SIEMENS

MATERIALID HVAC TEEMADESSE, HVAC technology
ÕPPEMATERIALID, KATALOOGID, STANDARDID

http://www.buildingtechnologies.siemens.com/bt/global/en/building-knowledge/Pages/building-automation-hvac.aspx

Introduction to building automation / HVAC technology

Learn about buildings physical principles, heating and hydraulic systems, ventilation and air conditioning, measuring and controling of building technology

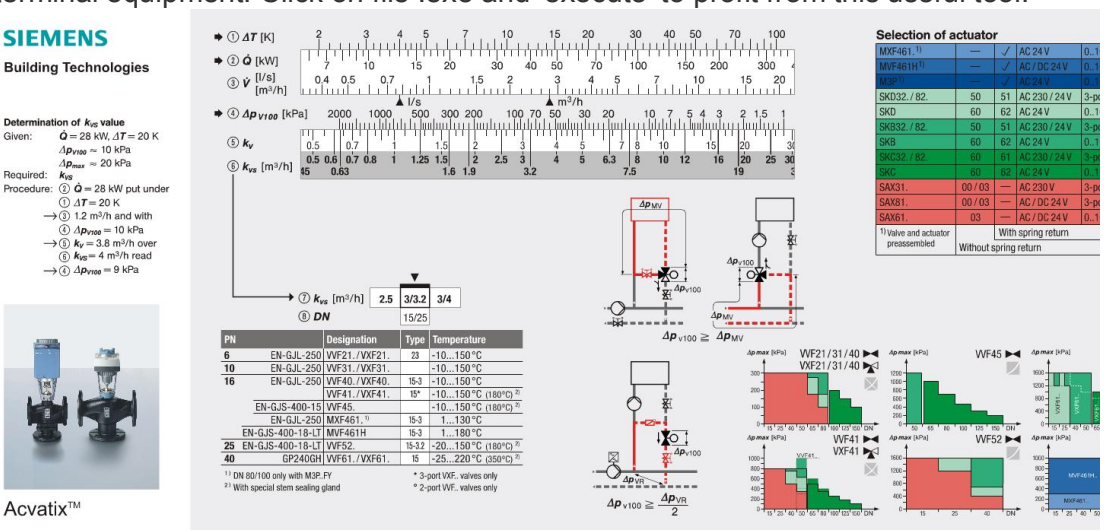
- Control technology
- Control of heating plants
- Hydraulics in building systems

Understand heating & cooling technologies

- Demand-controlled ventilation
- Control of ventilation and air conditioning plants
- Heat recovery in the refrigeration cycle
- Refrigeration technology
- Modulation capacity control in the refrigeration cycle

Valves & actuators

The slide rules are ideal for the sizing and selection of single valves and actuators. There are two models: a slide rule for central plant equipment and a slide rule for terminal equipment. Click on file .exe and 'execute' to profit from this useful tool.



Try this **3D animation tool** to learn about functions of magnetic actuators, for valve demonstration, valve electronics and further features. Click here to download and extract the ZIP before opening the Flash file.

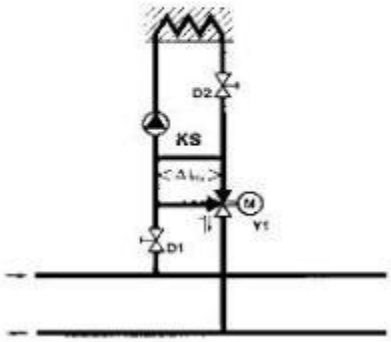
- Refrigeration VASP: No need to think about selection of refrigerant valves again. This excel program makes your life easier (only in german).
- Learn more about the operation principles of combi valves with this animation.

Practical tips

Read yourself trough our practical tips about **hydraulic settings, faulty circulation, sizing and selection of valves and actuators** with **calculation examples** for heating, ventilation, steam and water. Get also information about the correct **location and mounting of sensors** or to **ensure functionality of your air damper.**

See for example: Injection circuit

Injection circuit Floor heating control using injection circuit



Click on the image to come to the e-book

- Hydraulic settings: Control of mixing & injection circuit for floor heating
- Hydraulic settings: Injection control for radiated heat
- Air damper actuator: selection
- sensors for flush mounting
- Faulty circulation: on the boiler
- Faulty circulation: on distributor
- Valves & actuators: sizing and selection
- Valves & actuators: example heating plants
- Valves & actuators: example ventilation & air conditioning plants
- Valves & actuators: valve rating for water
- Valves & actuators: sizing and selection of steam
- Valves & actuators: water vapor table
- Valves & actuators: terms
- Valves & actuators: mounting
- Sensors: location
- Demand-controlled ventilation Demand-controlled ventilation

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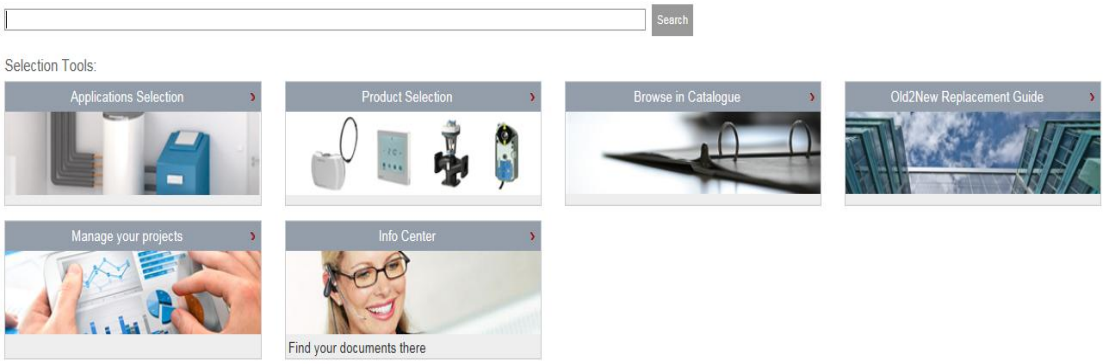
KATALOOGID, APLIKATSIOONIDE KATALOOGID

- HIT - HVAC Integrated Tool (for free after registration)

Beyond "Projects" you find a very useful planing tool to create HVAC documentation including connection diagrams and many more apllication and features.

TÄPSEMALT:
Seadmete ja lahenduste valiku programm HIT HINNAKIRJAGA 2014 AASTAKS: -
https://hit.sbt.siemens.com/hit/fs_global.aspx?&lang=en&RC=Baltics
(ei sisalda kahjuks kõiki k.o ajal tootmises olevat)
Seadmete ja lahenduste valiku programm HIT TÄIELIKU TOOTEVALIKUGA:
https://hit.sbt.siemens.com/HIT/fs_global.aspx?lang=en&RC=HQEU&WINX=1259&WINY=828



Technical product data and descriptions, GAMMA Product database:
http://www.hqs.sbt.siemens.com/Lowvoltage/gamma_product_data/data/search_find_en.htm?te1=5WG1
Kataloog raamatu kujul: http://www.hqs.sbt.siemens.com/gip/general/dlc/data/assets/hq/HVAC-products-and-building-automation-systems_A6V10390897_hq-en.pdf
665 lehekylge, soovitaks siiski HIT interaktiivseid valikuid eelnevast

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APLIKATSIOONID, TEEMAD

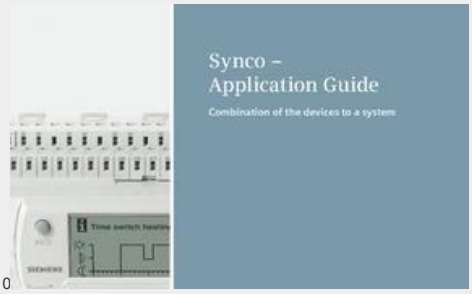
PDF 1.6 MB EN Synco-GAMMA application guide office buildings

9/20/2012

PDF 1.2 MB EN Synco – Application Guide Combination of the devices to a system

www.siemens.com/download?A6V10283124

9/2/2010



1.2 MB EN [Synco-GAMMA Application Guide - **School building - class room**]

Building automation, Home Automation Systems, BC - Devices for HCVA Applications, BC - System Products, Control ranges
www.siemens.com/download?A6V10374900

6/20/2012

1.5 MB EN [Synco-GAMMA Application Guide **Hotel**]

10/23/2013

Learn from training materials/tools

- Easy Hydronics

Check "Easy Hydronics" to visualize dynamically and interactively thermal and hydraulic simulation of basic hydraulic circuits. It can be used to foster hydraulic competencies and understanding or make life easier for all those who want to plan their hydraulic projects in a more visualised way.

Measure technology

Learn how to measure response, tolerance and errors. Find help at defining variables for HVAC, at the placement and installation of sensors and for planning measurement http://www.siemens.com/bt/file?soi=A6V10208877

Sensor installation guide **http://www.siemens.com/bt/file?soi=A6V10366334**

Psychometric chart - structure and application http://www.siemens.com/bt/file?soi=8313

Energy efficiency due to HVAC technology

EN 15232 - eu.bac product certification
What are standing orders for building automation?

Download document

Energy efficiency in building automation and control

Download document

Saving energy with Synco

Download document

Communication in building automation

The communication protocol BACnet was specially developed for the requirements of buildings. It is suited for both the automation and the management level. The emphasis is placed on building automation with a view to HVAC plants, fire control panels, intrusion detection and access control systems. http://www.siemens.com/bt/file?soi=A6V10209534

Read all about communication standards like BACnet, KNX, LonWorks, EnOcean, DALI, ...)
http://www.siemens.com/bt/file?soi=A6V10209534

See how intelligent room components based on KNX standards work smoothly together and blast the energy efficency of your room automation. Link

What is Wikipedia saying about building automation?

Building automation	KNX (Standard)
Intelligent building	EnOcean
Room automation	HVAC control systems
Green building	HVAC
Low energy building	Building performance
Building operation in conformance with construction	Thermostat
	Smart grid

Siemens BT website

www.siemens.com/hvac

http://www.siemens.com/buildingtechnologies

http://www.siemens.ee/ > Infrastruktuur & linnad > Hooneautomaatika
http://www.siemens.ee/ee/infrastruktuur_ja_linnad/hooneautomaatika.htm

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