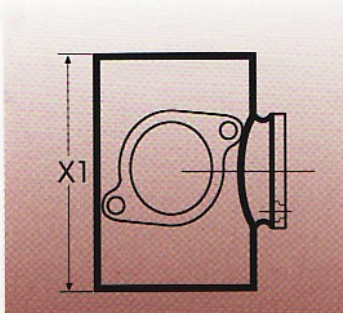




**SML single boss - with boss at 88°**

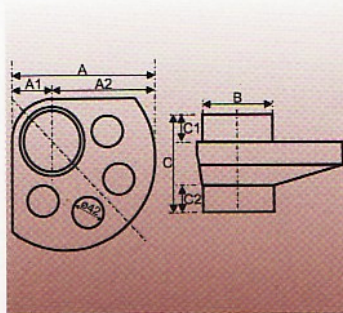
DN	X	kg	item no.
50*	150	1,2	232745
70*	146	1,6	231374
100	153	2,1	100267
150*	175	3,8	232746

\* upon request



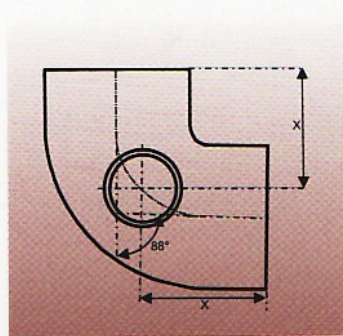
**SML double boss - with bosses at 90°**

DN	X	kg	item no.
100	155	2,9	100318



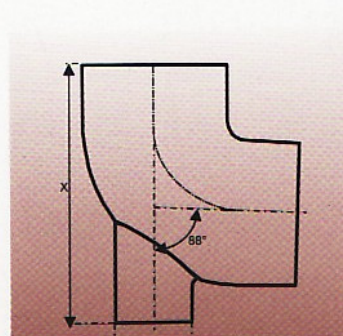
**SML manifold connector**

DN	A	A1	A2	B	C	C1, C2	kg	item no.
100	233,7	65	168,7	110	145	40	1,8	214089



**SML bend 88° with vent**

DN	X	kg	item no.
100x50	91	2,2	232445



**SML bend 88° with high heel**

DN	X1	A	kg	item no.
100x50*	195	58	2,4	235529

\* upon request