

Luminous Heater Systems
Innovative | Efficient | Comfortable

Made in Germany

Schwank Portfolio



Heat Recovery Systems



Air Curtains



Luminous Heaters



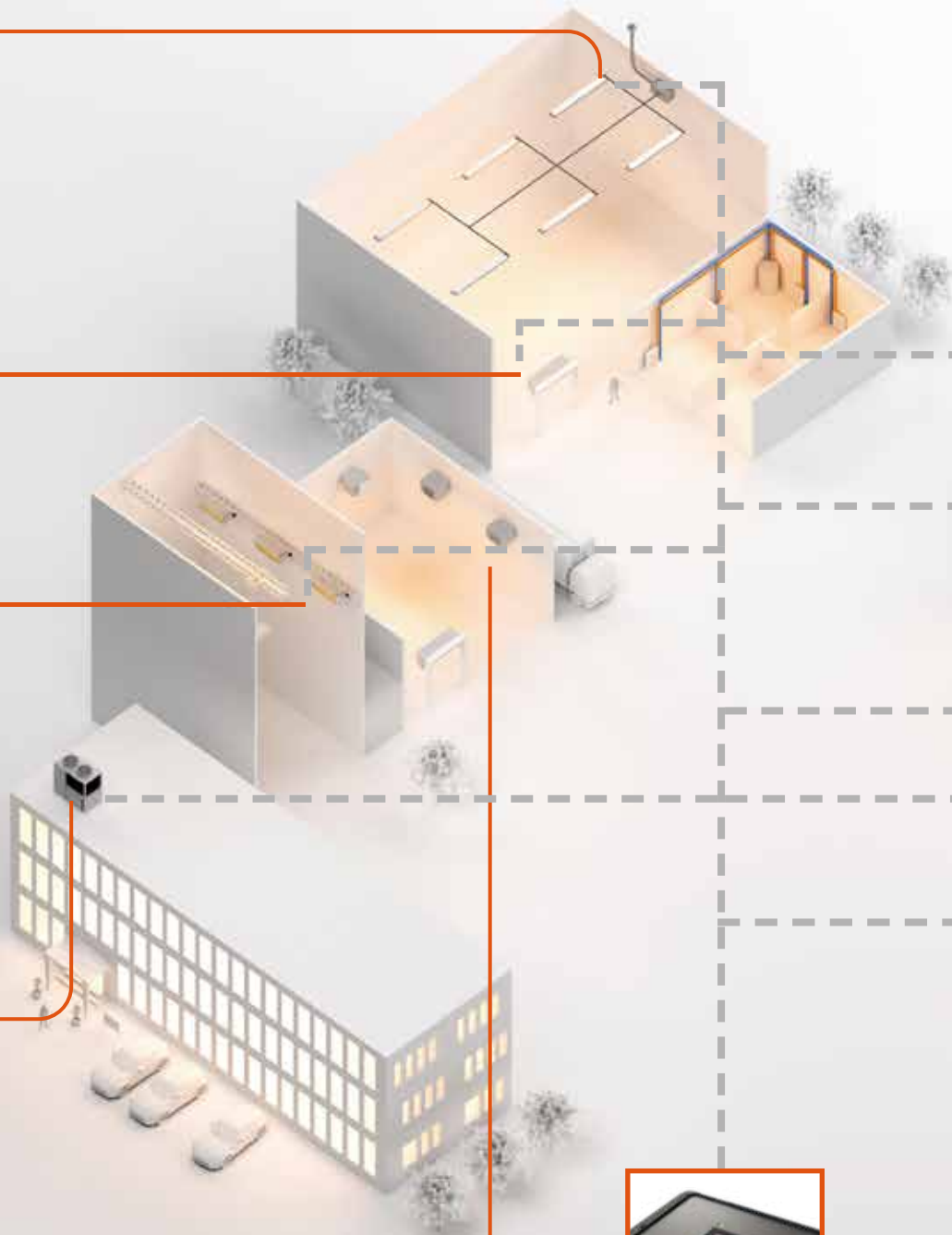
Gas Heat Pumps



Warm Air Units



Control





Tube Heaters



Condensing Technology



Gas Heat Pumps

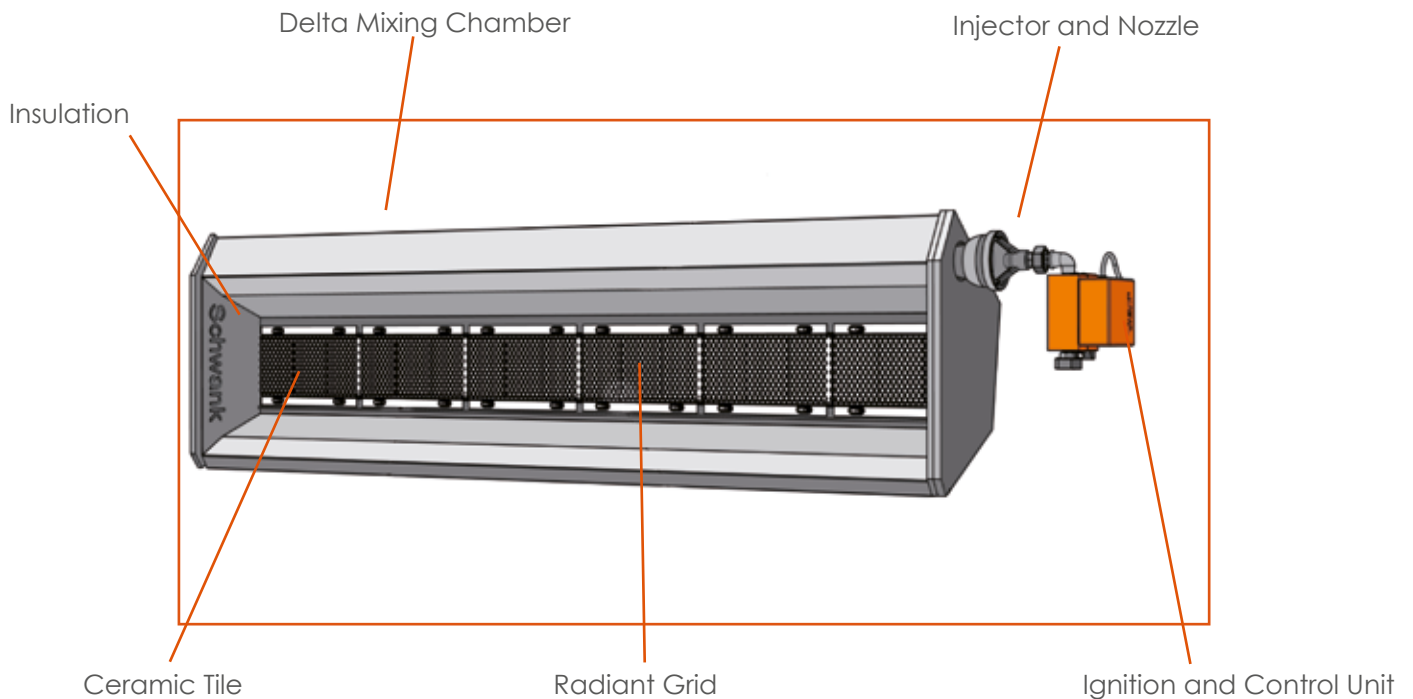


MonsterFans



Air Handling Units

Luminous Heaters - The Principle



→ Functionality

Inside the patented Delta Mixing Chamber a homogeneous gas-air mixture is formed and delivered to the perforated burner tiles [preheated to approx. 300° C]. The mixture flows through about 3,600 holes of each burner tile and is ignited there. The mixture burns just below the surface and heats the plates on the surface.

The radiant grids in front of the burner tile lead to a „ping-pong effect“, in which the heat radiation is reflected back to the tiles - a positive effect is an increase in radiant power [see image right]. A surface temperature of approx. 950° C is achieved, with lower gas consumption. Infrared radiant [also called heat radiation] is generated. It is managed by means of reflectors and directed into the occupied area on the floor where it warms people, the floor and objects.

Advantages

Luminous Heaters are gas-powered, decentralised infrared heating devices. In contrast to central heating systems, they generate the heat at the place where the heat is needed.

The advantages of Luminous Heaters:

- proven technology
- fast heating-up times
- no intermediate media
- high efficiency
- Zone heating possible
- no air movement
- no air draughts/Dust swirls

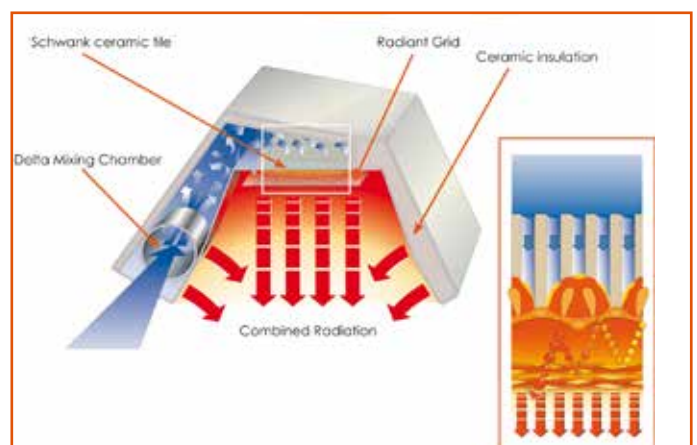


Image - Structure of Luminous heater with delta mixing chamber

Heating Systems with Infrared

Made in Germany

Innovative by Tradition

In 1939, Günther Schwank patented the luminous heaters, which are still characterised by their high efficiency and quality today. Developed and manufactured in Germany, they represent high quality and durability - the foundations for the rank as world market leader were thus laid early on.



All luminous heaters are developed in the company's own innovation centre in Cologne. The experience of more than 80 years of tradition flows into every product.

Consulting, Planning and Realisation

Each heating system must be adapted to the specific requirements of the customer. Our sales engineers provide support at every stage of the project. Whether consulting, planning, realisation or after-sales support - Schwank supervises you throughout the entire project.



Our goal is to develop solutions that save you operating costs in the long term while increasing employee satisfaction. In combination with Schwank maintenance, Schwank offers a warranty of up to 15 years - a real promise of performance.



Advantages of fully modulating adjustable Luminous Heaters:

Control Technology

- Fully modulating
- ModBus interface for optimised controllability

Reflector Material and Construction

- Radiation-optimised reflector geometry
- insulated housing [with supraSchwank] to minimise convective heat losses
- High degree of reflection of up to 95% thanks to FERAN
- permanent corrosion protection

Reflector insulation

[only with supraSchwank]

- high-quality insulating material [Promaglaf] ensures 4 to 5 times the insulating effect compared to conventional insulation
- almost unlimited service life due to high temperature resistant material

Patented Delta-Mixing-Chamber

- Preheating of the gas-air mixture to approx. 300 ° C for an additional increase in efficiency
- homogeneous mix of gas and combustion air
- optimal energy yield

Burner Tile

- low-pollutant combustion [NOx emission = 13 mg / kWh]
- high temperature resistance
- Special depth effect to increase the radiation output
- In-house development, Made in Germany

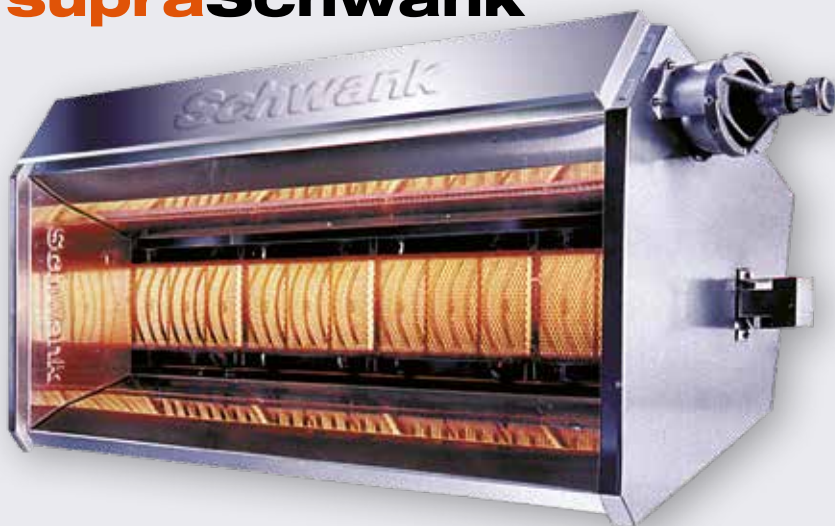
Radiation grid [only with supraSchwank]

- high-temperature resistant radiation grille made of chrome-nickel steel
- thermal radiation is reflected back on the burner plate [„ping-pong effect“] and thus increases the radiation output

supraSchwank

The most efficient Luminous Heater

supraSchwank



Advantages

- highest efficiency [up to 99.1% seasonal efficiency*]
- Radiant factor up to 82.4%**
- up to 95% reflectance
- fully modulating
- ModBus-capable for optimised controllability and connectivity
- increased radiant factor due to combined radiation and FERAN
- patented delta mixing chamber for optimum energy yield
- fully insulated housing and high quality insulation material [Promaglaf] for maximised radiant efficiency
- high temperature resistant chrome-nickel steel radiation grid for increased radiant efficiency

The supraSchwank is the top model among luminous heaters worldwide. Its exceptionally high energy efficiency makes it the number

one. This is made possible by the use of first-class technologies and high-quality materials.

[* Measured according DIN 419 at supraSchwank 30]

[** Measured according DIN 419 at supraSchwank 30M]

primoSchwank

The all-rounder among Luminous Heaters

The primoSchwank luminous heater sets the industry standard in infrared heating: it guarantees very good seasonal energy efficiencies and radiant factors. Among the Schwank heaters, the primoSchwank has the edge when low investment and good heating comfort are required.

The optimisation of the radiant surface and the gas-air mixture [preheated via the patented Delta mixing chamber] makes it the best luminous heater in its class.

primoSchwank



Advantages

- highest efficiency [up to 95% seasonal efficiency*].
- Radiant factor up to 72.9%**
- fully modulating
- ModBus-capable for optimised controllability and connectivity
- increased radiant factor through combined radiation
- patented delta mixing chamber for optimum energy yield

[* Measured according DIN 419 at primoSchwank 30]

[** Measured according DIN 419 at primoSchwank 40M]

Luminous Heater Applications

Industry | Commerce | Logistics



supraSchwank

The most efficient Luminous Heater







primoSchwank

The all-rounder among Luminous Heaters



supraSchwank

The Premium Model



Made in Germany



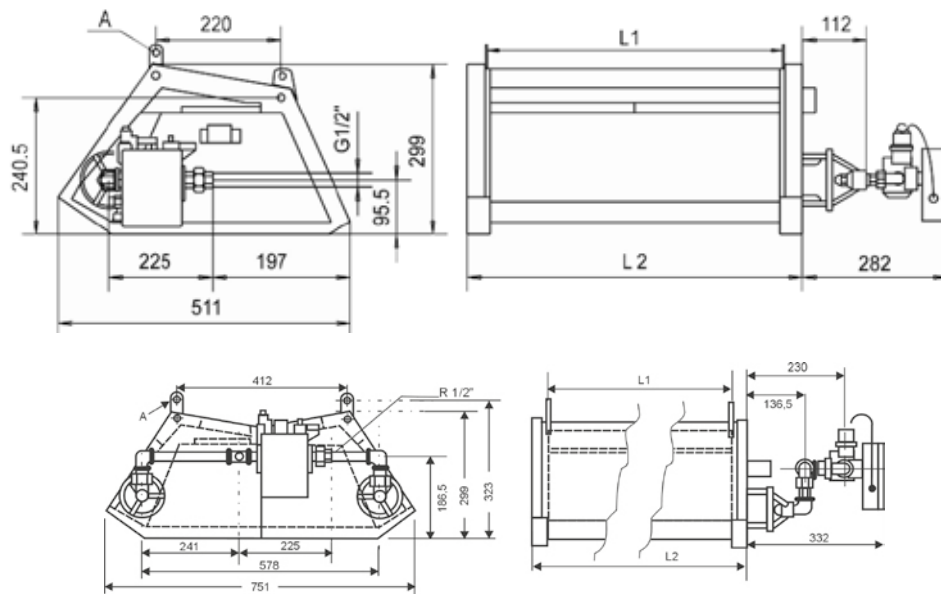
Your added Value:

- up to 99.1% seasonal efficiency*
- up to 82.4% radiant factor*
- 95% thermal efficiency*
[calorific value Hi]
- fully modulating
- clean combustion [NO_x - emission = 13 mg/kWh]
- full insulation
- patented delta mixing chamber for preheating the gas-air mixture
- Radiant grid
- combined radiation for high radiant factor
- Made in Germany

Seasonal Efficiency*

	6/1	6/M	10/1	10/M	15/1	15/M	20/1	20/M	30/1	30/M	40/1	40/M
Nominal heat input [kW] @ NCV	4.6	4.6	7.7	7.7	11.5	11.5	15.4	15.4	23.1	23.1	30.8	30.8
Minimum heat input [kW] @ NCV	/	2.8	/	4.6	/	6.9	/	9.2	/	13.9	/	18.5
Thermal efficiency, GCV [%], nominal heat input	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
Th. efficiency, GCV [%], at minimal heat input	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6
Radiant factor RF, NCV [%], nominal heat input	75.2	72.9	76.3	74.0	77.1	74.7	79.2	76.7	80.9	78.4	79.0	76.6
Seasonal Efficiency [%]	90.6	95.9	91.5	96.8	92.0	97.4	93.0	98.4	93.8	99.1	93.0	98.4

* Measured according 2015/1188 European Commission on supraSchwank 30/M.



	6	10	15	20	30	40
Nominal heat load [kW]						
Natural gas H /L* **	4.60	7.70	11.50	15.40	23.10	30.80
LPG***	4.60	7.70	11.50	15.40	23.10	30.80
Connected load						
Natural gas H /L [m ³ /h]* **	0.46 / 0.54	0.77 / 0.90	1.15 / 1.34	1.54 / 1.80	2.32 / 2.70	3.08 / 3.59
Liquid gas [kg/h]***	0.36	0.60	0.90	1.20	1.80	2.40
Weight	19.40	18.40	23.80	30.40	39.40	35.80
Dimensions						
L1 [mm]	553	553	830	1108	1662	1108
L2 [mm]	629	629	906	1184	1738	1181
CE-Identification	CE-0085AU0374					

Min. Connection Pressure

	single-stage	Fully modulating
Natural gas H	16 mbar	45 mbar
Natural gas L	22 mbar	45 mbar
Propane	32 mbar	65 mbar
Butane	50 mbar	65 mbar

- Max. Connection pressure natural gas/liquid gas: 100 mbar

- **Suspension**

The unit is attached to the ceiling at 4 suspension points with steel cables or to the wall at an angle with wall brackets [accessories].

- **Gas connection**

Nipple R 1/2" [external thread]

- **Electrical connection**

Single-phase alternating current 230 V, N, PE; 50 Hz [approx. 45 VA]

- **Exhaust gas emissions**

indirect according to DIN EN 13410

primoSchwank

the All-Rounder



Made in Germany



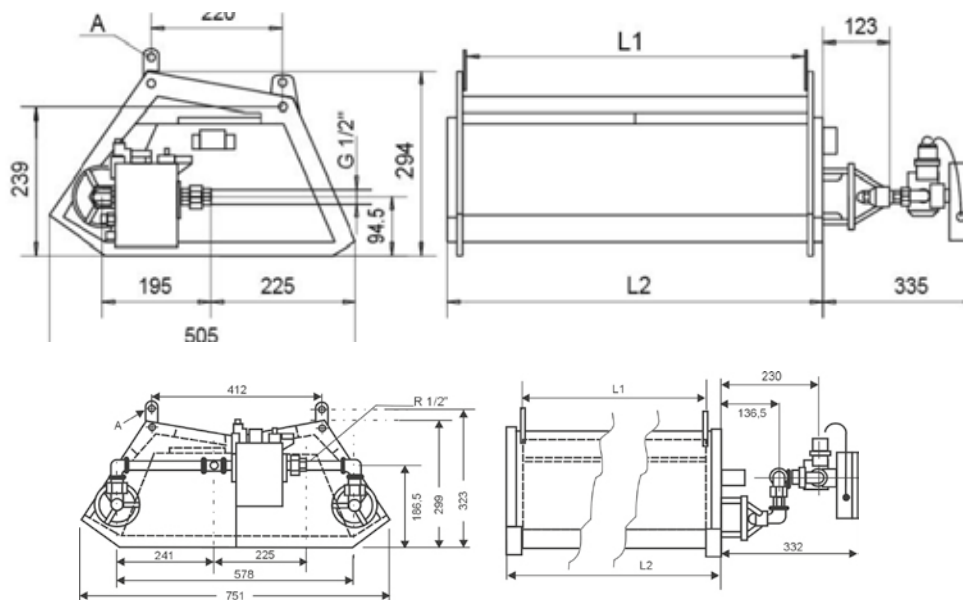
Your added Value:

- up to 95% seasonal efficiency*
- up to 72.9% radiant factor*
- 95% thermal efficiency* [calorific value Hi]
- fully modulating
- clean combustion [NO_x - emission = 13 mg/kWh].
- patented delta mixing chamber for preheating the gas-air mixture
- Made in Germany

Seasonal Efficiency*

	10/1	10/M	15/1	15/M	20/1	20/M	30/1	30/M	40/1	40/M
Nominal heat input [kW] @ NCV	9.7	9.7	14.5	14.5	19.4	19.4	29.1	29.1	38.8	38.8
Minimum heat input [kW] @ NCV	/	5.7	/	8.7	/	11.6	/	17.5	/	23.3
Thermal efficiency, GCV [%], nominal heat input	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
Th. efficiency, GCV [%], at minimal heat input	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6
Radiant factor RF, NCV [%], nominal heat input	63.8	62.1	66.2	64.4	69.5	67.5	69.5	67.5	71.4	69.3
Seasonal Efficiency [%]	85.5	91.0	86.9	92.3	88.6	94.0	88.7	94.1	89.6	95.0

[* Measured according 2015/1188 European Commission on primoSchwank 40/M.



	10	15	20	30	40
Nominal heat load [kW]					
Natural gas H /L* **	9.70	14.50	19.40	29.10	38.80
LPG***	9.70	14.50	19.40	29.10	38.80
Connected load					
Natural gas H /L [m³/h]* **	0.97 / 1.13	1.45 / 1.69	1.95 / 2.26	2.92 / 3.40	3.90 / 4.53
Liquid gas [kg/h]**	0.76	1.13	1.52	2.28	3.01
Weight	11.40	15.40	18.90	24.40	32.40
Dimensions					
L1 [mm]	553	830	1108	1662	1108
L2 [mm]	605	882	1160	1714	1157
CE-Identification	CE-0085AU0374				

Min. Connection Pressure

	Single-stage	Fully modulating
Natural gas H	20 mbar	45 mbar
Natural gas L	22 mbar	45 mbar
Propane	50 mbar	65 mbar
Butane	50 mbar	65 mbar

- Max. Connection pressure natural gas/liquid gas: 100 mbar

- Suspension**
 The unit is attached to the ceiling at 4 suspension points with steel cables or to the wall at an angle with wall brackets [accessories].
- Gas connection**
 Nipple R 1/2" [external thread]
- Electrical connection**
 Single-phase alternating current 230 V, N, PE; 50 Hz [approx. 45 VA]
- Exhaust gas emissions**
 indirect according to DIN EN 13410



Innovative. Experienced. Competent.

Experience creates Reliability.

For decades, the name Schwank has been synonymous with high-quality and economical space heating and cooling systems. As market leader for gas infrared heating systems, Schwank has extensive experience. More than 200,000 satisfied customers and more than 2.5 million manufactured devices speak for themselves.

As a German manufacturer, we stand by our claim to deliver products and services of the highest quality. Each of our products guarantees an economical and CO₂ & NO_x-minimised operation.

With Schwank, you can rely on a manufacturer of the highest quality.



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