
REFERENCE REPORT

Pflegetherapeutische Zentren Altentreptow & Neubrandenburg

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ENRICHED ENVIRONMENT

DATA

Pro-persona.care.GmbH currently runs two nursing facilities. They offer completely new ways of nursing care and treatment. These comprise: Biodynamic lighting concepts, special movement and coordination concepts for

those in need of care, promotion of independence, even for advanced care needs, promotion of quality of life.

TASK

From the beginning the aim was to use biodynamic VTL light management as part of the "Enriched Environment" design. The lighting design was developed on the basis of international scientific knowledge. The focus here was on the improvement of quality of life for people requiring care, particularly people with neurodegenerative diseases. At the same

time, the shape and appearance of the luminaires should match the high quality demands of care and treatment centres. For technical implementation, Gerd Bekel, Managing Director and Research Leader, approached Waldmann.

SOLUTION

All spaces, i.e. corridors, dining rooms, relaxation rooms, lounges, staff offices, group and physiotherapy rooms and the entrance area, were equipped with VIVAA VTL suspended luminaires, which mimics the progress of natural daylight. Apartments have been equipped with

CUBE orientation lights and AMADEA Bed wall luminaires, while bathrooms have special VANERA Bath luminaires. OBLO room lights were installed on the first floor in the corridor and in the entrances to the apartments.

ENRICHED ENVIRONMENT describes the design of the environment which is inspired by sensorimotor and cognitive requirements. This has a positive effect on the psychological and mental condition of the inhabitants or patients.

- Altentreptow
 - Opened on 01.11.2016
 - Total area 505 square metres
 - Number of daily care places 35
 - Cooperative living area with 12 apartments

- Neubrandenburg
 - Opened on 01.04.2017
 - Total area 750 square metres
 - Number of daily care places 45
 - Cooperative living area with 28 apartments



“After about five months of use in the Altentreptow care and treatment centre we can confirm that our clients/patients are definitely more active. We have observed that their day/night rhythm has been restored, just as we intended. For clients/patients who only occasionally attend our facilities, or have been absent for a long time, e.g. after a stay in hospital, we often observe a high level of tiredness, restlessness, hangover syndrome. We assume that they have been exposed to poor lighting conditions. The lighting design has been positively evaluated by families whose relatives stay with us regularly (5-7 days a week).”



Gerd Bekel
Managing Director and Research Leader



1 Lounge

VIVAA VTL C 400

Biodynamic lighting supplements the natural light incidence and makes use of the biological effect of light.



TOGETHERNESS



2

2 Dining room

VIVAA VTL C 400 and
VIVAA VTL C 600

Lighting suitable for the elderly
improves perception of space
and helps prevent falls.

3 Lounge areas

VIVAA VTL C 600

Depending on the level of daylight,
the lighting encourages activity
or provides a calming atmosphere.



3

CENTREPIECE



morning

mid-day

evening



SUNLIGHT FOR INSIDE SPACES

What is Visual Timing Light?

The Visual Timing Light (VTL) light management system is a tried and tested daylight tracking system. It was developed more than 10 years ago for care of the elderly, to support the sleep-wake rhythm of people with dementia or people who are bedridden. VTL reproduces the structure of the day and stimulates phases of activity and rest.

How does VTL work?

It simulates the progress of daylight as it automatically changes the intensity and colour of indirect general lighting. The firmly defined time-dependent controlled operation curve is based on scientific knowledge and evaluation. The light colour varies between 6 500 K (daylight white, stimulating) and 3 000 K (warm white, calming). This process comes closest to natural light and is perceived as pleasing. It stimulates the body's own metabolic processes which naturally support a sense of wellbeing and healing.

Why do humans actually need light?

Sunlight defines our existence: It affects important hormonal and metabolic processes, sets our internal clock and provides a rhythm for our life. In inside spaces, light management systems, known as Human Centric Lighting, replace the lack of daylight. VTL is implemented in combination with the Derungs DALI control system. These components are available for special room lights.

4 Open corridor with lounge

VIVAA VTL C 600

Besides pre-defined VTL scenarios for daylight tracking, special light scenarios and dimmable light are used.

OASIS OF CALM



5 Treatment area

VIVAA VTL C 400

Provides evenly bright and low-shadow lighting for fatigue-free working.

6 Dementia laboratory

VIVAA VTL C 400

Cognitive capacity is stimulated by high-strength, daylight-white lighting.



7 Relaxation room

VANERA LED 80 DALI

Warm white, dimmable light supports relaxation phases.



“All staff say that they are now rarely tired during the working day. For them, this is a positive change compared to previous employers. They feel more rested and say they sleep better. This has not been formally evaluated, but has been discussed in staff meetings. The finding is still significant.”



Roman Balk
Managing Director



8 Dining room

VIVAA VTL C 400

Daylight quality lighting improves the perception of food.

LIVING AREA



9 Residents' rooms

AMADEA Bed 39/39W and OBLO LED 370

The lighting in the hallway balances out the differences in brightness and provides greater safety.

10 Residents' rooms

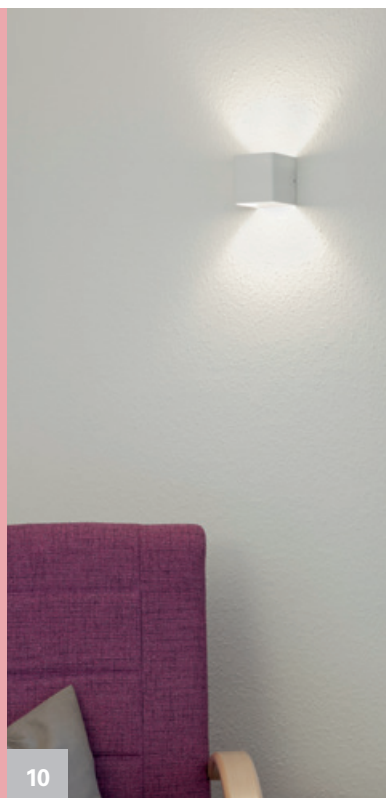
CUBE

The small lights create an atmosphere of wellbeing and also make night-time orientation easier.

11 Residents' bathroom

VANERA Bath 2x24 W

Gentle, shadow-free light improves self-awareness and reduces the risk of a fall.



MOVEMENT ZONES



12 staircase and corridor area 2nd floor

OBLO LED 370 and CUBE

Evenly illuminated corridors improve safety when walking and prevent misinterpretation resulting from irritating shadows.





■ **User**

To maintain and support the capabilities of people in need of care.

The human image of pro-persona.care GmbH is based on capability-oriented approaches to human otogenetics (human competence approach) and the care concepts of Dorothea E. Orem (self care competence). The lighting design is part of the evidence-based care concept. Spaces have been organised into various subdivisions according to “Enriched Environment” models and are based on the care concept of supporting capability. The VTL (Visual Timing Light) lighting concept is supplemented by a special acoustic ceiling and a specially designed colour concept.

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■ **Lighting advice**

■ **Sales**

Engineer of light. Sound know-how and mature technologies.

Waldmann, part of the Waldmann Group, develops and produces high quality lighting for application in industry, office and health as well as systems for medical phototherapy. Good lighting helps saving energy as well as ensuring added value in terms of productivity, safety and health. Sound know-how, mature technologies and a great wealth of experience on the effect of light form the basis of Waldmann lighting solutions.

Waldmann W
ENGINEER OF LIGHT.

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■ **Lighting solution**

■ **Producer**

Independence and wellbeing as a result of good light.

Derungs Licht AG from Switzerland is a subsidiary of the Waldmann Group and specialises in lighting concepts for the care and medical services. The strengths of both brands merge into a “luminous” intensity range, which reflects the mission: Light for people. Scientific evaluation, a practical network and continuous publicity work lead to its success in understanding the lighting needs of the elderly and in particular the needs of those people suffering from dementia.

Derungs D
LIGHT FOR PEOPLE

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