



PRODUCTS OVERVIEW



TRANSCON ELECTRONIC SYSTEMS is a independent private company established in 1990. We provide custom turn-key solutions for aerodrome and heliport lighting systems with all required hardware and software, as well as power supply and monitoring systems, customized mobile and stationary airports and heliports in standard container modules, complete modular solutions for small regional airports etc.

TRANSCON company has its own highly skilled group of professional hardware and software developers, own production workshops, prototyping labs, optical lab, service department etc. Our development, production and services are certified in accordance with standard quality control systems ISO 9001:2009, ISO 14001:2005 and OHSAS 18001:2008.

TRANSCON company provides non-stop customer service for all installed equipment worldwide, as well as on-line support service for its software solutions. Our customers' operators and service staff can be trained and officially certified in our specially equipped Training center in Czech Republic.

SYSTEM AMS – control and monitoring of airfield ground lighting.



CONTAINER PROGRAM – comfortable modular airports of high technical level and rich equipment

Custom turn-key solutions supplied by TRANSCON are highly modular, which makes their everyday usage, operation, servicing and future upgrades very easy and comfortable. As a part of our solutions we offer also a technical inspection and assessment of existing state of the airport or heliport, and - based on its results - we recommend an optimal and customized technical solution (project), as well as funding (if required).

TRANSCON products are certified in compliance with ICAO, FAA, STANAG, MAK and FAVT requirements.

TRANSCON products are already installed and used every day at more than 280 civil and military airports and heliports worldwide, including Czech Republic, Slovakia, Russian Federation, Poland, Germany, United Kingdom, Belarus, Ukraine, Kazakhstan, Estonia, Latvia, Georgia, Armenia, Azerbaijan, Serbia, Croatia, Bosnia and Hercegovina, Montenegro, Mongolia, Egypt, Libya, Republic of South Africa, Kingdom of Saudi Arabia, Sri Lanka, Uruguay etc.

Vladimír Drábek
Director General

TURNKEY DESIGN AND BUILD

TRANSCON is world's only company which successfully managed to conceive, design, manufacture and install comprehensive modular solutions for regional airports of virtually any type, category and size. Our unique regional airport modular program consists of following main segments and technologies:

- modular ATC towers (standard or double version)
 - fully equipped, including transceivers, meteorological stations, voice-recorders, remote control and monitoring systems etc.
- modular passenger terminals (departure/arrival)
 - fully equipped, including passenger luggage conveyors, check-in counters with scales, security check in systems, passenger information systems, all utilities etc.
- modular hangars for airport handling and service equipment
- modular fire-fighting and ambulance stations
- modular redundant power supply systems

Advantages of Modular airport solutions:

- high reliability, easy and rapid installation (typical regional airport can be usually put into operation within 9 months)
- life-span of approximately 20 years
- comprehensive solution
- reasonable price

We offer various types of modular terminals for up to 200 passengers during peak hours.

For regional airports, we can also offer following services:

- planning and design
- construction/reconstruction of runways, taxiways or aprons
- installation of aerodrome lighting and navigation systems
- comprehensive modular systems as mentioned above
- customized on-site training with optional certification
- financing services (in cooperation with Czech Insurance Agency)
- commissioning etc.







LIGHTING

HALOGEN/LED AERODROME
LIGHTS, SIGNS,
FLASHING SYSTEMS...

HALOGEN ELEVATED LIGHTS

ML 121 (HELIPORTS)

6,6 A halogen omnidirectional lights with integrated isolating transformer for stationary/portable use

- FATO - final approach and take-off area lights
- HAPP - heliport approach steady burning lights
- TLOF - touchdown and lift-off area lights
- TWY - taxiway edge lights
- UL - unserviceability lights (red)



ML 122 (AERODROMES)

6,6 A halogen omnidirectional/directional low/medium intensity lights with integrated isolating transformer for stationary/portable use

- APP - approach centre line and crossbar lights
 - END - runway end lights *
 - RWY - runway edge lights *
 - THR - threshold lights *
 - THREND - threshold and runway end lights
 - TWY - taxiway edge lights
- * may be produced as unidirectional



TL 322 (AERODROMES)

6,6 A halogen omnidirectional/directional lights

CAT I-III (high intensity)

- RWY - runway edge lights *

NO-CAT (low/medium intensity)

- APP - approach centre line and crossbar lights
 - END - runway end lights *
 - RWY - runway edge lights *
 - THR - threshold lights *
 - THREND - threshold and runway end lights *
 - TWY - taxiway edge lights
- * may be produced as unidirectional



TL 421 (AERODROMES)

6,6 A halogen unidirectional high intensity lights for CAT I-III

- APP - approach centre line and crossbar lights
- ASR - approach side row lights
- END - runway end lights
- THR - threshold lights
- THRWB - runway threshold and wing bar lights



ML 124 (HELIPORTS)

230 V halogen omnidirectional lights for stationary/portable use

- FATO - final approach and take-off area lights
- HAPP - heliport approach steady burning lights
- TLOF - touchdown and lift-off area lights
- TWY - taxiway edge lights



LED ELEVATED LIGHTS

TLE20 (AERODROMES/HELIPORTS)

6,6 A/2,2 A/230 V LED omnidirectional/directional low/medium intensity lights for stationary/portable use

- APP - approach centre line and crossbar lights
- END - runway end lights *
- FATO - final approach and take-off area lights
- HAPP - heliport approach steady burning lights
- RWY - runway edge lights *
- THR - threshold lights *
- THREND - threshold and runway end lights
- TLOF - touchdown and lift-off area lights
- TWY - taxiway edge lights

* may be produced as unidirectional



TLE21 (AERODROMES)

6,6 A LED directional high intensity lights for CAT I-III

- APP - approach centre line and crossbar lights
- ASR - approach side row light
- END - runway end lights
- RWY - runway edge lights
- THR - threshold lights
- THREND - threshold and runway end lights

- all types may be produced with "omnidirectional top light" module that ensures circling guidance visibility



ML 125 (AERODROMES)

6,6 A/230 V/12-24 V LED omnidirectional portable unserviceability light

- UL - unserviceability lights (red)

- 6,6 A version optionally with integrated isolating transformer
- base plate with handles is a part of the light (ensures easy and quick installation) and convenient cable storage



INSET LIGHTS (TI-HALOGEN/TLI-LED)

- simple and robust design with focus to power efficiency
- easy and quick maintenance, low life cycle servicing costs
- easily replaceable non-glued prisms
- 8" may be produced with two or four attaching holes

TI40/TI41/TLI41 (AERODROMES)

series 40 - 8" diameter, 9,35 mm protrusion

series 41 - 8" diameter, 6,35 mm protrusion

6,6 A halogen/LED directional high intensity lights for CAT I-III

- RCL - runway centre line lights
- RETIL - rapid exit TWY indicator lights
- TDZ - touchdown zone lights (with or without toe-in)
- THL - Take-off and hold lights (RWSL)

- common optical parts with series 70/71/72



TI42/TLI42 (AERODROMES/HELIPORTS)

series 42 - 8" diameter, 3,5 mm protrusion

6,6 A/230 V halogen/LED omnidirectional low/medium intensity lights

- FATO - final approach and take-off area lights
- FPAG - flight path alignment guidance lights
- RWY - runway edge lights *
- SBL - stop/no-entry bar lights (RVR ≥ 350 m) *
- SMG - aircraft stand manoeuvring guidance lights
- TCL - taxiway centre line lights (RVR ≥ 350 m) *
- TLOF - touchdown and lift-off area lights
- TWY - taxiway edge lights

* may be produced as unidirectional, or bicolour (bidirectional)

- may be produced for shallow bases with axial sealing
- common optical parts with series 43

TI43/TLI43 (AERODROMES/HELIPORTS)

series 43 - 8" diameter, 4,0 mm protrusion

6,6 A/230 V halogen/LED omnidirectional low/medium intensity lights

- FPAG - flight path alignment guidance lights
- SMG - aircraft stand manoeuvring guidance lights
- TLOF - touchdown and lift-off area lights

- elevated rim for better prism protection
- for extreme endurance top part may be produced from stainless steel
- may be produced for shallow bases with axial sealing
- common optical parts with series 42



TI44/TLI44 (AERODROMES)

**series 44 - 8" diameter, 6,35 mm protrusion
6,6/2,2 A halogen/LED directional lights**

CAT I-III

- EREX - enhanced rapid exit taxiway centre line
 - REL - runway entrance lights (RWSL)
 - RGL - low intensity runway guard lights
(Configuration B) *
 - SBL - stop/no-entry bar lights (straight sections)
 - TCL - taxiway centre line lights (straight sections) *
- * high power efficiency and low secondary leads losses due to
20 W / 2,2 A lamps, on demand 40 W / 6,6 A lamps may be used

NO-CAT (low/medium intensity)

- END - runway end lights
- THR - threshold lights
- THREND - threshold and runway end lights

- common optical parts with series 45



TI45/TLI45 (AERODROMES)

**series 45 - 8" diameter, 6,35 mm protrusion
6,6/2,2 A halogen/LED directional lights for CAT I-III**

- SBL - stop/no-entry bar lights (curved sections)
 - TCL - taxiway centre line lights (curved sections) *
- * high power efficiency and low secondary leads losses due to
20 W / 2,2 A lamps, on demand 40 W / 6,6 A lamps may be used

- common optical parts with series 44

TI70/TLI70 (AERODROMES)

**series 70 - 12" diameter, 12,5 mm protrusion
6,6 A halogen/LED directional lights for CAT I-III**

- APP - approach centre line and crossbar lights
- ASR - approach side row lights
- END - runway end lights
- RGL - high intensity runway guard lights
(Configuration B) *
- THR - threshold and threshold wingbar lights
- THREND - threshold and runway end lights

- common optical parts with series 40/41/71/72



TI71/TLI71/TI72 (AERODROMES)

series 71 - 12" diameter, 6,35 mm protrusion

series 72 - 12" diameter, 9,35 mm protrusion

6,6 A halogen/LED directional high intensity lights for CAT I-III

- RCL - runway centre line lights
- RETIL - rapid exit TWY indicator lights
- TDZ - touchdown zone lights (with or without toe-in)
- THL - Take-off and hold lights (RWSL)

- common optical parts with series 40/41/70



TIA1 (8" TO 12" ADAPTERS)

- type "F" - standard/universal protrusion 0,0 mm
- type "S" - for RWY and TWY-straight lights protrusion 6,35 mm (series 40/41/44)
- type "C" - for TWY-curved lights protrusion 6,35 mm (series 45)

- type "F" designed for omnidirectional lights although can be used for any light

- type "S/C" designed for enhanced protection of lights without lowering light output

TIC1 (8" AND 12" BASE COVERS)

- base covers are tested as inset lights, due to this fact they do not cause any operational limitations
- 8" base covers may be manufactured with two or four attaching holes



OTHER LIGHTS



TFL-32

- approach sequence flashing lights system
- may be used for runway threshold/end identification lights (RTIL/REIL), which can be operated alone or in combination with approach sequential flash lights

TLE22

6,6 A LED lights

- SBL - stop bar and no-entry bar lights
- RGL - runway guard lights



TP90 (PAPI/APAPI)

- (abbreviated) precision approach path indicator



OBSTRUCTION LIGHTS

LOW INTENSITY TYPE A/B

ML 121 HP-O

6,6 A halogen light with integrated isolating transformer



ML 125

230 V/6,6 A LED light *

* 6,6 A version optionally with integrated isolating transformer



ML 124 P-O

230 V halogen light



TLE200-OLB

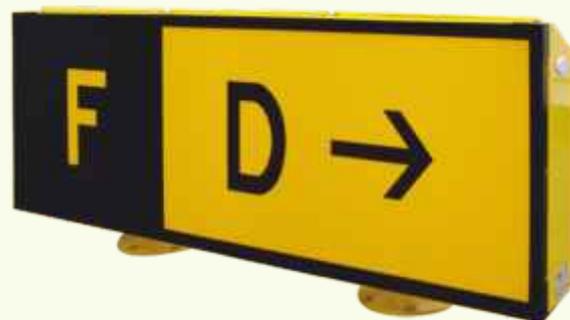
230 V/6,6 A/12-24 V LED light *

* on demand with monitoring module



AERODROME SIGNS (TZP)

ILLUMINATED HALOGEN/LED AND REFLECTIVE AERODROME SIGNS



- TZP-D - 6,6 A LED internally illuminated aerodrome signs
- TZP-E - 6,6 A halogen internally illuminated aerodrome signs
- TZP-ED - "retrofit" kits for modification of existing TZP-E - 6,6 A halogen to 6,6 A LED signs
- TZP-R - reflective aerodrome signs

- all types of signs may be produced as mandatory instruction or information signs with legend height 200/300/400 mm

AERODROME AND HELIPORT BEACONS (TLB)

TLB1-H

- heliport beacon



TLB1-A

- aerodrome beacon
- alternating white and green flashes



FIXING ELEMENTS AND LIGHT ACCESSORIES

BASE PLATES, SHALLOW BASES, METAL STAKES, REDUCTIONS, BREAKABLE COUPLINGS, POLES, CONSTRUCTION COVERS, MOUNTING TOOLS ETC.





AMS SYSTEM

AIRPORT SYSTEMS
AND EQUIPMENT CONTROL
AND MONITORING

- Airport Lighting Control and Monitoring System (ALCMS)
- depending on configuration allows operation of NO CAT, CAT I-III aerodromes
- provides customized control and monitoring of:
 - airfield ground lighting (AGL)
 - constant current regulators (CCR)

- radio navigation equipment and systems (RNE)
- electric power supply systems (EPS)
- meteorological equipment (ME, AWOS)
- receiving, sending and processing AFTN messages
- protection zones and other remote objects
- unified (central) time
- provides monitoring, processing and displaying of several types of standardized or custom air traffic control information (weather, air traffic restrictions, ATIS messages, runway occupancy, arrivals/departures, custom user databases etc.)
- provides extensive archiving of usage and failures of all monitored and controlled devices as well as of ALCMS itself



AMS PICO



AMS MICRO



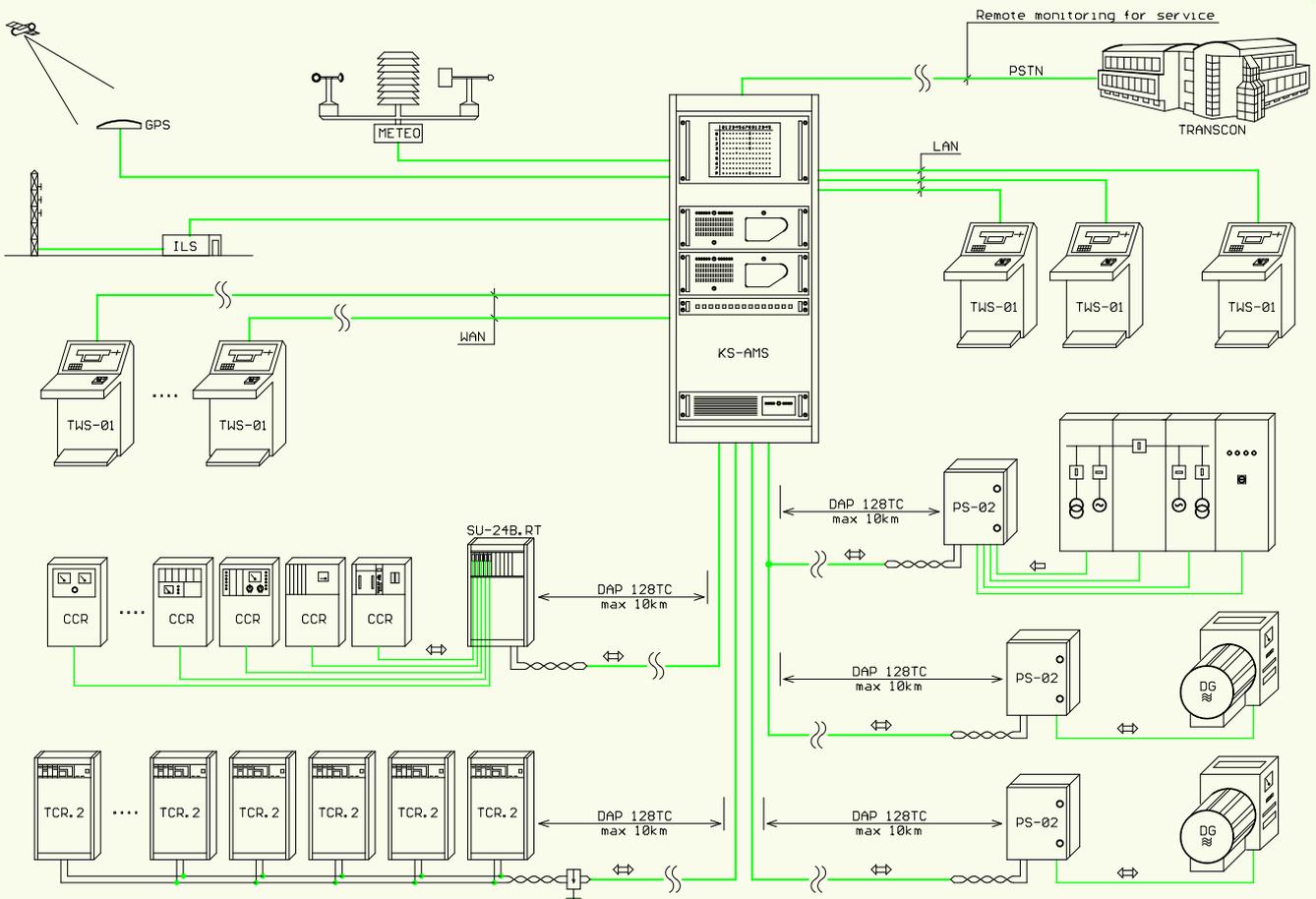
AMS MINI



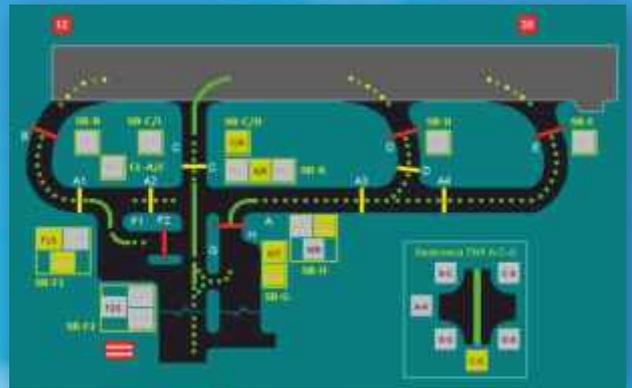
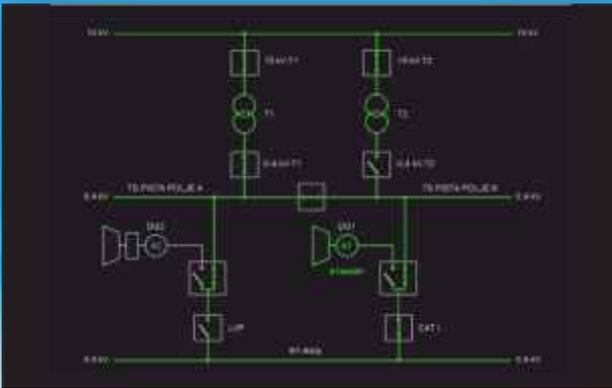
AMS STANDARD



AMS MAX



SOFTWARE



HARDWARE

DAP 128TC

- full duplex data transfer system for monitoring and controlling remote objects and devices



SU-24B.RT

- remote control and monitoring of various devices and equipment including third party CCRs
- scalable up to a very high number of input/output discrete/analog signals

PS-02

- substitutes SU-24B.RT rack for smaller number of signals, e.g. for remote control and monitoring of diesel gensets, switchboards, apron lighting etc.



LMS SYSTEM

INDIVIDUAL REMOTE LAMP CONTROL AND MONITORING SYSTEM

- provides remote control and monitoring of individual lamps
- used for stop bars, taxiway centre lines, RETILs, CAT II/III aerodrome signs etc.
- for high reliability uses fiber-optic cables for long distance data transfers and copper data cables for local data transfers at each node (on each stop bar, taxiway crossing etc.)
- can be integrated into third party (A-)SMGCS systems





POWER EQUIPMENT

TCR.2

- constant current regulator (power supply) of serial circuits for aerodrome and heliport lighting
- complies with FAA AC 150/5345-10H (L-829) and IEC 61822
- thyristor-controlled, air-cooled transformer 4-30 kVA
- 6.6 A or 8.3 output current system (user-selectable)
- regulation in 3/5/7 intensity steps
- over-current and over-voltage protection
- digital data entry and display
- remote and local control
- all control and monitoring elements on front panel
- all connectors accessible from the front side



TRS.10

- automatic switch-over power supply source
- available for 250 A, 400 A and 630 A total output load
- automatic switch-over between 2 mains supply sources and 1 or 2 diesel genset(s)
- can be equipped with various combinations of one-, two- or three-phase outputs
- all control and monitoring elements on front panels
- all connectors accessible from the front side
- equipped with PLC touch-screen display
- automatic and manual operation
- remote monitoring by ALCMS possible



TRP.1.X, RDG, RDG+TRP

TRP.1.X

- power supply (230 V) for parallel lighting
- suitable for small aerodromes and heliports
- total max. load 1×32 A or 3×16 A
- all control and monitoring elements on front panel
- all connectors accessible from the front side

RDG

- automatic switch-over power supply source for airports and heliports
- suitable for small aerodromes and heliports
- total max. current load 3×63 A
- automatic switch-over between 1 mains supply source and 1 diesel genset

RDG+TRP

- combination of RDG and TRP.1.X in one rack



TRP.1.X

RDG

RDG+TRP



CONTAINERS

CONTAINER PROGRAM FOR
COMPLETE AIRPORTS AND
HELIPORTS

Application

- modular ATC tower program for stationary/mobile airport solutions
- suitable for small regional airports
- manufactured from special durable alloys
- program includes comprehensive set of modules (containers), e.g. ATC tower, substation, power supply, technical room etc.
- each module fully equipped, including, for example, A/C, lighting, electrical wiring etc.
 - e.g. ATC tower module can include also ALCMS (APP, RWY, TWY, PAPI, APRON), meteo-station, voice recorders, transceivers etc.
- minimum civil and construction works required
- easy and quick installation, reliable and well proven equipment
- final composition tailored according to customer requirements
- life-span approx. 20 years

Transport

- transportable by trucks, railways, ships or airplanes
- handling by standard equipment (cranes, lift trucks, hydraulic jibs etc.)
- modules can be supplied with transport trucks (by request)

Dimensions and technical parameters

- ISO containers:
 - 6058 × 2438 × 2591 mm (20 feet)
 - 9125 × 2438 × 2591 mm (30 feet)
 - 12192 × 2438 × 2591 mm (40 feet)
- special welded corrosion-resistant structures



- wide range of operating temperatures:
 - N normal conditions (-30/+35 °C)
 - A arctic (-55/+35 °C, entrance door heated)
 - T tropic (-10/+55 °C)

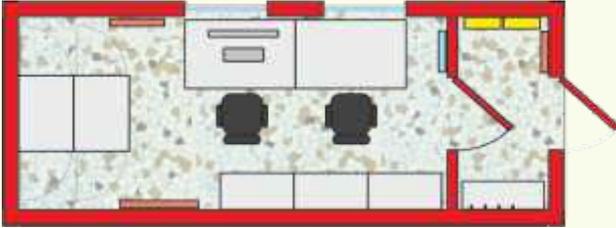
Common equipment (optional, depending on type):

- electrical heating
- air conditioning
- double floor with space for cables
- windows with safety glass
- increased thermal insulation
- over-voltage protections
- etc.



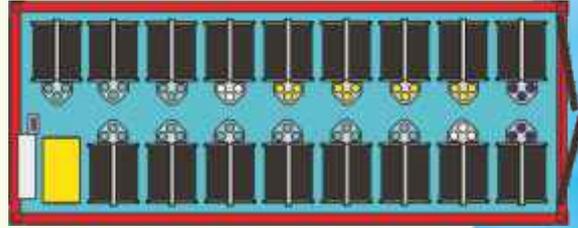
TCE - TECHNICAL ROOM

module for service staff (technical room)



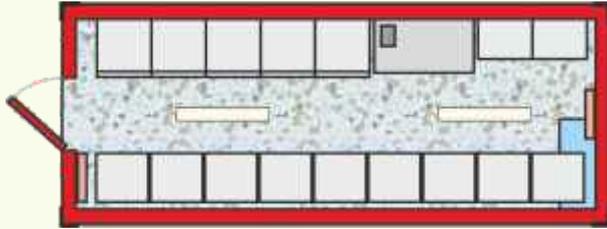
TCL - LIGHTING

module for storing of airport signal lights including cables placed on reels



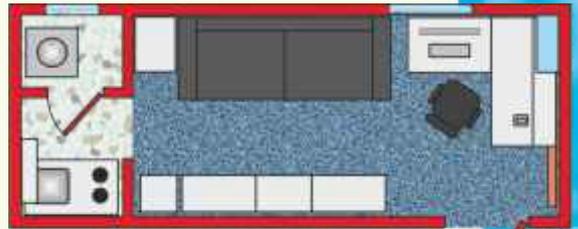
TCS - SUBSTATION

distributor and constant current regulators TRANSCON for airport lights



TCB - BRIEFING

module "briefing" for the set of the modular airport



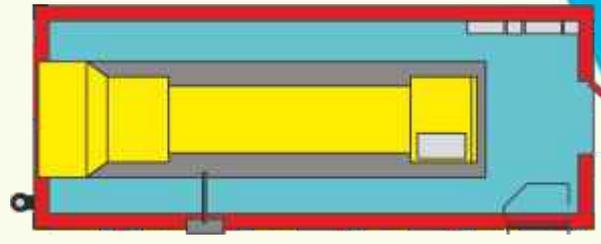
TCT - TOWER

module with one or two workplaces for air traffic controllers (TWR)



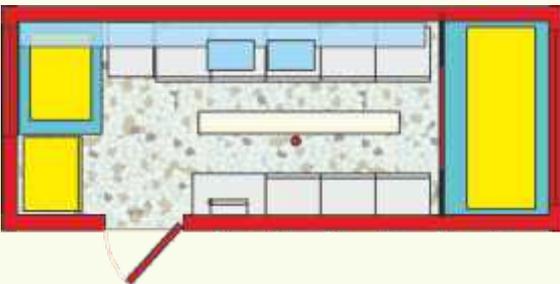
TCD - DIESEL

module with diesel generator set



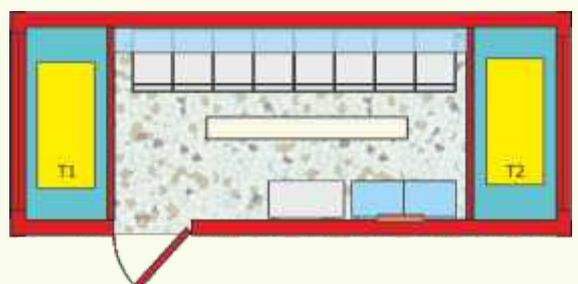
TDT - HV, LV SUBSTATION, DIESEL

module with high voltage transformer, HV distributor (SF6 switch-disconnectors), diesel generator set, LV distributor and constant current regulators



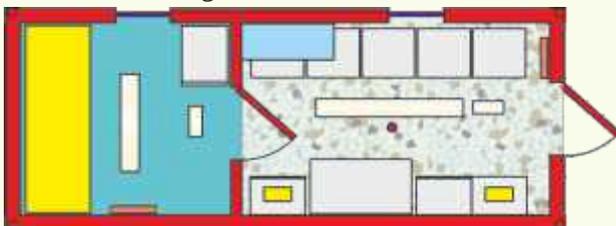
THV

high-voltage transformers, high-voltage and low-voltage distributors



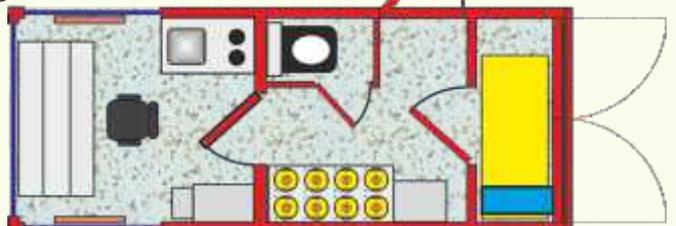
TDS - SUBSTATION + DIESEL

container with diesel generator set, LV distributor and constant current regulators



TCH

container for heliport with generator set





HELIPORTS

COMPLETE AND FULLY EQUIPPED
MOBILE AND STATIONARY
HELIPORT SETS

Transport

- all modules are standard ISO containers
- transportable by trucks, railways, ships or airplanes
- handling by standard equipment (cranes, lift trucks, hydraulic jibs etc.)

Dimensions and technical parameters

- ISO containers (length 20, 30, 40 feet)
- special welded corrosion-resistant structures
- wide range of operating temperatures

Lighting power supply types

- parallel (voltage) - simple and low-cost, suitable for small heliports only
- serial (current) - 6.6 A system, suitable for heliports of any type and size



HELIPORT POWER SYSTEMS

PARALLEL POWER SUPPLY
SERIES POWER SUPPLY

- **TCR regulators** - constant current regulator (power supply) of serial circuits (page 13)
- **TRP.1.X** - power supply (230 V) for parallel lighting
- **RDG** - automatic switch-over power supply source
- **RDG+TRP** - combination of RDG and TRP.1.X in one rack



TRP.1.X



RDG



RDG+TRP

HELIPORT CONTROL SYSTEMS

LOCAL/REMOTE CONTROL AMS PICO
REMOTE RADIO CONTROL HRC-01

AMS PICO

- simple control with use of rotary switches
- signalling by color LEDs
- remote control and monitoring of maximum six airfield ground lighting systems or devices

HRC-01

- radio remote control of heliport/airport lighting equipment using the standard on-board transmitter



AMS PICO



HRC-01

HELIPORT TRAILERS

COMPLETE TRAILERS WITH LIGHTS,
WIND DIRECTION INDICATOR AND GENERATOR SET
FOR HELIPORTS

Application

- complete mobile heliport on transportable trailer
- all equipment installed on/in weatherproof module

Description/Properties

- module with equipment removeable with forklift
- trailer attachable to cars with standard tow hitch
- single trailer reusable with many modules
- all light fixtures stored on shelves
- parallel power supply from generator set
- stationary power supply not required
- all lighting and cabling included



MOBILE LIGHTING SYSTEM "MoLiS"

COMPLETE SYSTEM FOR VFR NIGHT OPERATIONS
FOR RWY WITH DIMENSION UP TO 1200x60 M

- designed for portable (mobile) installations on unpaved RWY
- contain all visual aids for VFR NIGHT operations
- whole system is based on two trailers with weight up to 3,5 t
- system is energetically independent
- lights may be halogen or LED with airport series power-ups

System parts

- fully autonomous portable illuminated wind direction indicator (trailer nr.1)
- portable lights with integrated isolating transformer
 - treshold and runway end lights (green/red)
 - runway edge lights (white, white/yellow)
- complete set of primary cables
- trailer nr.2:
 - transport of lights and cables
 - generator set
 - airport beacon
 - constant current regulator
 - portable retroreflexive markers for delimiting of taxiways/taxiing surface and for delimiting of obstacles on them
 - other equipment



Product development is financially supported by government agency TA ČR within program EPSILON3. We collaborate on this project with Institute of Aerospace Engineering, Brno University of Technology



ACCESSORIES

CABLES, TRANSFORMERS,
CONNECTORS, WIND DIRECTION,
DIESEL GENERATORS



CURRENT TRANSFORMERS

- current transformers for aerodrome or heliport series circuits
- equipped with primary and secondary leads and connectors



CABLES

- primary cable for connecting transformers and CCRs in series circuit
- secondary cable for connecting transformers and lights in series circuit, or lights and remote control and monitoring system (rack) in parallel circuits



VOLTAGE TRANSFORMERS

- voltage transformers for aerodrome or heliport parallel circuits
- equipped with primary and secondary leads and connectors

PRIMARY CONNECTORS



SECONDARY CONNECTORS



DIESEL GENERATOR SETS

- emergency power supply sources for aerodromes or heliports
- can be installed as stand alone unit or in standard TCD container
- remote control and monitoring by ALCMS system
- rated power from 11 to 2400 kW



ILLUMINATED WIND DIRECTION INDICATOR

- visual identification of wind direction and speed
- aerodrome and heliport versions available



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EN ISO 9001:2009



EN ISO 14001:2005



OHSAS 18001:2008



CIVIL AVIATION AUTHORITY OF CZECH REPUBLIC



MINISTRY OF DEFENSE OF CZECH REPUBLIC



CIVIL AVIATION AUTHORITY OF SLOVAK REPUBLIC



MINISTRY OF DEFENSE OF SLOVAK REPUBLIC



FAVT FEDERAL AIR TRANSPORT AGENCY (ROSAVIATION)

