



2014-02-12

# ABB Instrument & Analys


## Vi gör det enkelt att mäta och analysera !

# How ABB is organized

## Five global divisions



### ABB's portfolio covers:

- 
- Electricals, automation, controls and instrumentation for power generation and industrial processes
  - Power transmission
  - Distribution solutions
  - Low-voltage products
  - Motors and drives
  - Intelligent building systems
  - Robots and robot systems
  - Services to improve customers productivity and reliability

(2011 revenues, consolidated; including Thomas & Betts revenue for LP division)

# ABB Measurement Products

## Key Facts







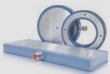





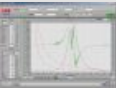





























- About 4500 employees in 50 countries
- 24 focused factories in 8 countries
- Market-leading products and services
- R&D and new product focus in both power & automation:
  - Energy efficiency
  - Flexibility and productivity
  - Environmental sustainability



# ABB Measurement Products

## Unrivalled scope and application expertise

				
Force Measurement	Analytical Measurement	Flow Measurement	Field Instruments & Devices	Service
<div data-bbox="79 582 175 654"></div> <div data-bbox="79 675 168 699">Flatness</div> <div data-bbox="249 572 359 644"></div> <div data-bbox="241 675 357 699">Rolling Mill</div> <div data-bbox="79 746 185 832"></div> <div data-bbox="73 853 183 876">Dimension</div> <div data-bbox="241 751 365 832"></div> <div data-bbox="231 853 369 876">Web Tension</div> <div data-bbox="117 943 166 1039"></div> <div data-bbox="85 1046 175 1071">Cylmate</div> <div data-bbox="249 922 353 1025"></div> <div data-bbox="262 1046 341 1071">Torque</div> <div data-bbox="73 1132 193 1218"></div> <div data-bbox="79 1225 179 1249">Weighing</div> <div data-bbox="249 1132 365 1218"></div> <div data-bbox="272 1225 334 1249">Tools</div>	<div data-bbox="452 582 575 644"></div> <div data-bbox="452 675 573 723">Continuous Gas</div> <div data-bbox="635 568 739 644"></div> <div data-bbox="622 675 747 723">Combustion Gas</div> <div data-bbox="481 746 575 832"></div> <div data-bbox="434 853 593 903">Gas Chromatograph</div> <div data-bbox="635 761 724 832"></div> <div data-bbox="643 853 730 903">Remote Sensing</div> <div data-bbox="475 943 546 1039"></div> <div data-bbox="436 1046 577 1071">Spectroscopy</div> <div data-bbox="625 958 747 1039"></div> <div data-bbox="622 1046 749 1096">pH &amp; Conductivity</div> <div data-bbox="488 1125 546 1218"></div> <div data-bbox="461 1225 562 1273">Municipal Water</div> <div data-bbox="658 1125 710 1218"></div> <div data-bbox="593 1225 778 1273">Power Generation Water</div>	<div data-bbox="838 568 909 644"></div> <div data-bbox="782 675 948 699">Electromagnetic</div> <div data-bbox="1022 568 1103 644"></div> <div data-bbox="1014 675 1089 723">Coriolis Mass</div> <div data-bbox="838 746 909 832"></div> <div data-bbox="795 853 938 876">Variable Area</div> <div data-bbox="1031 746 1083 832"></div> <div data-bbox="1014 853 1089 876">Vortex</div> <div data-bbox="848 929 900 1039"></div> <div data-bbox="815 1046 927 1096">Differential Pressure</div> <div data-bbox="1031 922 1083 1039"></div> <div data-bbox="1008 1046 1101 1096">Thermal Mass</div> <div data-bbox="838 1132 909 1218"></div> <div data-bbox="819 1225 921 1249">Gas Flow</div> <div data-bbox="1022 1132 1097 1218"></div> <div data-bbox="971 1225 1137 1273">Flow computers &amp; RTUs</div>	<div data-bbox="1215 568 1277 644"></div> <div data-bbox="1193 675 1294 699">Pressure</div> <div data-bbox="1387 568 1470 644"></div> <div data-bbox="1387 675 1456 699">Level</div> <div data-bbox="1161 746 1340 832"></div> <div data-bbox="1174 853 1313 876">Temperature</div> <div data-bbox="1379 782 1476 832"></div> <div data-bbox="1373 853 1495 903">Valve Positioners</div> <div data-bbox="1199 929 1302 1025"></div> <div data-bbox="1190 1046 1298 1071">Actuators</div> <div data-bbox="1379 951 1456 1039"></div> <div data-bbox="1360 1046 1476 1071">Recorders</div> <div data-bbox="1215 1118 1296 1203"></div> <div data-bbox="1182 1225 1302 1249">Controllers</div> <div data-bbox="1360 1132 1489 1218"></div> <div data-bbox="1356 1225 1501 1273">Asset Management</div>	<div data-bbox="1541 572 1663 689"></div> <div data-bbox="1676 568 1790 592"><b>Start-up:</b></div> <div data-bbox="1676 601 1868 694"> <ul style="list-style-type: none"> <li>• Dimensioning</li> <li>• Installation</li> <li>• Commissioning</li> </ul> </div> <div data-bbox="1541 715 1663 832"></div> <div data-bbox="1676 733 1814 783"><b>Operate &amp; maintain:</b></div> <div data-bbox="1676 792 1883 1028"> <ul style="list-style-type: none"> <li>• Maintenance</li> <li>• Calibration</li> <li>• Spare parts &amp; Repairs</li> <li>• Support &amp; Remote Services</li> <li>• Training &amp; eLearning</li> </ul> </div> <div data-bbox="1541 1001 1663 1118"></div> <div data-bbox="1676 1068 1808 1118"><b>Rebuild or replace:</b></div> <div data-bbox="1676 1126 1893 1270"> <ul style="list-style-type: none"> <li>• Retrofits</li> <li>• Upgrades, migration planning</li> <li>• Replace &amp; recycling</li> </ul> </div>



# Advance Optima – Continuous Gas Analyzers

Chemical &  
Petrochemical

Power & Steam

Oil & Gas

Water &  
Wastewater

Pharmaceutical

Food & Beverage

Metals & Mining

Pulp & Paper



## Features

- Integrated system concept with standardized analyzer modules
- Multi-analyzer system with up to 4 analyzer modules
- Distributed analyzers, connected to one central unit
- Broadest selection of different analyzer technologies
- Measures simultaneously up to 6 gas components
- Automatic calibration without test gas cylinders for most applications
- Digital interfaces for DCS and maintenance
- Ethernet for integration with PC and maintenance network, Profibus and Modbus fieldbus coupling, OPC-Interface for direct integration to DCS
- Full Remote Control for worldwide access on Ethernet
- Available for hazardous locations Category II2G, II3G
- International certifications according ATEX Europe, CSA US/Canada, GOST Russia

## Benefits

- Advanced and reliable technology
- Integrated system solutions – for added flexibility
- Multi-analyzer systems – ( up to four analyzer modules)
- Unlimited connectivity
- Integrated control and monitoring
- Simple, user-friendly operation
- "Packaging" that fits right in
- Reliable and powerful
- Always the right analyzer for the job. whatever the measuring task!

# ACX– Analyzer System for the extractive continuous gas analysis

Chemical &  
Petrochemical

Power & Steam

Oil & Gas

Water &  
Wastewater

Metals & Mining



## Features

- Continuous measurement of a maximum of six sample components
- Up to four analyzers including IR/UV photometer, paramagnetic/ or electrochemical O<sub>2</sub> analyzer and FID analyzer
- Appropriate gas sampling and gas conditioning included
- Operation via the operator panel in the front door
- available in sheet steel or glass-fiber cabinet or on a mounting plate
- Automatic calibration without test gas cylinders using internal calibration cells
- Integrated diagnosis functions for continuous self-control from probe to analysis
- Worldwide access for remote service possible
- AnalyzeIT Explorer visualization software for continuous monitoring and maintenance via Ethernet
- Modbus, PROFIBUS or Ethernet for networking with PC, OPC connection to PLC and Process control system or for integration in Windows applications.
- Gas ports and digital interfaces are accessible from the outside

## Benefits

- ACX – the complete system
- Always the right analyzers with proven and reliable measuring technology
- Convenient external operation
- Compact and innovative standardized design
- Self diagnosis for easy service and maintenance
- Process industry interfaces

# CoriolisMaster

Chemical &  
Petrochemical

Oil & Gas

Water &  
Wastewater

Food & Beverage

Metals & Mining

Pulp & Paper



## Features

- Wide meter size range: 1.5 ... 150mm (1/16..6")
- High accuracy for liquid flow and density of 0.1%
- High accuracy for gasflow of 0.5%
- Simple to use transmitter with common look & feel and sensor memory
- Hygienic approved version available
- Special material (HC4) available

## Benefits

- Save cost by making several measurements with one device
- Reduce flowmeter maintenance by up to 90%
- No mechanical wear and minimize installation issues
- Save up to 25 % on pump power through low pressure drop
- Save critical installation space by using one of the most compact meters on the market

Power and productivity  
for a better world™

