

TWENTY YEARS OF FLUID EVOLUTION



# monobloc lobe pumps BE series

ALL THE POWER WITH A DELICATE TOUCH

## STANDARD VERSION

The BE SERIES Lobe Pumps derives from the well-known B series pump since it shares several of its characteristics. The AISI 316 L stainless steel pump is assembled on a cast iron gear box which has a protective coating in epoxy paint finish. The chamber separating the pump body and gear box avoids any contamination between the pumped fluid and the lubricant.

The BE series pumps are simple and robust and are characterised by their monobloc design. The drive unit, thanks to the hollow shaft and to the rear cover provided with an IEC flange, is directly fixed to the pump by creating a unique compact and light body.

The new design, with smooth cover and fixing nut built in the rotors, improves the cleaning (CIP) and sterilisation (SIP) standard.



The lobe pumps of this series are provided only with bi-lobe rotary piston rotors, in AISI 316 stainless steel or in antifriction alloy Acteon, which ensure an excellent volumetric efficiency and a smooth and regular transfer of several liquid or viscous products.

The bi-lobe rotary piston rotors have big chambers that close twice per revolution and make these pumps suitable for transferring fluids containing solids in suspension, from 10 mm. for the BE 115 model to 19 mm. for the BE 440 model.

Also in the BE series, the main parts (rotors, seals) and the optional parts can be added or changed according to different utilisation requirements. The wide range of available seals and gaskets (similar to those of the B series) allows an excellent choice according to the characteristics of the transferred product.

In less demanding works, the BE pumps can replace the B pumps and, meeting the increasing demand of cheap lobe pumps with a high sanitary standard, allow to widen the utilisation possibilities of the OMAC pumps.



# SPECIAL VERSIONS

## HEATED JACKET BODY



front cover can be made available and it's own or with heated jacket on the body.

If it is necessary to keep the pumped fluid at a constant temperature a heated jacket body is available for all the pumps. This allows the circulation of heating or cooling liquid. Typical examples are melted fats, butter and margarine, chocolate and glucose. On request the heated jacket

## ENLARGED SUCTION INLET



of the product under gravity directly beneath the hopper.

The BE115, BE220, BE330, BE440 Models can be supplied with enlarged rectangular suction inlets allowing highly viscous products such as semi-solid pieces to be pumped. In these cases the pump is generally positioned with the port on a vertical axis in order to allow the entry

## PRESSURE RELIEF VALVE SYSTEMS



*Integral pressure relief valve*

suitable for CIP process line and functions for either direction of flow. The external pressure relief valve (unidirectional) can be assembled in order to recycle the whole pumped product. This valve is especially suitable for frequently operations and for volatile, heat or shear sensitive product. For both of the valves a manual, pneumatic or automatic operation is available.

The pumps can be supplied on request with hygienic by-pass or pressure relief valves. This device protects the pump from pressure peaks or restrictions in the discharge and assures excess liquid deviation during CIP and SIP. The relief valve can be manually selected as a flow regulator in order to pass product allowing the pump can be run continuously. This valve can be incorporated in the end cover that replace the standard cover, providing a pressure relief valve loop from discharge to the suction area; alternatively it can be incorporated in the discharge pipework, relieving excess pressure by by-passing product through a loop back to the suction side. The integral relief valve is



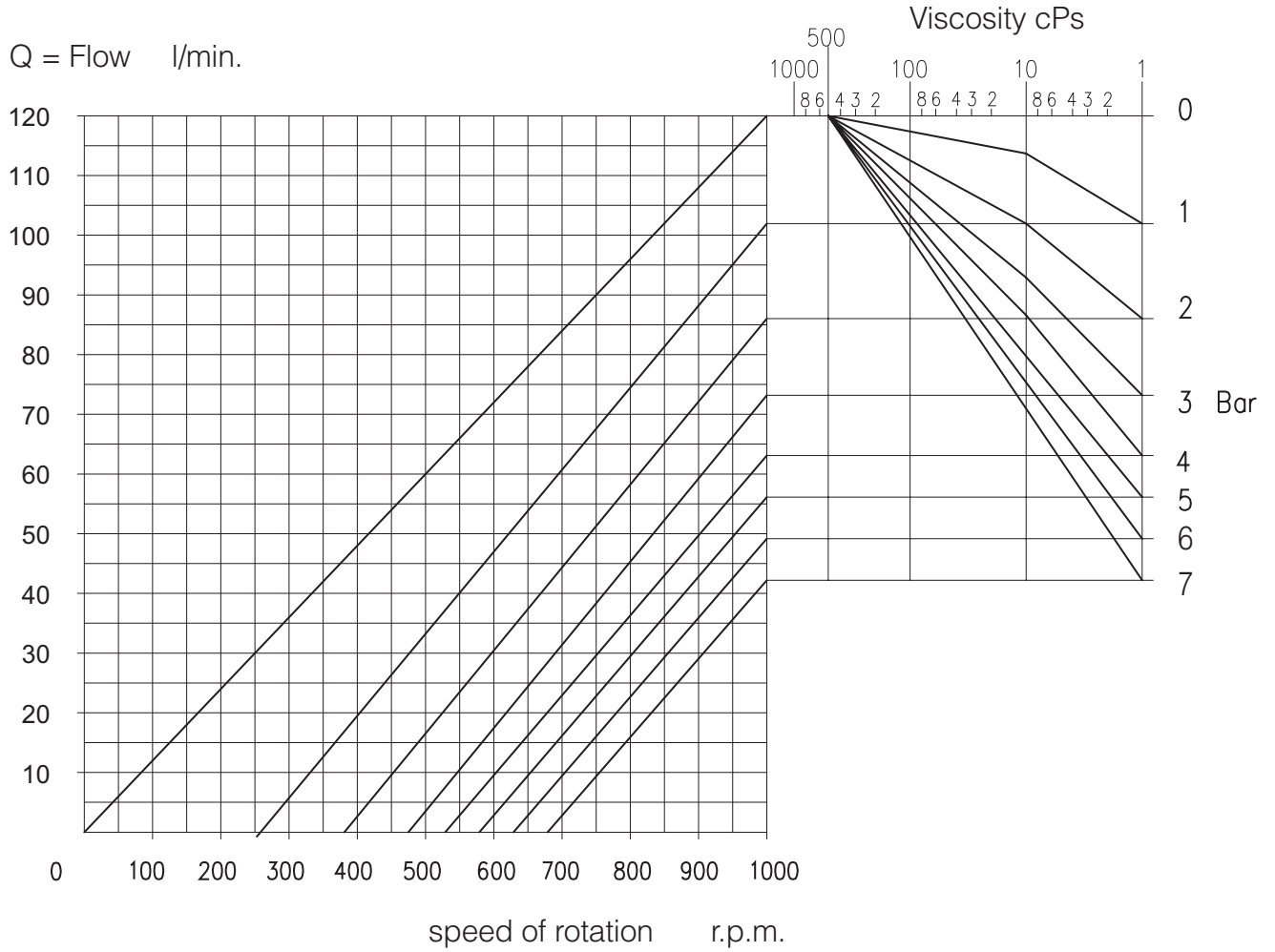
*External pressure relief valve*

## MOUNTING AND DRIVES

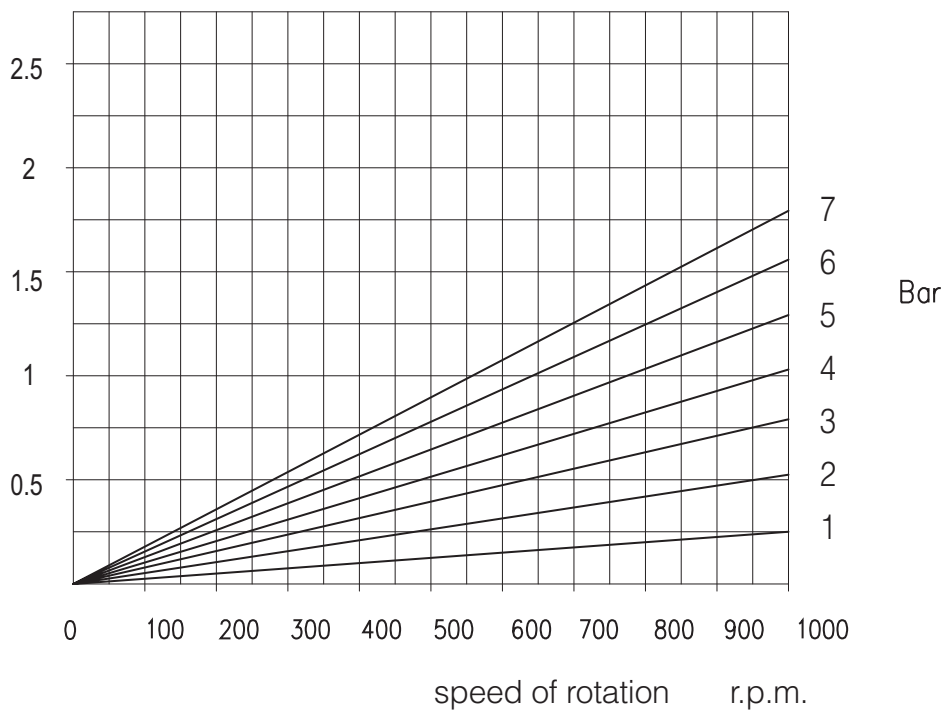


The new OMAC pumps can be supplied either bare shaft or complete with directly flanged drive unit. The pump unit becomes very compact without bare rotation shafts and with minimum dirt-collecting surfaces. Trolleys and such accessories as feet for vertical connections, adjustable feet, and stainless steel shrouds covering the motors can also be supplied as to build pumping sets which exactly satisfy customer's requirements. Power transmission can be variable speed via mechanical, hydraulic, belt adjustable speed unit or inverter integrated into the motor; alternatively can be fixed speed via reduction geared motor. For controlling the pumps the options are various and these include on off reversing switch, IP65 inverter, electric panel with IP21 inverter for remote control signal.

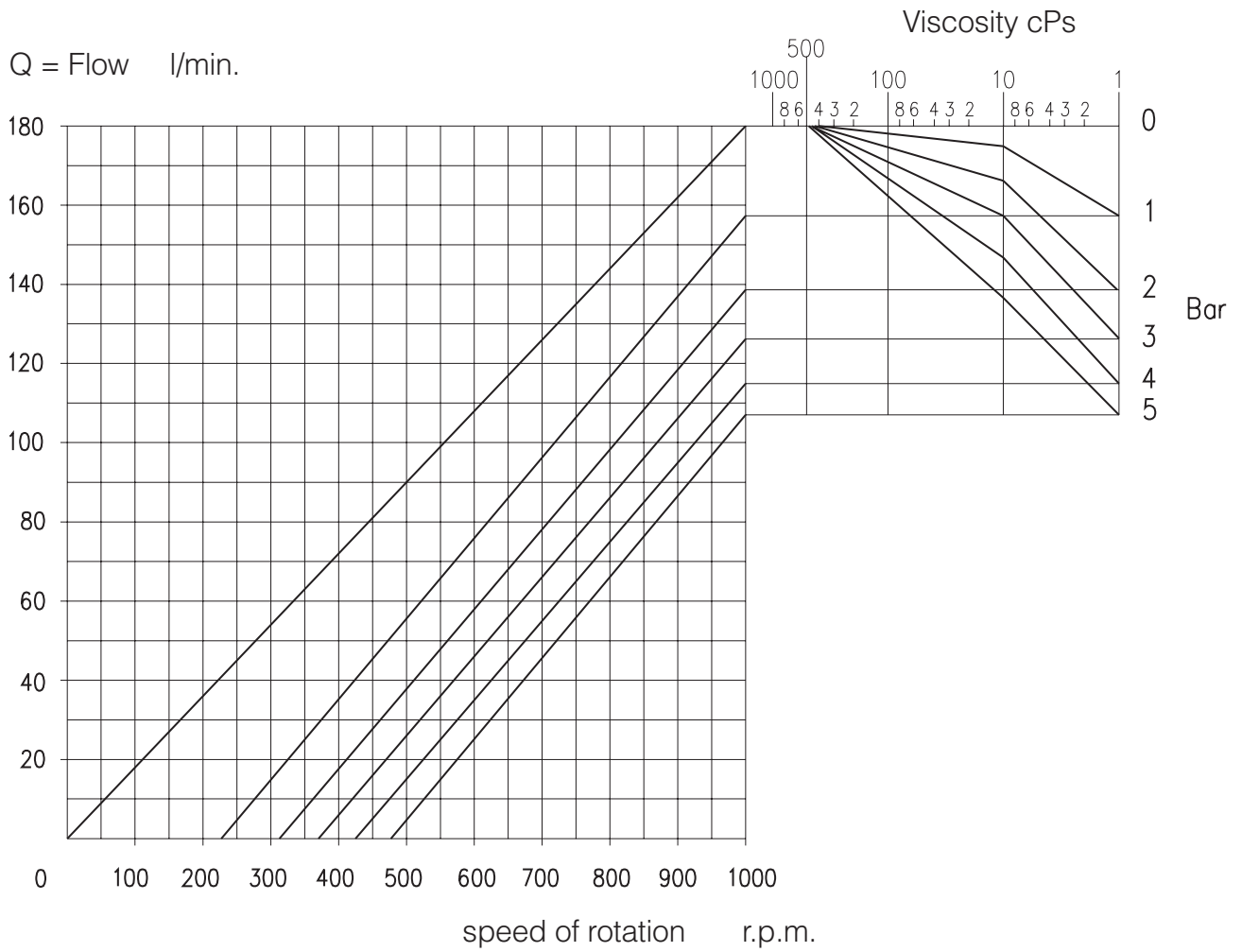
Q = Flow l/min.



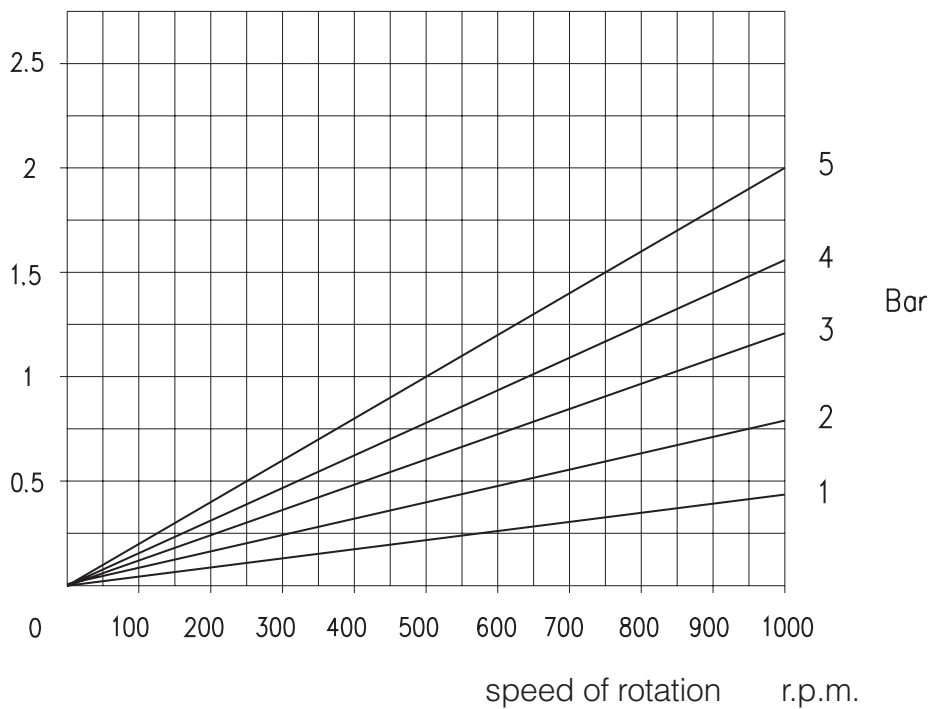
Kw = absorbed power

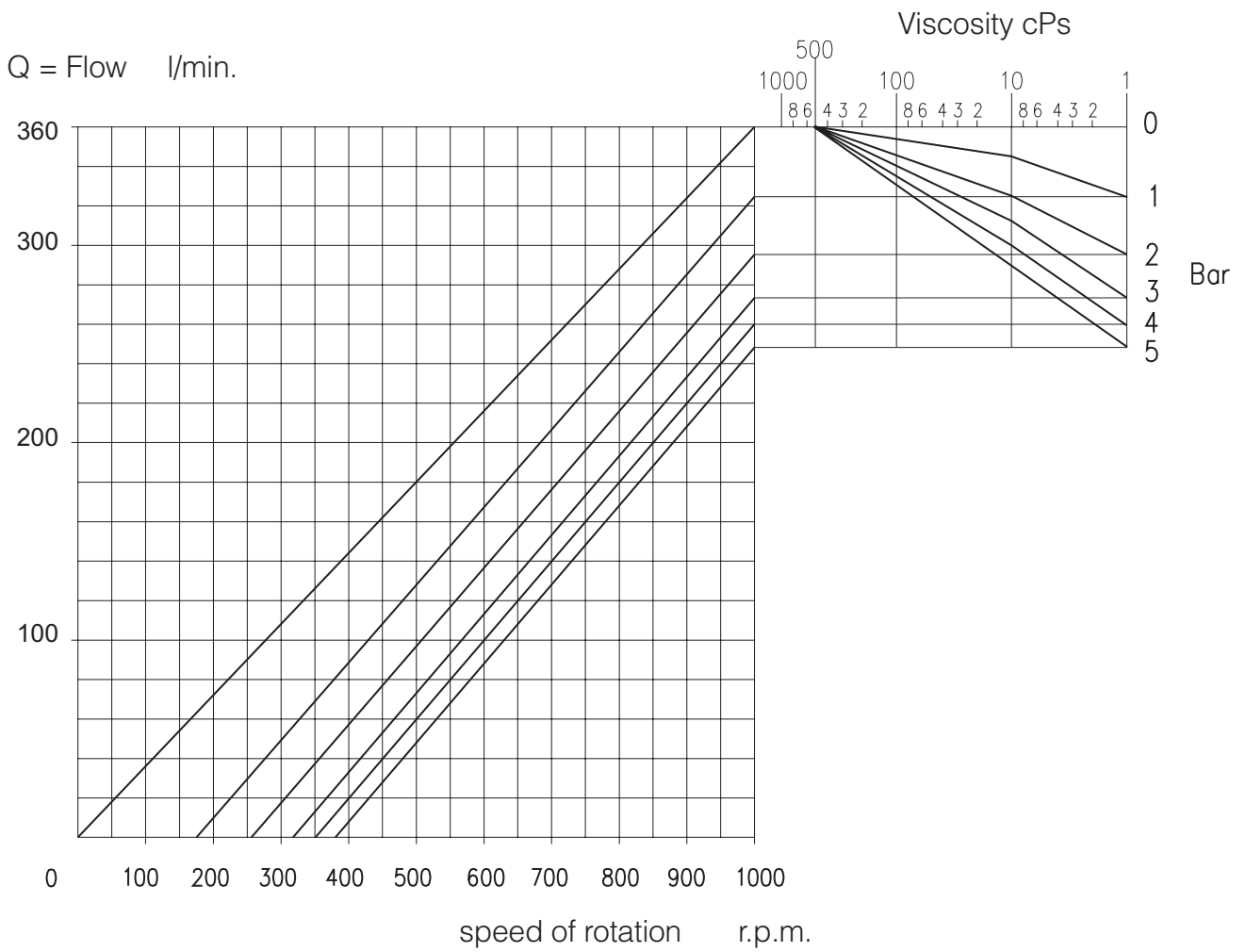




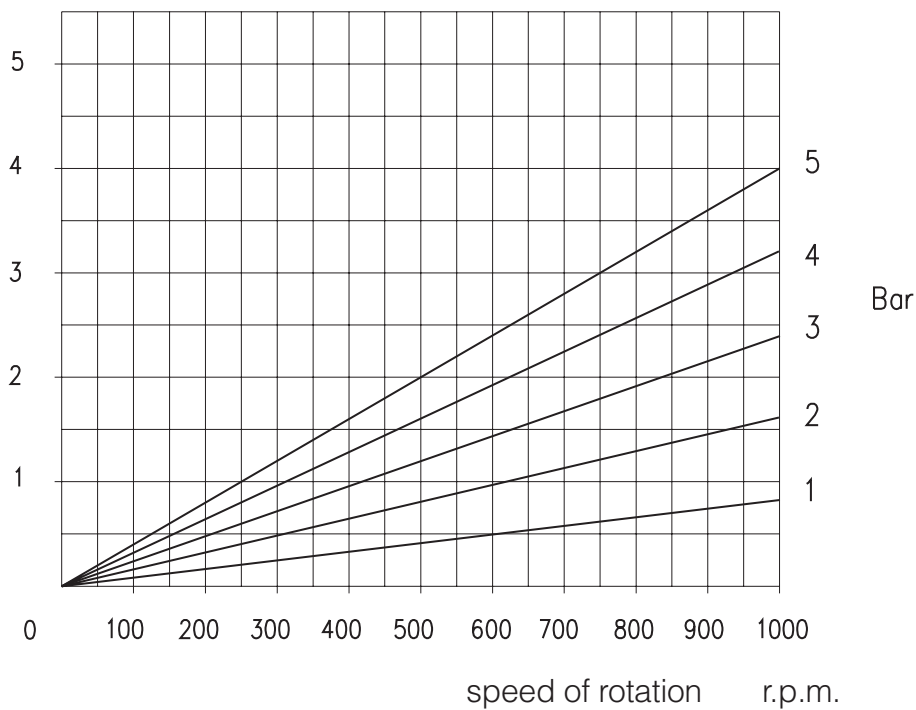


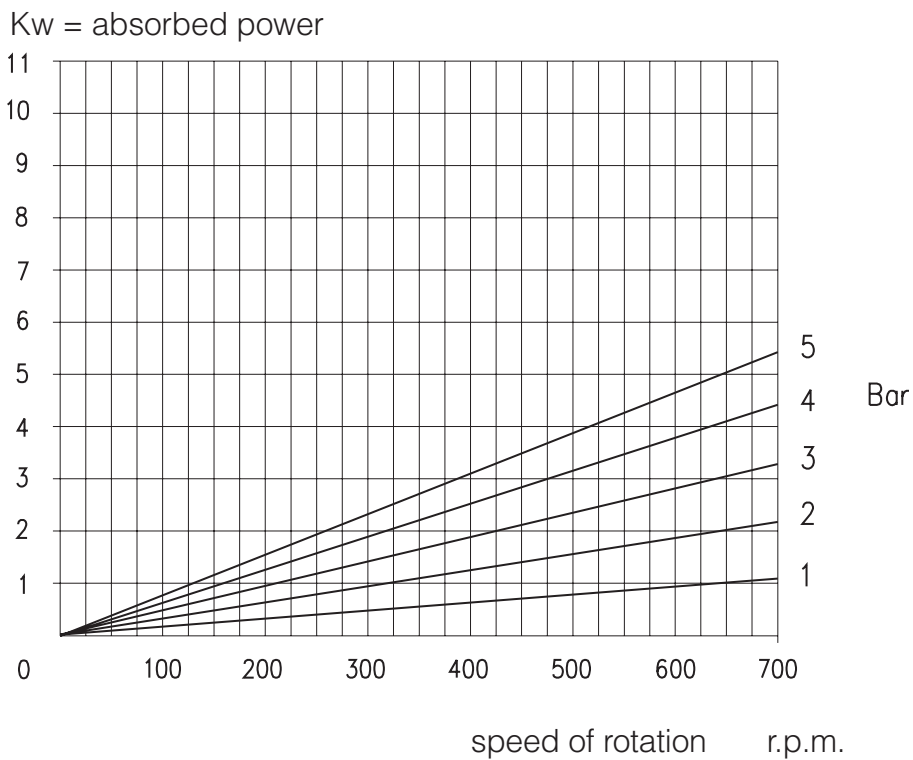
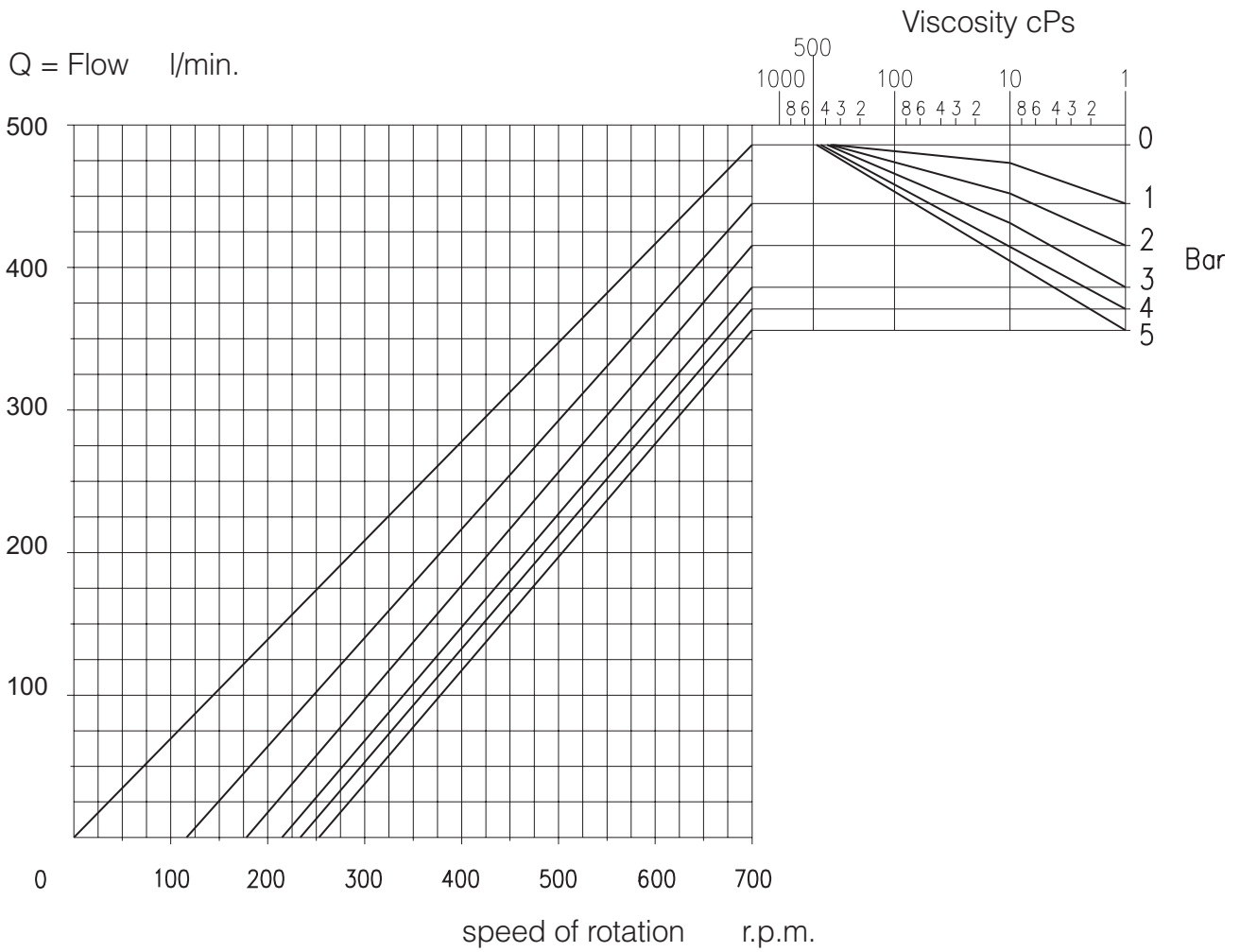
Kw = absorbed power

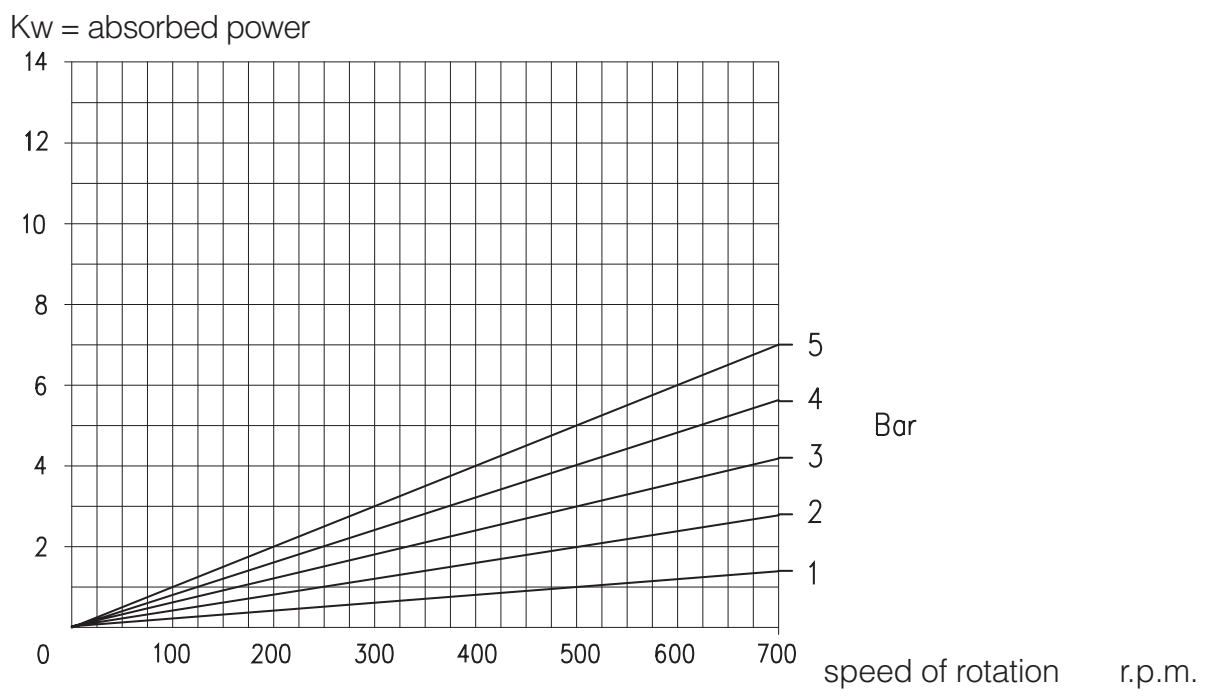
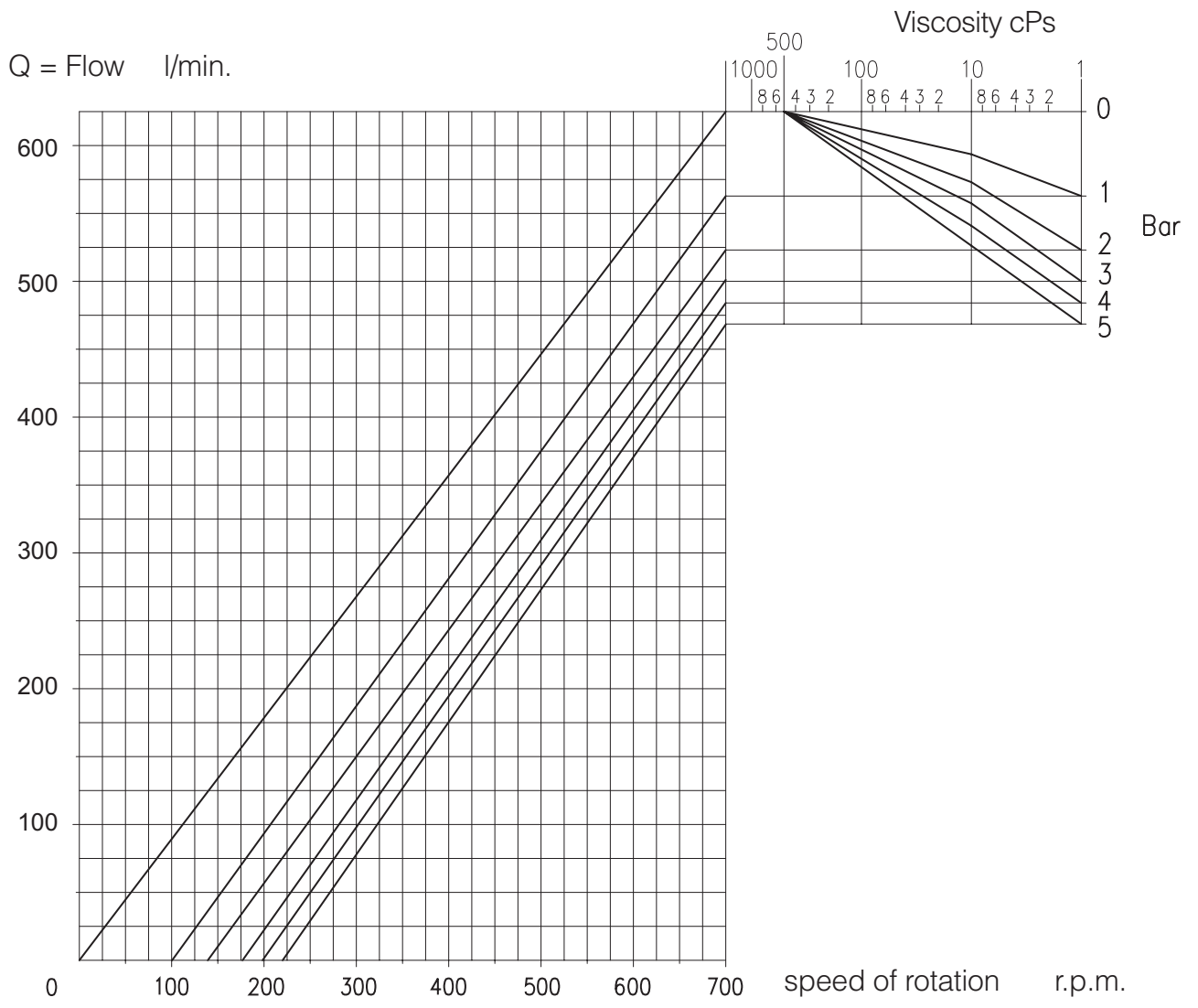




Kw = absorbed power











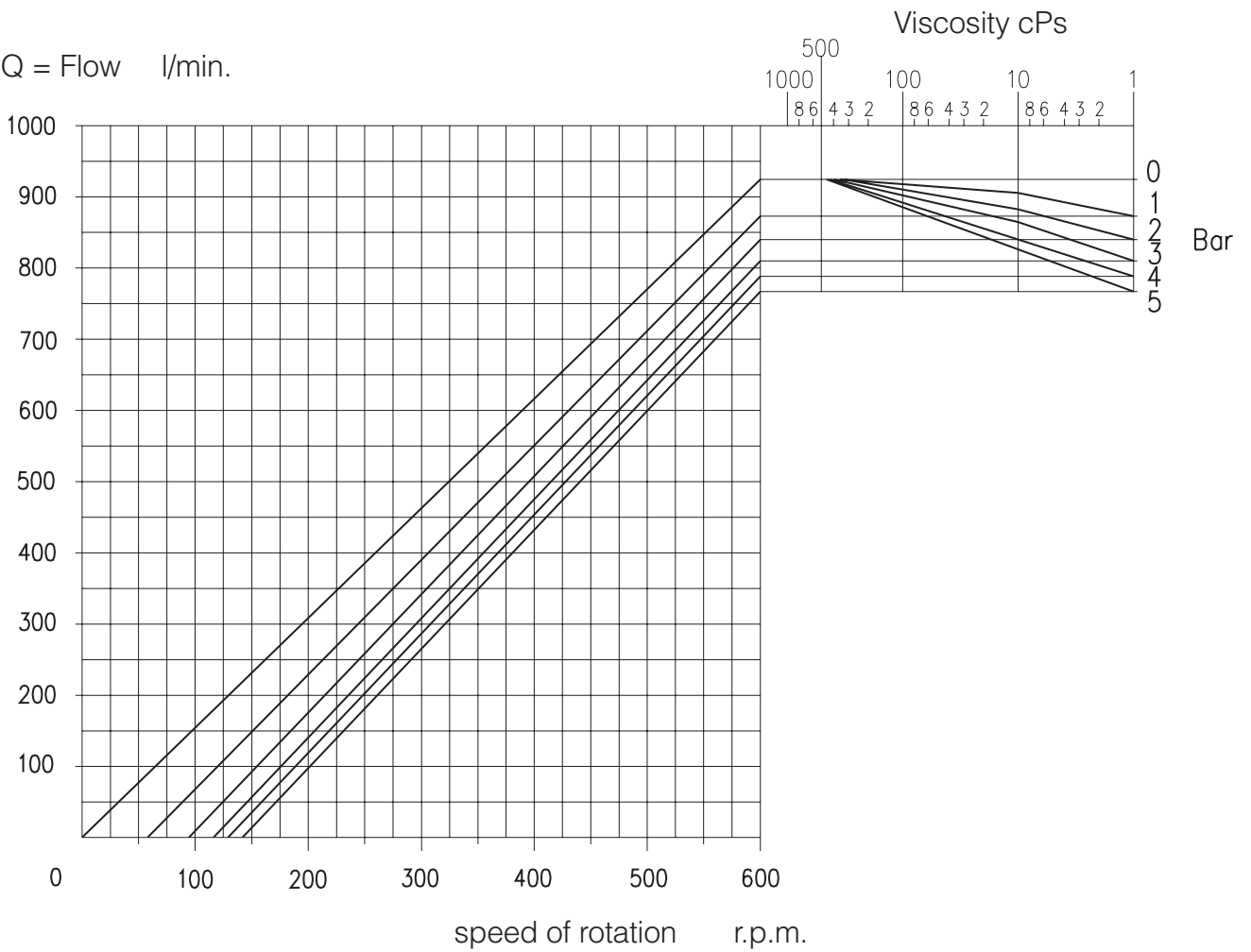
# PUMP PERFORMANCES CHART

BE440 Stainless Steel Dual Wing Rotary Piston

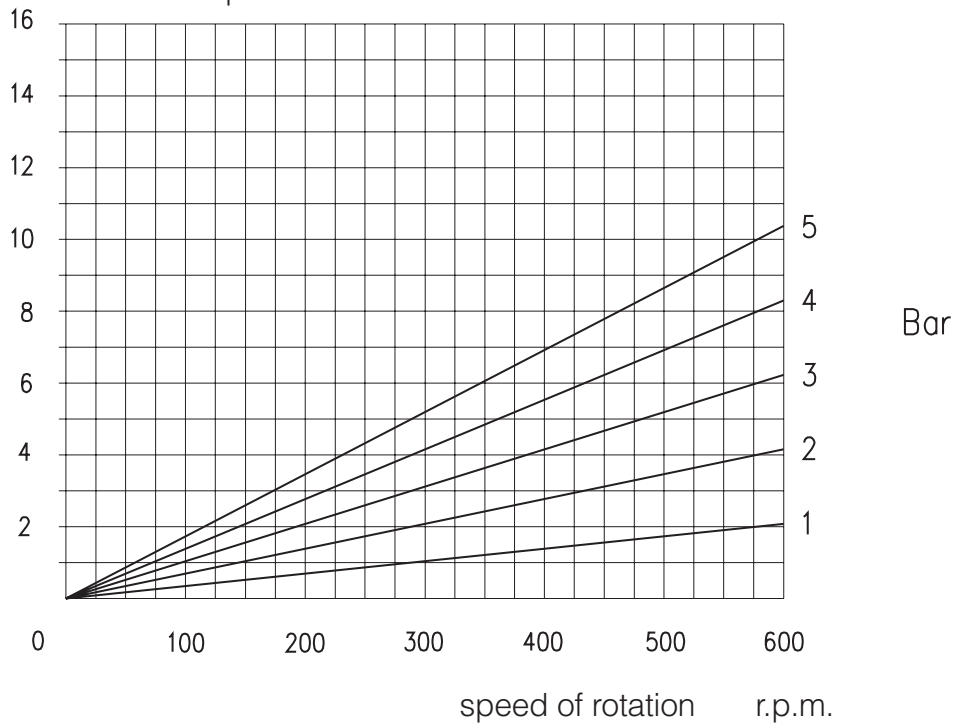
version ST

cod=5

Q = Flow l/min.

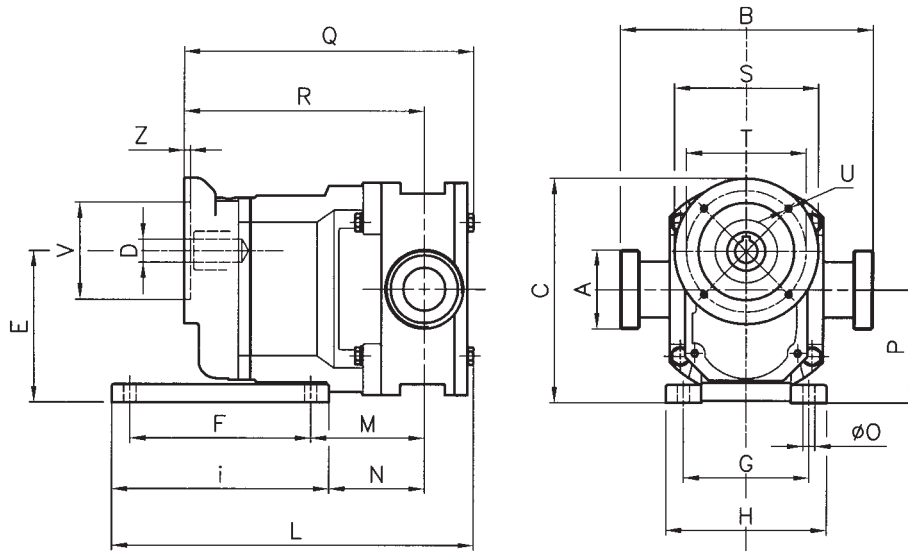


Kw = absorbed power





# OVERALL DIMENSIONS IN MM. WITH IEC FLANGE FOR MOTORIZATION CONNECTION



| TYPE PUMP<br>GAS-BSP<br>PORTS | POSITION |     |     |    |     |     |     |     |     |     |       |       |    |       |     |       |     |     |         |     | WEIGHT |     |
|-------------------------------|----------|-----|-----|----|-----|-----|-----|-----|-----|-----|-------|-------|----|-------|-----|-------|-----|-----|---------|-----|--------|-----|
|                               | A        | B   | C   | D  | E   | F   | G   | H   | I   | L   | M     | N     | O  | P     | Q   | R     | S   | T   | U       | V   |        | Z   |
| <b>BE110-F1</b>               | 1"1/2    | 170 | 185 | 19 | 125 | 150 | 105 | 134 | 180 | 291 | 82.5  | 67.5  | 10 | 93,5  | 231 | 188   | 120 | 100 | M6 (8)  | 80  | 5      | 20  |
| <b>BE110-F2</b>               |          |     | 185 | 20 |     |     |     |     |     |     |       |       |    |       | 231 | 188   | 120 | 100 | M6 (8)  | 80  | 5      | 20  |
| <b>BE110-F3</b>               |          |     | 285 | 19 |     |     |     |     |     |     |       |       |    |       | 245 | 201   | 200 | 165 | M10 (4) | 130 | 4      | 22  |
| <b>BE110-F4</b>               |          |     | 285 | 24 |     |     |     |     |     |     |       |       |    |       | 245 | 201   | 200 | 165 | M10 (4) | 130 | 4      | 22  |
| <b>BE110-F5</b>               |          |     | 205 | 24 |     |     |     |     |     |     |       |       |    |       | 245 | 201   | 160 | 130 | M8 (4)  | 110 | 4      | 21  |
| <b>BE110-F6</b>               |          |     | 185 | 24 |     |     |     |     |     |     |       |       |    |       | 231 | 188   | 120 | 100 | M6 (8)  | 80  | 5      | 20  |
| <b>BE115-F1</b>               | 1"1/2    | 170 | 185 | 19 | 125 | 150 | 105 | 134 | 180 | 303 | 94    | 79    | 10 | 93,5  | 243 | 199   | 120 | 100 | M6 (8)  | 80  | 5      | 21  |
| <b>BE115-F2</b>               |          |     | 185 | 20 |     |     |     |     |     |     |       |       |    |       | 243 | 199   | 120 | 100 | M6 (8)  | 80  | 5      | 21  |
| <b>BE115-F3</b>               |          |     | 285 | 19 |     |     |     |     |     |     |       |       |    |       | 257 | 213   | 200 | 165 | M10 (4) | 130 | 4      | 23  |
| <b>BE115-F4</b>               |          |     | 285 | 24 |     |     |     |     |     |     |       |       |    |       | 257 | 213   | 200 | 165 | M10 (4) | 130 | 4      | 23  |
| <b>BE115-F5</b>               |          |     | 205 | 24 |     |     |     |     |     |     |       |       |    |       | 257 | 213   | 160 | 130 | M8 (4)  | 110 | 4      | 22  |
| <b>BE115-F6</b>               |          |     | 185 | 24 |     |     |     |     |     |     |       |       |    |       | 243 | 199   | 120 | 100 | M6 (8)  | 80  | 5      | 21  |
| <b>BE220-F1</b>               | 2"       | 208 | 245 | 25 | 165 | 170 | 125 | 160 | 200 | 359 | 119   | 104   | 12 | 127,5 | 311 | 256   | 160 | 130 | M8 (4)  | 110 | 5      | 43  |
| <b>BE220-F2</b>               |          |     | 290 | 28 |     |     |     |     |     |     |       |       |    |       | 327 | 272   | 250 | 215 | M12 (4) | 180 | 5      | 47  |
| <b>BE220-F3</b>               |          |     | 245 | 28 |     |     |     |     |     |     |       |       |    |       | 311 | 256   | 160 | 130 | M8 (4)  | 110 | 5      | 43  |
| <b>BE220-F4</b>               |          |     | 265 | 28 |     |     |     |     |     |     |       |       |    |       | 327 | 272   | 200 | 165 | M10 (4) | 130 | 5      | 44  |
| <b>BE330-F1</b>               | 3"       | 236 | 290 | 30 | 190 | 200 | 140 | 180 | 240 | 443 | 151   | 131   | 14 | 145   | 389 | 339   | 200 | 165 | M10 (4) | 130 | 5      | 65  |
| <b>BE330-F2</b>               |          |     | 315 | 28 |     |     |     |     |     |     |       |       |    |       | 405 | 351   | 250 | 215 | M12 (4) | 180 | 5      | 68  |
| <b>BE390-F1</b>               | 3"       | 336 | 290 | 30 | 190 | 200 | 140 | 180 | 240 | 458 | 171   | 151   | 14 | 145   | 404 | 359   | 200 | 165 | M10 (4) | 130 | 5      | 69  |
| <b>BE390-F2</b>               |          |     | 315 | 28 |     |     |     |     |     |     |       |       |    |       | 416 | 371   | 250 | 215 | M12 (4) | 180 | 5      | 72  |
| <b>BE440-F1</b>               | 4"       | 335 | 355 | 30 | 255 | 250 | 190 | 240 | 300 | 530 | 157,5 | 132,5 | 18 | 192,5 | 453 | 367,5 | 200 | 165 | M10 (4) | 130 | 5      | 135 |
| <b>BE440-F2</b>               |          |     | 405 | 48 |     |     |     |     |     |     |       |       |    |       | 473 | 387,5 | 300 | 265 | M12 (4) | 230 | 6      | 142 |
| <b>BE440-F3</b>               |          |     | 350 | 40 |     |     |     |     |     |     |       |       |    |       | 470 | 384   | 250 | 215 | M12 (4) | 180 | 5      | 139 |

### PUMPS WITH PORTS:

| TYPE PUMP        | UNI2278 PN16<br>FLANGED PORTS |     | DIN 11851 |     | SMS   |     | IDF-ISS |     | RJT   |     | TRI-CLAMP |     | OENOLOGICAL |     |
|------------------|-------------------------------|-----|-----------|-----|-------|-----|---------|-----|-------|-----|-----------|-----|-------------|-----|
|                  | A                             | B   | A         | B   | A     | B   | A       | B   | A     | B   | A         | B   | A           | B   |
| <b>BE110/115</b> | DN40                          | 186 | DN40      | 210 | DN38  | 210 | DN38    | 210 | DN38  | 210 | DN 1"1/2  | 210 | DN40        | 218 |
| <b>BE220</b>     | DN50                          | 228 | DN50      | 228 | DN51  | 248 | DN51    | 248 | DN51  | 248 | DN 2"     | 248 | DN50        | 256 |
| <b>BE330/390</b> | DN80                          | 256 | DN80      | 296 | DN76  | 296 | DN76    | 276 | DN76  | 276 | DN 3"     | 290 | DN80        | 290 |
| <b>BE440</b>     | DN100                         | 355 | DN100     | 395 | DN101 | 395 | DN101   | 378 | DN101 | 378 | DN 4"     | 392 | DN100       | 389 |

## SOME PUMPED PRODUCTS

|                   |                  |                            |
|-------------------|------------------|----------------------------|
| vinegar           | ketchup          | tomato purée               |
| distilled water   | milk             | diced tomaatoes            |
| hydrogen peroxide | condensed milk   | perfumes                   |
| alcohol           | latex            | mashed potato              |
| adhesives         | yeast            | fruit purée                |
| beer              | liquor           | brine                      |
| soup              | lotions          | sauces                     |
| melted butter     | mayonnaise       | blood                      |
| curd              | malt             | soap                       |
| mincemeat         | melted margarine | syrup                      |
| chocolate         | jam              | shampoo                    |
| glue              | marzipan         | caustic soda               |
| cream             | molasses         | galvanic solution          |
| toothpaste        | mushroom         | sugar solution             |
| detergents        | honey            | solvents                   |
| emulsions         | coconut oil      | fruit juice                |
| explosives        | olive oil        | tea                        |
| essences          | baby food        | surfactants for detergents |
| milk enzymes      | sponge-cake      | tointment                  |
| strawberries      | cream            | eggs                       |
| ice-cream         | paraffin         | vaseline                   |
| gelatine          | suppository      | paint                      |
| icing             | paste            | wine                       |
| glycerine         | hand cleaning    | yoghurt                    |
| guucose           | paste            |                            |
| animal grease     | polymers         |                            |
|                   | fruit pulp       |                            |

## INDUSTRIAL APPLICATIONS

|                       |   |
|-----------------------|---|
| <b>COSMETICS:</b>     | beauty creams, toothpaste, shampoo, detergents, lotions   |
| <b>CHEMICAL:</b>      | paints, enamels, detergents, polymers, resins, dodecylbenzene, acids, etc.  |
| <b>BEVERAGES:</b>     | wine, alcohol, beer, soft drinks, syrup, tea, fruit juice, grape juice, mineral water   |
| <b>FOOD:</b>          | fruit and tomato concentrates, fruit and vegetable salads, preserved vegetables, sauces, mayonnaise, homogenized meat, starch, vegetable purées, etc. |
| <b>CONFECTIONERY:</b> | chocolate, cream, sponge-cake, products with yeast, fillings, fats, margarine, jam, marmalade   |
| <b>DAIRY:</b>         | milk and its products, sofft cheese, yoghurt, fruit for yoghurt, butter, curd, cream, whey, etc.  |

DEALER



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