

Energy Systems

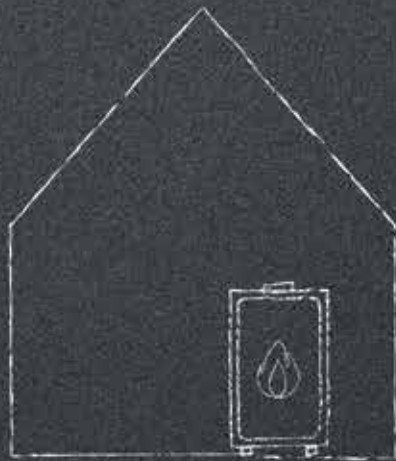
## Storage and transport tanks Unitech, Multitech and Service-Box

Range of tanks for industry, trade  
and agriculture



*Living full of energy*

*Goods that require careful handling are a common part of our daily work. One reason to pay particular attention to safe storage and transportation is to protect our environment.*





## Special goods that require special attention

The safety and protection during storage of water-polluting liquids as well as the transport of dangerous goods require special care. A care which is guaranteed by its own type, type approval verifications and transportation licences.

Various requirements have to be observed when handling water polluting liquids:

- > officially approved storage tanks for water-polluting liquids with a flash point >55 °C\*
- > approved for transporting dangerous goods of Packing Groups II or III – according to the regulation for the transportation of hazardous goods by road, rail and inland waterway transport (GGVSEB)\*\* – and the regulation for the transportation of hazardous goods by sea (GGVSee)
- > approved for transporting dangerous solid materials of Packing Groups II and III\*\*\*

Roth offers the appropriate solution. Products include the Unitech tank, the Multitech tank and the Service-Box.

\* valid for Multitech and Unitech

\*\* valid for Multitech, see page 8 et seqq.

\*\*\* valid for Service-box, see page 12 et seqq.

# Roth Unitech und Multitech

the latest design and production technology

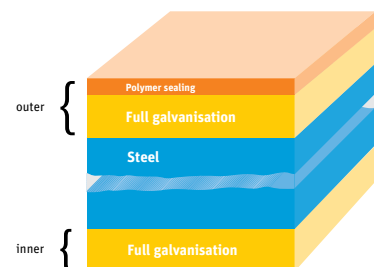


## ■ Our experience for your safety

Uni/Multitech tanks are the result of the latest design and production technology. The inner tank is made of tried-and-tested high molecular HDPE, which is blow moulded without seams. The outer tank consists of sheet metal that is galvanised on both sides. The patented beading protects the materials and firmly and permanently joins the sheet metal outer tank to the HDPE inner tank. The outer tank functions as a collecting tray and has the capacity to hold the full volume of the inner tank.

A leak probe integrated as standard monitors the space between tanks. Thanks to the use of high quality materials and the leak-monitored metal encapsulation of the inner tank, this design is extremely suitable as a single tank for the storage of water-polluting liquids in the private, industrial and commercial sector. Integrated handles enable easy handling of the tank. The low centre of gravity provides a high degree of static stability.

**Surface sealing for increased safety and a long-lasting, attractive appearance.**



■ Safety is in the details

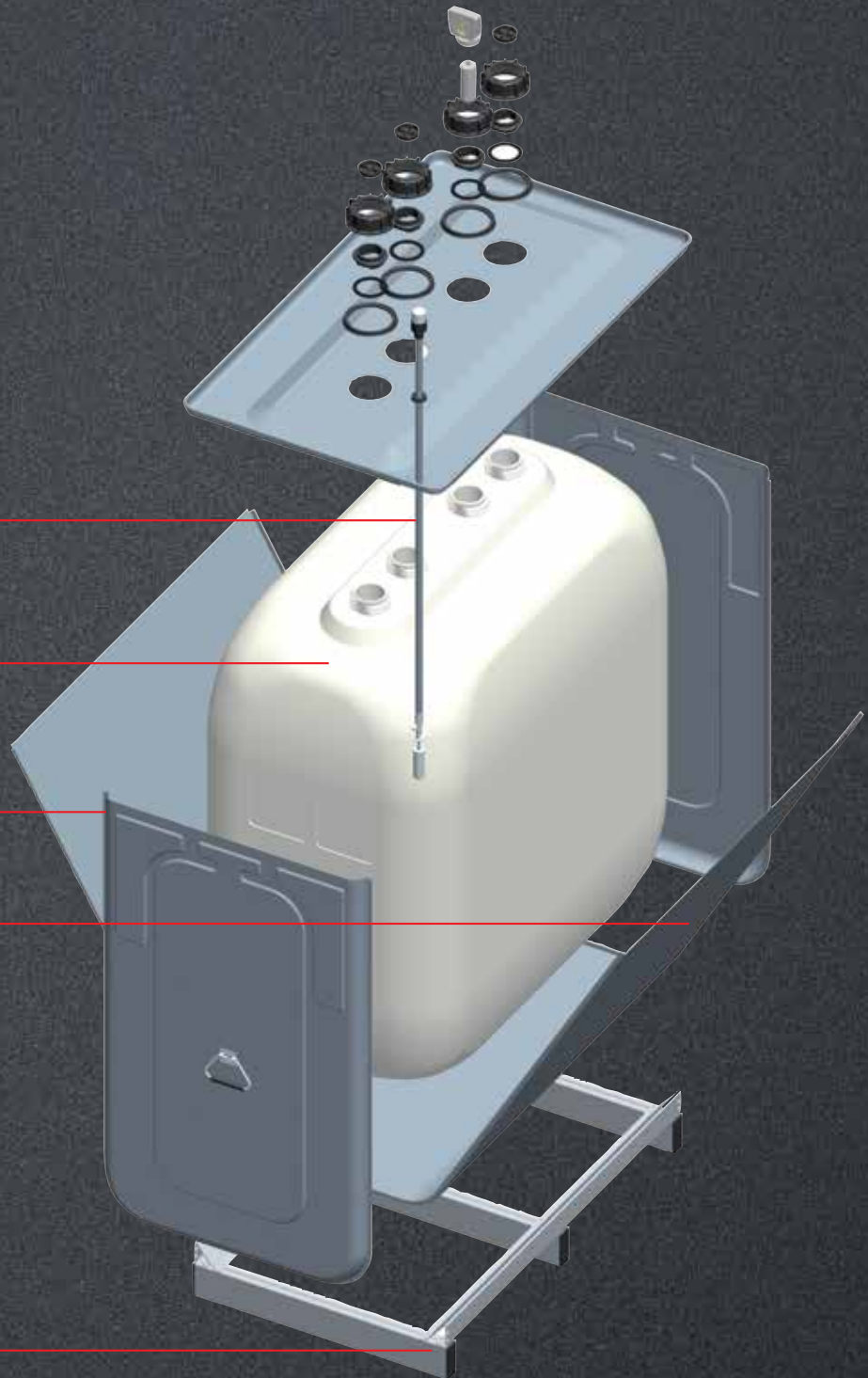
Leak probe

Inner tank

Beading

Steel outer tank

Base frame



# Roth Unitech

## storage tank for water-polluting liquids

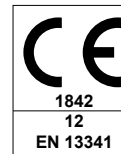


### ■ Roth Unitech (UT) storage tanks for fixed installations

Unitech tanks are approved storage tanks for water-polluting liquids with a flash point >55 °C, for fixed installation in rooms of buildings without additional collecting space, as individual tanks.

Type	Storage tank
Media	Lubricating oils; heat transfer oils; mineral oils; hydraulic oils; fatty oils; fuel oil; diesel; photochemicals
Media density	Maximum 1,2 kg/l
Approval	Storage permit
Installation	Individual tank

Roth Unitech (storage tanks)							
	Length	Width	Height*	Weight M0	Weight M1	Number of tanks per 40 ft sea-container	Storage permit
400 litres	740 (800) mm	700 (740) mm	1170 (1210) mm	46 kg	58 kg	46 <sup>1)</sup> + 45 <sup>2)</sup>	Z-40.21-362
**750 litres	980 (1020) mm	760 (800) mm	1420 (1600) mm	67 kg	81 kg	28 <sup>1)</sup> + 14 <sup>2)</sup>	Z-40.21-29
**1000 litres	1280 (1320) mm	760 (800) mm	1420 (1600) mm	82 kg	104 kg	22 <sup>1)</sup> +8 <sup>2)</sup>	Z-40.21-29
**1500 litres	1630 (1680) mm	760 (800) mm	1860 (2030) mm	133 kg	160 kg	14 <sup>1)</sup>	Z-40.21-283



\*Height on base frame to top of screwed connection. Dimensions in brackets include packaging.  
For installation in the room in which it is to be positioned, deduct 90 mm for the separate base frame.

Weight M0 = without packaging, without base frame, weight M1 = complete with packaging and base frame

1) Standing in the lower level

2) Standing up or lying on the lower level (additional storage safety and packaging aids required, hardboard between the levels as a support for balancing the weight of the tank located above)

\*\* These tanks also have an ÖTZ (Austrian Technical Approval). A special version is also available for Switzerland with a KVV Certificate.



■ **Safe storage of hazardous liquids (with additional collecting space)**

**Quality features of the Roth double wall**

- > tight plastic inner tank and enclosing dense metal outer tank (without holes in the liquid area)
- > the plastic tank is made of high-quality durable polyethylene (HDPE), is corrosion-resistant and therefore ideal for storing a variety of liquids (see DIBt general official approval)
- > the metal shell
  - protects the inner tank against external damage during storage
  - is protected against corrosion by its inner and outer layer of zinc, with its additional surface sealing
  - is joined by liquid-tight flanging to protect the material.  
Contrary to welding, the corrosion protection is unaffected by the joining process.
  - is optimally protected against fire (certified by a 90-minute fire test at the Materials Testing Institute of Dortmund)
  - protects the storage media against light and diffusion (safety for all storage media – including those with biogenic components)

**Other quality features**

- > the base frame, which is provided separately, provides secure footing and guarantees adequate ventilation of the metallic outer shell
- > maximum width of 800 mm, transport through regular doors possible
- > leak probe built in as standard
- > four tank connections with 2" internal thread adapter bushings
- > equipped with level gauge as standard for installation on a tank connection

# Roth Multitech

storage and transport tanks for hazardous goods



## ■ Storage and transport tanks Roth Multitech (MT) – securely transport and store hazardous goods

Multitech tanks are approved for transporting hazardous goods of Packaging Groups II or III.

They are suitable as bulk packaging for transporting hazardous goods (liquids) in accordance with the regulation for the transportation of hazardous goods by road, rail and inland waterway transport (GGV-SEB) and the regulation for the transportation of hazardous goods by sea (GGVSee). The fixed base frame allows forklifts or power lift trucks to get underneath. The specially shaped base frame also provides all-round buffers and transport protection.

Type	Storage and transport tanks
Media	For hazardous liquid goods of Packing Groups II and III (e.g., oils: lubricants; various chemicals)
Media density	Maximum 1,2 kg/l
Approval	Storage* and transport licence
Installation	Individual tank

\* see Unitech tank

### Roth Multitech (storage and transport tanks)

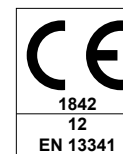
	Length	Width	Height *	Weight M0	Weight M1	Number of tanks per 40 ft sea-container	Transport licence (ADR/RID) 	Storage permit
400 litres	740 mm	740 mm	1170 (1210) mm	63 kg	64 kg	48 <sup>1)</sup> + 48 <sup>2)</sup>	D/BAM 6403/31HA1	Z-40.21-362
750 litres	980 mm	800 mm	1470 (1520) mm	88 kg	89 kg	28 <sup>1)</sup> + 14 <sup>2)</sup>	D/BAM 11580/31HA1	Z-40.21-29
1000 litres	(1280 mm)	800 mm	1470 (1520) mm	107 kg	108 kg	23 <sup>1)</sup> + 8 <sup>2)</sup>	D/BAM 11580/31HA1	Z-40.21-29
1500 litres	1640 mm	800 mm	1910 (1950) mm	162 kg	163 kg	14 <sup>1)</sup>	D/BAM 6404/31HA1	Z-40.21-283

\* Height on base frame to top of screwed connection. Dimensions in brackets include packaging.

Weight M0 = without packaging, weight M1 = complete with packaging

<sup>1)</sup> Standing on one level

<sup>2)</sup> Resting on top of the first stationary lower level (load safety must be tested, additional packaging aids needed)







■ **Safe transport and secure storage of hazardous liquid goods of Packaging Groups II or III without additional collecting space**

The classic single-wall IBC container has only one transport licence and is not approved for the storage of water-hazardous liquids.

**Quality features of the Roth double wall**

- > tight plastic inner tank and surrounding dense metal outer tank (without holes in the liquid area)
- > the plastic tank is made of high-quality durable polyethylene (HDPE), is corrosion-resistant and therefore ideal for storing a variety of liquids (see DIBt general official approval)
- > the metal shell
  - protects the inner tank against stress during transport and storage
  - is protected against corrosion by its inner and outer layers of zinc, with its additional surface sealing
  - is joined by liquid-tight flanging to protect the material. Contrary to welding, the corrosion protection is unaffected by the joining process.
  - is optimally protected against fire (certified by a 90-minute fire test at the Materials Testing Institute of Dortmund)
  - protects the storage media against light and diffusion (safety for all storage media – including those with biogenic components)

**Other quality features**

- > the base frame, which can be transported with a forklift, is fixed to the tank and has a reverse collision guard, thus ensuring easy handling
- > maximum width of 800 mm, transport through regular doors possible
- > leak probe built in as standard
- > four tank connections with 2" internal thread adapter bushings
- > equipped with level gauge as standard for installation on a tank connection

# Roth Unitech and Multitech storage and transport tanks

## safety you can depend on



### ■ Roth Unitech and Multitech tanks have many different uses

#### Strict safety

The totally corrosion-free inner tanks and the fully galvanised, corrosion-proof beaded outer tanks are tested for leaks.

#### Optimum dimensions

- > due to the compact dimensions of the Unitech/Multitech tank, no additional step ladder is required to use the 400 l, 750 l and 1000 l sizes
- > maximum storage volume with minimal space requirements

#### Storage media

- > EL heating oil according to DIN 51603
- > diesel fuel according to DIN EN 590
- > FAME according to DIN EN 14214
- > heating oil according to DIN SPEC 51603-6 EL A Bio
- > lubricating oils, hydraulic oils, Q heat transfer oils, alloyed or unalloyed with a flash point above 55 °C\*
- > lubricating oils, hydraulic oils, Q heat transfer oils, used oils, flash point above 55 °C (origin and flash point must be able to be substantiated by the operator)\*/\*\*

- > vegetable oils such as cottonseed, olive, rapeseed, castor or wheat germ oil in any concentration

#### Perfect quality

Constant material and production checks and TÜV-monitored, ISO-accredited production ensure consistently high quality. Years of maintenance-free operation safeguarded by our long-term 5-year guarantee.

#### Installation

The Unitech/Multitech tanks are officially approved for installation without any additional collection tray or collecting space. Installing Unitech/Multitech containers as storage tanks is only permitted as an individual tank in rooms of buildings. (Distance to wall at least 50 mm on three sides, at least 400 mm on a long side.) Up to a filling volume of 1000 l, a self-locking nozzle with unrestricted flow can be used to fill tanks at a maximum flow rate of 200 l/minute.

#### Scope of delivery

- > optical leak probe and level indicator fitted as standard
- > base frame fitted as standard for fixed installation ensures adequate ventilation under the tank



\* In the event of the storage of these substances in a Unitech or Multitech tank, the fitted leak probe should, if necessary, be replaced with an optical and acoustic leak warning device in accordance with water legislation (Water Hazard Class 3).

\*\* Photochemicals, up to a density of 1,15 g/cm<sup>3</sup> upon request.



### Accessories for Unitech/Multitech tanks

- > hand pump 0,06 l/stroke
- > optical and acoustic leak warning device – sensor probe must be ordered separately! (e.g., for liquids of Water Hazard Class III such as waste oil, prescribed in some federal states of Germany)
- > removal and ventilation kit for individual tank
- > accessories, gland locking nuts with gaskets and ventilation with foam filter
- > W40 electric pump with siphon protection, suction hose nozzle (automatic nozzle optional)
- > filler bowl for MT/UT 750/1000 l

### Connection equipment

- > extraction spout with 2" internal thread for electric or pneumatic drum or piston pump as well as fastening for pump holder
- > filler pipe with 2" internal thread
- > spout to attach the level indicator
- > additional spout (e.g., to install a de-aerator)

### Roth Unitech and Multitech tanks at a glance

- > Roth Unitech tanks for the **secure storage** of water-hazardous liquids
- > Roth Multitech tanks for the **secure storage and transport** of hazardous goods of Packing Groups II or III
- > for mounting without a collecting tray
- > inner tank made of tried-and-tested high-molecular HDPE
- > outer tank made of sheet steel galvanised on both sides
- > permanent and patented beading on the steel outer tank
- > including leak probe, level indicator and base frame
- > integrated handles make transport easier
- > TÜV-monitored and ISO-accredited production
- > 5-year long-term guarantee



# Roth Service-Box

transport and storage for hazardous solid materials



## Hazardous goods packaging Roth Service-Box

Type	Hazardous goods packaging
Media	For hazardous solid materials of Packing Groups II and III (textiles; bulk materials, among others)
Maximum gross weight	For type 170 l: 100 kg For type 250 l: 120 kg
Approval	Transport licence
Installation	Individual tank

Roth Unitech (storage tanks)					
	Dimensions (L/W/H) unpacked mm	Unladen weight unpacked per unit	Dimensions (L/W/H) unpacked mm	Weight packed	Number of tanks per 40 ft sea-container
170 litres	740 (800) mm	12,1 kg	1220 x 820 x 1850*	approx. 125 kg	approx. 250 kg
250 litres	980 (1020) mm	14,2 kg	1200 x 1200 x 1850**	approx. 140 kg	approx. 160 kg

(\*) 8 units on a europallet (1200 x 800)

(\*\*) 8 units on an industrial pallet (1200 x 1200)

<sup>1)</sup> Maximum cargo capacity for single loading, must be tested.



■ **Increased safety during transport and storage of hazardous solid goods of Packaging Groups II or III**

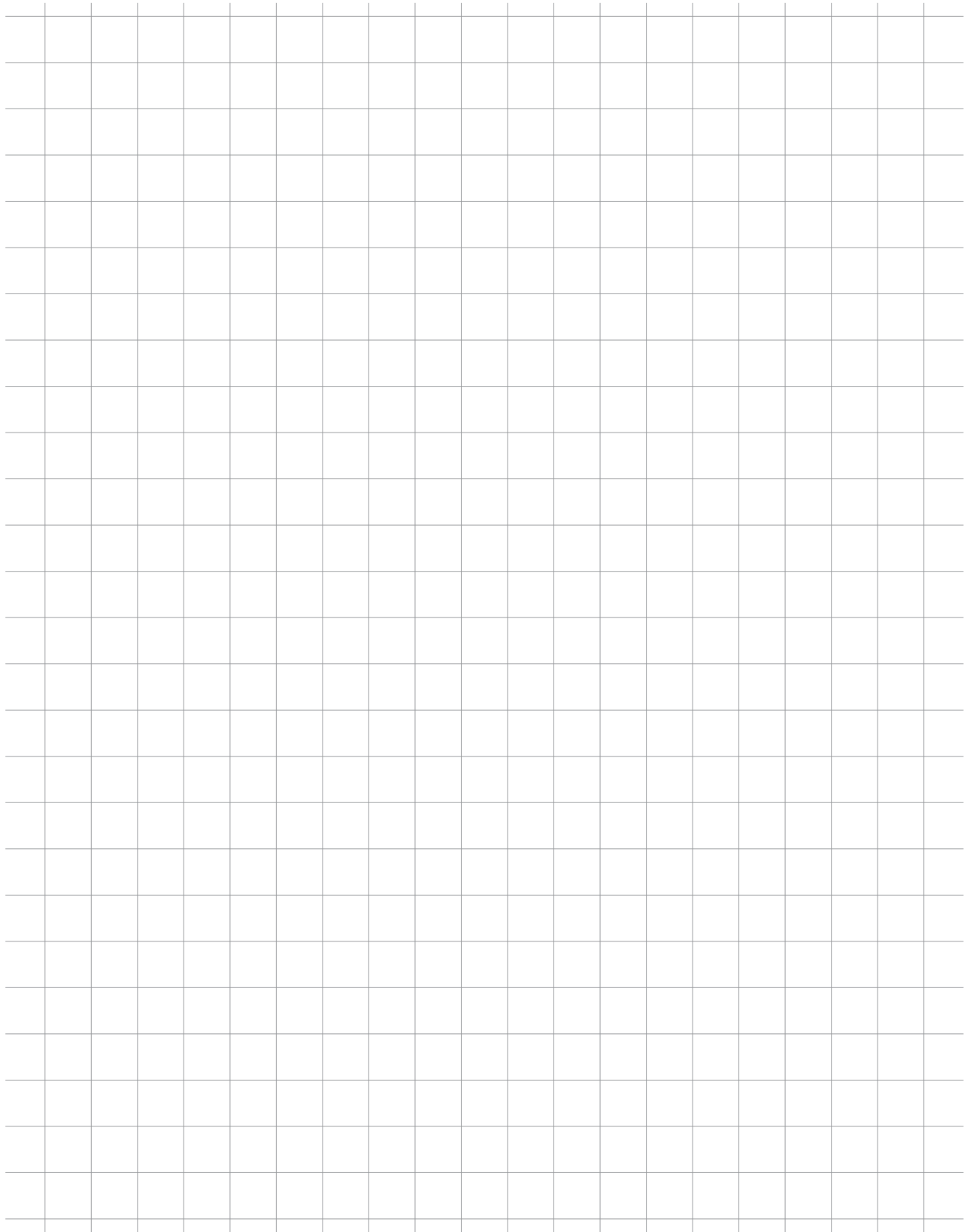
**Easy handling**

- > secure superimposing thanks to special surface geometry in the cover
- > safety thanks to ergonomic handle geometry, even at the bottom
- > easy to transport, even when filled
- > easy to move and empty, even with transport aids (forklift, pallet truck)

**Type recognition**

- > optimum identification and traceability by customer-specific logo and colour selection
- > classification by means of simple application of a hazard warning label
- > the design fulfils the testing requirements for packaging for the transport of hazardous goods as per the following international regulations concerning the requirements valid at the time of recording the certificate of approval Requirements
  - european Convention on the International Carriage of Dangerous Goods by Road (ADR)
  - international Rule for Transport of Dangerous Substances by Railway (RID)
  - International Maritime Dangerous Goods Code (IMDG Code)
  - RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS of the UNITED NATIONS
  - ICAO Technical Instructions, also recorded in the IATA Dangerous Goods Regulations

# Notes



## Our strengths

Your benefits

### Innovation

- > Early identification of market requirements
- > In-house materials research and development
- > In-house engineering

### Service

- > Extensive field network of qualified sales professionals
- > Hotline and project planning service
- > Factory training courses, planning and product seminars
- > Fast availability of all Roth brand product ranges throughout Europe
- > Comprehensive warranty and extended liability agreements

### Products

- > Complete range of easy-to-install product systems
- > Manufacturing expertise for the complete product range within the Roth Industries group of companies
- > All products and product systems are certified in accordance with DIN EN ISO 9001:2008

A large, stylized white Roth logo is centered on a dark background. The logo features the word "Roth" in a bold, sans-serif font, with a horizontal line above and below the text. The background of the entire page is a dark, textured grey.



## Roth Energy and Sanitary Systems

### Generation

- > Solar systems
- > Heat pump systems
- > Solar heat pump systems

### Storage

- Storage systems for
- > Domestic and heating water
  - > Combustibles and biofuels
  - > Rainwater and waste water

### Application

- > Radiant heating and cooling systems
- > Pipe installation systems
- > Shower systems

**Roth**

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