CBI
Ministry of Foreign Affairs

CBI Product Factsheet:

Valves in Norway

Introduction

With its small to medium-sized valve market, Norway is home to a small number of production facilities. The oil and gas industries together are estimated to account for more than 50% of the Norwegian valve market. To date, Norwegian valve manufacturers have preferred to keep all production processes in-house, making it quite a challenge for exporters from developing countries to convince Norwegian valve manufacturers to outsource and subcontract the production of parts. Exporters from developing countries should try to gain access to Norway for parts and finished valves. Another good option for exporters from developing countries would be to target specialised distributors. Valves produced for the Norwegian market must be designed and manufactured with an emphasis on low emissions, safety, simplicity of maintenance, ease of operation and, above all, long and reliable service life. In all cases, exporters from developing countries should focus on just a few specialised valves within their range of products. Finally, the pricing strategy should be very competitive.

Product description

Valves are applied in almost all industrial production processes in which liquids are used. The valves covered in this survey are industrial devices that regulate, direct or control the flow of fluids (gases, liquids, fluidised solids or slurries) by opening, closing or partially blocking various passages. The water and wastewater industry is the largest sector of application for valves, in addition to the chemical-processing industry, the food-processing industry (including beverages) and the oil and gas industries.

One chapter in the CN nomenclature refers to valves and valve parts: Chapter 8481. This chapter of codes was selected for this survey. The classifications are presented in Table 1. Note that several of the codes in Chapter 8481 have been excluded from the selection, as they relate to applications other than the process industry, including pneumatic (including tyres), hydraulic and sanitary applications. Table 1 also shows the Prodcom codes used for the production and demand statistics for valves and valve parts.

Table 1: Selected products, based on CN and Prodcom nomenclature

Subsector and product group	CN code	Prodcom code	Description
Valves			
check valves	848130-91/99	29131172	check valves
safety valves	848140-10/90	29131176	safety or relief valves
pressure-reducing valves	84811005	29131134	pressure-reducing valves combined with filters or lubricators
	84811019	29131135	pressure-reducing valves, of cast iron or steel
	84811099	29131139	pressure-reducing valves, of base metal
process control valves	84818051	29131313	thermostatically controlled process valves
	84818059	29131315	process control valves
gate valves	84818061	29131333	gate valves
	84818063	29131335	gate valves
	84818069	29131337	gate valves
globe valves	84818071	29131353	globe valves of cast iron
	84818073	29131355	globe valves of steel
	84818079	29131357	globe valves
diaphragm valves	84818087	29131377	diaphragm valves
other valves	84818099	29131380	valves not defined elsewhere
parts thereof	84819000	29132000	parts of valves
a range of valves (quarter turn)	84818081	29131373	ball and plug valves
	84818085	29131375	butterfly valves

Source: Globally Cool, based on CN and Prodcom Nomenclature (2013)

The valve specifications required by Norwegian buyers are described below. These specifications include requirements pertaining to the material used, the processing steps, documentation and packaging. Illustrations 1–4 display examples of valves sold in Norway, and Illustration 5 provides an example of valve bodies packaged for transportation.

Material and design

The material used depends upon the valve's application. Materials range from nodular cast iron or alloy nodular cast iron for use in water and wastewater processes to stainless and heat-resistant steel in the chemical and power-generation industries. Designs are in line with customer specifications.

Documentation

Valve importers require associated reports about the quality and specification of the material used, registration of critical process parameters and test reports, along with traceability reports for the batches of products manufactured.

Labelling and packaging

Valves are individually packed in crates or boxes, generally made of wood. The packaging depends upon the characteristics of the valve, its level of treatment (100% treated valves require high-protection packaging in order to prevent breakage) and its size. Plastics or coatings are also used for additional packaging purposes.
In addition to general packaging requirements (see 'Requirements'), customers are likely to have their own additional packaging requirements and preferences. The standard of the valve should be imprinted on the rim, as well as the size, batch number and materials. Highly specialised valves have unique numbers, as they are tested individually.

Packaging is always labelled, not only for the purposes of identification during transport, but also to indicate the quantity, weight, the products themselves and the producer's name. Customers are likely to have their own (additional) packaging requirements and preferences. In most cases, the packaging and labelling requirements are included in the customer's specifications.

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Quality and quantity

The quality standards of individual Norwegian companies are considered among the highest in Europe, and comparable to those in other Nordic countries. These quality standards have an impact on many aspects, including the finishing and painting of the product (the visual-optical qualities or the appearance of the valve), the packaging requirements and the documentation of accessories.

Order volumes follow the customer's standards and requirements. As a general guideline, transportation of standard valves or valve parts from overseas countries to Norway is viable only for full container loads.

Illustration 1: Plug valve

Illustration 2: Butterfly valve

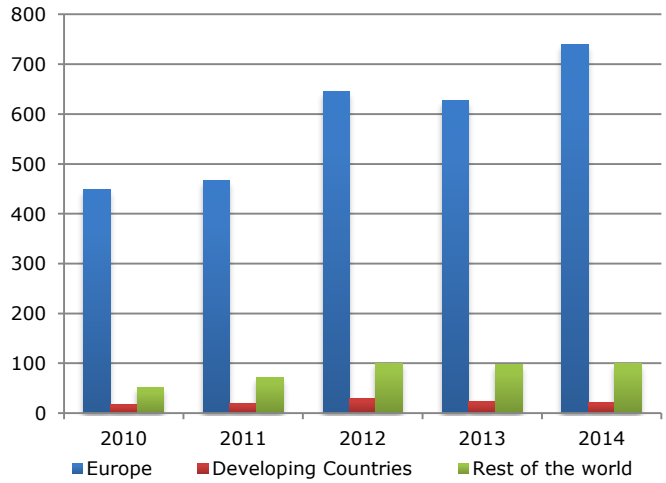
Illustration 3: Wafer-type check valve

Illustration 4: Steam safety valve

Illustration 5: Example of valve bodies ready for transport

What is the demand for valves in Norway?

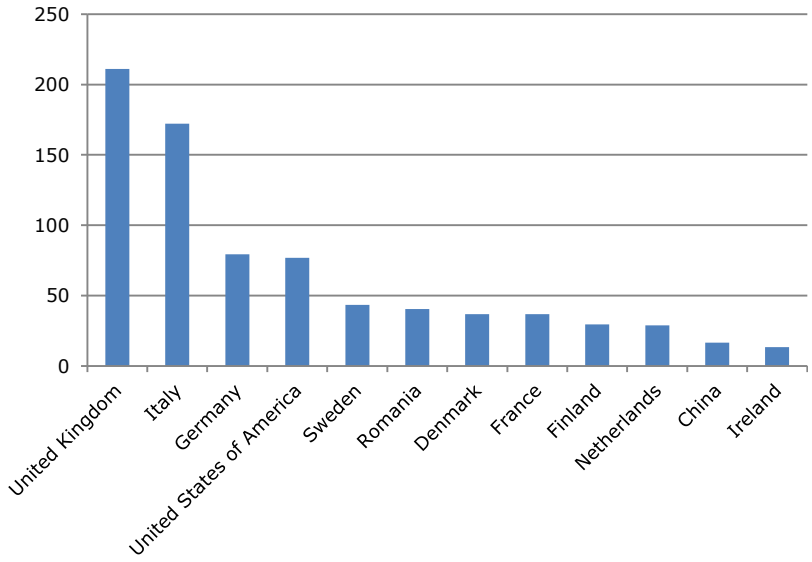
Figure 1: Imports of valves to Norway by main origin (2010–2014), in € million



Source: Trade Map (2015)

- Norway is the largest importer of valves in the Nordic region. In 2014, it accounted for 5% of all imports into Europe, which makes it comparable to Belgium and the Netherlands in terms of import value.
- Import values have been growing steadily since 2010, with the exception of a slight dip in 2013.
- In 2014, imports reached €860 million, which is much higher than the pre-crisis import value in 2008 (€644 million). On average, imports increased by 14% per year in 2010-2014.
- At 2.5%, imports from developing countries as a share of total imports are far below the European average (14%). During the next few years, this share is expected to increase gradually to 3%-4%.
- The import of valves is expected to exhibit a slight increase in the next few years, in the range of 0%–2%.

Figure 2: Leading suppliers of valves to Norway (2014), € million



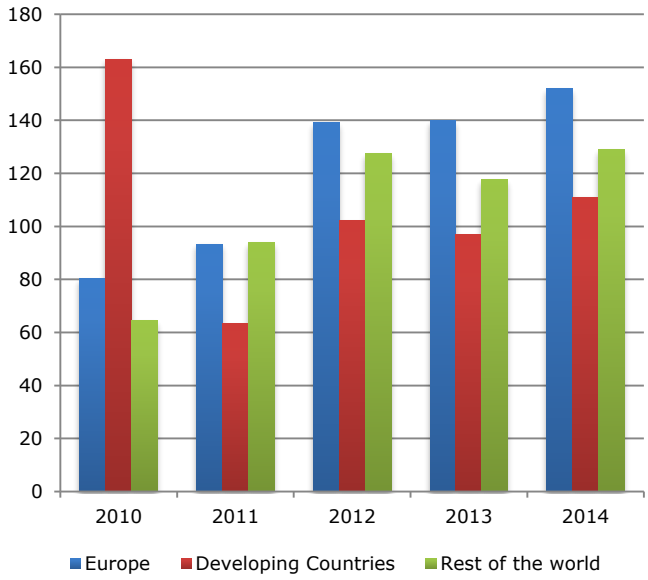
Source: Trade Map (2015)

- Most of the leading suppliers are from developed countries. Only a few developing countries export valves and valve parts to Norway. The most important of these exporting countries is China (in 11th position at €17 million).
- The leading positions of United Kingdom, Italy, Germany and the USA are the result of the presence of production facilities owned by the leading global and national valve manufacturers in these countries.
- Several other developing countries also export valves to Norway, including India, Turkey, Malaysia and Mexico (between €1–3 million per country).
- The composition of suppliers from developing countries is not expected to change substantially in the next few years.

Tips:

- Benchmark your company against your peers from China, as well as against those from other countries that export to Norway. Several factors can be considered, including market segments served, perceived price and quality levels, and countries.
- One source that can be used to find exporters of valves by country is the ITC Trade Map.
- Norwegian buyers are apparently aware of and have found suppliers in other developing countries as well, albeit not to the same extent as in other European countries. Be sure that Norwegian prospects can find your website when searching the web for suppliers. In addition, be sure that you are listed in relevant databases, including the Valve World Buyers' Guide.

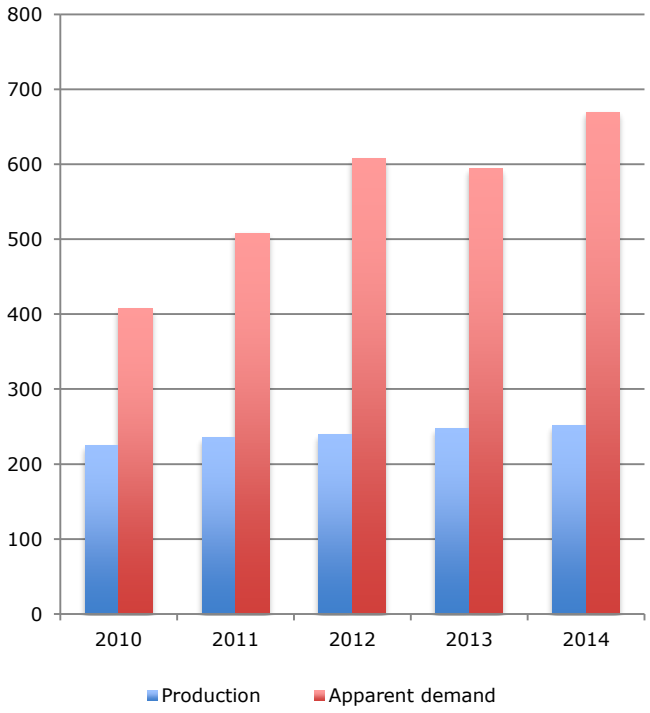
Figure 3: Exports of valves from Norway by main destination (2010–2014), in € million



Source: Trade Map (2015)

- Norwegian valve exports increased at a rate of 6.2% per year in the 2010–2014 period (€392 million in 2014). One exception was 2011, a weak year with a sharp reduction in project activities resulting in a decline of almost 20%.
- The pattern over the 2010–2014 period is more or less the same as the pattern for Norwegian imports (Figure 1). This demonstrates Norway's participation in the global trade of valves and valve parts.
- Of all Norwegian exports, 28% are destined for developing countries. This presents an interesting opportunity for manufacturers of valves and valve parts in developing countries. Suppliers who are able to prove their ability to meet product specifications can also supply these valves and valve parts. Brazil is the leading developing-country destination, followed by Angola, China, Ivory Coast, Nigeria, Ghana and Malaysia.

Figure 4: Indication of the production of and local demand for valves in Norway (2010–2014), in € million



Source: Prodcom (2015)

Production and demand

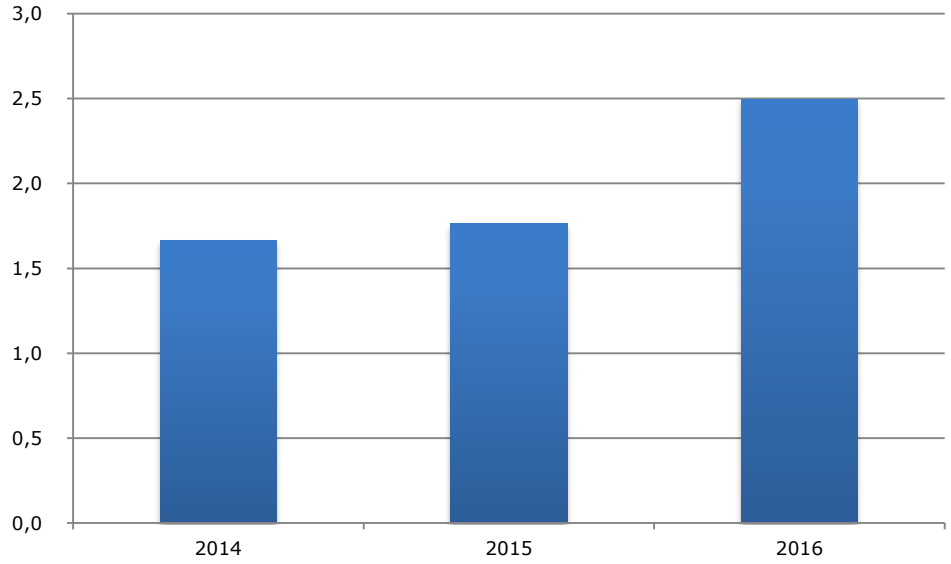
- Although detailed production figures for Norway are not available, valve production output could be described as small to medium from a European perspective.
- The Norwegian valve market depends largely on imports, with local production reaching between €200–300 million per year.
- The Norwegian market is of medium size, with a value of €500–800 million per year. It has a mature character, consisting largely of replacements and the maintenance of existing equipment.
- The Norwegian valve market is heavily dependent upon the North Sea oil and gas industry. The oil and gas industries together are estimated to account for more than 50% of the Norwegian valve market. The remainder covers a wide range of smaller segments (e.g. the chemical, pulp and paper, food and power-generation industries).
- Major Norwegian valve manufacturers include Ulefos Esco (valves for the water industry), Valves of Norway (petrochemical, oil and gas) and Scana Skarpenord (shipping, oil and gas). Valves of Norway is a good example of the group of European valve manufacturers who changed their strategies due to factors including the high production costs in Europe. These manufacturers shifted away from the production of standard valves towards producing a smaller volume of specialised and customised valves, while ensuring high quality and short delivery times.
- Norwegian valve manufacturers have preferred to keep all production processes in-house. They believe that this allows them the highest production and delivery flexibility.
- The Norwegian demand for valves is expected to be under pressure in 2015 and 2016, as low oil prices are expected to decrease investments in valves and other process equipment in Norway.

Tips:

- Manufacturers of valve parts can find a few short-term and medium-term subcontracting opportunities with Norwegian valve producers. Only a few producers from Norway have started to seek a foothold abroad, as most prefer to retain control of all their production activities. =
- Given the sub-optimal forecast for 2015 and beyond, pricing will continue to be one of the most influential competitive factors, especially for newcomers to the Norwegian valve market. Exporters from developing countries who have difficulty achieving competitive pricing should consider specialising, as competition tends to be less intense in the market for specialised valves.

Macro-economic indicators

Figure 5: Real GDP Norway (2014–2016), % change from previous year



Source: OECD Economic Outlook 96 database

- The major determinant of demand for valves is industrial spending activity, which is stimulated by economic growth. As indicated in Figure 5, the GDP is expected to exhibit continued growth year on year. For the longer term, it will provide a significant base for continued import growth.
- The profitability of imports of valves is affected by the NOK:USD exchange rate, as many valves and valve parts that are sourced globally are paid for in USD. In 2015, the NOK:USD exchange rate rose considerably. This situation is likely to have a negative impact on the level playing field of Norwegian imports paid in USD relative to local Nordic production, especially it persists for several years. This would thus also have a negative impact on the competitive position of exporters from developing countries.

Tip:

- Although Norwegian companies are not very open to outsourcing production to foreign countries, exporters from developing countries could try to make themselves known to Norwegian producers. Exporters from developing countries could develop shortlists of the relevant Norwegian valve manufacturers. They could maintain contact with these manufacturers by providing annual updates regarding their business and try to schedule meetings at trade fairs.

What trends offer opportunities on the Norwegian market for valves?

The most important trends in the Norwegian valve sector include the following:

- Materials: In the next few years, the market will continue to be characterised by a growing demand for non-standard specifications and a growing demand for exotic materials (e.g. titanium, Inconel, Hastelloy, duplex and super-duplex), due to the attractive properties of these materials (e.g. strength and corrosion resistance).

- Oil: In the oil sector, it is expected that the next few years will see a greater need for subsea valves capable of operating at higher pressures (10,000 psi to 15,000 psi and even higher), due to a growing number of projects with such requirements.
- Environment: The increasing demand for certain types of valves in recent years can be regarded as a result of the search for energy efficiency and the restriction of CO2 and NOx emissions (following legislation from the European Union). This has led to the increased use of innovative production techniques, resulting in greater efficiency and less waste. For example, a range of valves has become more appealing as control valves for petrochemical companies. The main reason is that a range of valves has lower gland emissions than globe valves do. In addition, one specific range of valves, eccentric plug valves, is suitable for a very large number of applications. Eccentric plug valves have thus experienced relatively high growth in demand, especially for control-valve applications in the oil and gas industry.

Tips:

- The segment for specialised products presents opportunities for producers from developing countries who are able to supply high-tech valves and valves made of exotic materials.
- The expected increase in the need for subsea valves operating at higher pressures presents opportunities for producers in developing countries who would be able to supply valves that can handle such higher pressures.
- The trend towards greater energy efficiency provides opportunities for producers from developing countries who are able to supply certain types of low-emission valves or parts for such valves.
- The CBI document on Trends for Pipes and Process Equipment provides a general overview of trends in the European industry.

With which requirements should valves comply in order to be allowed on the Norwegian market?

Requirements can be divided into the following categories: (1) musts, which are legal requirements that you must meet in order to enter the market, and (2) additional requirements, which consist of the relatively common requirements that most competitors have already implemented (in other words, requirements that you should meet in order to stay abreast of the market).

A general overview of EU buyer requirements for pipes and process equipment is available on the CBI Market Intelligence Platform. Additional sources of information on gaining access to the European market include the EU Export Helpdesk and the ITC Market Access Map.

Musts

Although Norway is not a member of the European Union, the legislation relating to valves for Norway is in line with European Union legislation. For industrial valves, the most important legal requirements are compliance with the Essential Safety Requirements of (1) the Pressure Equipment Directive (PED) 97/23/EC, and (2) the ATEX Directive 94/9/EC (which applies to valves in potentially explosive atmospheres).

Valve parts are not subject to any specific legal requirements for market access. For finished valves, the following legislation applies:

- The Product Liability Directive states that the European importer is liable for the products put on the European market. In theory, however, European importers can pass claims along to their producers/exporters.
- Valves are subject to the PED directive.
- Valves intended for use in potentially explosive atmospheres must comply with the ATEX directive (Directive 94/9/EC).

Other general legislation that must be taken into account includes:

- Wood packaging materials used for transport (Directive 2005/15/EC): The European Union sets requirements for wood packaging materials (WPM), including packing cases, boxes, crates, drums, pallets, box pallets and dunnage (i.e. wood used to wedge and support non-wood cargo).
- Another packaging-related directive is the general directive for packaging and packaging waste, which prescribes the marking of the kind of packaging material used and maximum levels of heavy metals in the packaging material.

Tips:

- To obtain PED or ATEX certification, valves must be certified by a Notified Body. In some cases, these notified bodies also offer consultancy services to help manufacturers meet the requirements. Be aware that notified bodies are often notified for only a part of the conformity assessment procedure, or for only a specific sector (e.g. electrical equipment).
- Consult the European ATEX Guidelines for the Valve Industry published by the European Valves Committee.
- Make sure that your wood packaging material (WPM) qualifies for the European market. If you are not certain, ask your WPM supplier to confirm and explain this to you. Your WPM supplier should undertake any further actions required to comply with the Directive. If the supplier is not able to do so, it would be advisable to select another supplier.
- A Certificate of Origin is obligatory; note that it must be validated by a local Chamber of Commerce. Additional information is available here.

Additional requirements

For finished valves, the customer's main requirements will be related to technical aspects, many of which are covered in the CE or other standards. General standards (e.g. EN558 and EN12982) can serve as a starting point, while other standards apply to specific market segments (e.g. ISO 15761, 10434 and 17292 for gas and oil). Yet other standards apply to specific types of valves (e.g. EN 13709, 13789 and 1349 for globe and control valves and ISO 5996 for cast-iron gate valves).

For valve parts, material requirements are the most important customer requirement. The material that is used for valve parts must be covered by an international standard and certificated. The metal used must meet the material standard, which can be stated in an EN10204 Type 3 certificate. This type of certificate is internationally accepted.

While the American ASTM standards link material requirements with applications, this is not the case for the European EN standards. Instead, European customers have their own specific requirements, in addition to the EN standards. Such additional requirements from customers can be NDT (non-destructive testing), surface (MT or magnetic testing, PT or penetrant testing) and section (UT or ultrasonic testing and RT or X-ray testing) tests.

Buyers may also have specific requirements relating to the dimension and surface of the valve parts. In practice, these requirements are highly dependent upon the customer and application. In some cases, buyers ask their suppliers to adhere to the EN ISO 8062 standard and, in other cases, they include their specific dimensional and surface requirements in the technical drawing.

Finally, many customers are likely to demand that you work according to such general organisational quality systems as ISO 9001 (version 2008) and process control. Some may also demand compliance with ISO 14001 (environmental) and OHSAS 18000 (labour standards).

Tips:

- Valves produced for the European market must be designed and manufactured with an emphasis on low emissions, safety, simplicity of maintenance, ease of operation and, above all, long and reliable service life.
- Additional details are available on the following websites:
  - ISO Catalogue - See 'TC 153' (Valves) for an overview of ISO standards.
  - Search EN norms in the online shop of the British Standards Institution.
  - CBI Buyers' Black Box offers further information on topics that are decisive for buyers when searching for new suppliers.

Import tariffs

For valves and valve parts, a 2.2% duty is levied on European imports from third countries. Several countries benefit from a preferential 0% tariff, including Indonesia, Pakistan, Vietnam, the Philippines, Bosnia-Herzegovina and Egypt. The TARIC database provides additional details relating to Chapter 8481. Note that a Certificate of Origin is required in order to claim a preferential tariff.

Tip:

- Exporters from countries subject to a preferential 0% tariff have a slight competitive advantage over competitors from countries without such preferential tariffs.

What do the trade channels and interesting market segments for valves look like in Norway?

Valve manufacturers are the most prominent targets in Norway. Producers from developing countries can supply parts to them as subcontractors, in addition to supplying finished products. Producers from developing countries can improve their opportunities by focussing on a few specialised products. Norwegian manufacturers are also the most important targets for specialised products, and some may be interested in subcontracting a part of their production to low-cost countries. Distributors are also good targets, as they have excellent access to the local market.

Additional information is available in the CBI documents on 1) Market Channels and Segments for Pipes and Process Equipment and 2) Competition for Valves. Explanations of the types of prospects are provided below, including a few examples for each type. Resources that can be used for finding prospects are included in the section 'useful resources'.

Manufacturers

These companies offer good potential for suppliers of valve parts, and possibly for suppliers of some finished valves. Subcontracting offers the best opportunities for specialised products, including special valves or parts thereof (e.g. knife valves).

Examples of Norwegian manufacturers include the following:

- Jon Gjerde – manufacturer of tank-vent check valves for floating constructions.
- Norske Ventiler – producer of valves for oil and gas industry.
- Sole Solutions – maker of valves and other components for the water-heating industry.
- Ulefos Esco – one of the largest manufacturers of valves, fittings and pipe sections for the water-supply industry in the Nordic region.

Note that this list is not complete, and it is intended only as an illustration of a particular category of companies.

Distributors

Distributors are attractive targets for exporters from developing countries aiming to export large volumes of commodity-type products (e.g. common valves). This is because distributors often buy and/or import commodities in relatively large volumes on a scheduled basis. In most cases, the distributor is also the importer. Distributors often have their own stock, thus explaining why they are also called 'stockists'. Products must be kept in stock, as they need to be available for urgent deliveries to end-users.

Most distributors offer a range of valves and other pipe-related process equipment. Examples include the following:

- Aratrno Kurt Wiig – one of the leading Norwegian importers that specialises in trading hydraulic components, including valves.
- Ingeberg – importer and distributor of valves and other process equipment.
- Mento – distributor of valves and other equipment for the oil industry.

A few distributors are true valve specialists, as they are exclusively specialised in valves. Two examples of such specialists are:

- Flow Control Norway – distributor and stockist of valves, actuators and interlock systems.
- Norwegian Valve Technology – distributor of different types of industrial valves and actuators.

Note that this list is not complete, and it is intended only as an illustration of a particular category of companies.

Useful resources

- Commercial Agents Scandinavia – database of intermediaries in Sweden and Norway.
- Elmia Subcontractor – leading subcontracting fair in North Europe, held annually in November, Jönköping, Sweden.
- Eurostat – official statistics office of the European Union. Registration is free and provides access to large collections of data.
- Eventseye – trade show directory; search by country and industry for trade shows.
- Export Helpdesk – information on European trade statistics, tariffs and quotas for developing countries.

- ITC International Trade Statistics – registration required.
- Kwintessential – provides practical tips on business culture and etiquette.
- NFA – Norwegian association for automation control. Click on '*Bedriftsmedlemmer*' to search for members.
- Norwegian (Oslo) Chamber of Commerce – an umbrella business association in Norway; two interesting services are Export analysis & Market reports and Partner search & Matchmaking.
- Offshorenorway – B2B portal for Norwegian companies in the oil, gas and energy industry. Go to 'search by product' and find such categories as 'valves and accessories'.
- ProcessTeknik – trade fair on process automation and process technology – held biennially in October, Gothenburg in Sweden.

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