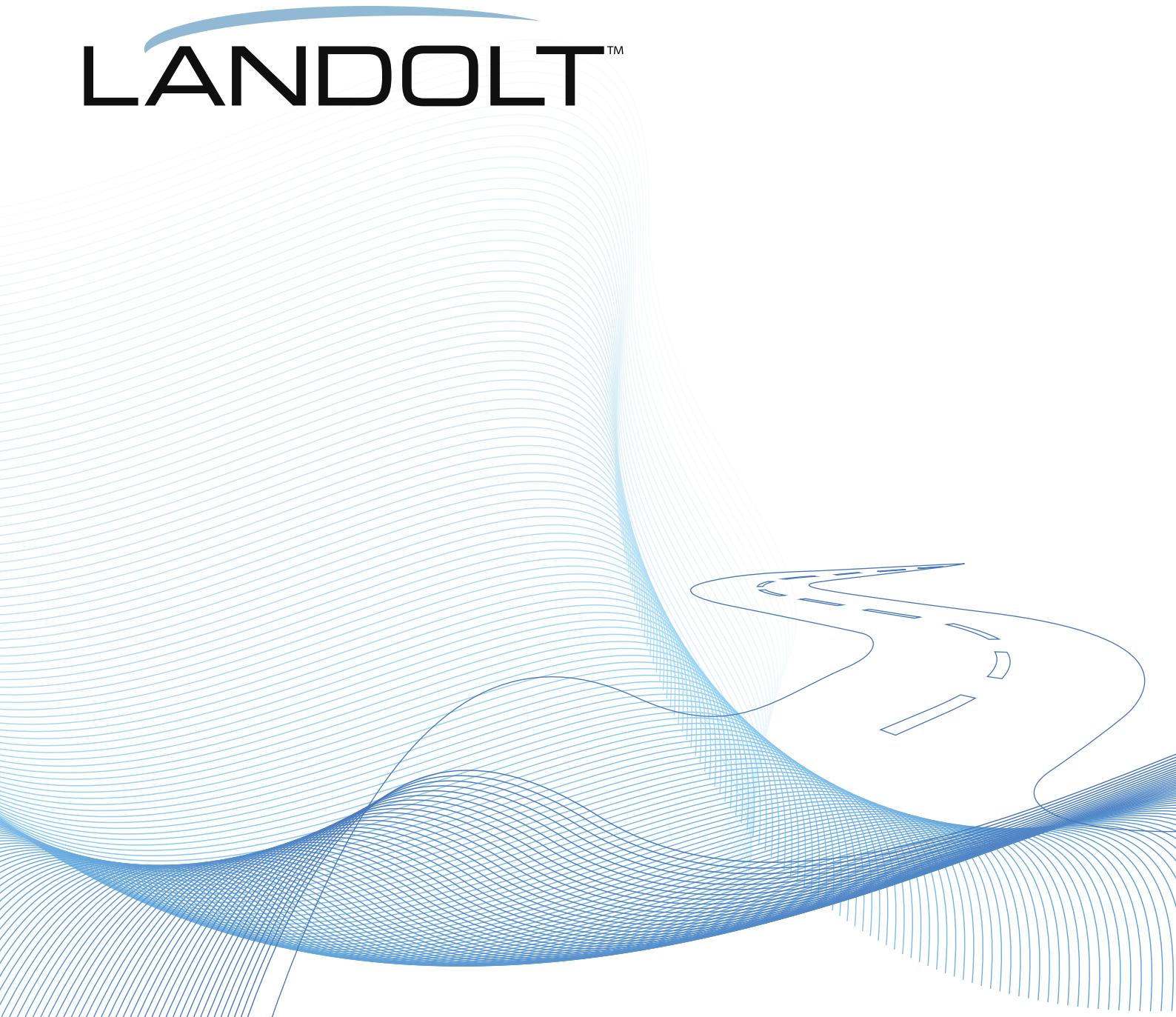
LANDOLT™



Outdoor solutions

Outdoor Solutions

The broad range of high-quality geosynthetics manufactured by FRITZ LANDOLT AG offers ideal solutions for any building site situation, whether for earthworks and civil engineering or for construction purposes.
Here you can find reliable, construction-relevant information on geosynthetics for a variety of applications. We will also show you our first-class and very interesting solutions for use in garden and landscape construction.

Performance, Together !

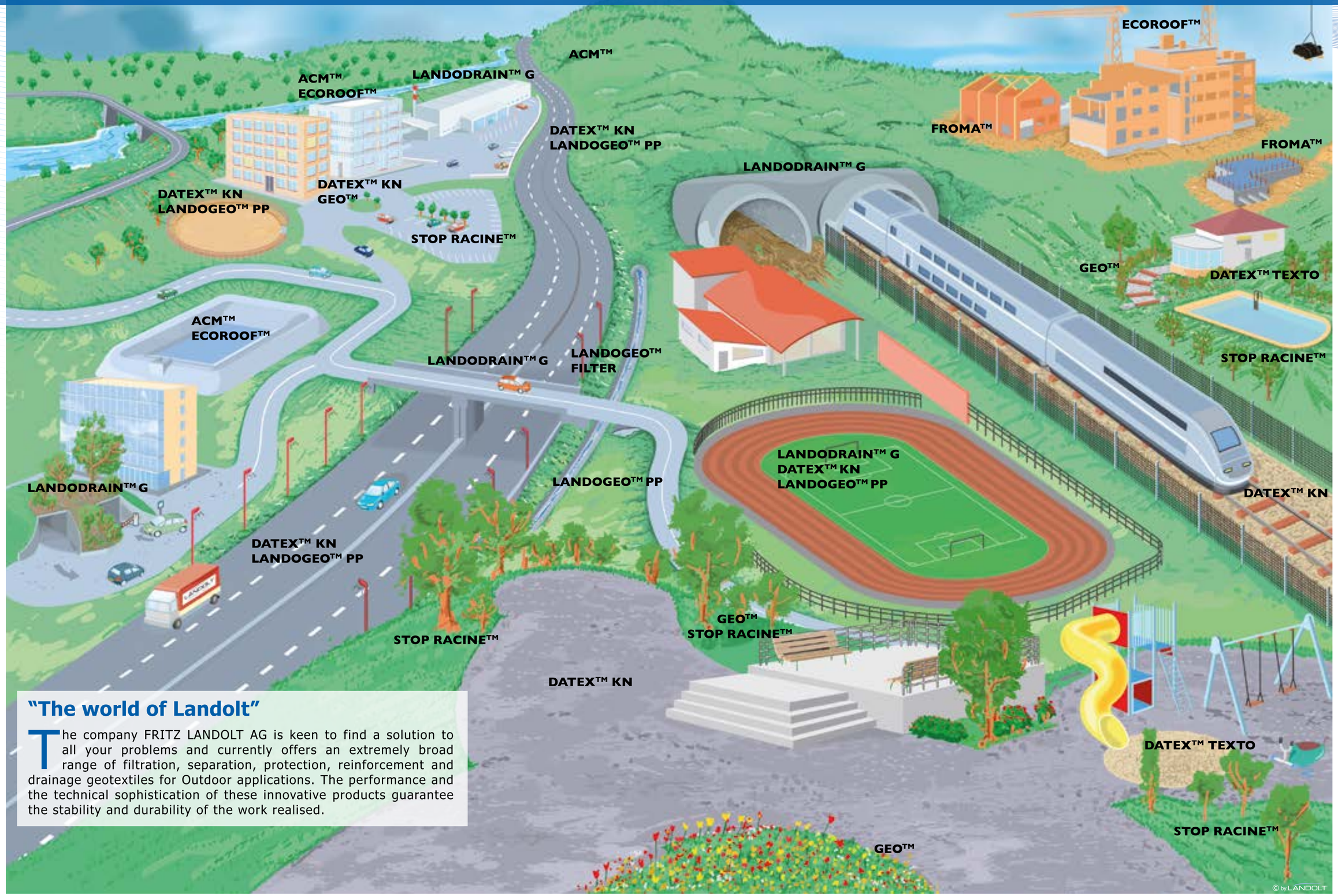
Is customer satisfaction important to you? And what about safety on your building sites? Are you looking for practical, efficient and time-saving solutions?
Our products will meet all of your expectations in every regard.

Choose Landolt™ to be on the safe side:
- Outstanding quality
- Needs-based customer service
- Quick-reacting logistics

SUMMARY

Outdoor solutions, version 1.0, EN

Applications



"The world of Landolt"

The company FRITZ LANDOLT AG is keen to find a solution to all your problems and currently offers an extremely broad range of filtration, separation, protection, reinforcement and drainage geotextiles for Outdoor applications. The performance and the technical sophistication of these innovative products guarantee the stability and durability of the work realised.

Datex™ KN (DA)

Datex™ KN (DA) is a mechanically needle-punched geotextile made of 100% continuous polypropylene fibres.

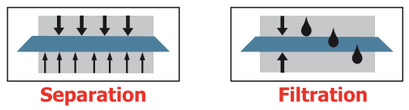
The flexible Datex™ KN (DA) material adapts easily to unevenness in the terrain. Datex™ KN (DA) combines excellent tear resistance with outstanding hydraulic properties thanks to its design.

Datex™ KN (DA) guarantees a high tensile strength and good puncture resistance combined with a low surface weight.

The broad Datex™ KN (DA) product range has ideal solutions to every construction site situation requiring mainly "separation and filtering" functions.

Functions

- ✔ Datex™ KN (DA) as a separating nonwoven prevents the fines of two overlaying layers from mixing.
- ✔ The Datex™ KN (DA) filter function prevents the internal erosion of the substrate in the direction of flow vertical to the geotextile and guarantees a pressure-free water flow.
- ✔ Datex™ KN (DA) lends permanent stability to structures in road building.



Areas of use

- ✔ Earthworks and civil engineering
- ✔ Road and railway construction
- ✔ Pathways and forest trails
- ✔ Gardens and landscaping
- ✔ Seepage drains

Features

- ✔ Easy installation
- ✔ Easy storage
- ✔ Good hydraulic values
- ✔ Saves fill material
- ✔ Environmentally friendly

Certifications

ISO 9001 BUREAU VERITAS Certification N° CH116582G6 · CE · ASQUAL · RVS · SVG

Technical data Datex™ KN (DA)

Nonwoven for filtration and separation

Product			KN 7 DA2	KN 9 DA3	KN 10 DA3	KN 13 DA4	KN 15 DA4	KN 17 DA5	KN 20 DA6	KN 25 DA7		
Certification			CE ASQUAL	CE ASQUAL SVG RVS	CE SVG RVS	CE ASQUAL SVG RVS	CE SVG RVS	CE ASQUAL SVG RVS	CE ASQUAL SVG RVS	CE ASQUAL SVG RVS		1213-CPR-5393
Characteristic properties												
Polymers and construction			Nonwoven geofabric made of needle punched continuous 100% polypropylene fibres									
Mechanical properties												Norm
Weight		g/m²	95	105	125	155	180	200	250	305	nom	EN ISO 9864
Thickness at	2 kPa	mm	1.1	1.2	1.4	1.6	1.8	2.0	2.4	2.7	nom	EN ISO 9863-1
Elongation at break	MD	%	80	80	80	80	80	80	80	85	nom	EN ISO 10319
	CMD	%	70	70	70	70	70	70	70	75	nom	
Tensile strength	MD	kN/m	6	8	9	12	14	16	20	25	nom	EN ISO 10319
	CMD	kN/m	6	8	9	12	14	16	20	25	nom	
Static puncture resistance	CBR	kN	1,05	1.2	1.4	1.75	2.1	2.35	2.9	3.85	nom	EN ISO 12236
Dynamic puncture test		mm	34	32	28	25	22	21	18	15	nom	EN ISO 13433
Puncture resistance			0.4	0.4	0.5	0.7	0.8	0.9	1.1	1.2	nom	NFG 38-019
Hydraulic properties												
Water permeability (vertical)	20 kPa	$m*s^{-1}$	100	100	100	100	90	85	70	55	nom	EN ISO 11058
Water flow in the plane	20 kPa	$10^{-6}m^2/s^{-1}$	4.5	5.3	7.2	10.0	13.0	15.0	20.0	27.0	nom	EN ISO 12958
	100 kPa	$10^{-6}m^2/s^{-1}$	2.8	2.8	3.0	4.0	4.5	5.0	5.5	6.8	nom	
Characteristic opening size		µm	105	105	105	100	100	100	95	85	nom	EN ISO 12956
Durability (degradation) - not ASQUAL-certification												
Resistance		%	65	65	65	65	65	65	65	65	min	EN 12224
Resistance to sulphuric and lime milk		%	95	95	95	95	95	95	95	95	min	EN 14030
Biological stability		%	95	95	95	95	95	95	95	95	min	EN 12225
Standard dimensions												
Colour of the label			green	violet	grey	brown	red	yellow	blue	rose		
Length		m	200	200	200	180	150	150	150	100		
Width		m	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6		
Diameter		cm	41	43	45	50	47	55	58	52		
Geotextile class - not ASQUAL - certification												
German norms		**GRK**	**1**	**2**	**2**	**3**	**3**	**3**	**4**	**5**		
French norms			**2**	**3**	**3**	**4**	**4**	**5**	**6**	**7**		

min = minimum value | max = maximum value (according to SN 670 240) | nom = nominal value

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Outdoor solutions, version 1.0, EN

Geofabric for filtering and separating

Landogeo™ Filter

Landogeo™ Filter is a PE monofilament filter fabric.

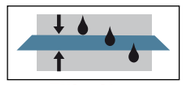
Landogeo™ Filter is a PE monofilament fabric comprising a two-thread system (warp and weft) that is cross-linked at right-angles on a single level to form a two-dimensional textile fabric.

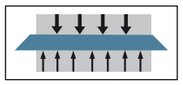
This open structure achieves outstanding filtering properties.

Landogeo™ Filter is suitable for every construction site situation requiring "filtering" as the main function.

Functions

- ✔ Landogeo™ Filter as a filter fabric for applications in earthworks and hydraulic engineering with high demands on effective filtering.


Filtration


Separation

Areas of use

- ✔ Earthworks and civil engineering
- ✔ Road construction
- ✔ Seepage drains
- ✔ Gardens and landscaping

Features

- ✔ High filtering properties, good hydraulic values
- ✔ Easy installation
- ✔ Easy storage
- ✔ Weather proof
- ✔ Saves fill material
- ✔ Environmentally friendly

Certifications

ISO 9001 BUREAU VERITAS Certification
N° CH165826

CE

Outdoor solutions, version 1.0, EN

Technical data Landogeo™ Filter

Filter fabric					
Product			**Landogeo™ Filter**		
Certification			CE		1213-CPR-5084
Characteristic properties					
Structure and form			100% PE-Monofil woven		
Mechanical properties					**Norm**
Weight		g/m²	160	nom	EN ISO 9864
Thickness		mm	0.8	nom	EN ISO 9863-1
Elongation	MD	%	18	nom	EN ISO 10319
	CMD	%	28	nom	
Tensile strength	MD	kN/m	25	nom	EN ISO 10319
	CMD	kN/m	18	nom	
Static puncture resistance	CBR	kN	2.2	nom	EN ISO 12236
Dynamic puncture test		mm	17	nom	EN ISO 13433
Hydraulic properties					
Water permeability (vertical)		l/m² .s	250	nom	EN ISO 11058
Characteristic opening size		mm	0.4	min	EN ISO 12956
Delivery form					
Length		m	100		
Width		m	5.20 / 2.60		
Area		m²	520 / 260		

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Outdoor solutions, version 1.0, EN

GEO™

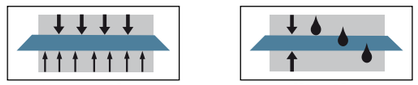
GEO™ is a mechanically needle-punched geotextile made of 100% continuous polypropylene fibres.

The flexible GEO™ material adapts easily to unevenness in the terrain. GEO™ combines excellent tear resistance with outstanding hydraulic properties thanks to its design.

GEO™ is suitable for any earthworks and civil engineering application.

Functions

- ✔ GEO™ as a separating nonwoven prevents the fines of two overlaying layers from mixing.
- ✔ The GEO™ filter function prevents the internal erosion of the substrate in the direction of flow vertical to the geotextile and guarantees a pressure-free water flow.



Areas of use

- ✔ Earthworks and civil engineering
- ✔ Road construction
- ✔ Pathways and forest trails
- ✔ Gardens and landscaping
- ✔ Seepage drains

Features

- ✔ Easy installation
- ✔ Easy storage
- ✔ Good hydraulic values
- ✔ Weather proof
- ✔ Saves fill material
- ✔ Environmentally friendly

Certification

ISO 9001 BUREAU VERITAS Certification
N° CH165826

CE

Technical data GEO™

Needle-punched nonwovens for separation and filtration

Product			GEO™ 150	GEO™ 200		
Certification			CE			1213-CPR-5396
Characteristic properties						
Structure and form			Nonwoven geofabric made of continuous 100% polypropylene fibers			
Mechanical properties						**Norm**
Weight		g/m²	150	200	nom	EN ISO 9864
Thickness		mm	1.7	2.3	nom	EN ISO 9863-1
Elongation	MD	%	50	50	nom	EN ISO 10319
	CMD	%	60	60	nom	
Tensile strength	MD	kN/m	10	14	nom	EN ISO 10319
	CMD	kN/m	10	14	nom	
Static puncture resistance	CBR	kN	1.6	2.3	nom	EN ISO 12236
Dynamic puncture test		mm	23	18	nom	EN ISO 13433
Hydraulic properties						
Water permeability (vertical)		l/m² .s	90	80	min	EN ISO 11058
Resistance (residual)						
Resistance to weathering		%	65	65		SN 670 240
Resistance to sulphuric acid		%	95	95		EN 14030
Resistance to lime-milk		%	95	95		EN 14030
Biological resistance		%	95	95		EN 12225
Delivery form rolls of						
Colour of the label			orange		turquoise	
Length		m	150		150	
Width		m	2	3	4	6	2	4	
Area		m²	300	450	600	900	300	600	

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Outdoor solutions, version 1.0, EN

Separation and filter nonwoven

Datex™ Texto

Datex™ Texto is a mechanically needle-punched geotextile made of 100% continuous polypropylene fibres.

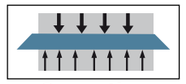
The flexible Datex™ Texto material adapts easily to unevenness in the terrain.

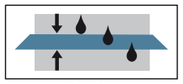
It weighs very little and provides reliable separation combined with efficient filtering functionality.

Datex™ Texto is suitable for all garden applications.

Functions

✔ Datex™ Texto as a separating nonwoven prevents the fines of two overlaying layers from mixing.
✔ The Datex™ Texto filter function prevents the internal erosion of the substrate in the direction of flow vertical to the geotextile and guarantees a pressure-free water flow.


Separation


Filtration

Areas of use

✔ Minor earthworks
✔ Gardens and landscaping
✔ Seepage drainpipes
✔ Pathways
✔ Sandbox

Features

✔ Easy to install (ductile and light)
✔ Ideal for smaller projects
✔ Good mechanical properties
✔ Good hydraulic properties
✔ Easy to store
✔ Saves fill material
✔ Environmentally friendly

Certifications

ISO 9001 BUREAU VERITAS Certification
N° CH116582

CE

Technical data Datex™ Texto

Nonwoven for filtration and separation

Product			Datex™ Texto 7		
Certification			CE		1213-CPR-5394
Characteristic properties					
Polymers and construction			Nonwoven geofabric made of needle punched continuous 100% polypropylene fibres		
Mechanical properties					
Weight		g/m²	95	nom	EN ISO 9864
Thickness at		mm	1.1	nom	EN ISO 9863-1
Tensile strength	MD	kN/m	6	nom	EN ISO 10319
	CMD	kN/m	6	nom	
Elongation at break	MD	%	80	nom	EN ISO 10319
	CMD	%	70	nom	
Static puncture resistance	CBR	kN	1.05	nom	EN ISO 12236
Dynamic puncture test		mm	34	nom	EN ISO 13433
Static puncture resistance	NFG	kN	0.4	nom	NFG 38019
Hydraulic properties					
Water permeability (vertical)		l/m² ·s	100	min	EN ISO 11058
Water flow in the plane		20 kPa 10^{-7} m²/s	4.5	min	EN ISO 12958
		100 kPa 10^{-7} m²/s	2.8	min	
Characteristic opening size		µm	105	nom	EN ISO 12956
Durability (degradation)					
Resistance		%	65	min	EN 12224
Resistance to sulphuric		%	95	min	EN 14030
Resistance to lime-milk		%	95	min	EN 14030
Biological stability		%	95	min	EN 12225
Standard dimensions					
Roll dimensions: width x length		m	0.50 x 50	48 Rolls/Palett; 2 Carton/Palett	
Roll dimensions: width x length		m	1.00 x 50	24 Rolls/Palett; 2 Carton/Palett	
Roll dimensions: width x length		m	2.00 x 50	12 Rolls/Palett; 2 Carton/Palett	
Geotextile class					
German norms		**GRK**	**1**		
French norms			**2**		

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Outdoor solutions, version 1.0, EN

ACM™

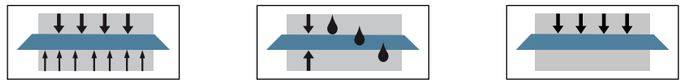
ACM™ is a mechanically needle-punched geotextile made of polypropylene staple fibres.

The flexible ACM™ material adapts easily to unevenness in the terrain. ACM™ guarantees optimum protection for every solution in construction and civil engineering.

The broad ACM™ product range has ideal solutions to every construction site situation requiring "protection and separation".

Functions

✔ ACM™ provides ideal mechanical protection for waterproofing membranes.
✔ ACM™ as a protective nonwoven between waterproofing membrane and substrate.
✔ ACM™ as a protective nonwoven between waterproofing membrane and build-up (fill material).



Areas of use

✔ Flat roofs
✔ Earthworks and civil engineering
✔ Waste disposal sites
✔ Gardens and landscaping
✔ Hydraulic engineering
✔ Pipeline construction

Features

✔ Protection against punching and perforation
✔ Easy installation
✔ Easy storage
✔ Environmentally friendly

Certifications

ISO 9001 BUREAU VERITAS Certification
N° CH165826

CE

Technical data ACM™

Nonwoven for protection and separation

Product			ACM™ 200	ACM™ 300	ACM™ 500	ACM™ 600	ACM™ 800	ACM™ 1000		
Certification			CE	CE	CE	CE	CE	CE		0407-CPR-731
Characteristic properties										
Polymers and construction			Nonwoven geofabric made of needle punched polypropylene staple fibres							
Mechanical properties										Norme
Weight		g/m²	200	300	500	600	800	1000	nom	EN ISO 9864
Thickness at 2 kPa		mm	2.7	3	4	5	6	7	nom	EN ISO 9863-1
Tensile strength	MD	kN/m	7.0	12.0	18.0	20.0	30.0	40.0	nom	EN ISO 10319
	CMD	kN/m	8.0	15.0	30.0	32.0	45.0	48.0	nom	
Elongation at break	MD	%	> 50	> 50	> 50	> 50	> 50	> 50	nom	EN ISO 10319
	CMD	%	> 50	> 50	> 50	> 50	> 50	> 50	nom	
Static puncture Resistance	CBR	kN	1.2	2.5	4.0	5.0	7.0	8.0	nom	EN ISO 12236
Dynamic puncture test		mm	12	8	5	4	2	1	nom	EN ISO 13433
Hydraulic properties										
Characteristic opening size		µm	85	77	< 60	< 60	< 60	< 60	nom	EN ISO 12956
Water permeability (vertical)	20 kPa	$m*s^{-1}$	0.137	0.089	0.041	0.035	0.022	0.021	nom	EN ISO 11058
Water flow in the plane	20 kPa	$10^{-6}m^2/s^{-1}$	-	9.7	9.7	12	12	-	nom	EN ISO 12958
	100 kPa	$10^{-6}m^2/s^{-1}$	-	1.7	2.8	3.4	5.1	-	nom	
Standard dimensions										
Colour marking			red	green	brown	yellow	blue	violet		
Length		m	150	100	50	50	50	40		
Width		m	2.50/5.00	2.50/5.00	2.50/5.00	2.50/5.00	2.50/5.00	2.50/5.00		

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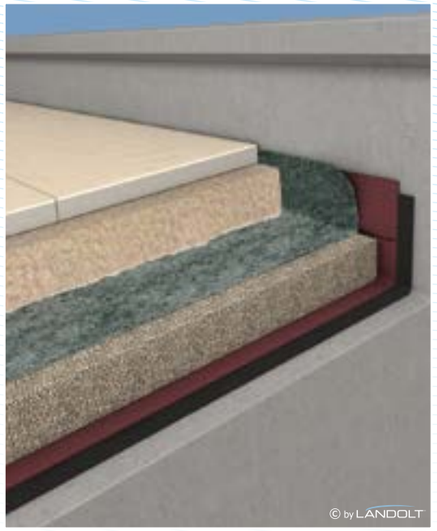
Ecoroof ™



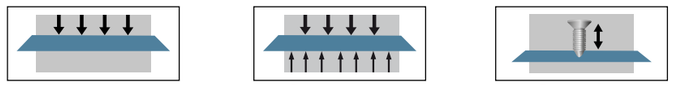
Ecoroof™ is a mechanically needle-punched and thermally treated geotextile made of polypropylene staple fibres.

The geotextile offers high protection despite its low weight thanks to thermal curing and is drill and screw tight.

Ecoroof™ is the ideal solution to every construction site situation requiring "protection and separation".

Functions

✔ Ecoroof™ provides ideal mechanical protection for waterproofing membranes.
✔ Ecoroof™ is "drill and screw tight" thanks to thermal curing and can be attached using various methods.



Areas of use

✔ Flat roofs
✔ Earthworks and civil engineering
✔ Gardens and landscaping

Features

✔ Easy installation
✔ Easy storage
✔ Fast installation
✔ Drill and screw tight
✔ Optimum protection
✔ Highly resistant to puncturing
✔ Environmentally friendly

Certifications

ISO 9001 BUREAU VERITAS Certification N° CH1165826

CE

Technical data Ecoroof™

Nonwoven for separation and protection									
Product			**ECR 140**		**ECR 200**		**ECR 300**		
Certification			CE		CE		CE		0799-CPR-91
Characteristic properties									
Polymers and construction			Needle punched and thermally bonded nonwoven of 100% polypropylene. Drill resisitent.						
Mechanical properties									**Norme**
Weight		g/m²	140		200		300	nom	EN ISO 9864
Thickness at		mm	0.7		1.35		2.1	nom	EN ISO 9863-1
Elongation at break	MD	%	60		70		65	nom	EN ISO 10319
	CMD	%	70		70		60	nom	
Tensile strength	MD	kN/m	6		11		15	nom	EN ISO 10319
	CMD	kN/m	11		20		28	nom	
Static puncture resistance	CBR	kN	1.6		2.5		3.7	nom	EN ISO 12236
Dynamic puncture test		mm	24		15		11	nom	EN ISO 13433
Hydraulic properties									
Water permeability (vertical)		m/s	0.060		0.060		0.045	nom	EN ISO 11058
Standard dimensions									
Roll length		m	100		100		100		
Roll width		m	2	4	2	4	2	4	
Roll area		m²	200	400	200	400	200	400	

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Geofabric for separating and reinforcing

Landogeo™ PP

Landogeo™ PP is a woven fabric made of 100% polypropylene.

Landogeo™ PP is made from a high-quality woven PP fabric comprising a two-thread system (warp and weft) that is cross-linked at right-angles on a single level to form a two-dimensional textile fabric.

This structure achieves very high tensile resistance combined with a low surface weight.

Landogeo™ PP is a suitable solution for any building site situation requiring "separation and reinforcement" as the main functions.

Functions

- ✔ Landogeo™ PP as a separating element prevents the fines of two overlaying layers from mixing.
- ✔ Landogeo™ PP as a reinforcing element lends the structure permanent stability.
- ✔ Landogeo™ PP's secondary "filtering" function guarantees that water flows vertically to the geofabric.

Areas of use

- ✔ Earthworks and civil engineering
- ✔ Road and railway construction
- ✔ Construction site trails
- ✔ Pathways and forest trails
- ✔ Gardens and landscaping

Features

- ✔ Saves fill material
- ✔ Foundation layer reinforcement
- ✔ Easy installation
- ✔ Easy storage
- ✔ Environmentally friendly

Certifications

ISO 9001 BUREAU VERITAS Certification N° CH165826

CE

Technical data Landogeo™ PP

PP-woven fabric									
Product			**PP 15/15**	**PP 25/25**	**PP 30/30**	**PP 45/45**	**PP 60/60**	**PP 80/80**	
Certification			CE	CE	CE	CE	CE	CE	0799-CPR-91
Characteristic properties									
Structure and form			Woven fabric made of 100% polypropylene						
Mechanical properties									Norme
Weight		g/m²	100	125	175	230	280	370	nom EN ISO 9864
Tensile strength	MD	kN/m	20.0	25.0	30.0	45.0	60.0	80.0	nom EN ISO 10319
	CMD	kN/m	14.0	25.0	30.0	45.0	60.0	80.0	nom
Elongation	MD	%	13	15	15	12	11	12	nom EN ISO 10319
	CMD	%	12	9	9	10	9	8	nom
Static puncture resistance	CBR	kN	2.4	3,4	3.5	5.0	6.5	9.0	nom EN ISO 12236
Dynamic puncture test		mm	15.0	10.0	8.0	10.0	6.0	4.0	nom EN ISO 13433
Hydraulic properties									
Water permeability (vertical)		µm	200	200	200	200	200	190	nom EN ISO 12956
Characteristic opening size		l /m²*s	19	16	16	16	16	14	min EN ISO 11058
Delivery form									
Width		m	2.10 / 5.20	5.20	5.20	5.20	5.20	5.20	
Length		m	100	100	100	100	100	100	
Area		m²	210 / 520	520	520	520	520	520	

min = minimum value | max = maximum value (accordin g to SN 670 240) | nom = nominal value

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Geocomposite fabric for drainage and protection

Landodrain™ G

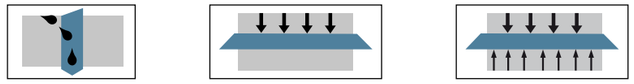
Landodrain™ G is a three-dimensional composite drainage fabric.

Landodrain™ G consists of a three-dimensional drainage core of randomly laid and form-pressed polypropylene (PP) monofilaments. It is thermally bonded to a PP geo-nonwoven (version FD or FDF) on one or both sides.

Landodrain™ G is a suitable solution for any building site situation requiring "drainage and protection" as the main functions.

Functions

✔ Landodrain™ G as drainage in horizontal and vertical applications.
✔ Landodrain™ G as protection for the waterproofing membrane.
✔ Landodrain™ G ensures the separation of layers without clogging.



Areas of use

✔ Earthworks and civil engineering
✔ Road and railway construction
✔ Waste disposal sites
✔ Tunnel construction
✔ Flat roofs
✔ Gardens and landscaping
✔ Terrace construction
✔ Basement walls
✔ Supporting walls

Features

✔ Easy installation
✔ Optimum water drainage
✔ Easy storage
✔ Optimum protection
✔ Very resistant to heavy loads
✔ Environmentally friendly

Certifications

ISO 9001 BUREAU VERITAS Certification N° CH165826

CE

Technical data Landodrain™ G

Drainage mat							1213-CPR-5400
Product			**G 12 FD**	**G 20 FD**	**G 12 FDF**	**G 20 FDF**	
	F: Filter D: Drainage		Geocomposite for planar drainage, obtained by continuous thermo bonding of an extruded monofilaments core (GMA) with two geotextiles (GTX) for separation and filtration.				
Properties filter (F)							Norm
Material		g/m²	PP- UV stabilized, mechanically bonded nonwoven				
Weight	2 kPa	mm	120	120	120	120	EN ISO 9864
Thickness at	MD	%	0.75	0.75	0.75	0.75	EN ISO 9863-1
Tensile strength	MD CMD	kN/m kN/m	8.0 8.0	8.0 8.0	8.0 8.0	8.0 8.0	EN ISO 10319
Static puncture resistance	CBR	kN	1.4	1.4	1.4	1.4	EN ISO 12236
Dynamic puncture test		mm	33	33	33	33	EN ISO 13433
Water permeability (vertical)		l/m².s	100	100	100	100	EN ISO 11058
Characteristic opening size		µm	110	110	110	110	EN ISO 12956
Width		cm	205	205	205	205	
Properties drainage core (D)							
Structure			Three dimensional geomat with channels-like structure, made by extruded monofilaments.				
Raw material			Polypropylene UV-stabilized by carbon-black				
Weight		g/m²	550	650	600	750	EN ISO 9864
Width		cm	200	200	200	200	
Properties geocomposit (D)							
Thickness at	2 kPa	THp2 mm	14	20	14	20	EN ISO 9863-1
Weight		g/m²	670	770	840	990	EN ISO 9864
Tensile strength	MD CMD	kN/m kN/m	8.0 8.0	8.0 8.0	15.0 15.0	15.0 15.0	EN ISO 10319
Water flow in the plane	i=0,03 20 kPa 100 kPa	l/m.s	0.50 0.03	0.70 0.03	0.40 0.03	0.70 0.07	EN ISO 12958
	i=0,32 20 kPa 100 kPa	l/m.s	2.20 0.14	2.90 0.17	1.60 0.21	2.80 0.38	
	i=0,32 20 kPa 100 kPa	l/m.s	4.00 0.25	5.50 0.33	3.00 0.40	5.00 0.72	
Delivery form							
Length		cm	200	200	200	200	
Width		m	35	25	35	25	
Diameter		cm	80	80	80	80	
Area		m²	70.0	50.0	70.0	50.0	

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Frost and building protection mat

Froma™

Froma™ is a frost and building protection mat made from 100% polypropylene staple fibres with a laminated, light-blue top side made of PE film.

Functions

- ✔ Froma™ enables concreting at low temperatures and slows down the cement setting process in the summer.
- ✔ Froma™ protects the mortar on freshly installed curbstones during the curing phase.
- ✔ Multi-usage Froma™ can be used to close gaps and to protect materials and structures that have been freshly stripped.

Areas of use

- ✔ Concreting at low and high temperatures.
- ✔ Various construction and civil engineering applications.

Features

- ✔ High level of protection from cold/heat
- ✔ Temperature improvement: 5 – 15°C
- ✔ Quick and easy to install
- ✔ Resistant to mechanical damage
- ✔ Extra tear resistant and reusable
- ✔ Environmentally friendly

Certifications

ISO 9001 BUREAU VERITAS Certification N° CH1165826

SWISS

Outdoor solutions, version 1.0, EN

Technical data Froma™

Protective nonwoven against frost and building

Product		Froma™			
Characteristic properties					
Structure and form		Nonwoven composite made of continuous 100% polypropylene, one side laminated with blue PE film (40 µm).			
Mechanical properties					**Norm**
Weight	g/m²	300		nom	EN ISO 9864
Thickness	mm	3		nom	EN ISO 9863-1
Tensile strength	MD kN/m	9		nom	EN ISO 10319
	CMD kN/m	12		nom	
Static puncture resistance	CBR kN	2,0		nom	EN ISO 12236
Standard dimensions					
Length	m	25			
Width	m	1	2	4	
Area	m²	25	50	100	

min = minimum values | max = maximum values | nom = nominal values

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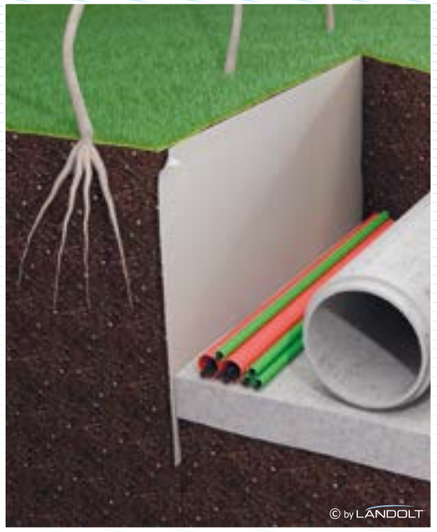
Outdoor solutions, version 1.0, EN

Stop Racine™



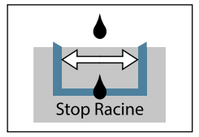
Stop Racine™ is a 100% polypropylene nonwoven, thermally cured and coated.

Stop Racine™ enables controlled root growth and prevents the root systems of trees and plants from causing extensive damage to buildings. For example: roads, foundations, pipelines, etc.

Stop Racine™ is suitable for any "root protection" application.

Functions

- ✔ Stop Racine™ has a closed, non-permeable structure for various applications as a nonwoven for root protection.
- ✔ Stop Racine™ offers effective protection from root growth.



Areas of use

- ✔ Earthworks and civil engineering
- ✔ Roads, pavements, cycle paths, engineering structures
- ✔ Underground cables and pipelines
- ✔ Pond and swimming pool construction
- ✔ Gardens and landscaping
- ✔ Foundations
- ✔ Sewer systems

Features

- ✔ Easy installation
- ✔ Efficient for all root types
- ✔ Impermeable to water
- ✔ High tear resistance
- ✔ Good chemical resistance
- ✔ Environmentally friendly

Certification

ISO 9001 BUREAU VERITAS Certification
N° CH165826

Technical data Stop Racine™

Root protection nonwoven						
Product			**Stop Racine™**			
Characteristic properties						
Structure and form			Needle-punched and thermally treated nonwoven, 100% polypropylene			
Mechanical properties						**Norm**
Weight		g/m²	325		nom	EN ISO 9864
Elongation	MD	%	64		nom	EN ISO 10319
	CMD	%	50			
Tensile strength	MD	kN/m	22		nom	EN ISO 10319
	CMD	kN/m	22		nom	
Static puncture resistance	CBR	kN	3.5		nom	EN ISO 12236
Composition						
Surface resistance of coated side		µm	45		nom	ISO 4288
Stiffness / elastic modulus	MD	N/mm	76		nom	DIN EN ISO 527-1
	CMD	N/mm	77		nom	
Delivery form						
Length		m	50			
Width		m	1.00	1.50		
Area		m²	50	75		

min = minimum values | max = maximum values | nom = nominal values

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Group structure

The Landolt Group – people working for poeple.
Employees who always want to be one step ahead when it comes to meeting customer's requirements.

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