

"Targad" mootorid, andurid ja juhtimisvõimalused tarbija juures

Kutsenimetus	Eesti kvalifikatsiooniraamistiku (EKR) tase
Diplomeeritud automaatikainsener, tase 7	7
Võimalikud spetsialiseerumised ja nimetused kutsetunnistusel	
Spetsialiseerumine	Nimetus kutsetunnistusel
Tööstus- ja tootmisautomaatika	Diplomeeritud automaatikainsener, tase 7 Tööstus- ja tootmisautomaatika
Ehitusautomaatika	Diplomeeritud automaatikainsener, tase 7 Ehitusautomaatika

Aivar Kukk

Eesti volitatud insener (HVAC)

Sales manager / Siemens Building Technologies Control Products and Systems

Siemens OY Eesti filiaal

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Tel.: 6305727 Faks.: 630 4778 Mobiil.: 517 9898

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Valves and actuators from Siemens

Master hydronics with Acvatix

Acvatix is a versatile range of valves and actuators for superior ease of use, maximum control accuracy and outstanding energy efficiency. It allows you to meet virtually any control and hydronic requirement associated with the generation, distribution and consumption of heating and cooling.



> Energy generation

> Energy distribution

> Energy consumption

➤ Products within HIT

https://hit.sbt.siemens.com/RWD/app.aspx?MODULE=Catalog&ACTION=ShowGroup&KEY=OPC_376467



www.siemens.com/hit

Valve technologies



> Globe valves

Rõhust
sõltumatud

Kuulkraanid,
reguleerivad

1-3 sekundit

> Magnetic valves

> Rotary valves

> Product overview

RK AS Parim praktika 21.01.2016

Ka parim praktika väärrib parendamist



Reguleer- ja sulgarmatuur tuleb paigaldada kõikidele küttekehadele, küttekehade gruppidele, püstikutele, süsteemi - ja põrandkütte harudele. **Reguleerarmatuur peab olema rõhust sõltumatu tasakaalustus - reguleerventiil** ning sellel peavad olema mõõtotsikud.

Radiaatorite ja vajadusel ka teiste küttekehade reguleerventiili täiturmehhanism (termostaat- või mootorventiil) peab olema keermeühendusega M30x1,5.



Valves and Actuators >



Room Thermostats >



Sensors >



Damper Actuators >



Variable Speed Drives >



Meters >



Thermostatic head

Electrothermal

Electromotoric

Electrohydraulic

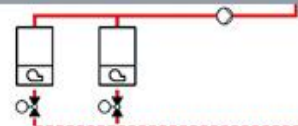
search for product in "Valves and Actuators"

Search

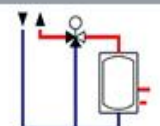
District Heating >



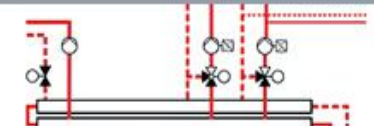
Boiler Plant >



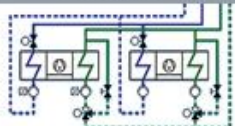
Domestic Hot Water >



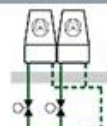
Heating Groups >



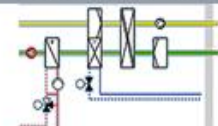
Chiller Plant >



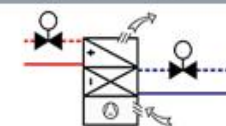
Cooling Towers >



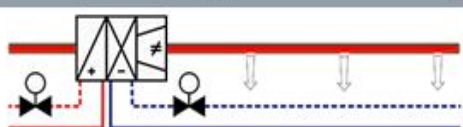
Air Handling Unit >



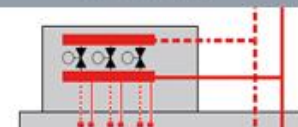
Fan Coil Unit >



VAV >



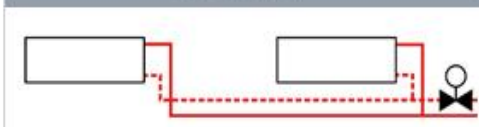
Floor Heating >



Chilled Ceiling >



Zone Control >



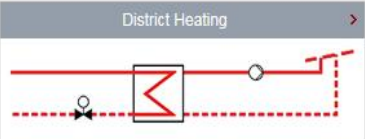
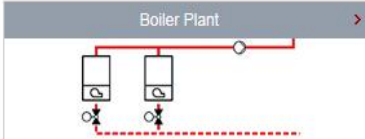
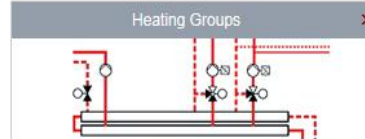
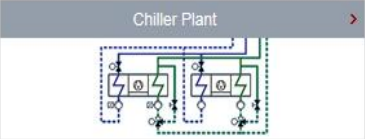
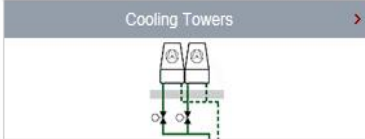
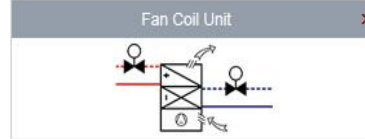
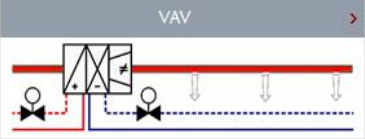
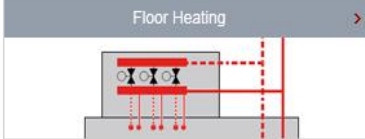
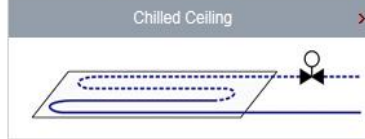
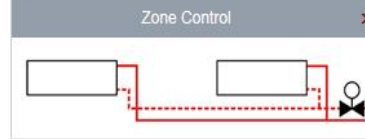
Radiators >

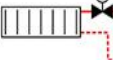


http://hit.sbt.siemens.com/RWD/app.aspx?RC=HQUEU&lang=en&MODULE=Product&ACTION=ShowGroup&KEY=HIT_Prod_Grp_52799&VALUE=HoV

Protsessid?

search for product in "Valves and Actuators"

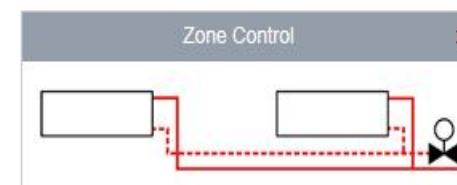
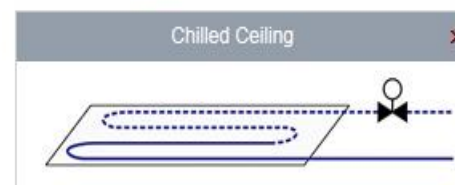
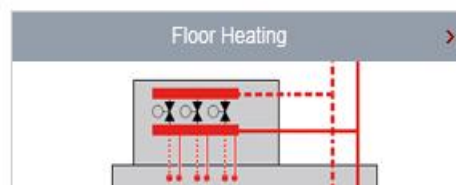
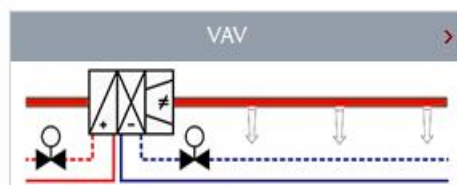
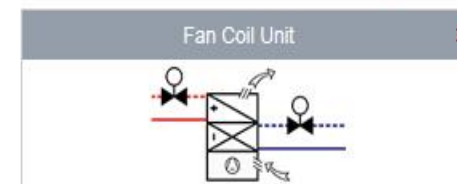
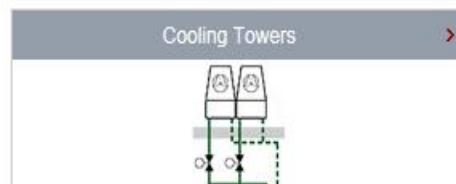
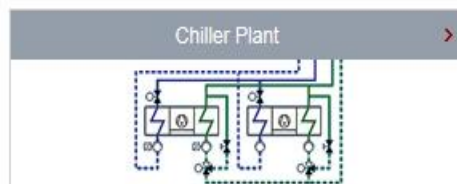
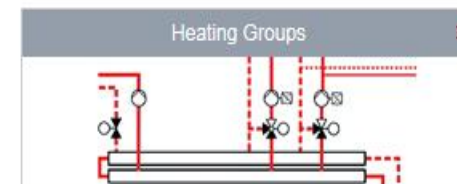
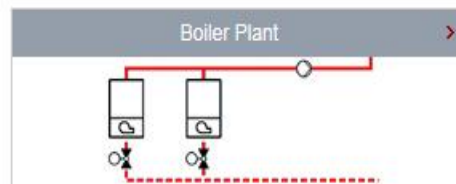
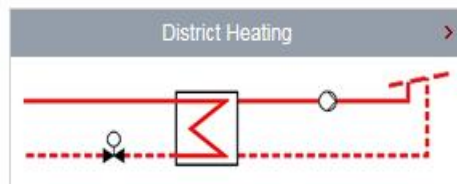
 District Heating >	 Boiler Plant >	 Domestic Hot Water >	 Heating Groups >
 Chiller Plant >	 Cooling Towers >	 Air Handling Unit >	 Fan Coil Unit >
 VAV >	 Floor Heating >	 Chilled Ceiling >	 Zone Control >

 **“Tark” reguleerventiili ja mootori valik**

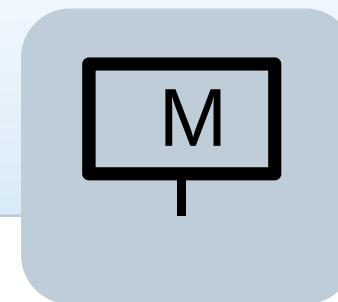
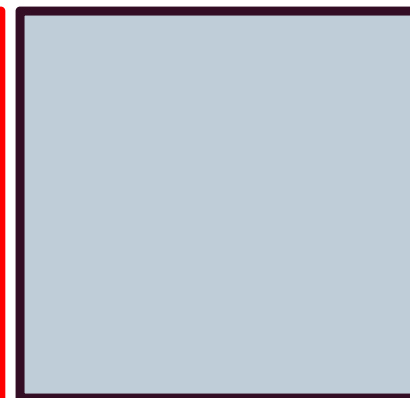
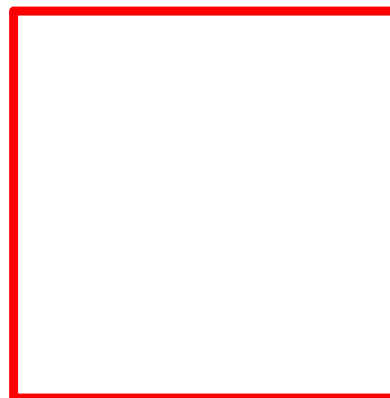
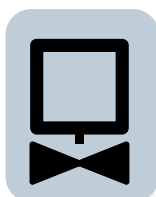
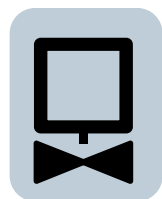
- Protsessi iseloomule vastav kiirus ja täpsus, energiasäästuks ja kasutajatele “tööviljakuseks” ehk määrava täpsusega)
- Rõhuklassi ja -langu vastavus
- Hüdraulilise režiimi stabiilsus? On see probleemiks?
- Juhitavus automaatika poolt: reguleerimise täpsus ja **kiirus**
 - määravad: P (s.h otsetoimega), PI, PId, vedrutagastuse vajadus jms jms
- Juhtimissignaali (2P, 3P, sujuv: (PMD), 0-10V/4-20mA)
- Tagasiside, olekuteated, ohutusfunktsioonid jms
- BACS poolele jääks juhtimise teostamise valik: otse, läbi sideprotokolli (KNX, MODBus; BACnet...)
- Installatsiooni poolelt – võiks olla isesobituv... Iseõppiv

DISAIN

"Targa" reguleerimisventiili ja mootori valik

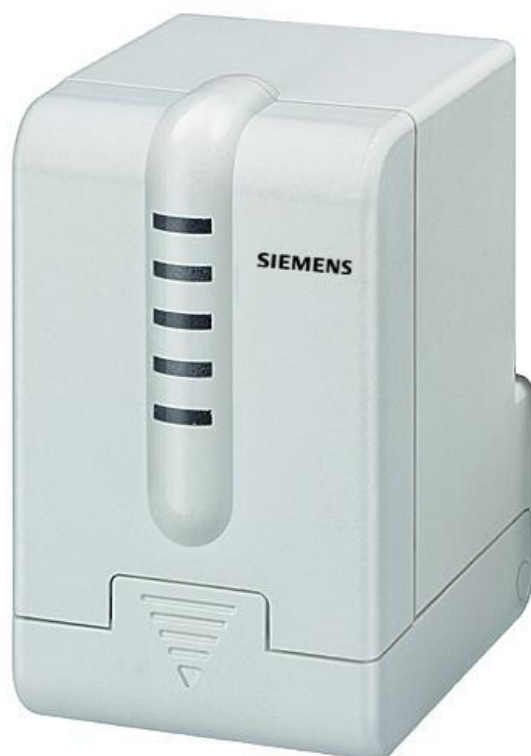


- **Hüdraulilise režiimi stabiilsus**
- Dünaamilise tasakaalustamise vajadus ja optimaalne teostamine



Tarkadest mootoritest

Valve actuator, electromotive AP 562/02 (KNX TP)



- Automatic adjustment, 3 different modes selectable
- Valve protection mode
- Forced mode
- Maximum actuating value limitation (min/max)
- Adaption to valve characteristics
- Monitoring of actuating value
- Determination of the maximum actuating value
- Binary input for window contact
- Binary input for presence contact
- Summer mode
- Transmit the current valve value

KNX TP

Search for Products and Documentation

Search



Valves and actuators

Actuators for globe and pressure independent combi valves



- > Thermostatic head
- > Electrothermal
- > Electromotoric
- > Electrohydraulic

Globe and pressure independent combi valves



- > 2-port flanged valves
- > 2-port threaded valves
- > 3-port flanged valves
- > 3-port threaded valves
- > Flanged pressure independent combi valves
- > Threaded pressure independent combi valve



- > Rotary actuator

12 – 200 000 l/h

Rotary valves



- > Ball valves
- > Slipper valves
- > Butterfly valves

Kvs
- 63 m³/h
reguleerimiseks
- 96 m³/h
ON-OFF

Refrigerant valves



- > For expansion, hotgas and suction throttle applications
- > 2-port modulating pilot valve
- > For refrigeration units and heat recovery
- > For condensate control

1 – 3 sekundit

Company Presentation >



Product Overview >



Training >



Energy Efficiency >



VDI3805/ISO16757 Selektor (german only) >



Tendertext >

Siemens VDI3805 Selector 2014 >>the comprehensive portfolio for more energy efficiency<<

Valves & Actuators

Search criteria

Type: --arbitrary--

Valve series: --arbitrary--

Connection type: --arbitrary--

Valve design: 3-port

Nominal size DN: --arbitrary--

PN class: --arbitrary--

Nom. flow rate kvs* m³/h: --arbitrary--

Perm. differ. pressure mbar: --arbitrary--

Max. medium temperature °C: --arbitrary--

Material valve body: --arbitrary--

* for combi valves, please select "arbitrary"

Quick search

Product representation | Technical data | Commercial data | Maintenance

Layout: ☒ Detail, ☐ Rough, ☐ 2D symbol

Display: ☒ Connections, ☐ Jam range, ☒ Dimensions

Actuator: SSP61, AC/DC 24V, 2VA, DC..10V, 34s, cable

Accessory: Edit, selected: 1

DN: 15, PN: 16, Max. medium temp.: 110 °C, kvs: 2.50 m³/h

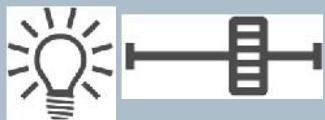
Valve design: 3-port, Connect. type: External thread, Material: Bronze CC491K (Rg5)

162	Product	Type	Valve seri...	DN	PN	Max. medium...	kvs	perm...
160	VXP47.10-1.6	Control val...	Stroke va...	10	16 bar	110 °C	1.60 m³/h	
161	VXP47.15-2.5	Control val...	Stroke va...	15	16 bar	110 °C	2.50 m³/h	
162	VXP47.20-4	Control val...	Stroke va...	20	16 bar	110 °C	4.00 m³/h	

TRA – total room automation Energiakasutus tõhusaks

SIEMENS

The light rules



The blind rules



Ruumi kasutaja **valib**  lehe sümboliga nupule →

> **ruumi seaded taastatakse optimaalseteks** →

The HVAC rules



The room coordination rules



Synco

Synco Living

+ Trending

SIEMENS

Name	Synco device	KNX S-Mode	Product number
Web-Server	for 1 Synco device	7 data points	OZW772.01
Web-Server	for 4 Synco devices	237 data points	OZW772.04
Web-Server	for 16 Synco devices	237 data points	OZW772.16
Web-Server	for 250 Synco devices	237 data points	OZW772.250



- Trend
- Verbrauchsdaten
- Meldungshistorie
- Dokumente
- Logos
- Systemdefinitionen
- Updates

- ☒ Home > 0.2.172 QAX913 > Informationen: Aussentemperatur
- ☒ Home > 0.2.210 RMH760B > Heizkreis 1 > Eingänge / Sollwerte: Raumtemperatur-Istwert
- ☐ Home > 0.2.210 RMH760B > Heizkreis 1 > Eingänge / Sollwerte: Vorlauftemperatur-Istwert

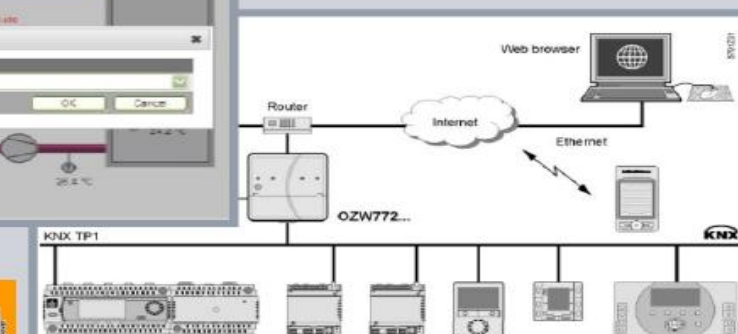
Name	Status	Abfrage Intervall	Rollende Aufzeichnung	Busbelastung	Aktion
TA / TR / TVL	■ ↓ □ ✓	Vorgang läuft	1h	>730 Tage	0 %
TA /LD QAX913	■ ↓ □ ✓	Vorgang läuft	2m	171 Tage	2 %
TR RMU730	● ↓ □ ✓	Vorgang abgeschlossen	30s	60 Tage	3 %
TR RMU730	● ↓ □ ✓	Vorgang abgeschlossen	1m	91 Tage	3 %
100 S-ModeDP	■ ↓ □ ✓	Vorgang läuft	10m	51 Tage	17 %

Download: trend_data_1_20150828.csv

18 % Aktuelle Busbelastung



SIEMENS



“Power is xxx without control”

VAV juhtblokid, ajamid, regulaarorid Eelmiselt kohtumiselt, nüüd lisandunud protokollid

SIEMENS

BACnet
MODBus

KNX

Setpoint

20%

Device information

Device name

GDB181.1E/KN

Fault text

Operating hours

0hrs



Actual values

Extract air volume flow

0%

Extract air volume flow

4,7339m³/h

Position extract air damper

100%

Settings

Type of air

Extract air

Master/Slave

Autonomous

Opening direction

Clockwise

Nominal volume flow

13970,4485m³/h

Minimum volume flow

28%

Maximum volume flow

96%

Vn

1.43

Elevation above sea level

40

Adaptive positioning

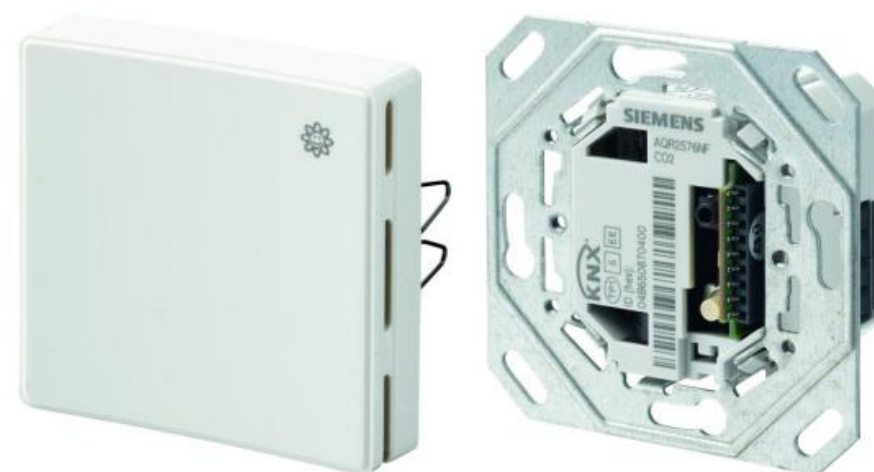
Off

“Tark andur”

On ka 3 PI(d) kontrolleringa

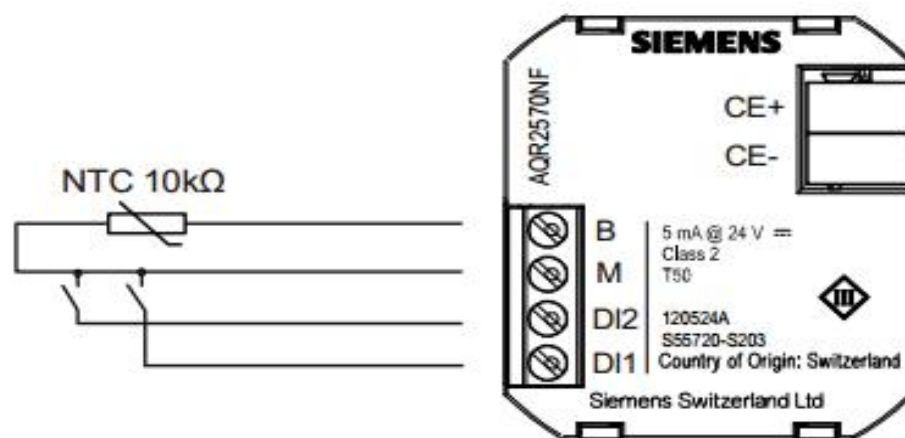
Combinable multi-sensor to measure temperature, humidity, and CO2 concentration x Range 0...+50 ° C / 0...95 % r.h. (non-condensing) / 0...5000 ppm x Air quality indication via LED x **PID room temperature controller and ventilation controller (KNX S-Mode)** x 2 binary inputs for potential-free contacts x Optimized, energy-saving measuring methods ideal for energy-efficient room applications x Supplied via bus x

Humidity measuring range	Temperature measuring range	Air quality indication
—	—	—
—	0...50 °C	—
0...100 % r.h.	—	—
0...100 % r.h.	0...50 °C	—
0...100 % r.h.	0...50 °C	LED



AQR253...

AQR257...



System/Network environment	Engineering and commissioning tool(s)
KNX PL-Link	Desigo ABT, SSA
KNX LTE-Mode	Synco ACS
KNX S-Mode	ETS3, ETS4

Täname tähelepanu eest!



Aivar Kukk

Eesti volitatud insener (HVAC)

Sales manager / Siemens Building Technologies Control

Products and Systems

Siemens OY Eesti filiaal

Väike-Paala 1 11415 Tallinn

Tel.: 6305727 Faks.: 630 4778 Mobiil.: 517 9898

aivar.kukk@siemens.com www.siemens.ee

See how intelligent room components based on KNX standards work smoothly together and blast the energy efficiency of your room automation. [Link](#)

