INSTRUCTIONS 1005-F00 e

Section	1005
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Translation of the original instructions

Transferring Fuel Oil via AP - AB - AG - AF TM electric pumps Determining the diameter of the piping

a DOVER company

Z.I. La Plaine des Isles - F 89000 AUXERRE - FRANCE
Tel. : +33 (0)3.86.49.86.30 - Fax : +33 (0)3.86.49.87.17
contact@mouvex.com - www.mouvex.com

Your distributor :

DETERMINING THE DIAMETER OF THE PIPING

The following procedure is to be carried out when determining the diameters required for the suction and discharge piping so that the installation to be implemented operates correctly, (a dotted line example illustrates the procedure).

1. Estimate the geodetic suction head and the geodetic head at outlet.

The geodetic head is equal to the difference of the level, in metres, between the pump flange and :

- The bottom of the fuel storage tank (geodetic suction head),
- The highest level reached by the discharged liquid (geodetic head at outlet).

2. Estimate the fictitious suction and discharge lengths.

The fictitious suction length is equal to the actual length of the suction piping, in metres, overestimated by the drops in pressure from the accessories (filter, valves, bends, etc.) positioned along this piping, expressed in metres of piping.

The fictitious discharge length is estimated in the same way.

3. Mark the values found on the Suction and Discharge graphs corresponding to the type of equipment selected and draw the perpendiculars (cf. dotted line example).

The intersection of the perpendiculars defines two points (DA and DR).

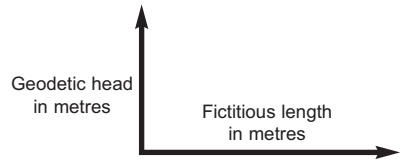
The zones containing said points DA and DR indicate the very minimum diameters required for the piping. (1)

SPECIAL CASE OF LOOP FEEDING

The burners need stable pressure to be guaranteed. It is, therefore, essential for the piping to be generously proportioned in order that any pressure drop variations in the piping in accordance with the flow rate have little influence on the overall pressure prevailing in the system. A MOUVEX pressure regulating valve is used to balance this total pressure.

The question of loop feeding does not change anything as regards estimating the diameter of the suction piping.

When determining the diameter required for the discharge piping, pinpoint the value of the fictitious length, estimated as above in § 2, and the zone containing the point indicates the minimum internal diameter required. (2)



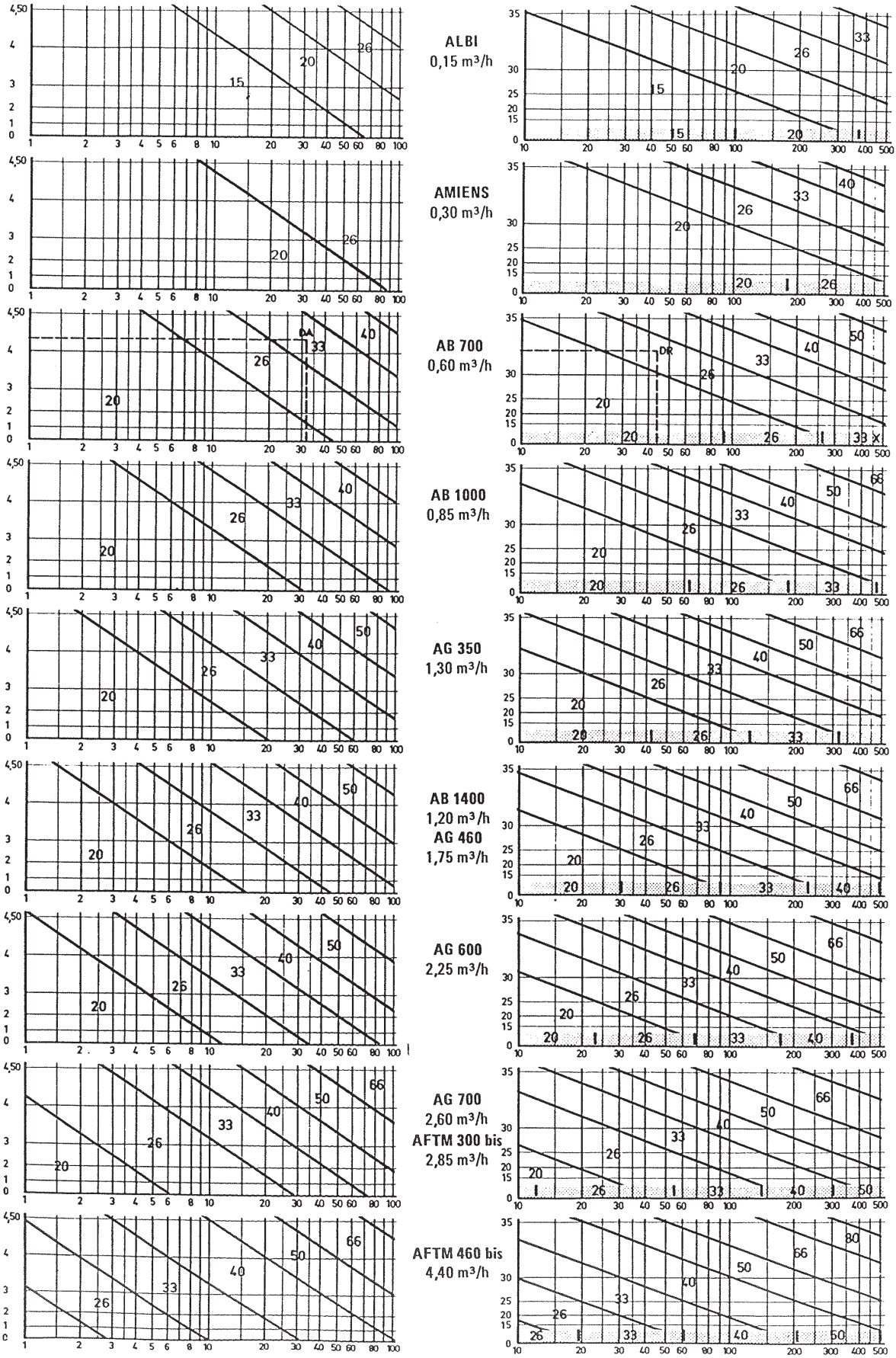
(1) The minimum diameter would be 33 mm for the suction piping and 26 mm for the discharge piping in the given example.

(2) This diameter would be 33 mm in the given example (marked with an x).

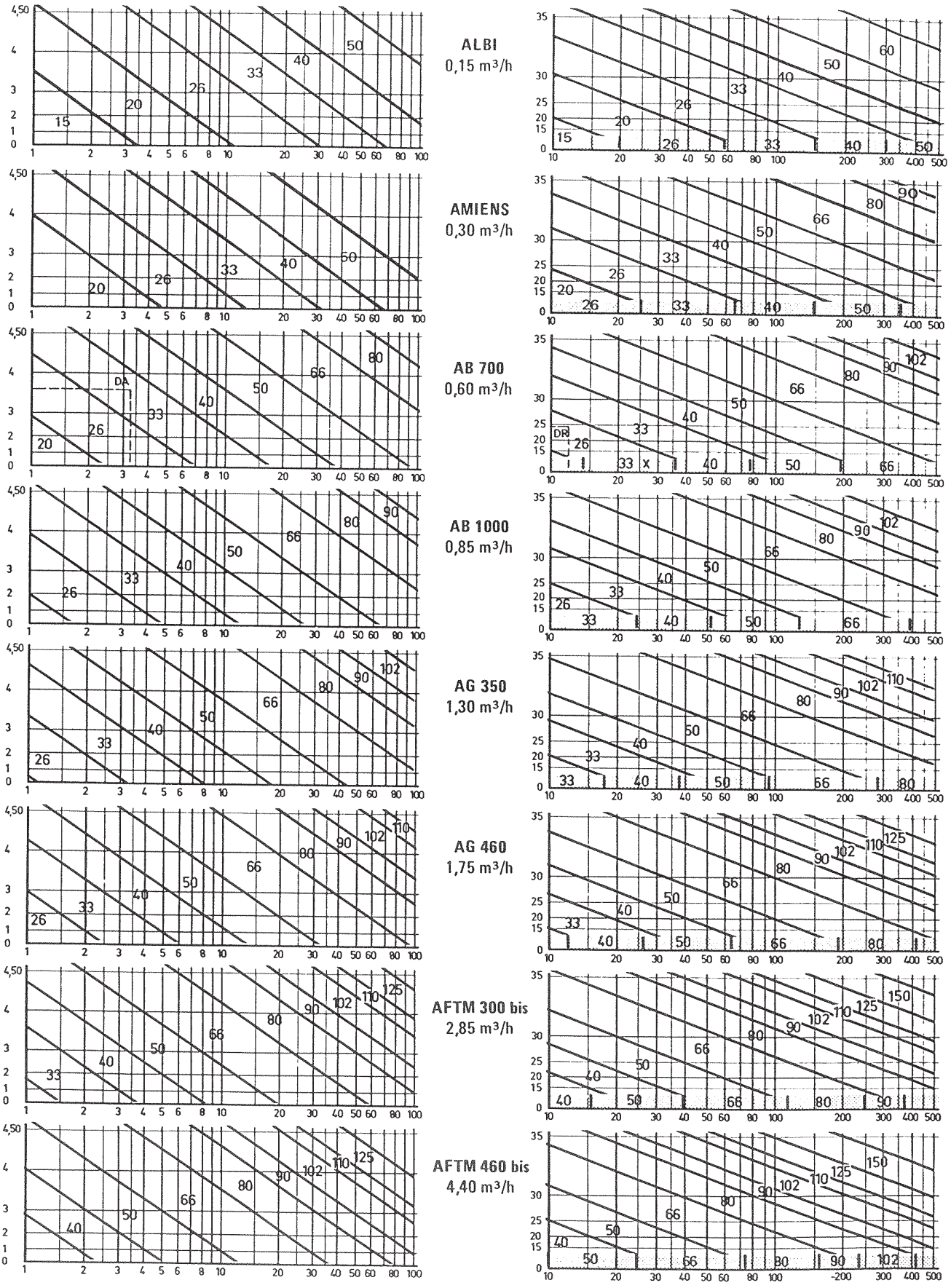
DOMESTIC FUEL

Temperature at least equal to 0°C

SUCTION **DISCHARGE**



HEAVY FUEL

Temperature at least equal to 50°C

SUCTION **DISCHARGE**