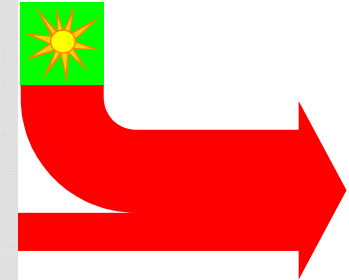


# „EU Standards and Regulations“

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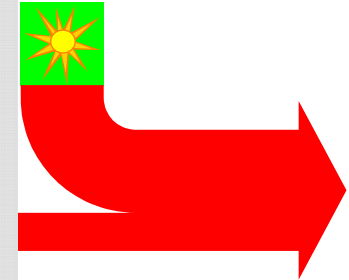


- EU Standards and Regulations

- ❖ Target

- harmonized standards for free trading
- harmonized standards for environmental protection

- ❖ Valid for all EU- and EFTA-members
  - > members have to cancel national inconsistent regulations

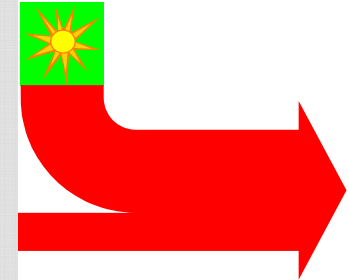


- EU Standards and Regulations

- ❖ Different aspects:

- a) Effect oriented

- Safety
- Quality
- Environmental protection
- ...

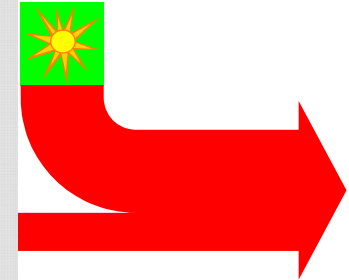


- EU Standards and Regulations

- ❖ Different aspects:

- b) device-, component oriented

- Piping
    - Compressor
    - Vessel
    - Electric devices
    - ...



- EU Standards and Regulations

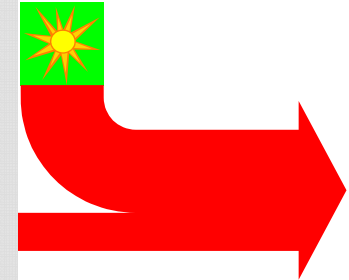
- ❖ Example:

Austrian Standards Institute:

Database keyword: “heat pump”

> 44 documents

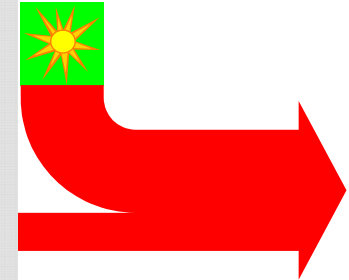
- 10 national standards
- 34 EU - standards



- EU Standards and Regulations

- ❖ Examples: “heat pump”

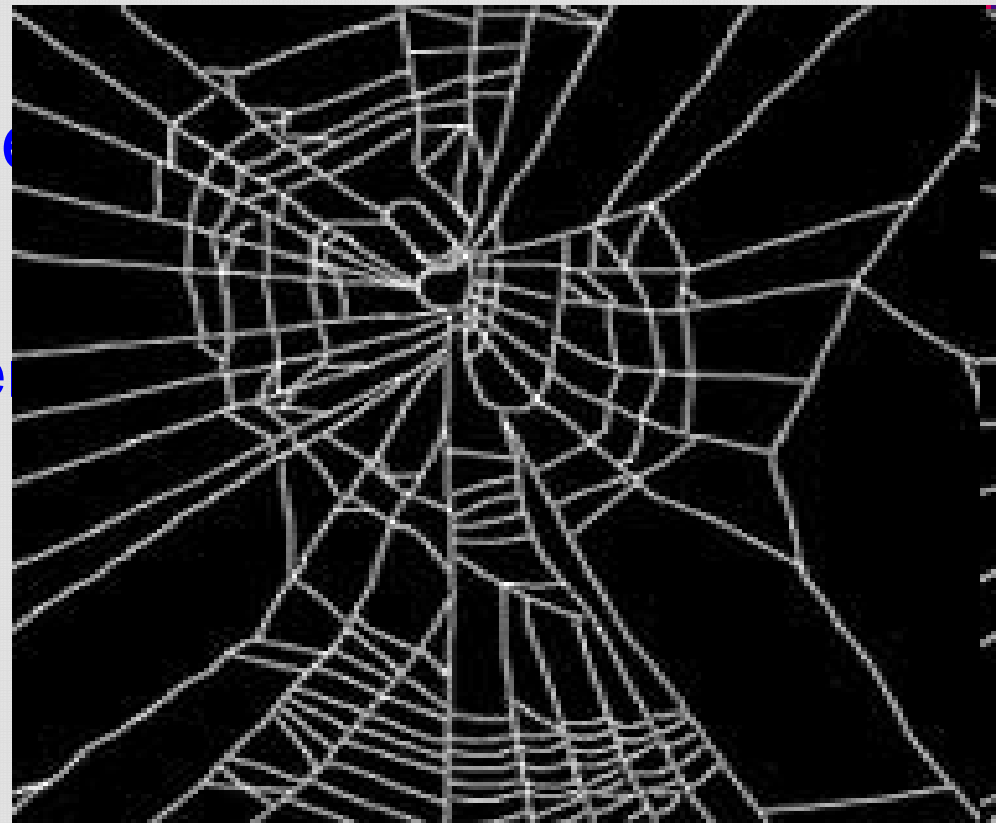
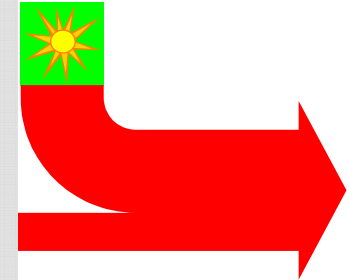
- EN 14511: „Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling - Part 2: Test conditions“
- EN 14511: „Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling - Part 3: Test methods“



- EU Standards and Regulations

- ❖ Problem:

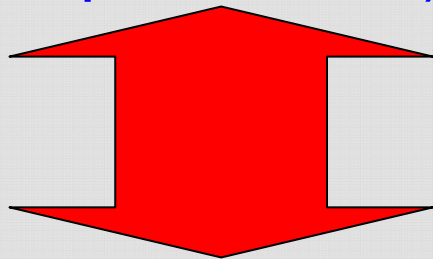
- System permanent „under stress“
- Multiple relations between



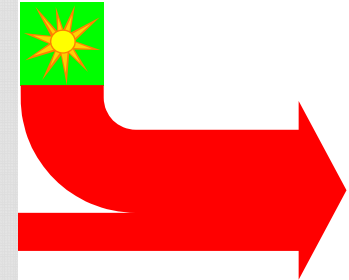
- EU Standards and Regulations

- ❖ Example: “permanent under construction”

- EN378 (“Refrigerating systems and heat pumps – Safety and environmental requirements“)



- Directive 97/23EC “Pressure Equipment”

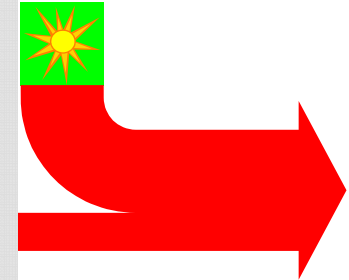




- EU Standards and Regulations

- ❖ EN378: History

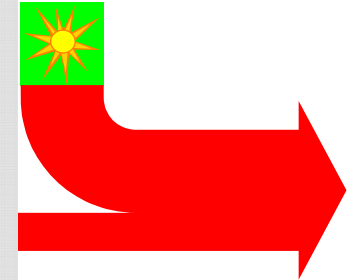
- Original draft: 13 parts
- part 1: into force 1994
- Re-arrangement to 4 parts; into force 2000
- **revision A1-2003; into force 2004**
- revision draft 2003
- revision draft 2005



- EU Standards and Regulations

- ❖ EN378: Refrigerating systems and heat pumps – Safety and environmental requirements

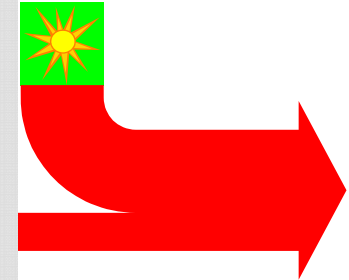
- Part 1: Basic requirements, definitions, classification and selection criteria (EN 378-1:2000 + A1:2003)
- Part 2: Design, construction, testing, marking and documentation (EN 378-2:2000)
- Part 3: Installation site and personal protection (EN 378-3:2000 + A1:2003)
- Part 4: Operation, maintenance, repair and recovery (EN 378-4:2000 + A1:2003)



- EU Standards and Regulations

- ❖ EN378: Refrigerating systems and heat pumps – Safety and environmental requirements

- Original to implement basic requirements of the EC-"Pressure Equipment Directive" !!
- After the implementation of the EC-"Pressure Equipment Directive" into national "Pressure Equipment Regulations" (in Austria: "Druckgeräteverordnung BGI 426/1999") some parts do not fit together!



- EU Standards and Regulations

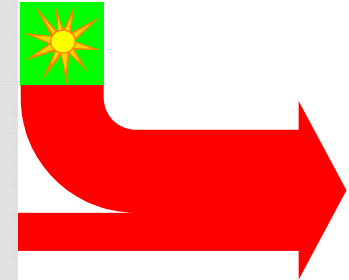
- ❖ EN378: Refrigerating systems and heat pumps – Safety and environmental requirements

- First “emergency measure” A1:2003

elimination of some direct references to the EC-”Pressure Equipment Directive”

- New revisions

- draft 2003: no agreement
- draft 2005: no agreement
- many objections !!



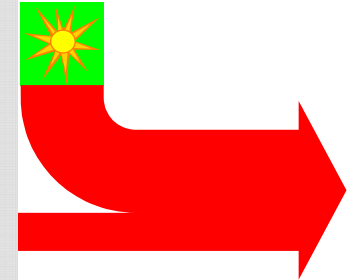
- EU Standards and Regulations

- ❖ EN378: Refrigerating systems and heat pumps – Safety and environmental requirements

- Problem:

related documents sometime changing faster than the update-process of EN378

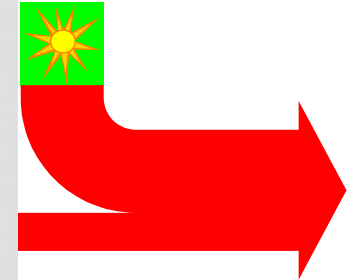
- Classical “oscillating process”



- EU Standards and Regulations

- ❖ Conclusion

- Harmonized standards important for free trading and equal requirements on the market
  - o same test standards
  - o same safety standards
  - o ...
- Complex procedure (slow)
- “Overregulation”



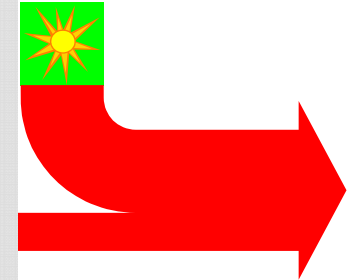
- EU Standards and Regulations

- ❖ Conclusion

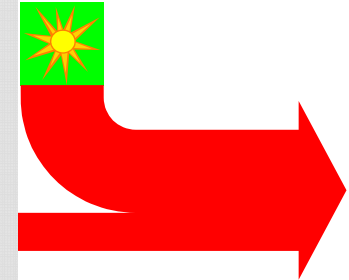
- But !!

- o Standards are not set by the government !
- o CEN-working groups: members from industry, ....

- Demand for engagement !!



- EU Standards and Regulations



Thank you  
for your attention