



AMCAL
INDUSTRIAL PUMP SOLUTIONS

KSB
DATA BOOKLET

Amarex

Effective Speed

Characteristic Curves Booklet



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Characteristic Curves Booklet Amarex

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Contents

Waste Water.....	4
Submersible Motor Pump	4
Amarex.....	4
Selection information	4
Overview of sizes.....	5
Selection charts	6
Characteristic curves.....	9

Waste Water

Submersible Motor Pump

Amarex



i In the case of waste water, too low a flow velocity in the discharge line will lead to clogging and increased wear. The flow velocity in the vertical riser must not fall below 2 m/s.

i In the case of waste water, too low a circumferential speed of the impeller will lead to clogging of the hydraulic system (operation on a frequency inverter). A minimum circumferential speed (measured at the impeller diameter) of 12 m/s must be observed.²⁾

Selection information

- The indicated heads and performance data apply to material variant G, for fluids with a density $\rho = 1 \text{ kg/dm}^3$ and a kinematic viscosity $\nu \leq 20 \text{ mm}^2/\text{s}$.

Impeller type

- D-max impellers and F-max impellers can only be supplied with the documented impeller diameters. Indicate the pump set designation and the impeller diameter in the purchase order.

Efficiency class

- IEC 60034-30 standard not binding for submersible motor pumps. Efficiencies are derived in analogy to the measurement method described in IEC 60034-2. The marking is used for submersible motors that achieve efficiency levels similar to those of standardised motors acc. to the IEC 60034-30 standard.

Pump input power

- Adjust the power input to the density of the fluid handled:
 $P_2 (\text{required}) = \rho [\text{kg/dm}^3] (\text{fluid handled}) \times P_2 (\text{documented})$
- Select the operating point with the largest power input within an operating range. Select a motor size providing a power reserve to compensate the tolerances in the system characteristic / pump characteristic.

Table 1: Recommended motor power reserve¹⁾

P ₂ [kW]	Reserve	
	Mains operation	With frequency inverter
≤ 30	10 %	15 %
> 30	5 %	10 %

¹ If larger power reserves are stipulated by local regulations, these larger reserves must be provided.

² For F impellers, a circumferential speed below 12 m/s is permissible.

Overview of sizes

Table 2: Overview of sizes, D-max impeller

Size	Speed [rpm]			
	2900 rpm		1450 rpm	
	Without IE	IE3	Without IE	IE3
80-140	(⇒ Page 10)	(⇒ Page 12)	-	-
80-170	(⇒ Page 13)	(⇒ Page 15)	-	-
80-180	-	-	(⇒ Page 17)	(⇒ Page 19)
80-230	-	-	(⇒ Page 21)	(⇒ Page 23)
100-140	(⇒ Page 25)	(⇒ Page 27)	-	-
100-170	(⇒ Page 28)	(⇒ Page 30)	-	-
100-180	-	-	(⇒ Page 32)	(⇒ Page 34)
100-230	-	-	(⇒ Page 36)	(⇒ Page 38)
150-230	-	-	(⇒ Page 40)	(⇒ Page 42)

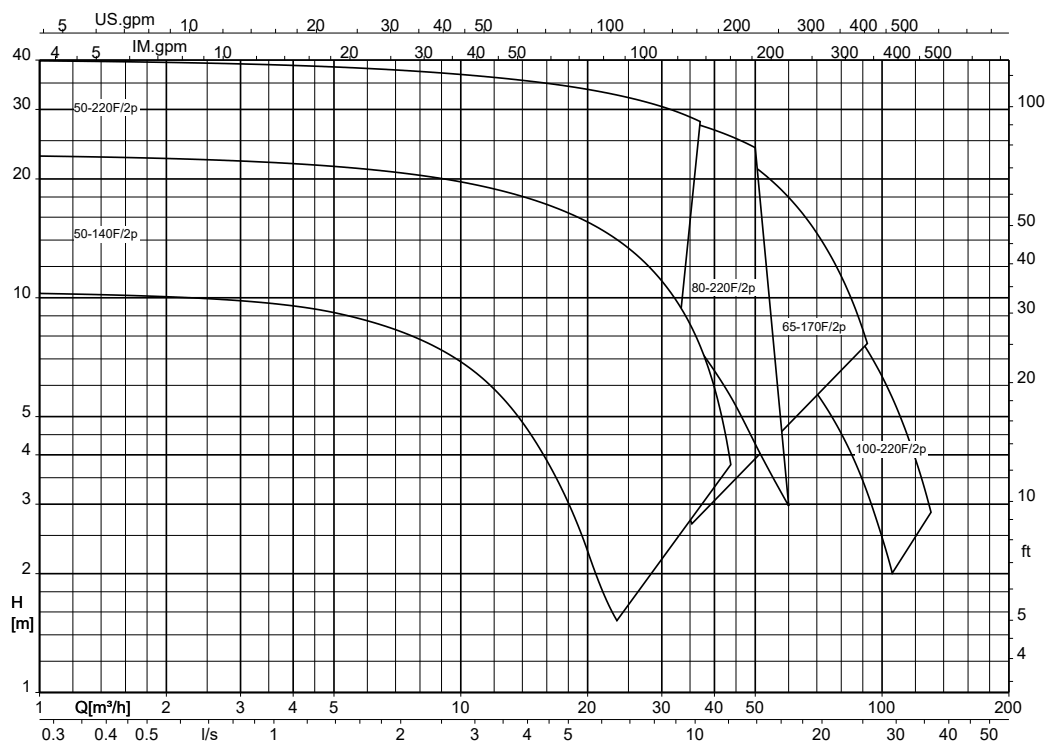
Table 3: Overview of sizes, F-max impeller

Size	Speed [rpm]			
	2900 rpm		1450 rpm	
	Without IE	IE3	Without IE	IE3
50-140	(⇒ Page 44)	(⇒ Page 46)	-	-
50-220	(⇒ Page 48)	(⇒ Page 50)	-	-
65-150	-	-	(⇒ Page 52)	(⇒ Page 54)
65-170	(⇒ Page 56)	(⇒ Page 58)	-	-
65-230	-	-	(⇒ Page 60)	(⇒ Page 62)
80-150	-	-	(⇒ Page 64)	(⇒ Page 66)
80-180	-	-	(⇒ Page 68)	(⇒ Page 70)
80-220	(⇒ Page 72)	(⇒ Page 74)	-	-
80-230	-	-	(⇒ Page 76)	(⇒ Page 78)
100-180	-	-	(⇒ Page 80)	(⇒ Page 82)
100-220	(⇒ Page 84)	(⇒ Page 86)	-	-
100-230	-	-	(⇒ Page 87)	(⇒ Page 89)
150-180	-	-	(⇒ Page 91)	(⇒ Page 93)
150-230	-	-	(⇒ Page 95)	(⇒ Page 97)

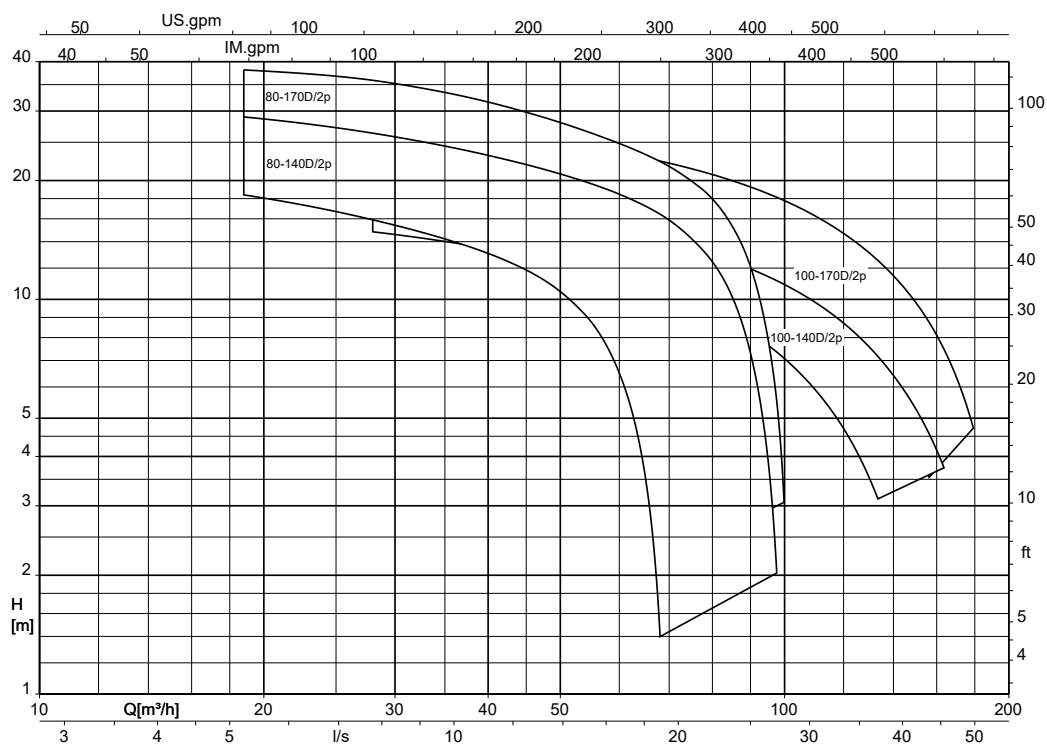
Selection charts

$n = 2900 \text{ rpm}$

Amarex, F-max, $n = 2900 \text{ rpm}$

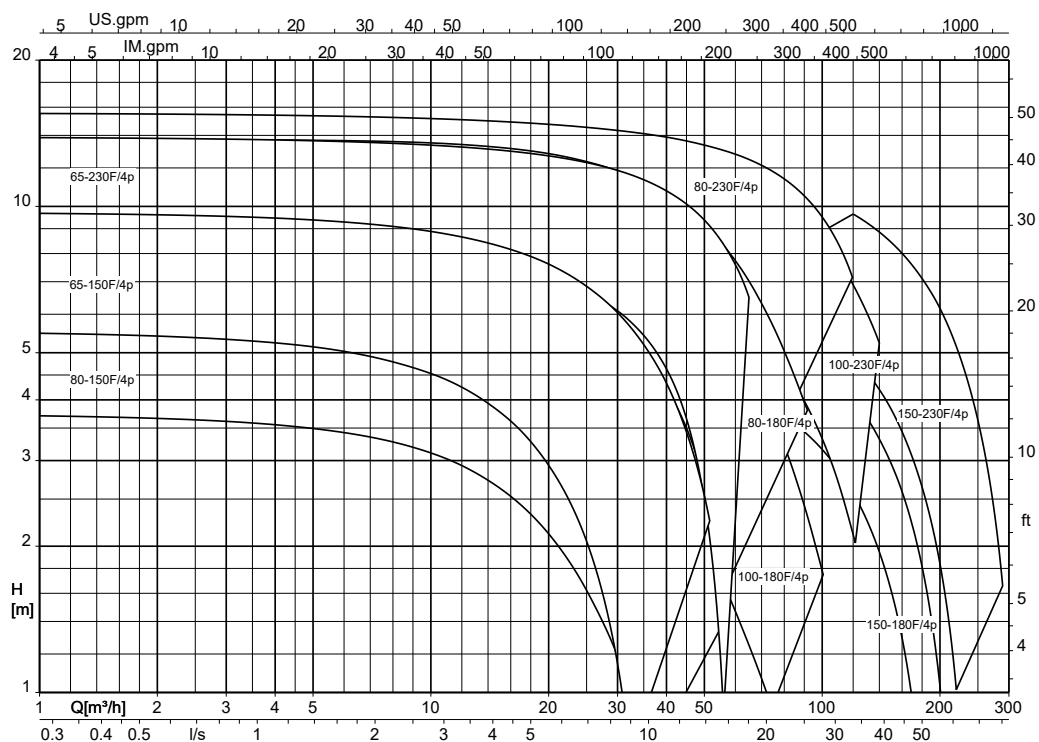


Amarex, D-max, $n = 2900 \text{ rpm}$

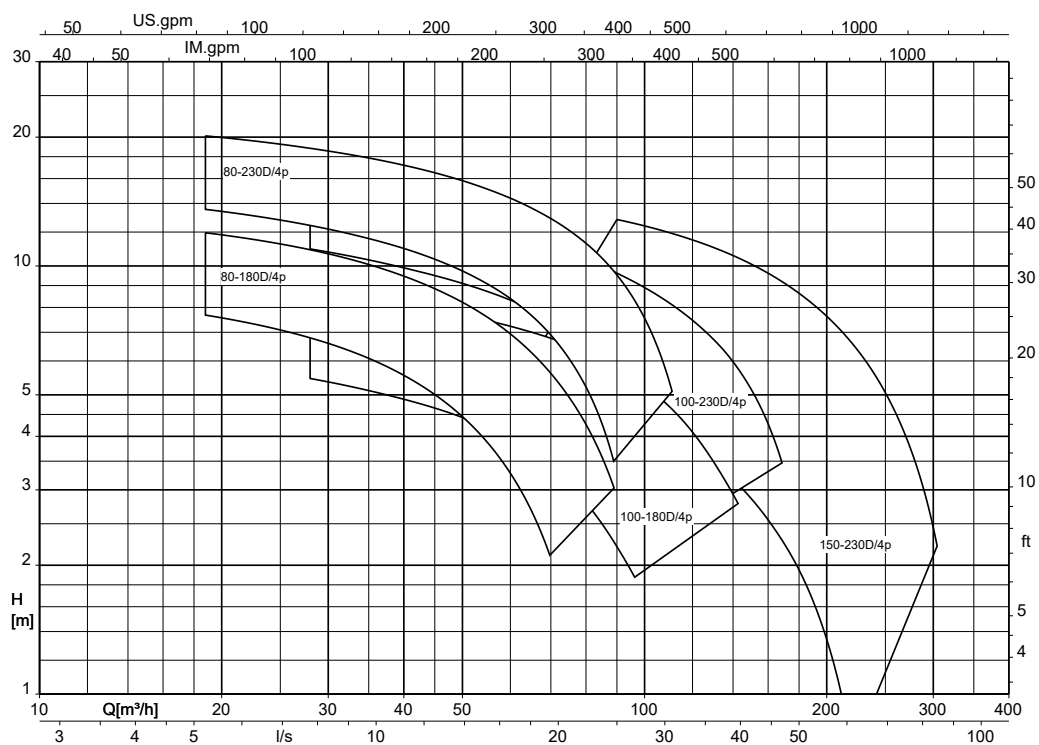


$n = 1450 \text{ rpm}$

Amarex, F-max, $n = 1450 \text{ rpm}$



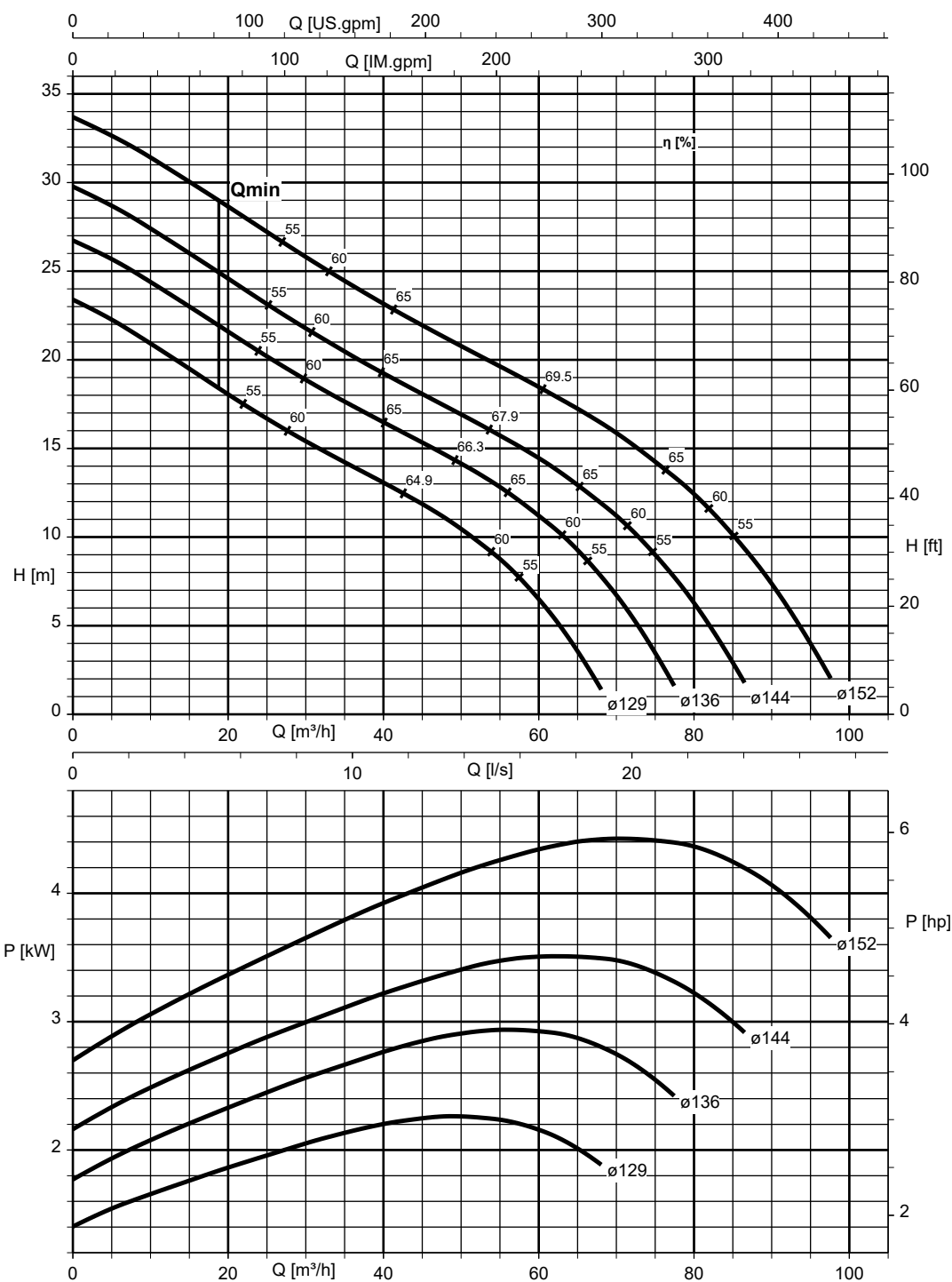
Amarex, D-max, $n = 1450 \text{ rpm}$



Characteristic curves

D-max impeller

Amarex D-max 080-140, n = 2900 rpm (effective speed), without IE



K2573-52_080140D_Eff_IE0/1

Table 4: Motor assignment³⁾

Size ⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-140/024F2	129	M	2,40	2,95	4,89	DOL
D080-140/040F2	129	M	4,00	4,86	8,17	DOL
D080-140/040F2	136	M	4,00	4,86	8,17	DOL
D080-140/049F2	136	L	4,90	5,83	9,85	DOL
D080-140/040F2	144	M	4,00	4,86	8,17	DOL
D080-140/049F2	144	L	4,90	5,83	9,85	DOL
D080-140/049F2	152	L	4,90	5,83	9,85	DOL

³⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁴⁾ C: motors to IE3, F: without

Amarex D-max 080-140, n = 2900 rpm (effective speed), IE3

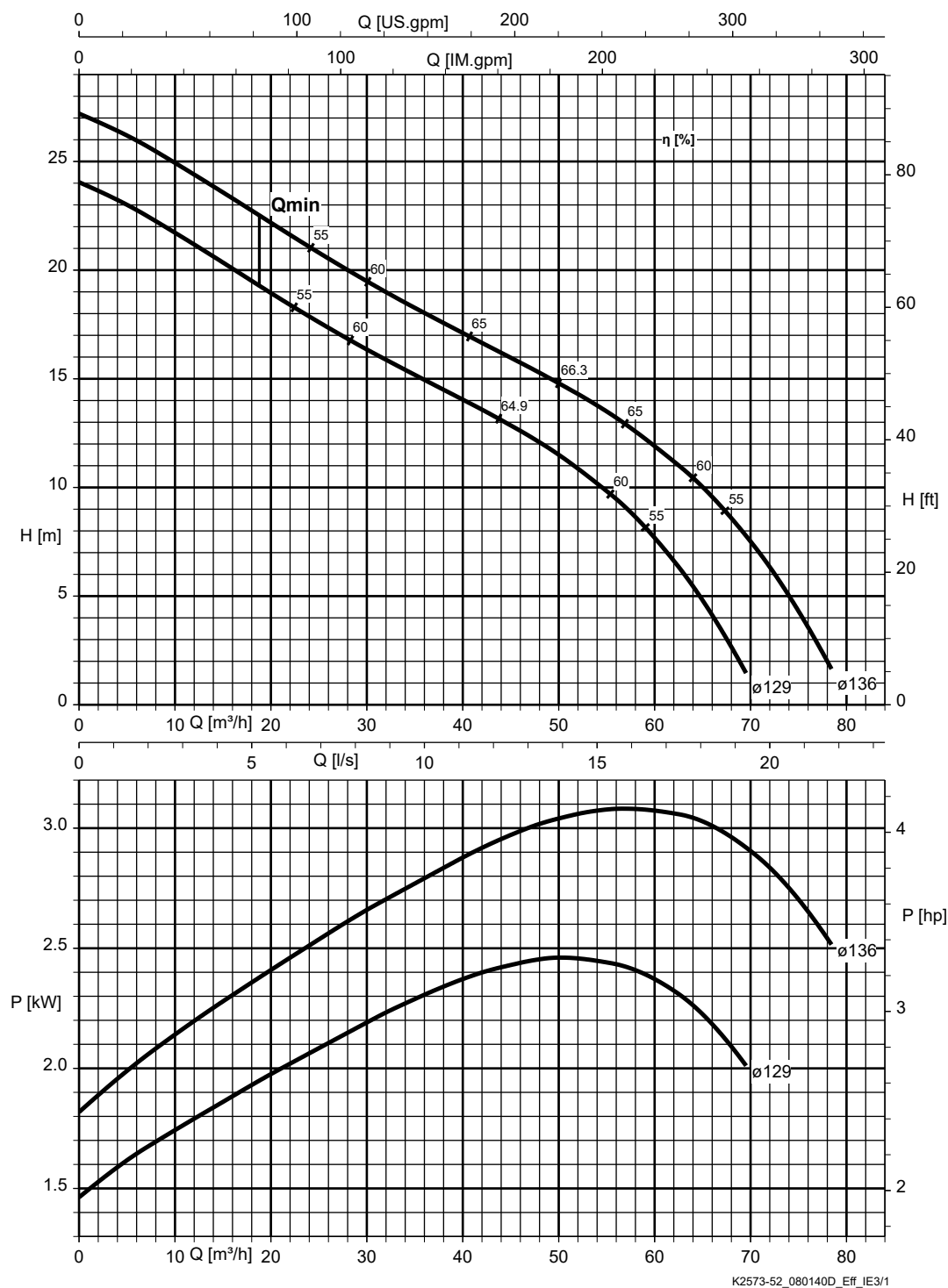


Table 5: Motor assignment⁵⁾

Size ⁶⁾	Impeller diameter [mm]	Motor size	P ₂	P ₁	I _N	Starting method
			[kW]	[kW]	[A]	
D080-140/029C2	129	M	2,97	3,41	6,29	DOL
D080-140/035C2	129	L	3,57	4,06	7,46	DOL
D080-140/035C2	136	L	3,57	4,06	7,46	DOL

⁵⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁶⁾ C: motors to IE3, F: without

Amarex D-max 080-170, n = 2900 rpm (effective speed), without IE

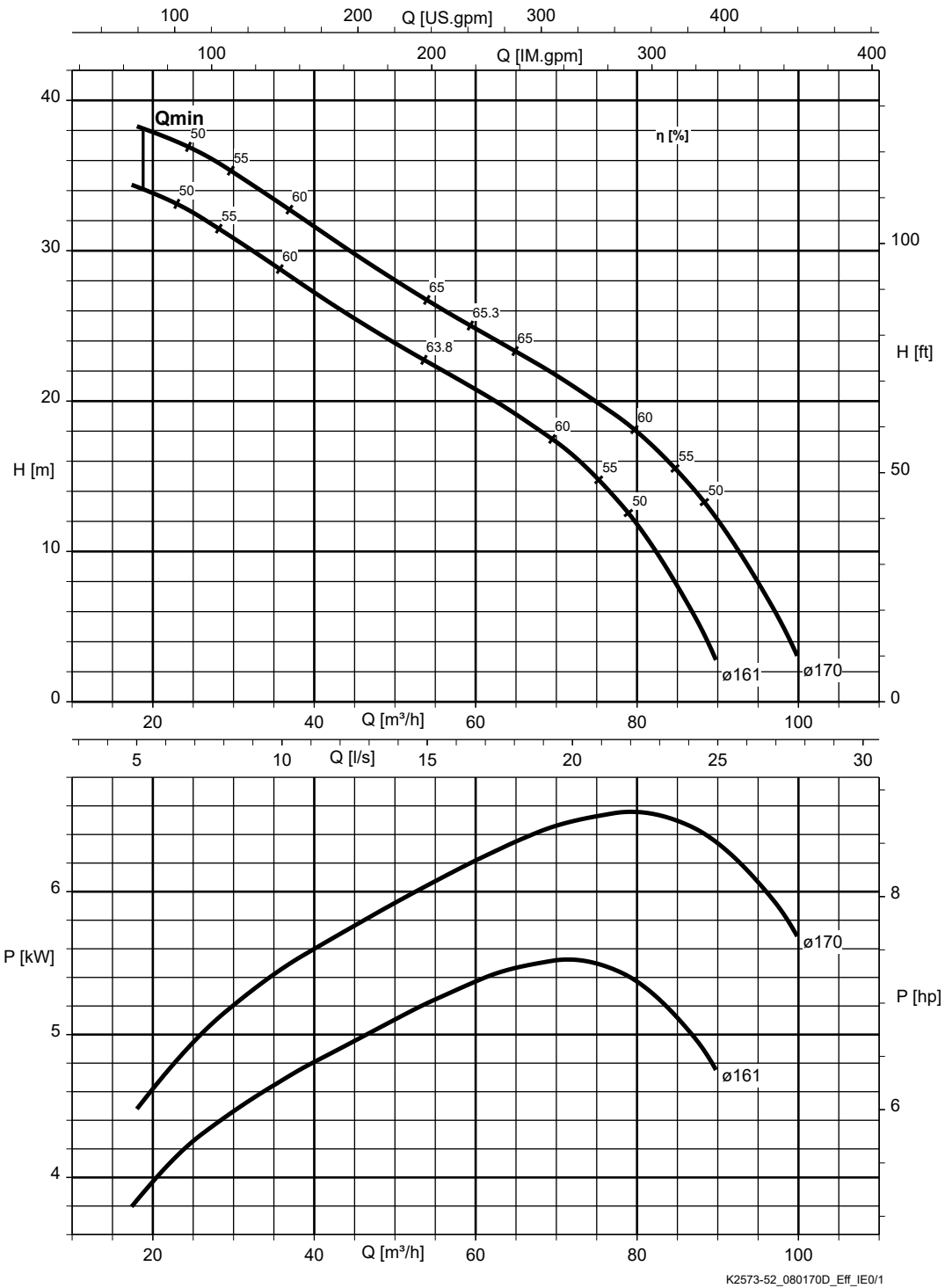


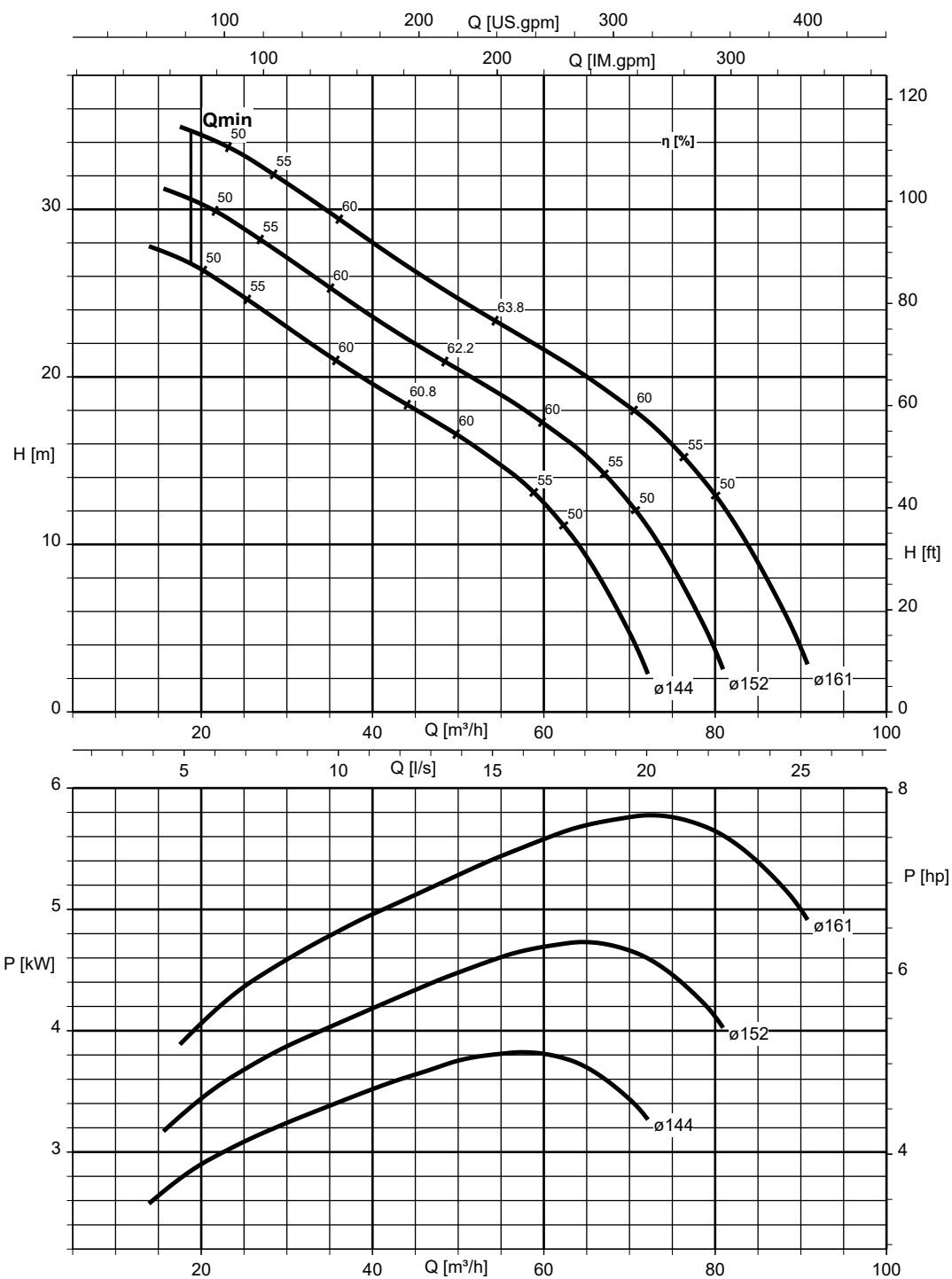
Table 6: Motor assignment⁷⁾

Size ⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-170/073F2	161	L	7,30	8,72	14,70	DOL / star-delta
D080-170/084F2	161	X	8,40	9,85	16,80	DOL / star-delta
D080-170/073F2	170	L	7,30	8,72	14,70	DOL / star-delta
D080-170/084F2	170	X	8,40	9,85	16,80	DOL / star-delta

⁷⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁸⁾ C: motors to IE3, F: without

Amarex D-max 080-170, n = 2900 rpm (effective speed), IE3



K2573-52_080170D_Eff_IE3/1

Table 7: Motor assignment⁹⁾

Size ¹⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-170/045C2	144	L	4,54	5,13	10,10	DOL / star-delta
D080-170/060C2	144	X	6,00	6,71	12,70	DOL / star-delta
D080-170/060C2	152	X	6,00	6,71	12,70	DOL / star-delta
D080-170/060C2	161	X	6,00	6,71	12,70	DOL / star-delta

⁹ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

¹⁰ C: motors to IE3, F: without

Amarex D-max 080-180, n = 1450 rpm (effective speed), without IE

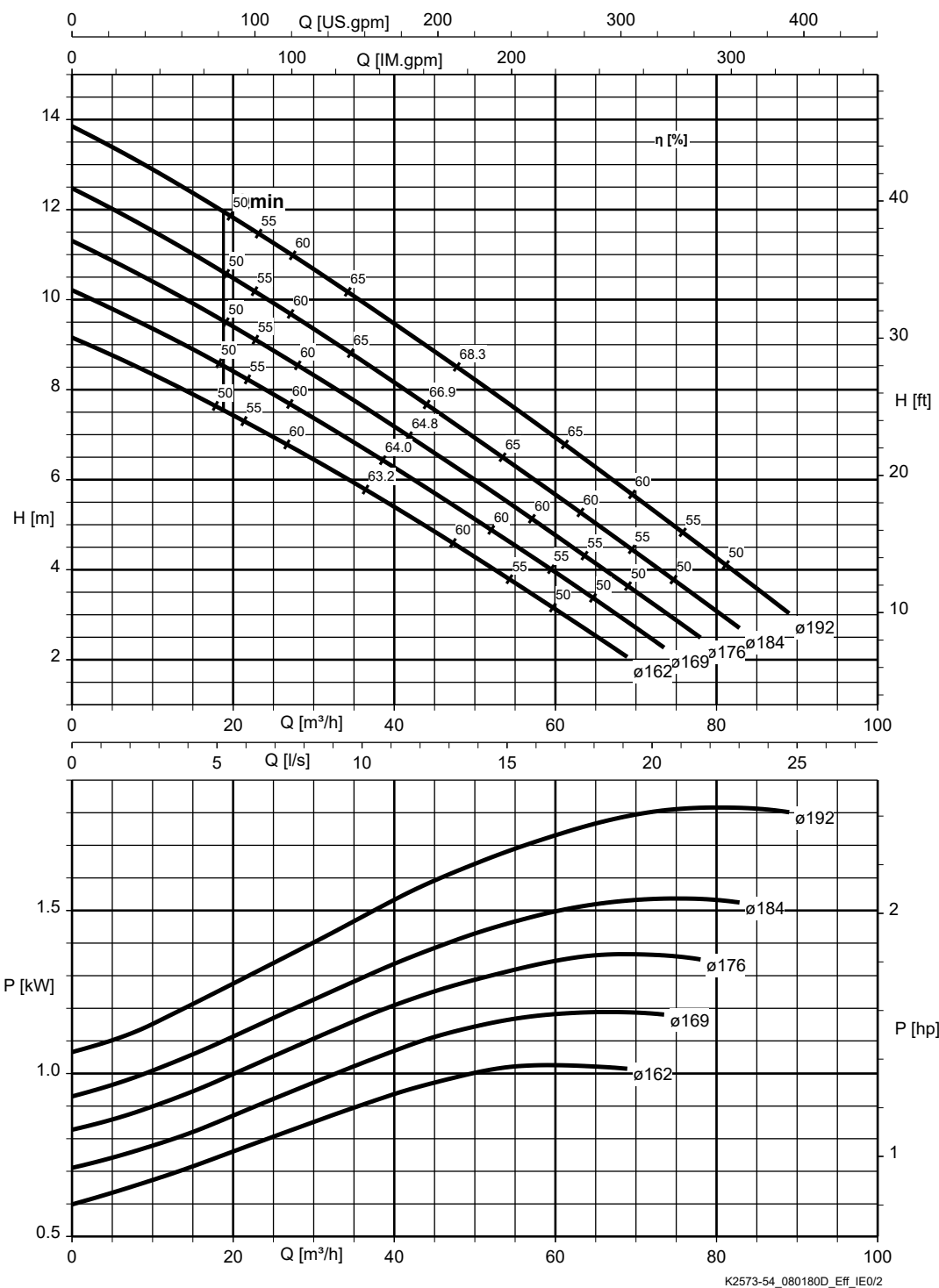


Table 8: Motor assignment¹¹⁾

Size ¹²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-180/017F4	162	M	1,67	2,13	3,71	DOL
D080-180/023F4	162	M	2,30	2,98	5,15	DOL
D080-180/017F4	169	M	1,67	2,13	3,71	DOL

¹¹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

¹²⁾ C: motors to IE3, F: without

Size ¹²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-180/023F4	169	M	2,30	2,98	5,15	DOL
D080-180/017F4	176	M	1,67	2,13	3,71	DOL
D080-180/023F4	176	M	2,30	2,98	5,15	DOL
D080-180/017F4	184	M	1,67	2,13	3,71	DOL
D080-180/023F4	184	M	2,30	2,98	5,15	DOL
D080-180/017F4	192	M	1,67	2,13	3,71	DOL
D080-180/023F4	192	M	2,30	2,98	5,15	DOL

Amarex D-max 080-180, n = 1450 rpm (effective speed), IE3

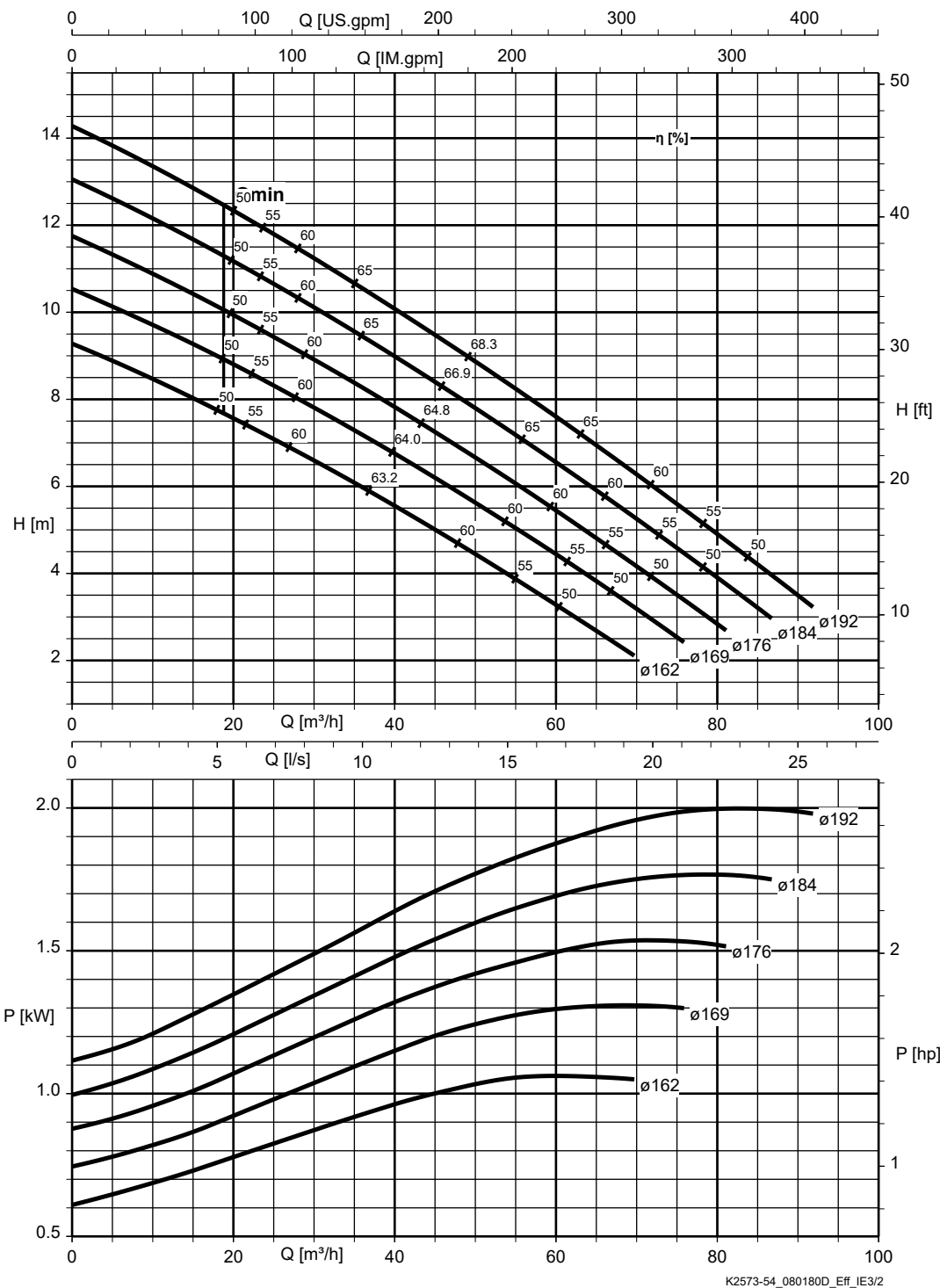


Table 9: Motor assignment¹³⁾

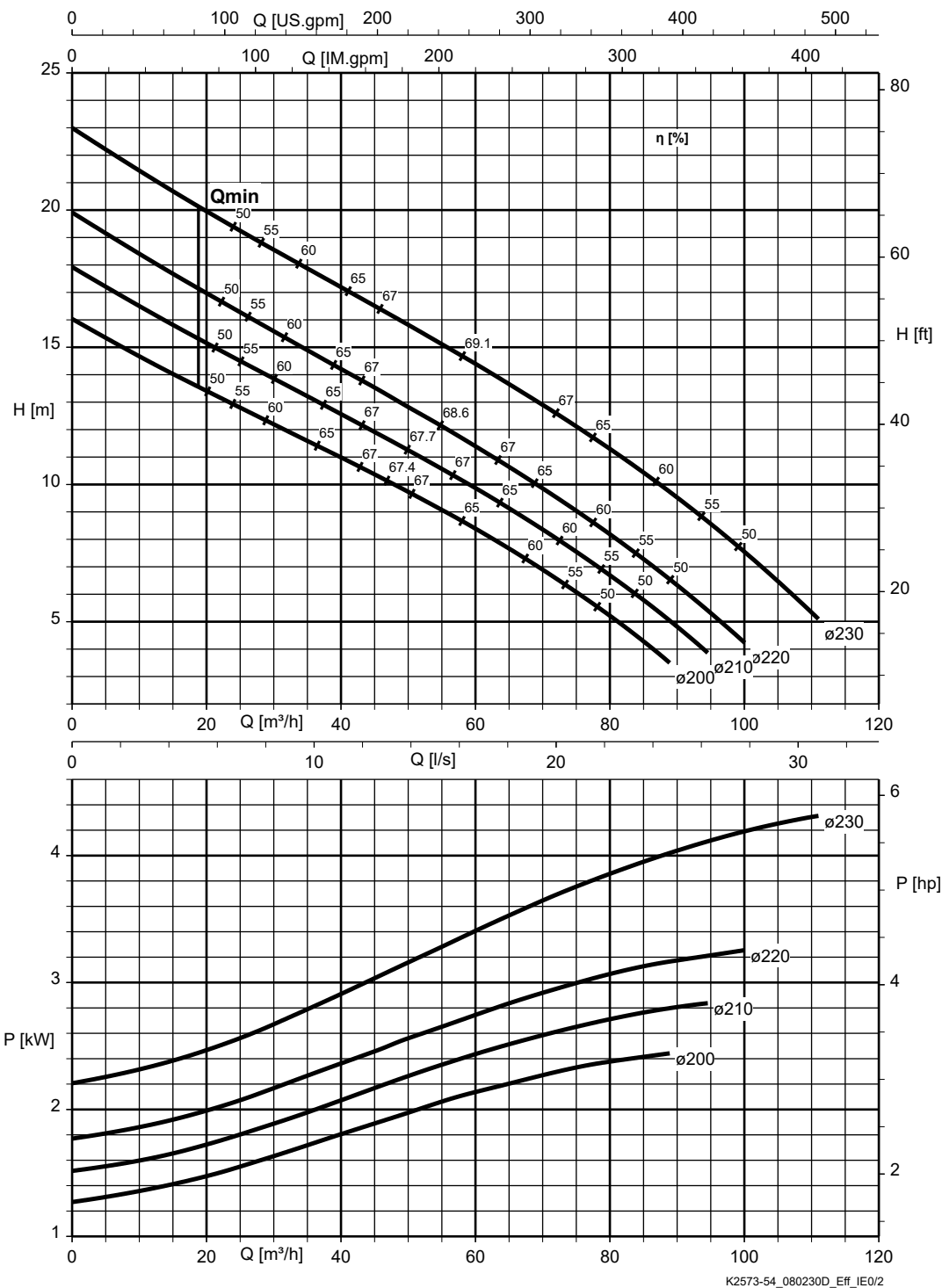
Size ¹⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-180/012C4	162	M	1,24	1,46	3,36	DOL
D080-180/021C4	162	L	2,10	2,47	5,14	DOL
D080-180/012C4	169	M	1,24	1,46	3,36	DOL

¹³⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

¹⁴⁾ C: motors to IE3, F: without

Size ¹⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-180/021C4	169	L	2,10	2,47	5,14	DOL
D080-180/021C4	176	L	2,10	2,47	5,14	DOL
D080-180/021C4	184	L	2,10	2,47	5,14	DOL
D080-180/021C4	192	L	2,10	2,47	5,14	DOL

Amarex D-max 080-230, n = 1450 rpm (effective speed), without IE



K2573-54_080230D_Eff_IE0/2

Table 10: Motor assignment¹⁵⁾

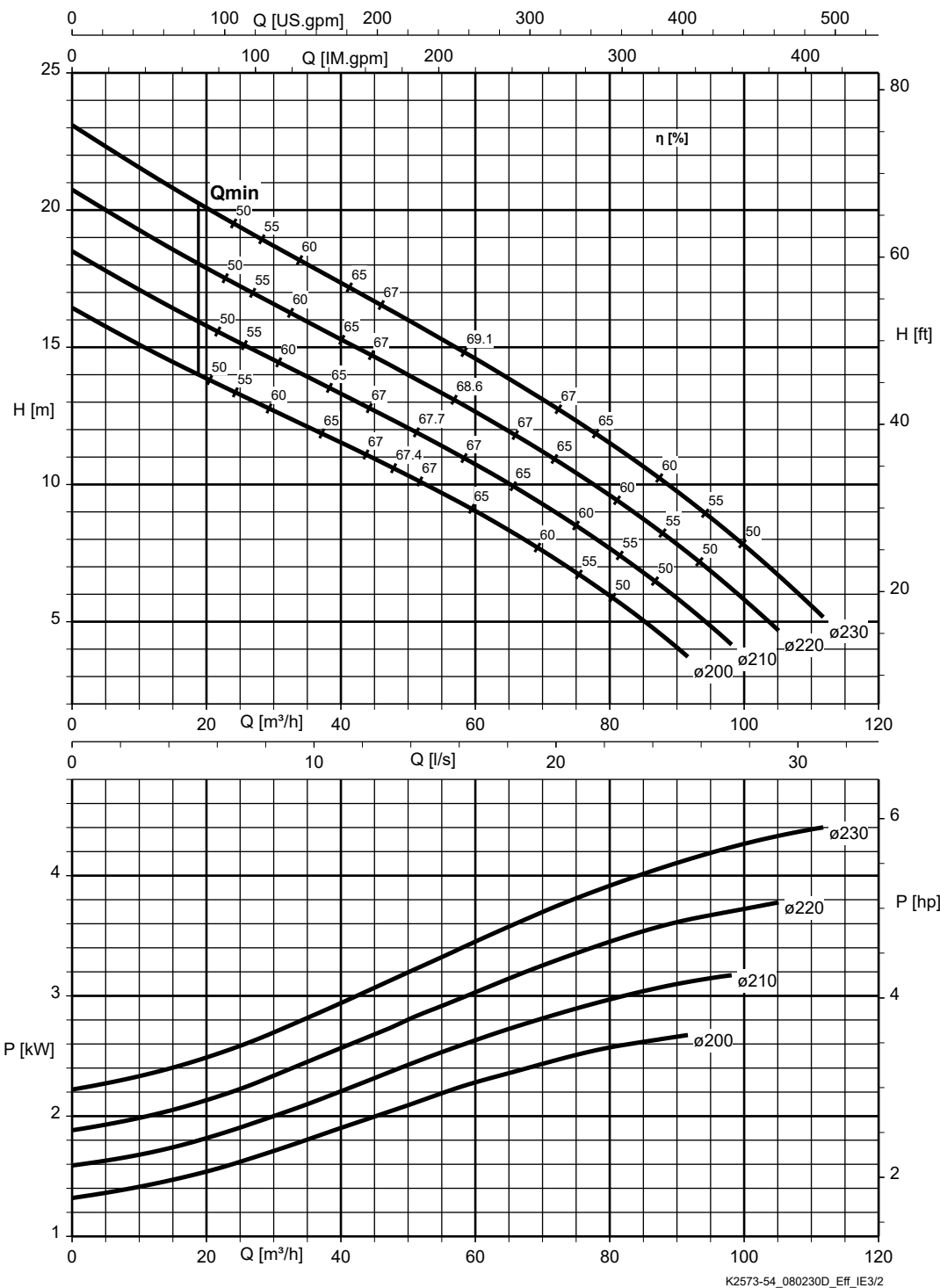
Size ¹⁶⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-230/035F4	200	L	3,55	4,41	7,56	DOL
D080-230/039F4	200	L	3,90	5,01	9,91	DOL
D080-230/035F4	210	L	3,55	4,41	7,56	DOL

¹⁵ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

¹⁶ C: motors to IE3, F: without

Size ¹⁶⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-230/039F4	210	L	3,90	5,01	9,91	DOL
D080-230/035F4	220	L	3,55	4,41	7,56	DOL
D080-230/039F4	220	L	3,90	5,01	9,91	DOL
D080-230/039F4	230	L	3,90	5,01	9,91	DOL
D080-230/065F4	230	X	6,50	7,89	13,40	DOL / star-delta

Amarex D-max 080-230, n = 1450 rpm (effective speed), IE3



K2573-54_080230D_Eff_IE3/2

Table 11: Motor assignment¹⁷⁾

Size ¹⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-230/036C4	200	X	3,59	4,06	8,40	DOL / star-delta
D080-230/045C4	200	X	4,48	5,04	10,70	DOL / star-delta
D080-230/036C4	210	X	3,59	4,06	8,40	DOL / star-delta

¹⁷⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

¹⁸⁾ C: motors to IE3, F: without

Size ¹⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D080-230/045C4	210	X	4,48	5,04	10,70	DOL / star-delta
D080-230/045C4	220	X	4,48	5,04	10,70	DOL / star-delta
D080-230/045C4	230	X	4,48	5,04	10,70	DOL / star-delta

Amarex D-max 100-140, n = 2900 rpm (effective speed), without IE

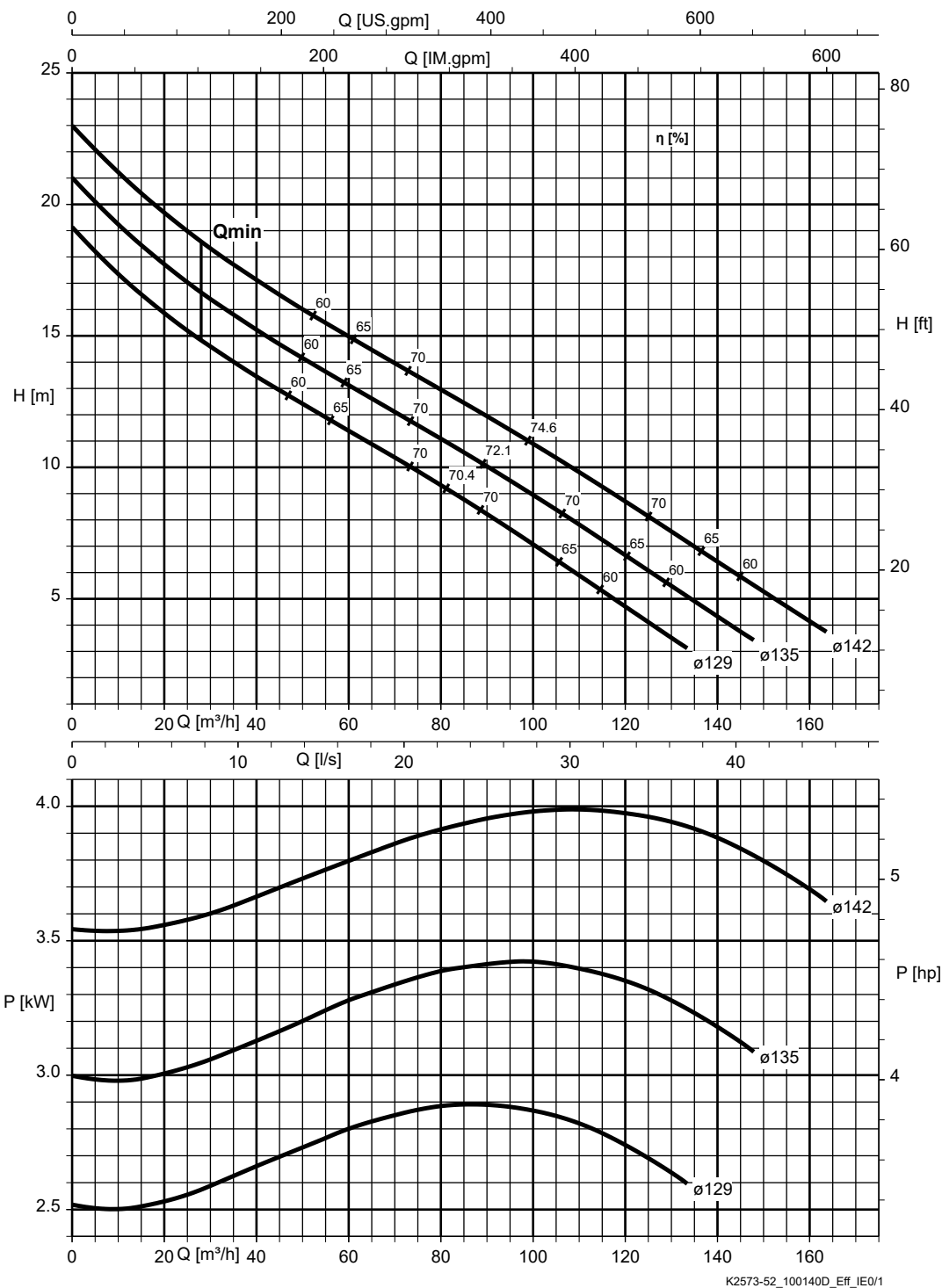


Table 12: Motor assignment¹⁹⁾

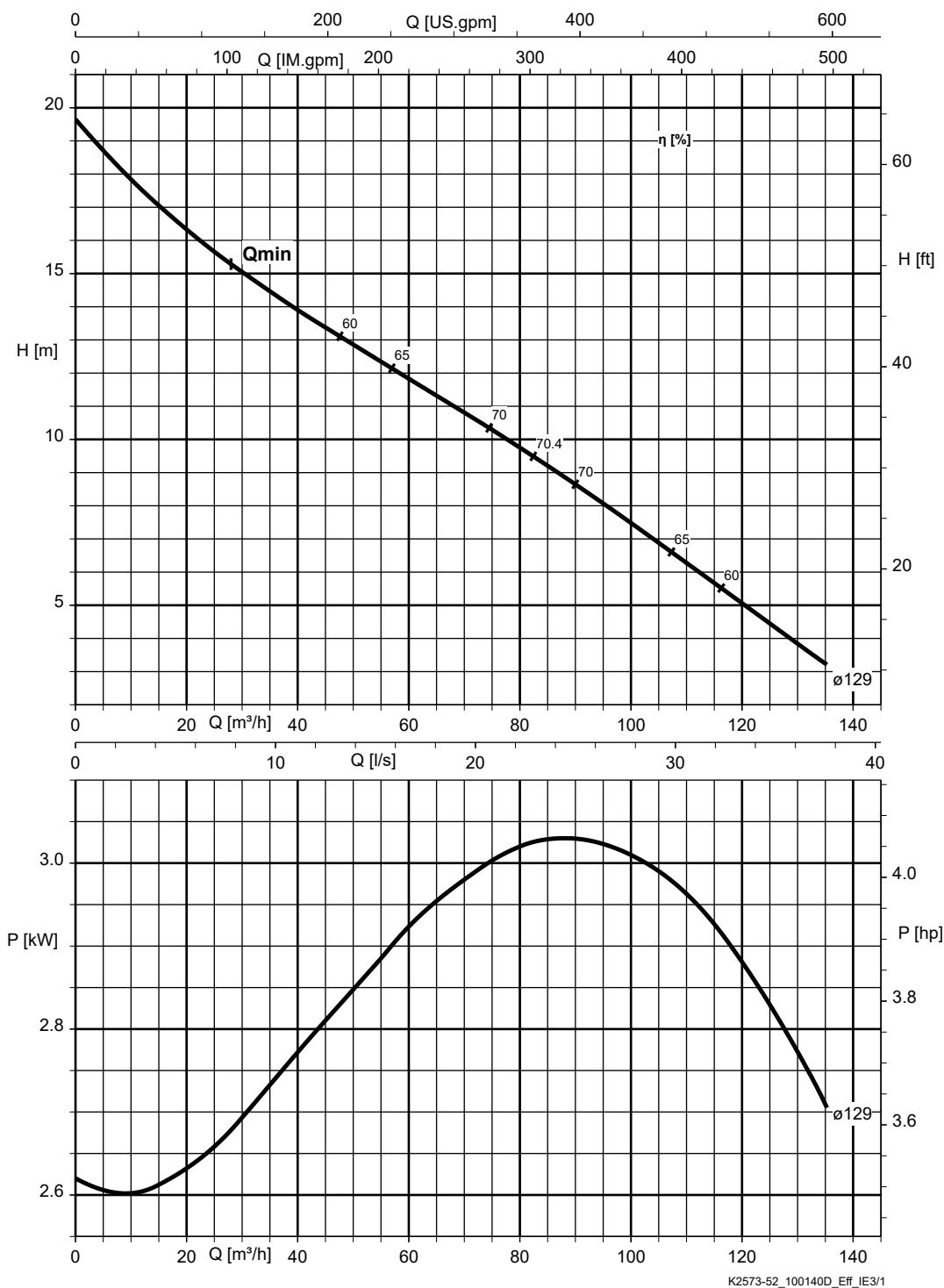
Size ²⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-140/040F2	129	M	4,00	4,86	8,17	DOL
D100-140/049F2	129	L	4,90	5,83	9,85	DOL
D100-140/040F2	135	M	4,00	4,86	8,17	DOL

¹⁹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

²⁰⁾ C: motors to IE3, F: without

Size ²⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-140/049F2	135	L	4,90	5,83	9,85	DOL
D100-140/040F2	142	M	4,00	4,86	8,17	DOL
D100-140/049F2	142	L	4,90	5,83	9,85	DOL

Amarex D-max 100-140, n = 2900 rpm (effective speed), IE3



K2573-52_100140D_Eff_IE3/1

Table 13: Motor assignment²¹⁾

Size ²²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-140/035C2	129	L	3,57	4,06	7,46	DOL

²¹ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

²² C: motors to IE3, F: without

Amarex D-max 100-170, n = 2900 rpm (effective speed), without IE

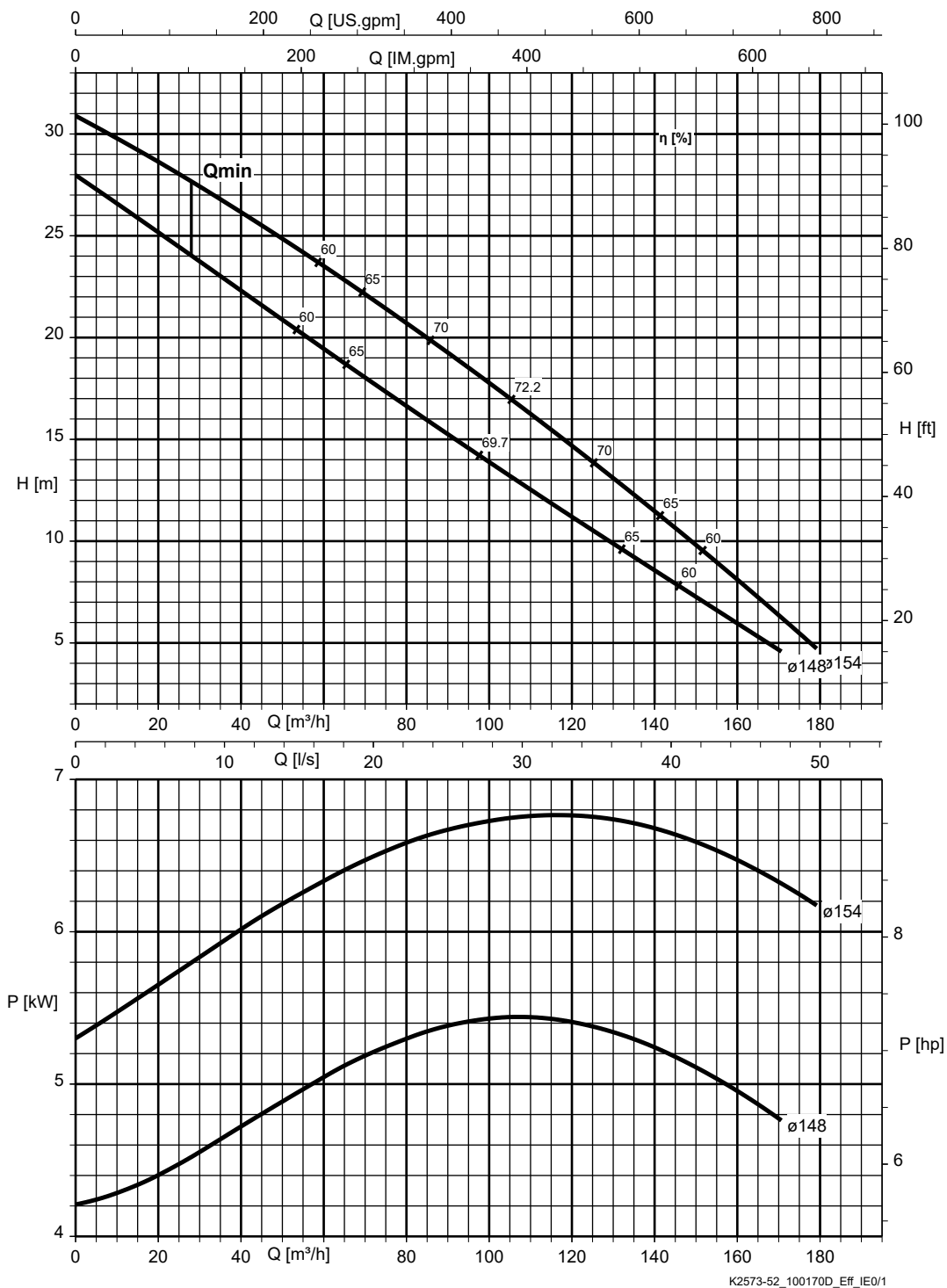


Table 14: Motor assignment²³⁾

Size ²⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-170/073F2	148	L	7,30	8,72	14,70	DOL / star-delta
D100-170/084F2	148	X	8,40	9,85	16,80	DOL / star-delta
D100-170/073F2	154	L	7,30	8,72	14,70	DOL / star-delta
D100-170/084F2	154	X	8,40	9,85	16,80	DOL / star-delta

²³⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

²⁴⁾ C: motors to IE3, F: without

Amarex D-max 100-170, n = 2900 rpm (effective speed), IE3

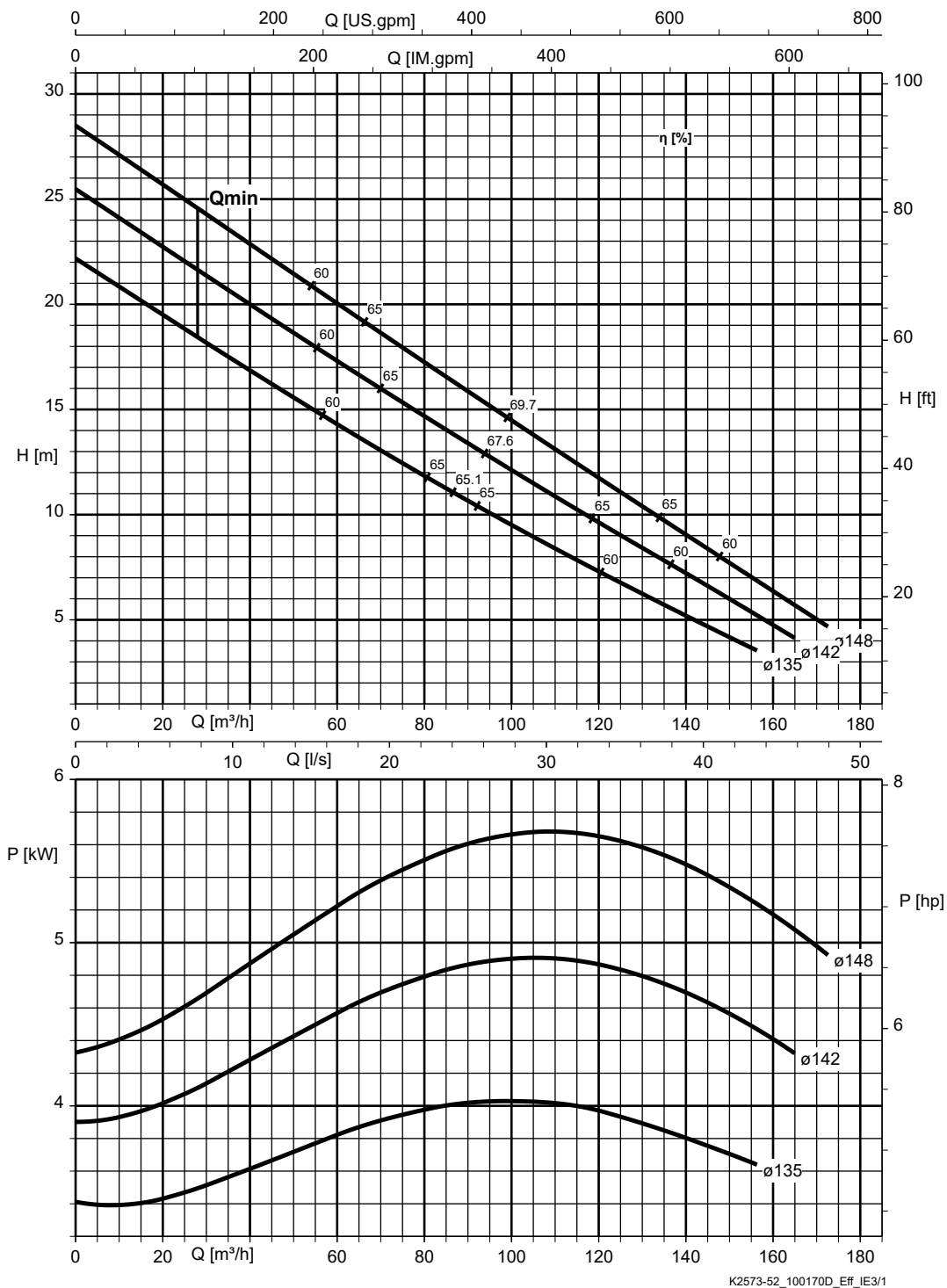


Table 15: Motor assignment²⁵⁾

Size ²⁶⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-170/045C2	135	L	4,54	5,13	10,10	DOL / star-delta
D100-170/060C2	135	X	6,00	6,71	12,70	DOL / star-delta
D100-170/060C2	142	X	6,00	6,71	12,70	DOL / star-delta
D100-170/060C2	148	X	6,00	6,71	12,70	DOL / star-delta

²⁵⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

²⁶⁾ C: motors to IE3, F: without

Amarex D-max 100-180, n = 1450 rpm (effective speed), without IE

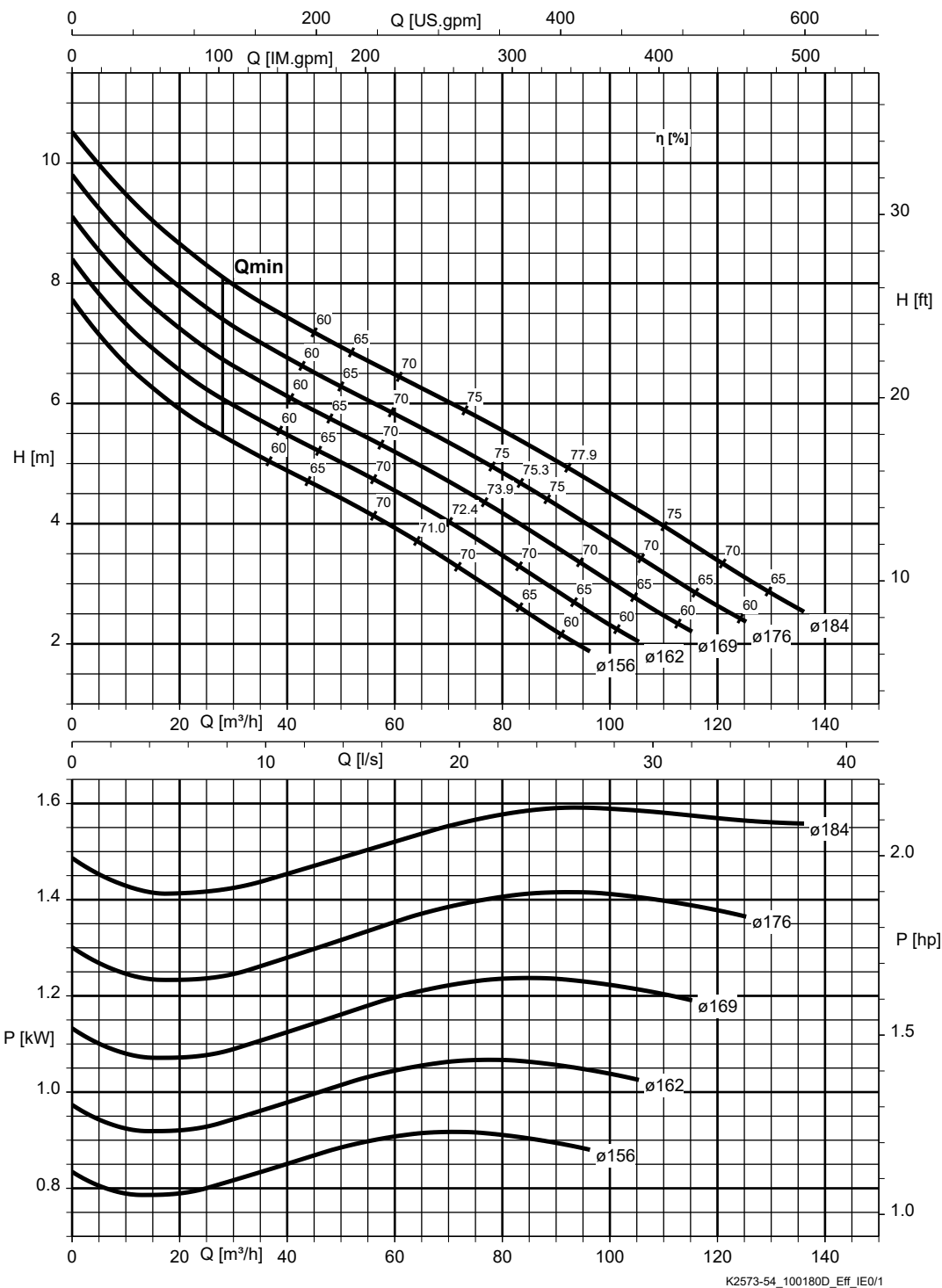


Table 16: Motor assignment²⁷⁾

Size ²⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-180/017F4	156	M	1,67	2,13	3,71	DOL
D100-180/023F4	156	M	2,30	2,98	5,15	DOL
D100-180/017F4	162	M	1,67	2,13	3,71	DOL

²⁷⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

²⁸⁾ C: motors to IE3, F: without

Size ²⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-180/023F4	162	M	2,30	2,98	5,15	DOL
D100-180/017F4	169	M	1,67	2,13	3,71	DOL
D100-180/023F4	169	M	2,30	2,98	5,15	DOL
D100-180/017F4	176	M	1,67	2,13	3,71	DOL
D100-180/023F4	176	M	2,30	2,98	5,15	DOL
D100-180/017F4	184	M	1,67	2,13	3,71	DOL
D100-180/023F4	184	M	2,30	2,98	5,15	DOL

Amarex D-max 100-180, n = 1450 rpm (effective speed), IE3

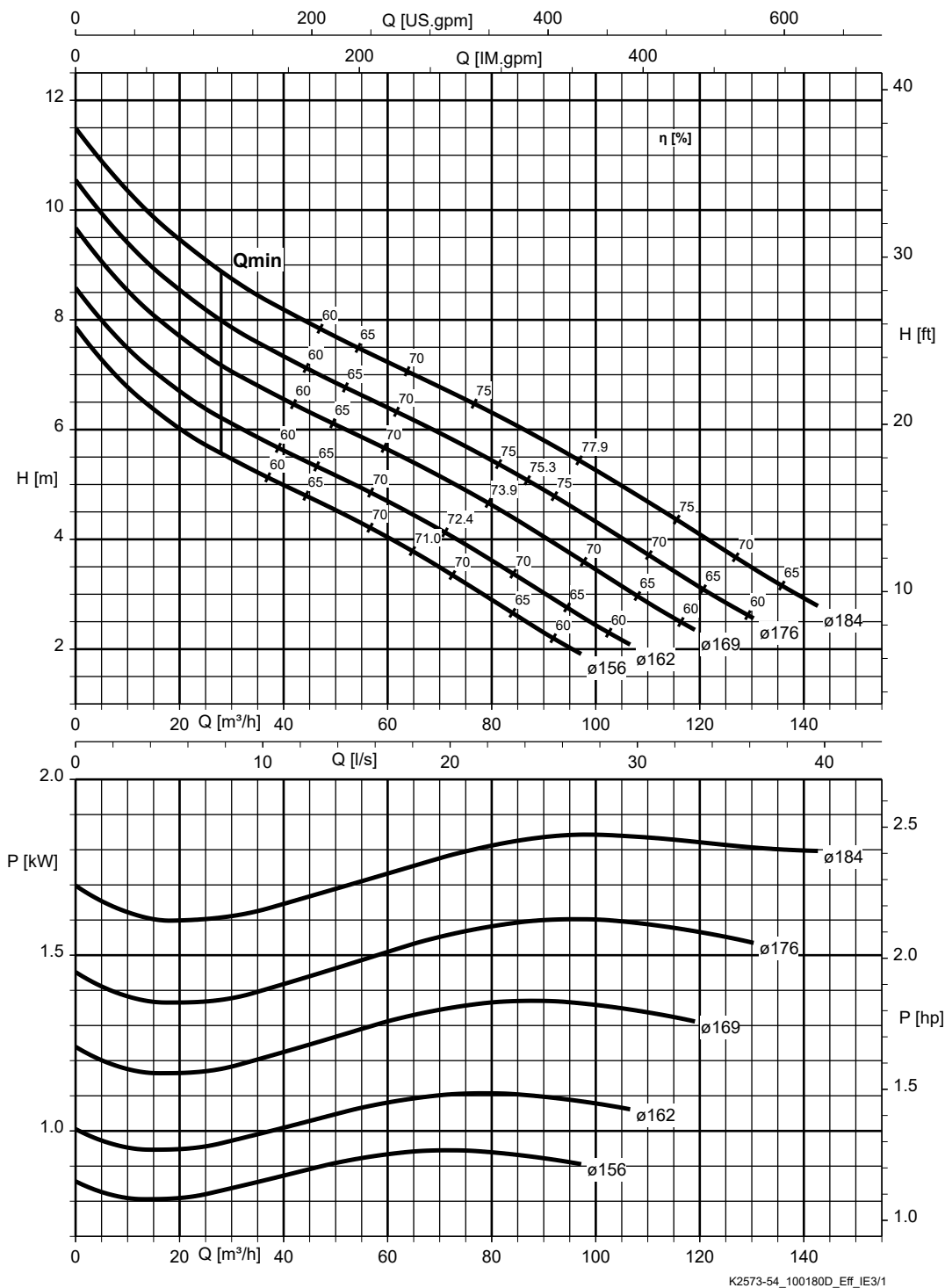


Table 17: Motor assignment²⁹⁾

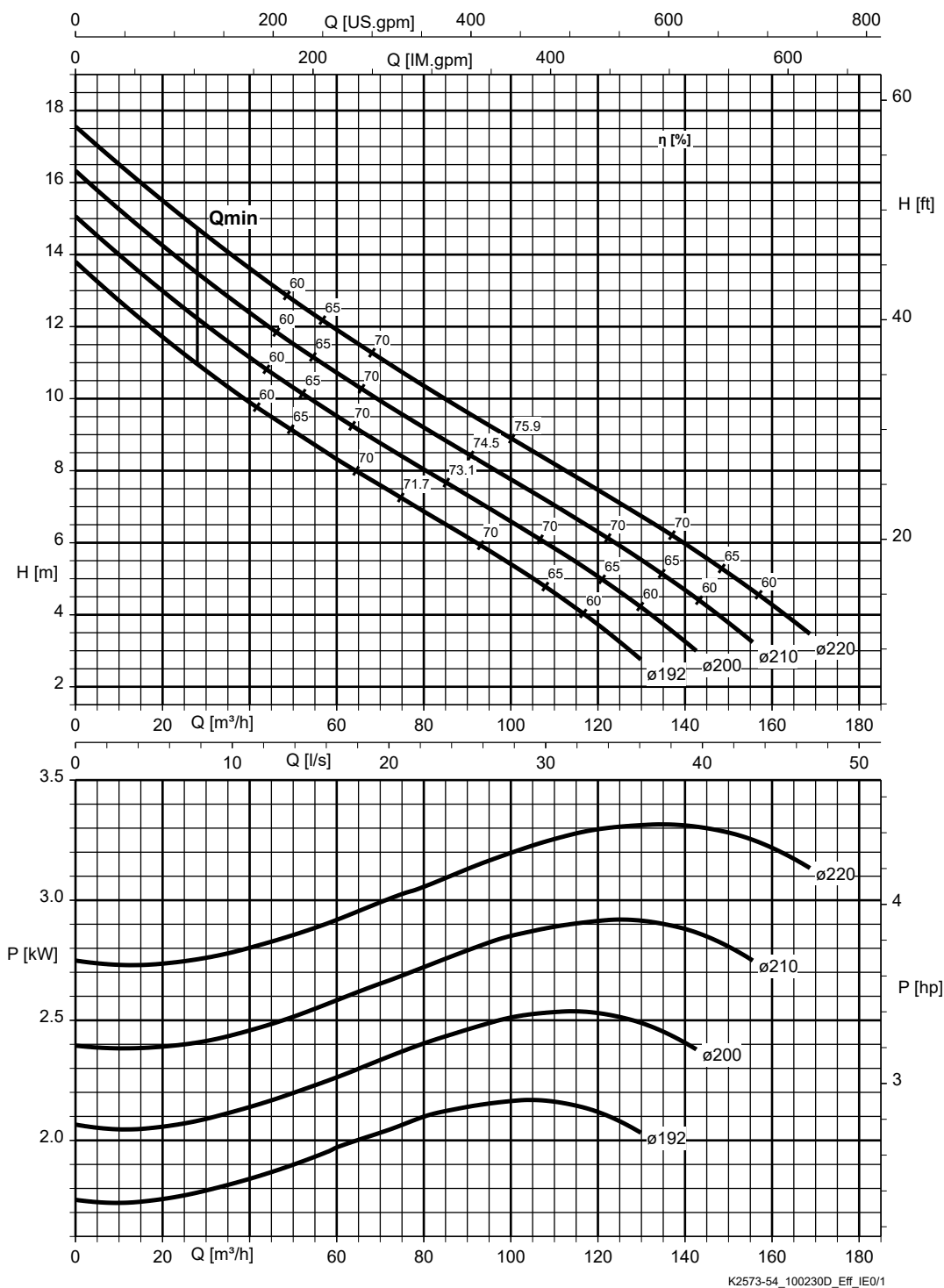
Size ³⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-180/012C4	156	M	1,24	1,46	3,36	DOL
D100-180/021C4	156	L	2,10	2,47	5,14	DOL
D100-180/012C4	162	M	1,24	1,46	3,36	DOL

²⁹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

³⁰⁾ C: motors to IE3, F: without

Size ³⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-180/021C4	162	L	2,10	2,47	5,14	DOL
D100-180/021C4	169	L	2,10	2,47	5,14	DOL
D100-180/021C4	176	L	2,10	2,47	5,14	DOL
D100-180/021C4	184	L	2,10	2,47	5,14	DOL

Amarex D-max 100-230, n = 1450 rpm (effective speed), without IE


Table 18: Motor assignment³¹⁾

Size ³²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-230/035F4	192	L	3,55	4,41	7,56	DOL
D100-230/039F4	192	L	3,90	5,01	9,91	DOL
D100-230/035F4	200	L	3,55	4,41	7,56	DOL

³¹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

³²⁾ C: motors to IE3, F: without

Size ³²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-230/039F4	200	L	3,90	5,01	9,91	DOL
D100-230/035F4	210	L	3,55	4,41	7,56	DOL
D100-230/039F4	210	L	3,90	5,01	9,91	DOL
D100-230/035F4	220	L	3,55	4,41	7,56	DOL
D100-230/039F4	220	L	3,90	5,01	9,91	DOL

Amarex D-max 100-230, n = 1450 rpm (effective speed), IE3

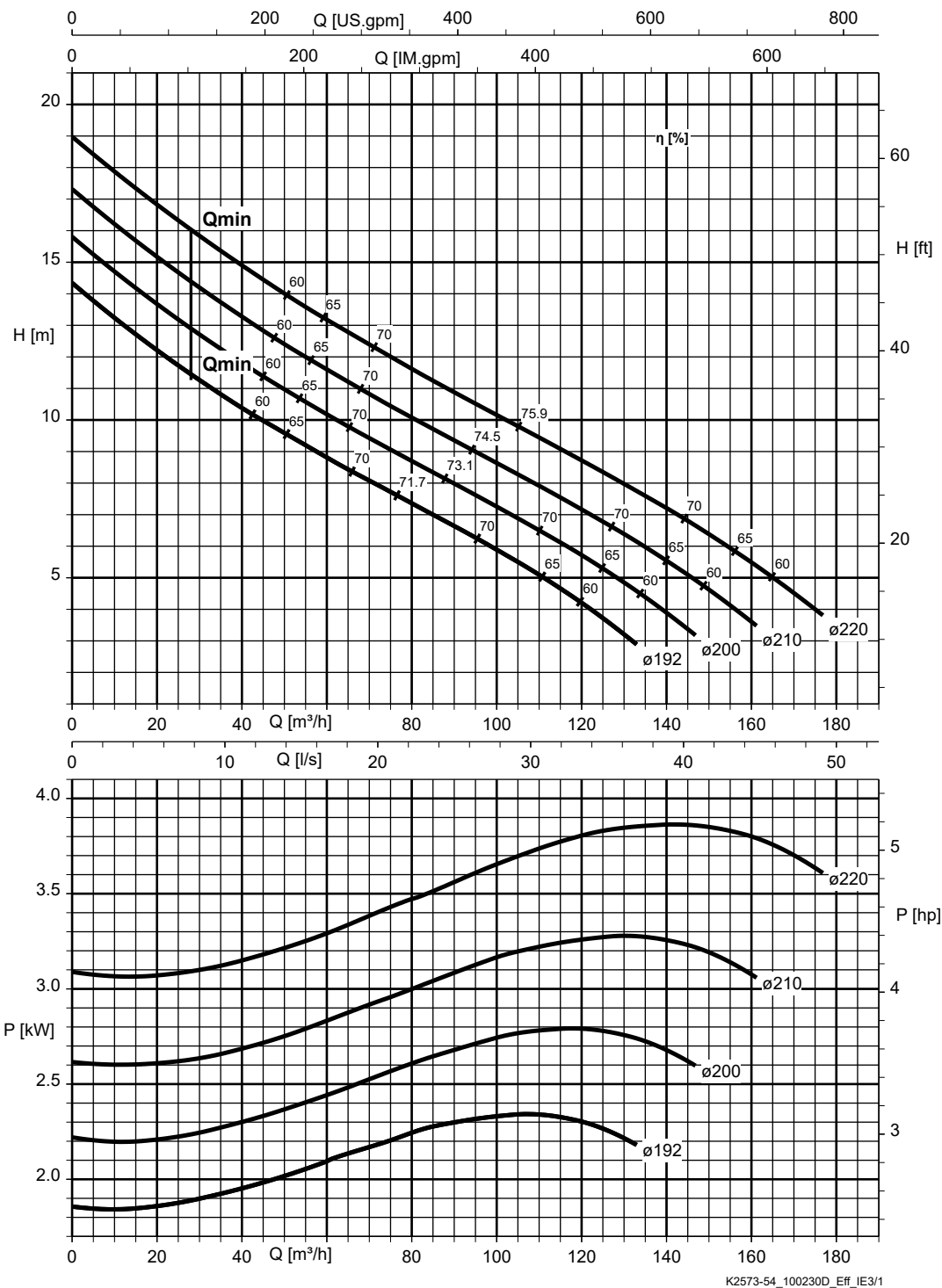


Table 19: Motor assignment³³⁾

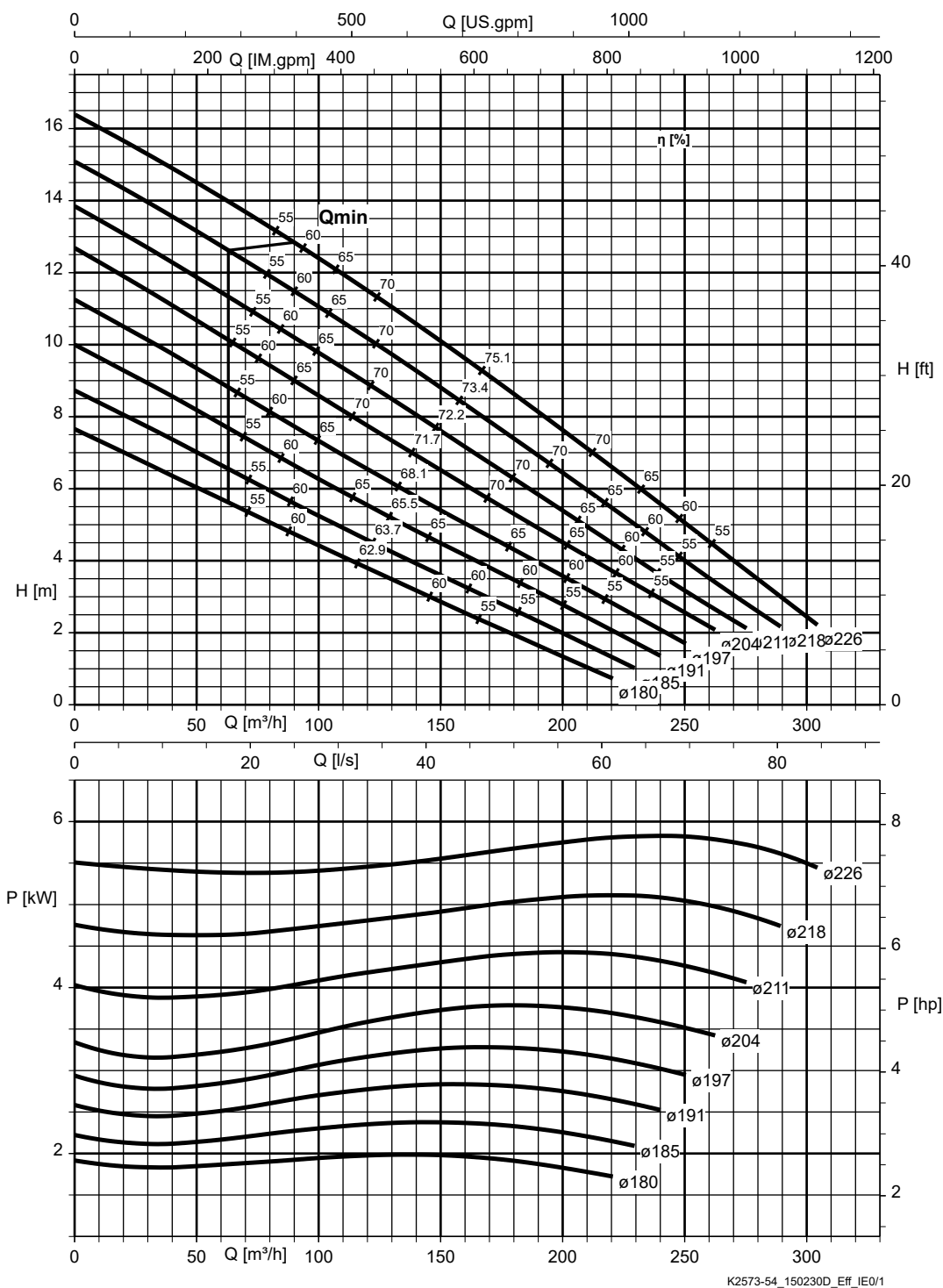
Size ³⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-230/036C4	192	X	3,59	4,06	8,40	DOL / star-delta
D100-230/045C4	192	X	4,48	5,04	10,70	DOL / star-delta
D100-230/036C4	200	X	3,59	4,06	8,40	DOL / star-delta

³³⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

³⁴⁾ C: motors to IE3, F: without

Size ³⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D100-230/045C4	200	X	4,48	5,04	10,70	DOL / star-delta
D100-230/036C4	210	X	3,59	4,06	8,40	DOL / star-delta
D100-230/045C4	210	X	4,48	5,04	10,70	DOL / star-delta
D100-230/045C4	220	X	4,48	5,04	10,70	DOL / star-delta

Amarex D-max 150-230, n = 1450 rpm (effective speed), without IE


Table 20: Motor assignment³⁵⁾

Size ³⁶⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D150-230/065F4	180	X	6,50	7,89	13,40	DOL / star-delta
D150-230/077F4	180	X	7,70	9,20	15,90	DOL / star-delta
D150-230/065F4	185	X	6,50	7,89	13,40	DOL / star-delta

³⁵⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

³⁶⁾ C: motors to IE3, F: without

Size ³⁶⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D150-230/077F4	185	X	7,70	9,20	15,90	DOL / star-delta
D150-230/065F4	191	X	6,50	7,89	13,40	DOL / star-delta
D150-230/077F4	191	X	7,70	9,20	15,90	DOL / star-delta
D150-230/065F4	197	X	6,50	7,89	13,40	DOL / star-delta
D150-230/077F4	197	X	7,70	9,20	15,90	DOL / star-delta
D150-230/065F4	204	X	6,50	7,89	13,40	DOL / star-delta
D150-230/077F4	204	X	7,70	9,20	15,90	DOL / star-delta
D150-230/065F4	211	X	6,50	7,89	13,40	DOL / star-delta
D150-230/077F4	211	X	7,70	9,20	15,90	DOL / star-delta
D150-230/065F4	218	X	6,50	7,89	13,40	DOL / star-delta
D150-230/077F4	218	X	7,70	9,20	15,90	DOL / star-delta
D150-230/065F4	226	X	6,50	7,89	13,40	DOL / star-delta
D150-230/077F4	226	X	7,70	9,20	15,90	DOL / star-delta

Amarex D-max 150-230, n = 1450 rpm (effective speed), IE3

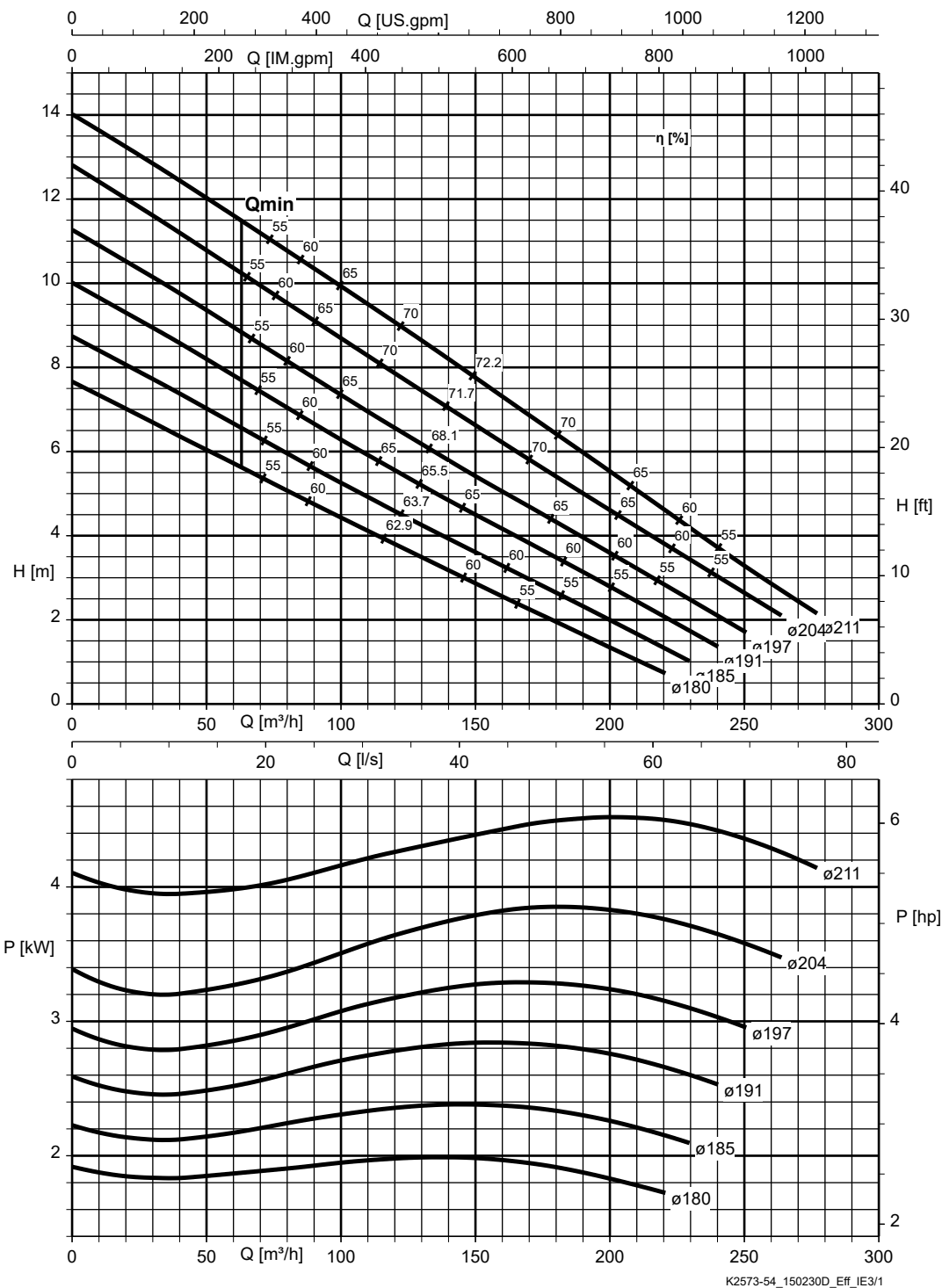


Table 21: Motor assignment³⁷⁾

Size ³⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D150-230/036C4	180	X	3,59	4,06	8,40	DOL / star-delta
D150-230/045C4	180	X	4,48	5,04	10,70	DOL / star-delta
D150-230/036C4	185	X	3,59	4,06	8,40	DOL / star-delta

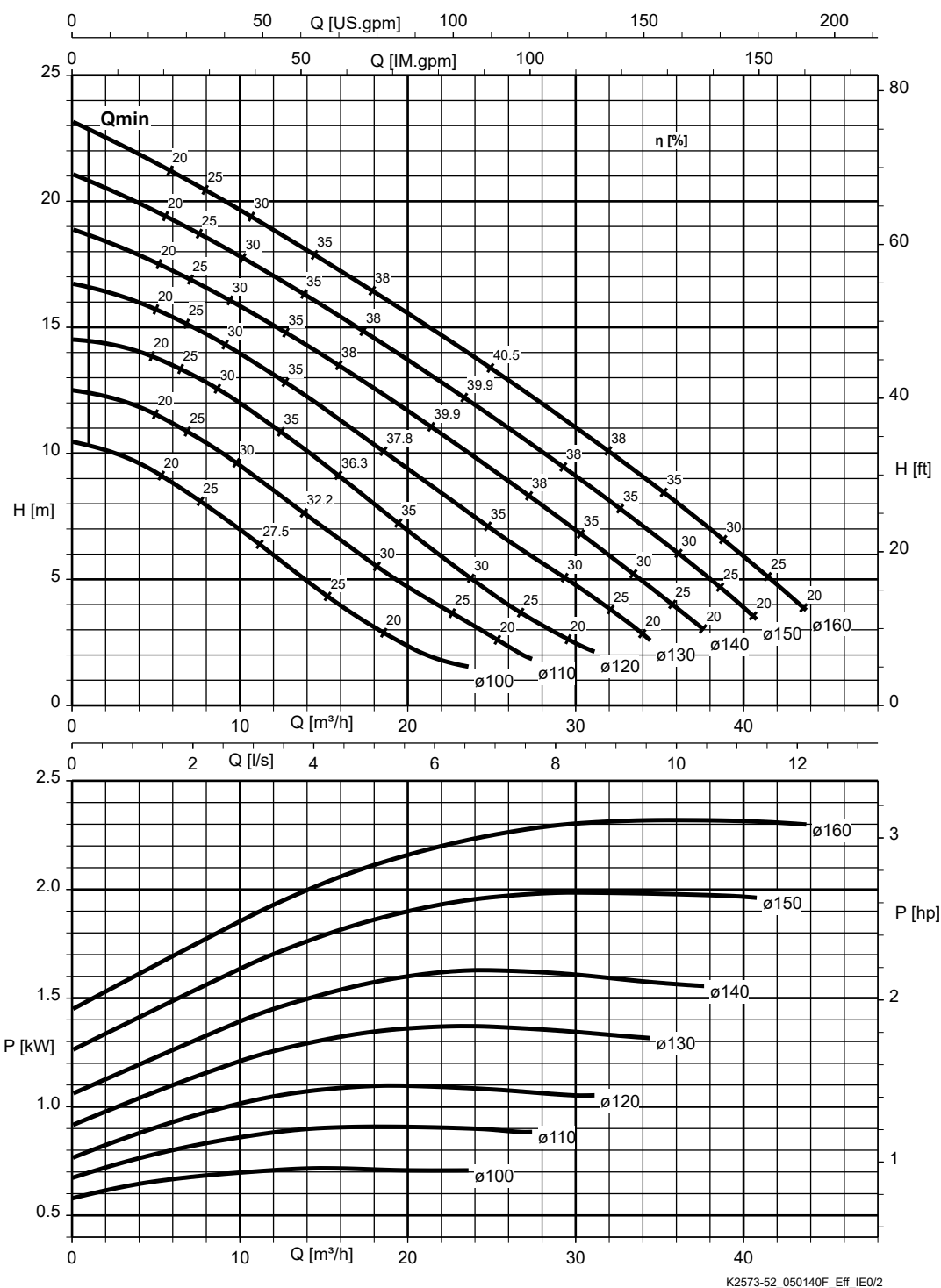
³⁷⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

³⁸⁾ C: motors to IE3, F: without

Size ³⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
D150-230/045C4	185	X	4,48	5,04	10,70	DOL / star-delta
D150-230/036C4	191	X	3,59	4,06	8,40	DOL / star-delta
D150-230/045C4	191	X	4,48	5,04	10,70	DOL / star-delta
D150-230/036C4	197	X	3,59	4,06	8,40	DOL / star-delta
D150-230/045C4	197	X	4,48	5,04	10,70	DOL / star-delta
D150-230/045C4	204	X	4,48	5,04	10,70	DOL / star-delta
D150-230/045C4	211	X	4,48	5,04	10,70	DOL / star-delta

F-max impeller

Amarex F-max 050-140, n = 2900 rpm (effective speed), without IE



Free passage = 44 mm

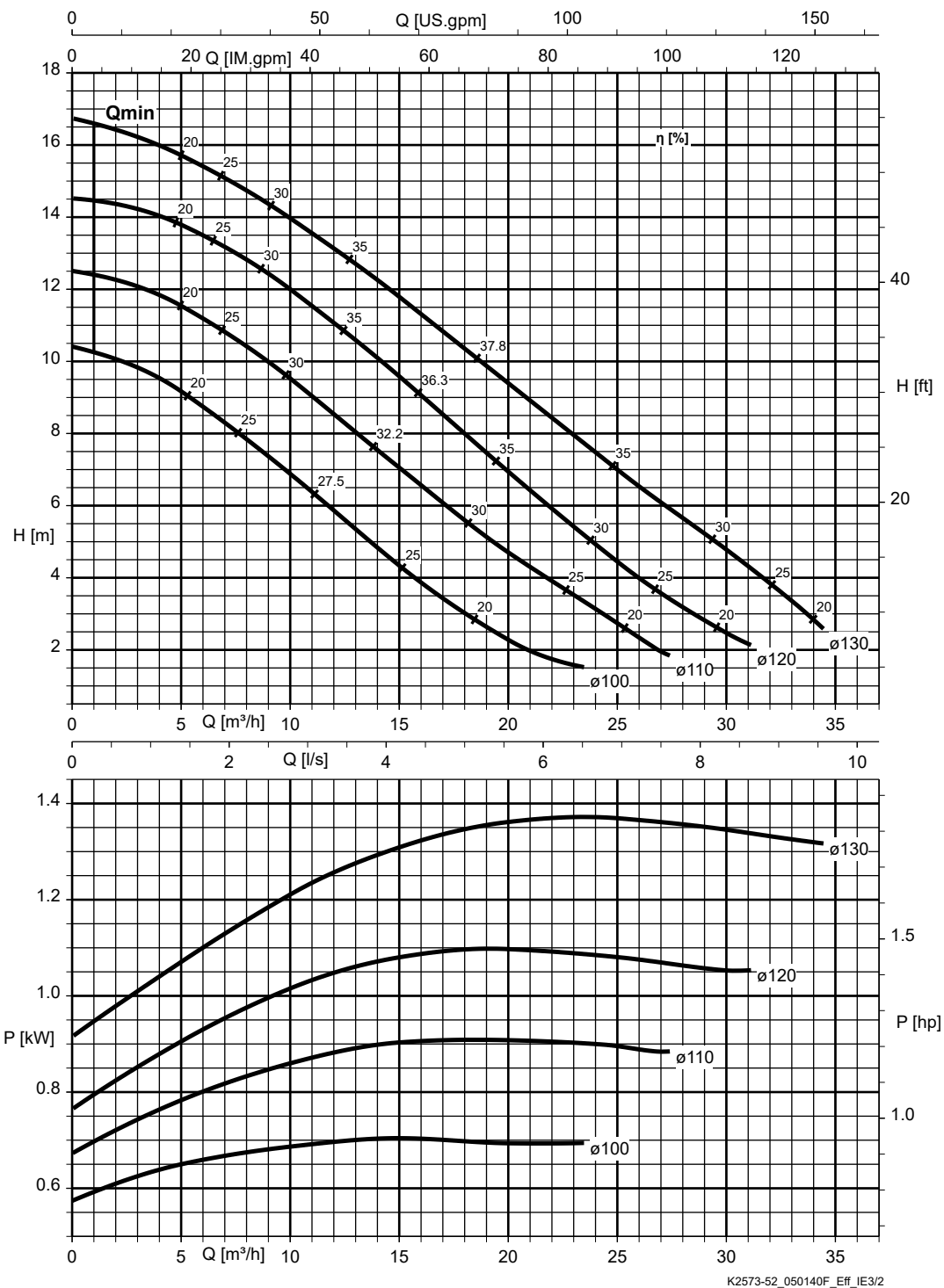
Table 22: Motor assignment³⁹⁾

Size ⁴⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F050-140/023F2	100	S	2,35	3,04	5,25	DOL
F050-140/023F2	110	S	2,35	3,04	5,25	DOL
F050-140/023F2	120	S	2,35	3,04	5,25	DOL
F050-140/023F2	130	S	2,35	3,04	5,25	DOL
F050-140/023F2	140	S	2,35	3,04	5,25	DOL
F050-140/023F2	150	S	2,35	3,04	5,25	DOL
F050-140/023F2	160	S	2,35	3,04	5,25	DOL

³⁹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁴⁰⁾ C: motors to IE3, F: without

Amarex F-max 050-140, n = 2900 rpm (effective speed), IE3



Free passage = 44 mm

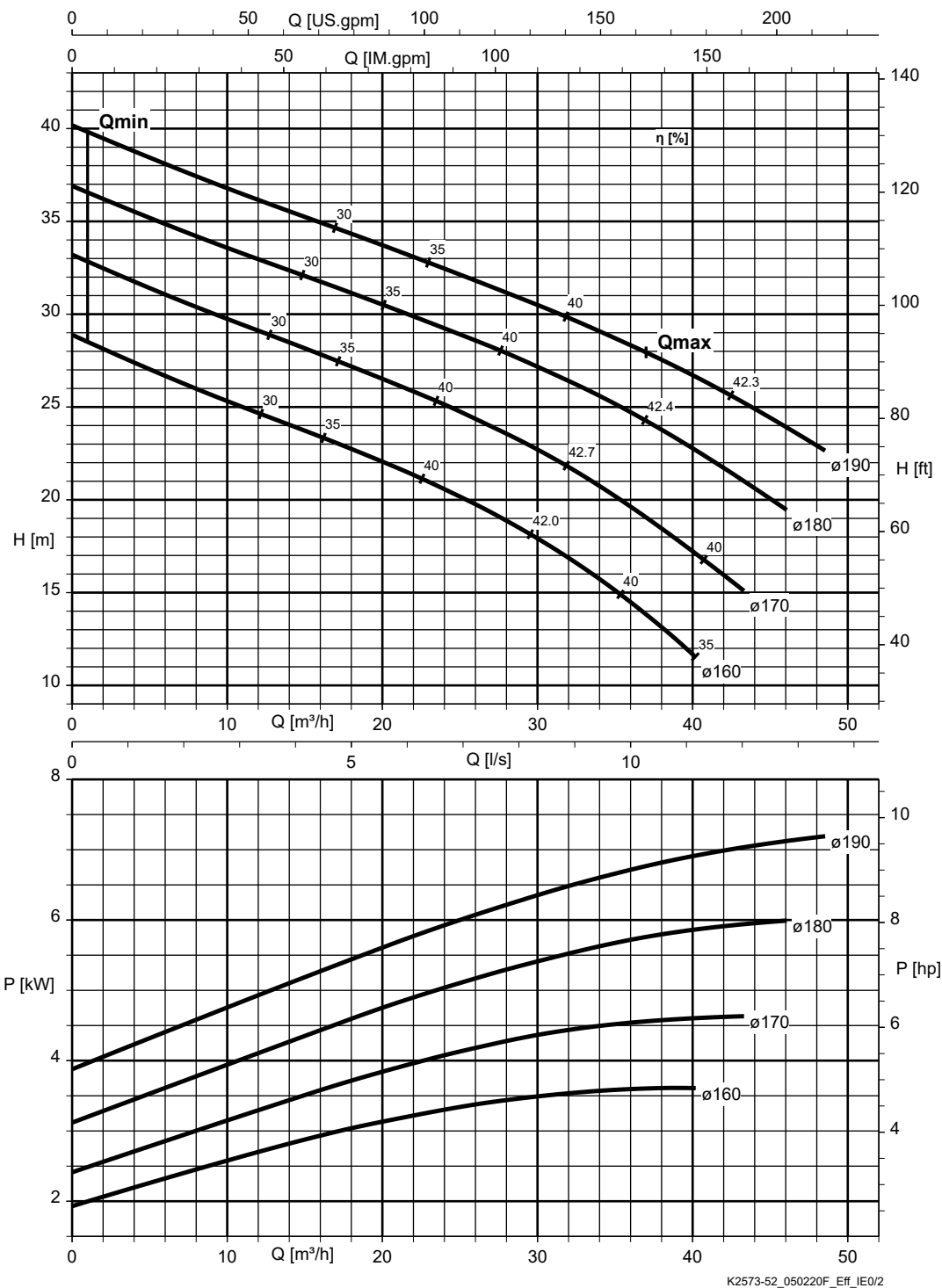
Table 23: Motor assignment⁴¹⁾

Size ⁴²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F050-140/014C2	100	S	1,40	1,67	3,50	DOL
F050-140/014C2	110	S	1,40	1,67	3,50	DOL
F050-140/014C2	120	S	1,40	1,67	3,50	DOL
F050-140/014C2	130	S	1,40	1,67	3,50	DOL

⁴¹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁴²⁾ C: motors to IE3, F: without

Amarex F-max 050-220, n = 2900 rpm (effective speed), without IE



Free passage = 40 mm

Table 24: Motor assignment⁴³⁾⁴⁴⁾

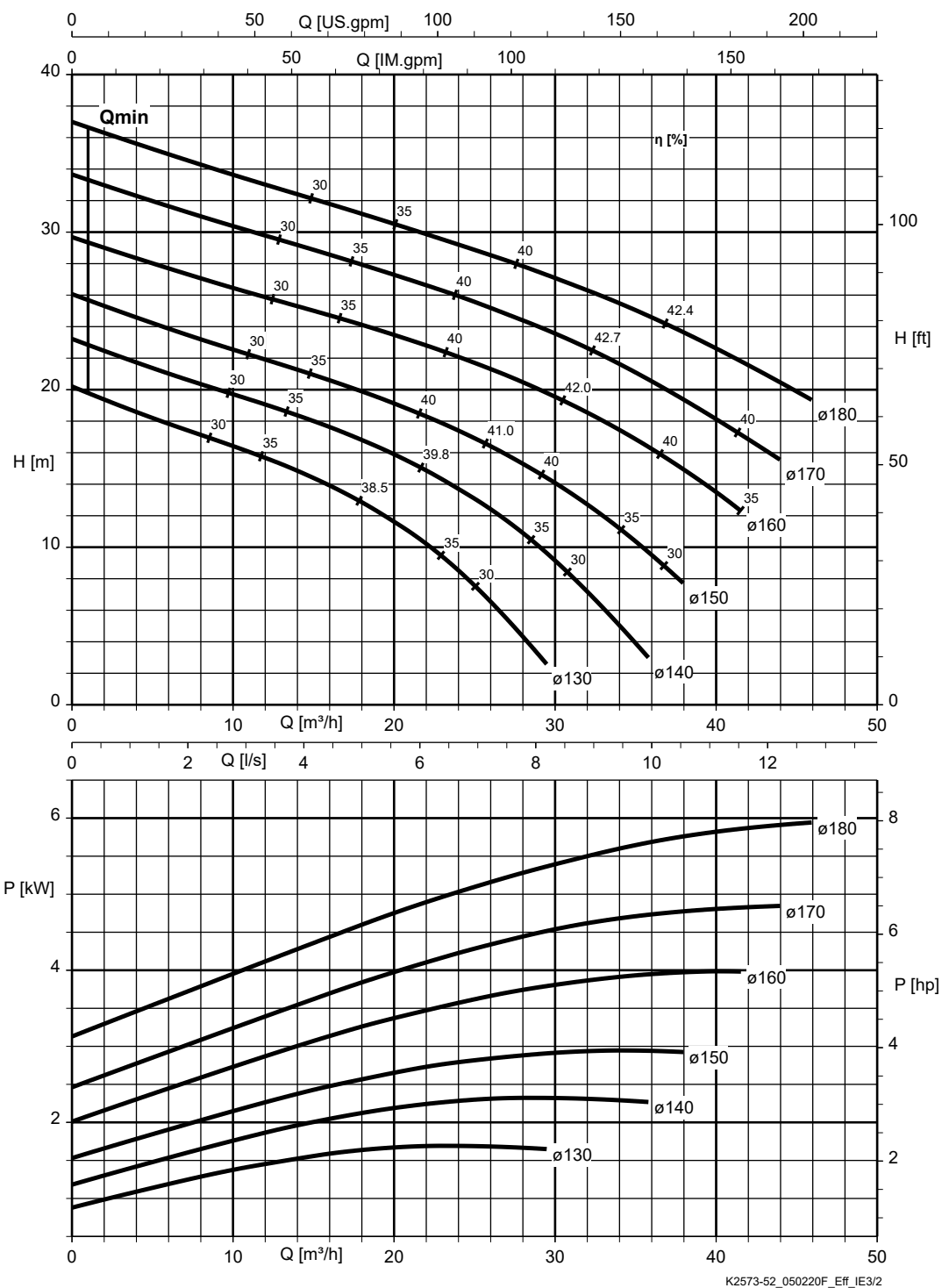
Size ⁴⁵⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F050-220/024F2	160	M	2,40	2,95	4,89	DOL
F050-220/040F2	160	M	4,00	4,86	8,17	DOL
F050-220/049F2	160	L	4,90	5,83	9,85	DOL
F050-220/040F2	170	M	4,00	4,86	8,17	DOL
F050-220/049F2	170	L	4,90	5,83	9,85	DOL
F050-220/073F2	170	L	7,30	8,72	14,70	DOL / star-delta
F050-220/040F2	180	M	4,00	4,86	8,17	DOL
F050-220/049F2	180	L	4,90	5,83	9,85	DOL
F050-220/073F2	180	L	7,30	8,72	14,70	DOL / star-delta
F050-220/049F2	190	L	4,90	5,83	9,85	DOL
F050-220/073F2	190	L	7,30	8,72	14,70	DOL / star-delta

⁴³ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁴⁴ Q_{max} Applies to explosion-proof pump sets only.

⁴⁵ C: motors to IE3, F: without

Amarex F-max 050-220, n = 2900 rpm (effective speed), IE3



Free passage = 40 mm

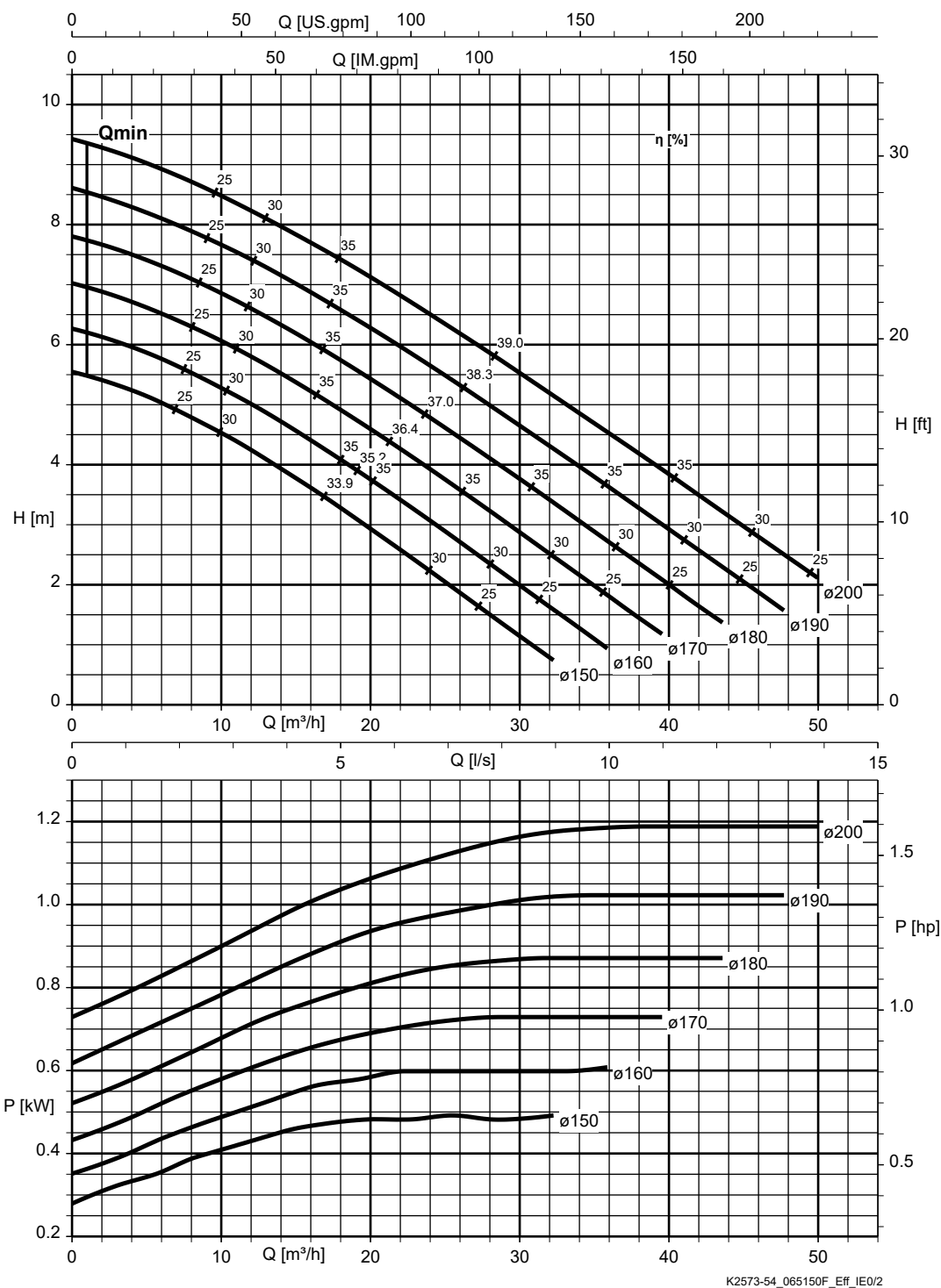
Table 25: Motor assignment⁴⁶⁾

Size ⁴⁷⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F050-220/018C2	130	M	1,82	2,14	3,78	DOL
F050-220/029C2	130	M	2,97	3,41	6,29	DOL
F050-220/029C2	140	M	2,97	3,41	6,29	DOL
F050-220/035C2	140	L	3,57	4,06	7,46	DOL
F050-220/029C2	150	M	2,97	3,41	6,29	DOL
F050-220/035C2	150	L	3,57	4,06	7,46	DOL
F050-220/045C2	160	L	4,54	5,13	10,10	DOL / star-delta
F050-220/045C2	170	L	4,54	5,13	10,10	DOL / star-delta
F050-220/045C2	180	L	4,54	5,13	10,10	DOL / star-delta

⁴⁶⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁴⁷⁾ C: motors to IE3, F: without

Amarex F-max 065-150, n = 1450 rpm (effective speed), without IE



Free passage = 65 mm

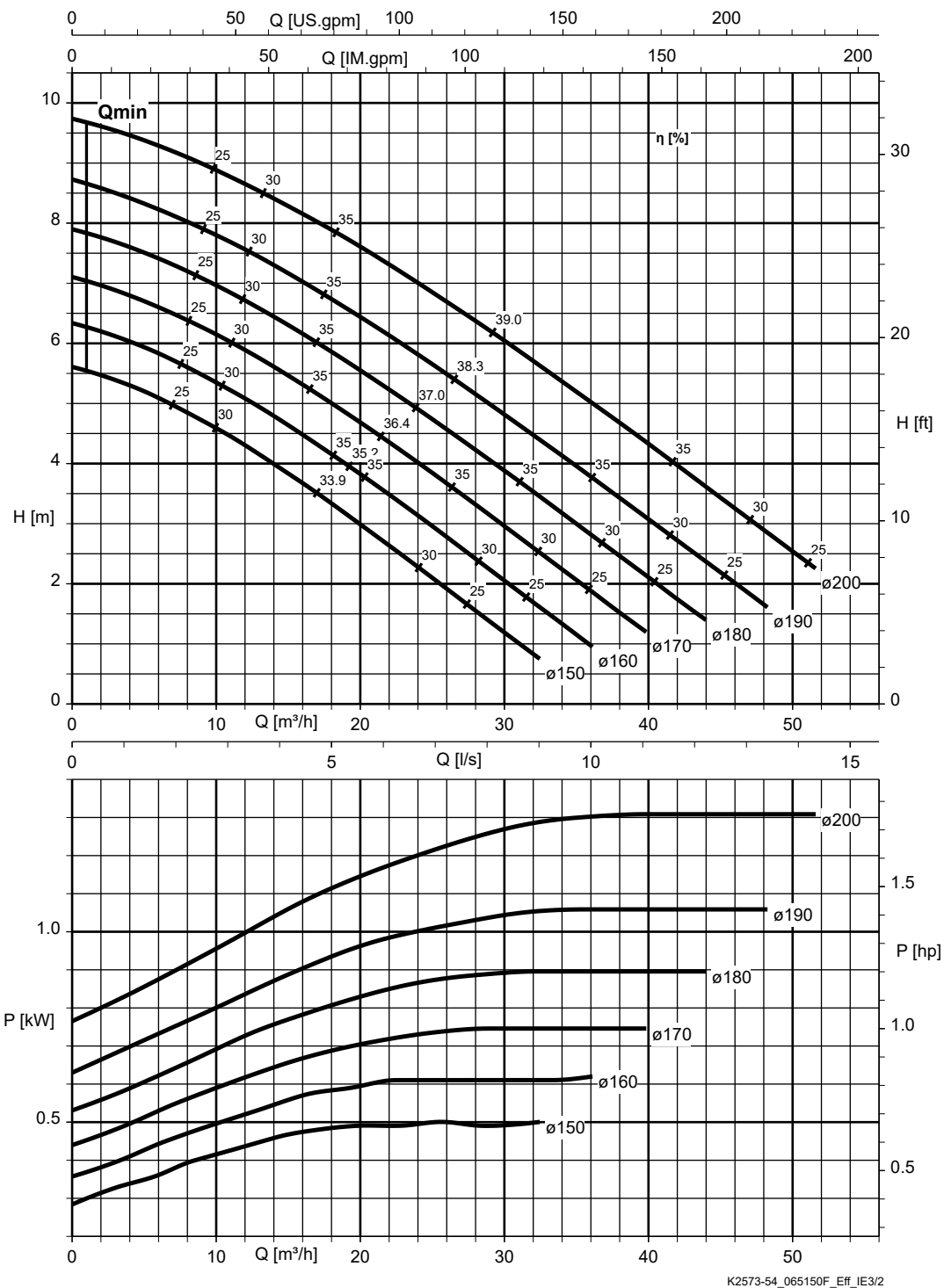
Table 26: Motor assignment⁴⁸⁾

Size ⁴⁹⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F065-150/017F4	150	M	1,67	2,13	3,71	DOL
F065-150/023F4	150	M	2,30	2,98	5,15	DOL
F065-150/017F4	160	M	1,67	2,13	3,71	DOL
F065-150/023F4	160	M	2,30	2,98	5,15	DOL
F065-150/017F4	170	M	1,67	2,13	3,71	DOL
F065-150/023F4	170	M	2,30	2,98	5,15	DOL
F065-150/017F4	180	M	1,67	2,13	3,71	DOL
F065-150/023F4	180	M	2,30	2,98	5,15	DOL
F065-150/017F4	190	M	1,67	2,13	3,71	DOL
F065-150/023F4	190	M	2,30	2,98	5,15	DOL
F065-150/017F4	200	M	1,67	2,13	3,71	DOL
F065-150/023F4	200	M	2,30	2,98	5,15	DOL

⁴⁸⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁴⁹⁾ C: motors to IE3, F: without

Amarex F-max 065-150, n = 1450 rpm (effective speed), IE3



Free passage = 65 mm

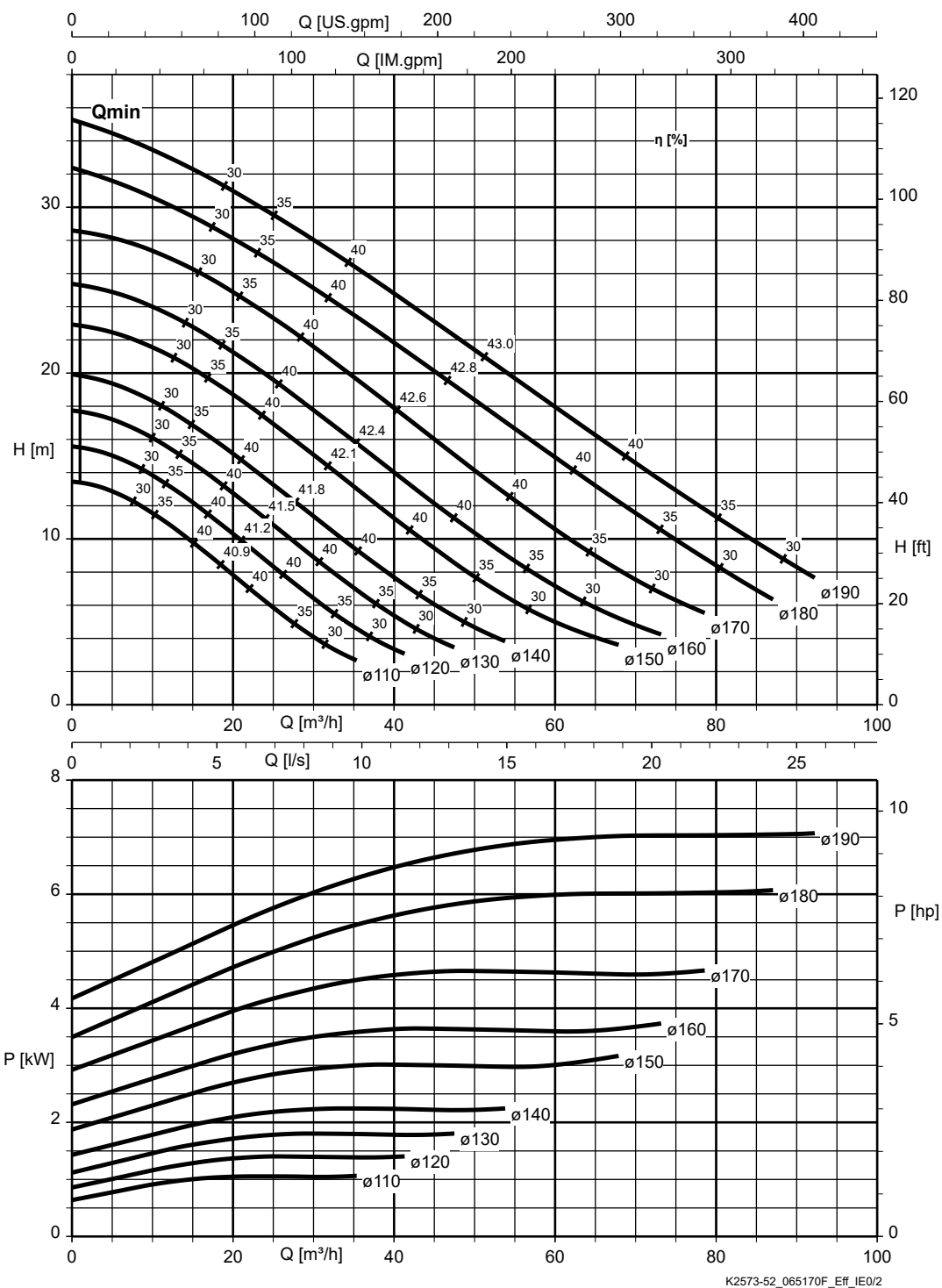
Table 27: Motor assignment⁵⁰⁾

Size ⁵¹⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F065-150/012C4	150	M	1,24	1,46	3,36	DOL
F065-150/021C4	150	L	2,10	2,47	5,14	DOL
F065-150/012C4	160	M	1,24	1,46	3,36	DOL
F065-150/021C4	160	L	2,10	2,47	5,14	DOL
F065-150/012C4	170	M	1,24	1,46	3,36	DOL
F065-150/021C4	170	L	2,10	2,47	5,14	DOL
F065-150/012C4	180	M	1,24	1,46	3,36	DOL
F065-150/021C4	180	L	2,10	2,47	5,14	DOL
F065-150/012C4	190	M	1,24	1,46	3,36	DOL
F065-150/021C4	190	L	2,10	2,47	5,14	DOL
F065-150/012C4	200	M	1,24	1,46	3,36	DOL
F065-150/021C4	200	L	2,10	2,47	5,14	DOL

⁵⁰⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁵¹⁾ C: motors to IE3, F: without

Amarex F-max 065-170, n = 2900 rpm (effective speed), without IE



Free passage = 65 mm

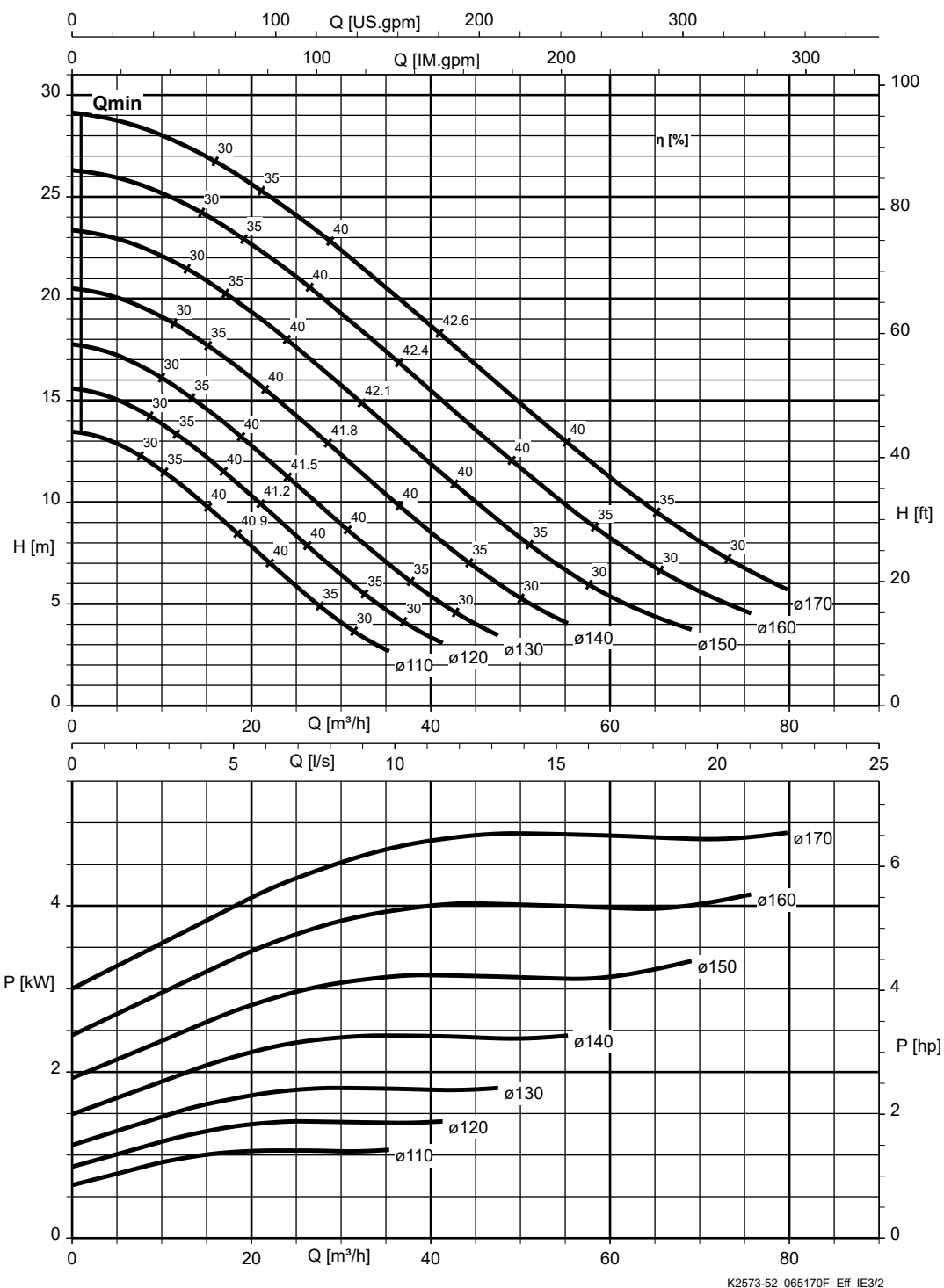
Table 28: Motor assignment⁵²⁾

Size ⁵³⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F065-170/024F2	110	M	2,40	2,95	4,89	DOL
F065-170/040F2	110	M	4,00	4,86	8,17	DOL
F065-170/024F2	120	M	2,40	2,95	4,89	DOL
F065-170/040F2	120	M	4,00	4,86	8,17	DOL
F065-170/024F2	130	M	2,40	2,95	4,89	DOL
F065-170/040F2	130	M	4,00	4,86	8,17	DOL
F065-170/024F2	140	M	2,40	2,95	4,89	DOL
F065-170/040F2	140	M	4,00	4,86	8,17	DOL
F065-170/024F2	150	M	2,40	2,95	4,89	DOL
F065-170/040F2	150	M	4,00	4,86	8,17	DOL
F065-170/049F2	150	L	4,90	5,83	9,85	DOL
F065-170/040F2	160	M	4,00	4,86	8,17	DOL
F065-170/049F2	160	L	4,90	5,83	9,85	DOL
F065-170/040F2	170	M	4,00	4,86	8,17	DOL
F065-170/049F2	170	L	4,90	5,83	9,85	DOL
F065-170/073F2	170	L	7,30	8,72	14,70	DOL / star-delta
F065-170/049F2	180	L	4,90	5,83	9,85	DOL
F065-170/073F2	180	L	7,30	8,72	14,70	DOL / star-delta
F065-170/049F2	190	L	4,90	5,83	9,85	DOL
F065-170/073F2	190	L	7,30	8,72	14,70	DOL / star-delta

⁵²⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁵³⁾ C: motors to IE3, F: without

Amarex F-max 065-170, n = 2900 rpm (effective speed), IE3



Free passage = 65 mm

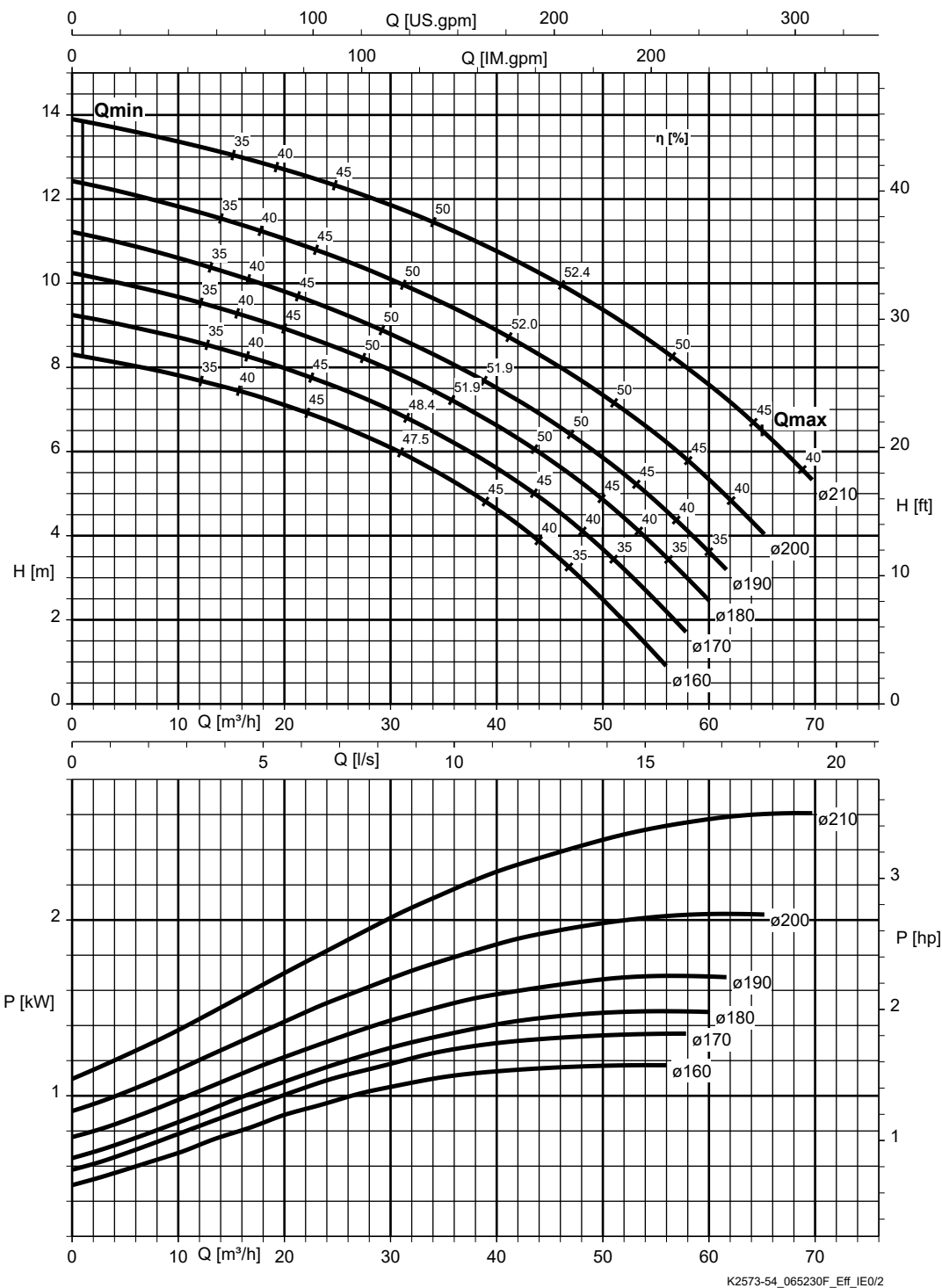
Table 29: Motor assignment⁵⁴⁾

Size ⁵⁵⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F065-170/018C2	110	M	1,82	2,14	3,78	DOL
F065-170/029C2	110	M	2,97	3,41	6,29	DOL
F065-170/018C2	120	M	1,82	2,14	3,78	DOL
F065-170/029C2	120	M	2,97	3,41	6,29	DOL
F065-170/018C2	130	M	1,82	2,14	3,78	DOL
F065-170/029C2	130	M	2,97	3,41	6,29	DOL
F065-170/029C2	140	M	2,97	3,41	6,29	DOL
F065-170/035C2	140	L	3,57	4,06	7,46	DOL
F065-170/035C2	150	L	3,57	4,06	7,46	DOL
F065-170/045C2	150	L	4,54	5,13	10,10	DOL / star-delta
F065-170/045C2	160	L	4,54	5,13	10,10	DOL / star-delta
F065-170/045C2	170	L	4,54	5,13	10,10	DOL / star-delta

⁵⁴⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁵⁵⁾ C: motors to IE3, F: without

Amarex F-max 065-230, n = 1450 rpm (effective speed), without IE



Free passage = 65 mm

Table 30: Motor assignment⁵⁶⁾⁵⁷⁾

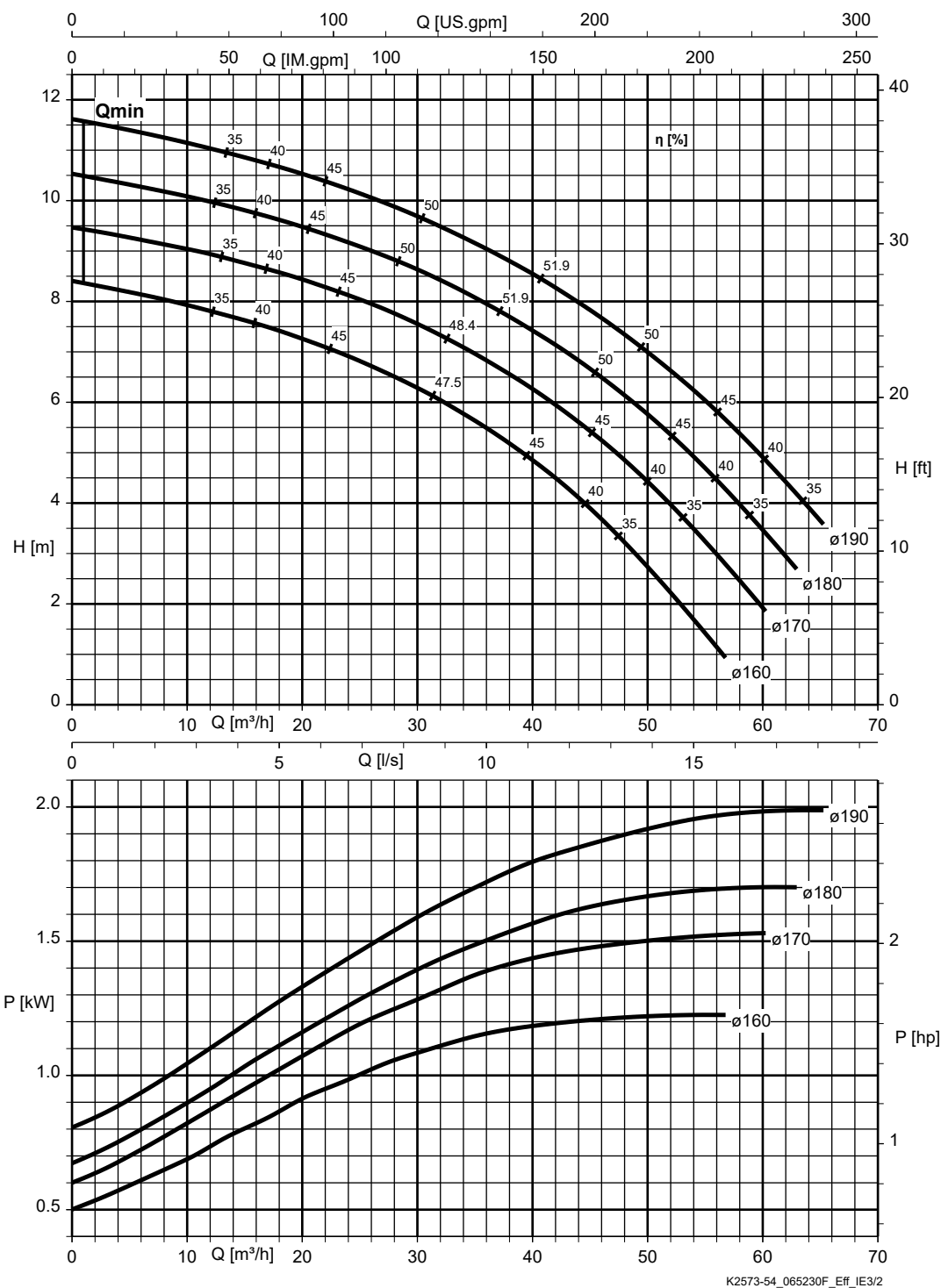
Size ⁵⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F065-230/017F4	160	M	1,67	2,13	3,71	DOL
F065-230/023F4	160	M	2,30	2,98	5,15	DOL
F065-230/017F4	170	M	1,67	2,13	3,71	DOL
F065-230/023F4	170	M	2,30	2,98	5,15	DOL
F065-230/017F4	180	M	1,67	2,13	3,71	DOL
F065-230/023F4	180	M	2,30	2,98	5,15	DOL
F065-230/017F4	190	M	1,67	2,13	3,71	DOL
F065-230/023F4	190	M	2,30	2,98	5,15	DOL
F065-230/035F4	190	L	3,55	4,41	7,56	DOL
F065-230/017F4	200	M	1,67	2,13	3,71	DOL
F065-230/023F4	200	M	2,30	2,98	5,15	DOL
F065-230/035F4	200	L	3,55	4,41	7,56	DOL
F065-230/023F4	210	M	2,30	2,98	5,15	DOL
F065-230/035F4	210	L	3,55	4,41	7,56	DOL
F065-230/039F4	210	L	3,90	5,01	9,91	DOL

⁵⁶ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁵⁷ Q_{max} Applies to explosion-proof pump sets only.

⁵⁸ C: motors to IE3, F: without

Amarex F-max 065-230, n = 1450 rpm (effective speed), IE3



Free passage = 65 mm

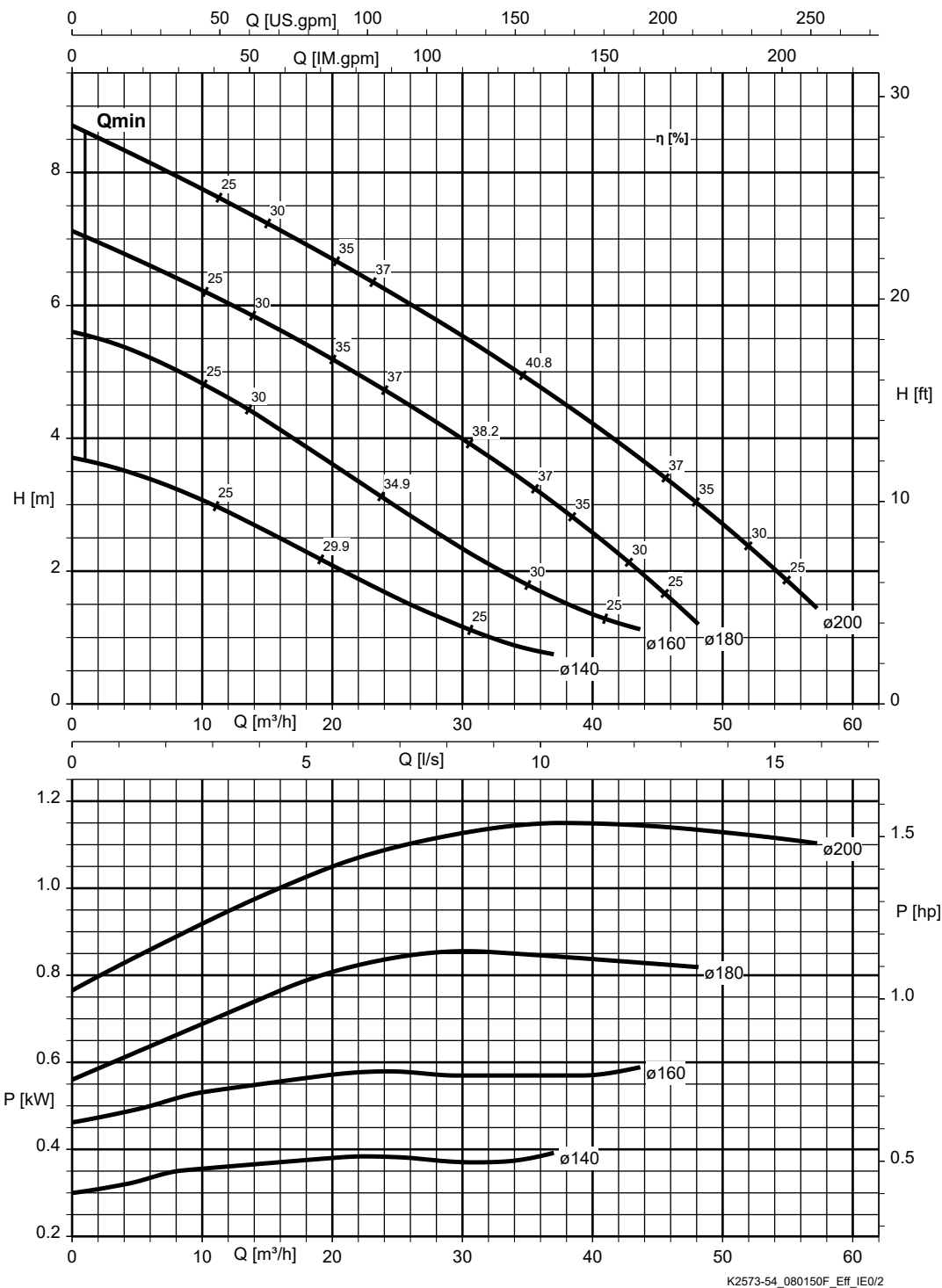
Table 31: Motor assignment⁵⁹⁾

Size ⁶⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F065-230/012C4	160	M	1,24	1,46	3,36	DOL
F065-230/021C4	160	L	2,10	2,47	5,14	DOL
F065-230/021C4	170	L	2,10	2,47	5,14	DOL
F065-230/021C4	180	L	2,10	2,47	5,14	DOL
F065-230/021C4	190	L	2,10	2,47	5,14	DOL

⁵⁹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁶⁰⁾ C: motors to IE3, F: without

Amarex F-max 080-150, n = 1450 rpm (effective speed), without IE



Free passage = 80 mm

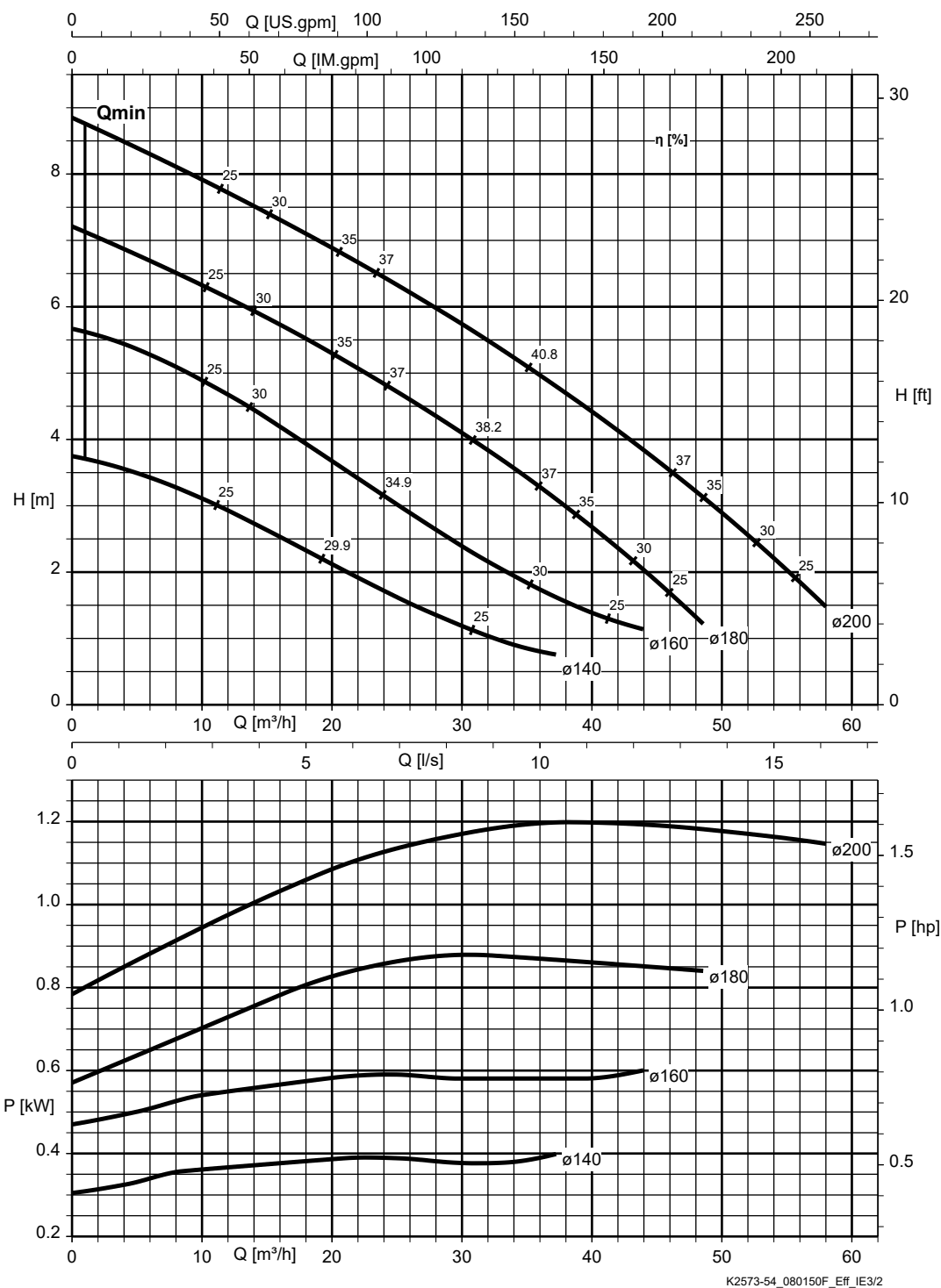
Table 32: Motor assignment⁶¹⁾

Size ⁶²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F080-150/017F4	140	M	1,67	2,13	3,71	DOL
F080-150/017F4	160	M	1,67	2,13	3,71	DOL
F080-150/017F4	180	M	1,67	2,13	3,71	DOL
F080-150/035F4	200	L	3,55	4,41	7,56	DOL

⁶¹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁶²⁾ C: motors to IE3, F: without

Amarex F-max 080-150, n = 1450 rpm (effective speed), IE3



Free passage = 80 mm

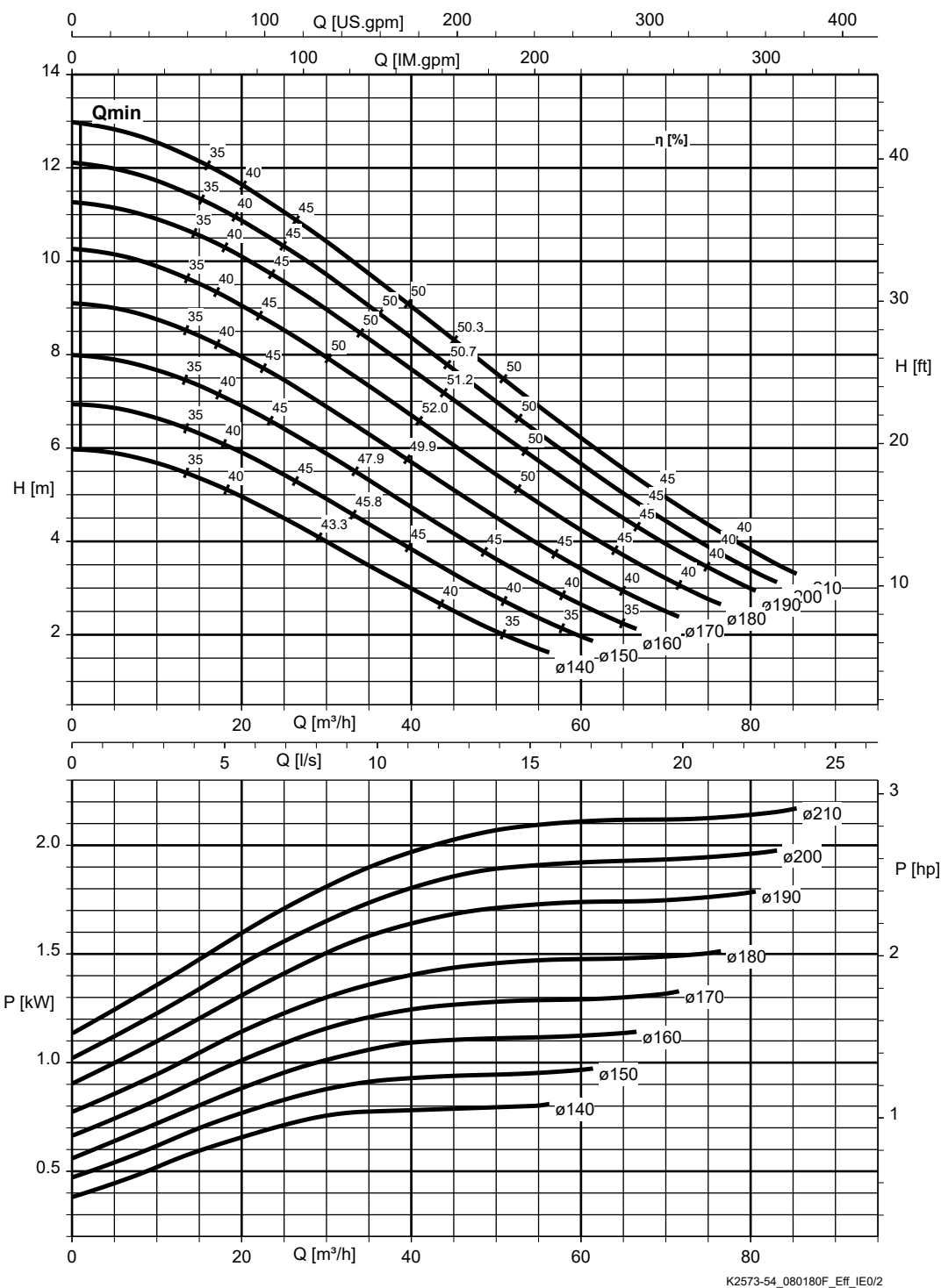
Table 33: Motor assignment⁶³⁾

Size ⁶⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F080-150/012C4	140	M	1,24	1,46	3,36	DOL
F080-150/012C4	160	M	1,24	1,46	3,36	DOL
F080-150/012C4	180	M	1,24	1,46	3,36	DOL
F080-150/021C4	180	L	2,10	2,47	5,14	DOL
F080-150/021C4	200	L	2,10	2,47	5,14	DOL

⁶³ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁶⁴ C: motors to IE3, F: without

Amarex F-max 080-180, n = 1450 rpm (effective speed), without IE



Free passage = 80 mm

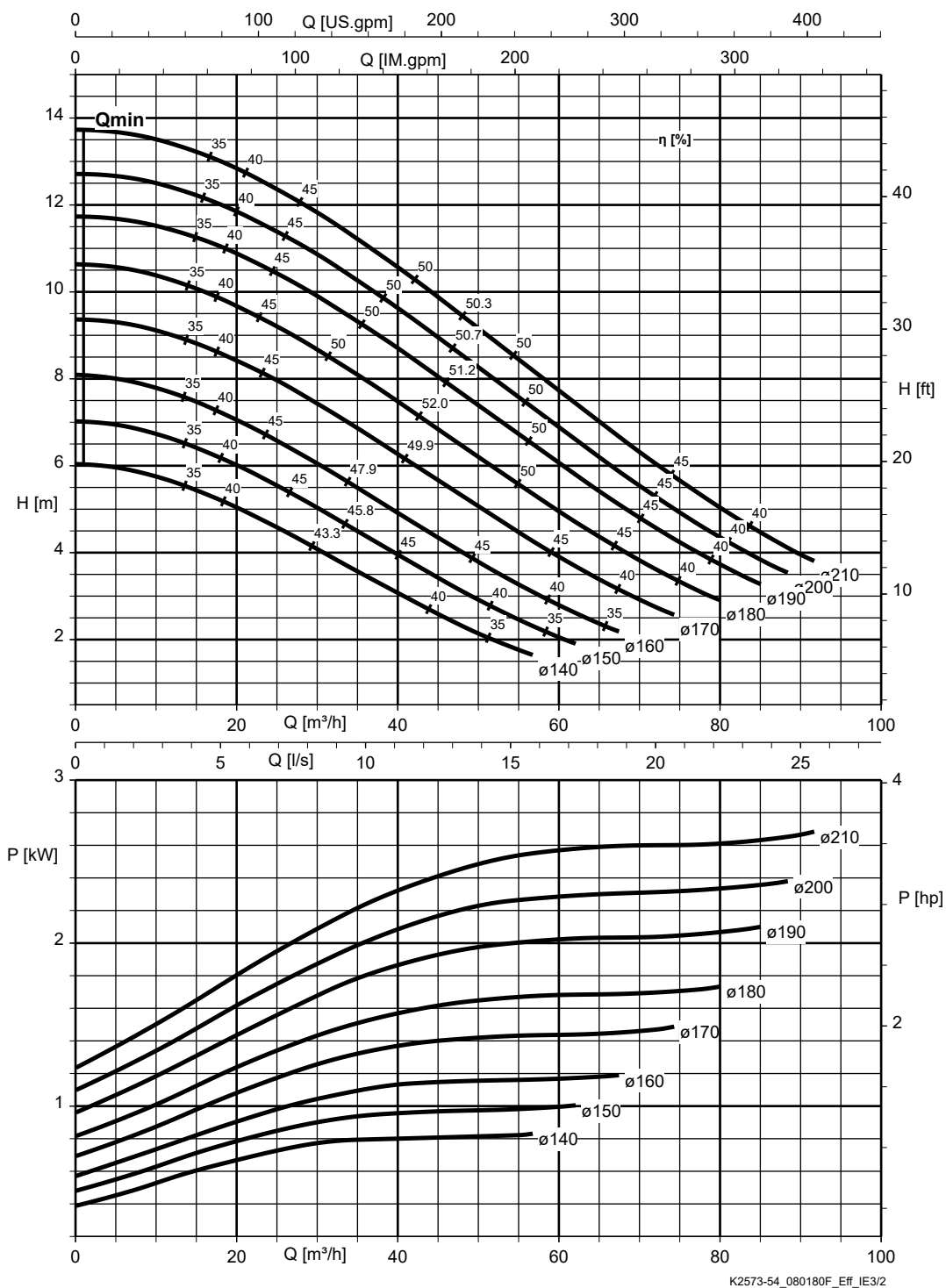
Table 34: Motor assignment⁶⁵⁾

Size ⁶⁶⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F080-180/017F4	140	M	1,67	2,13	3,71	DOL
F080-180/023F4	140	M	2,30	2,98	5,15	DOL
F080-180/017F4	150	M	1,67	2,13	3,71	DOL
F080-180/023F4	150	M	2,30	2,98	5,15	DOL
F080-180/017F4	160	M	1,67	2,13	3,71	DOL
F080-180/023F4	160	M	2,30	2,98	5,15	DOL
F080-180/017F4	170	M	1,67	2,13	3,71	DOL
F080-180/023F4	170	M	2,30	2,98	5,15	DOL
F080-180/017F4	180	M	1,67	2,13	3,71	DOL
F080-180/023F4	180	M	2,30	2,98	5,15	DOL
F080-180/017F4	190	M	1,67	2,13	3,71	DOL
F080-180/023F4	190	M	2,30	2,98	5,15	DOL
F080-180/035F4	190	L	3,55	4,41	7,56	DOL
F080-180/035F4	200	L	3,55	4,41	7,56	DOL
F080-180/039F4	200	L	3,90	5,01	9,91	DOL
F080-180/035F4	210	L	3,55	4,41	7,56	DOL
F080-180/039F4	210	L	3,90	5,01	9,91	DOL

⁶⁵⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁶⁶⁾ C: motors to IE3, F: without

Amarex F-max 080-180, n = 1450 rpm (effective speed), IE3



Free passage = 80 mm

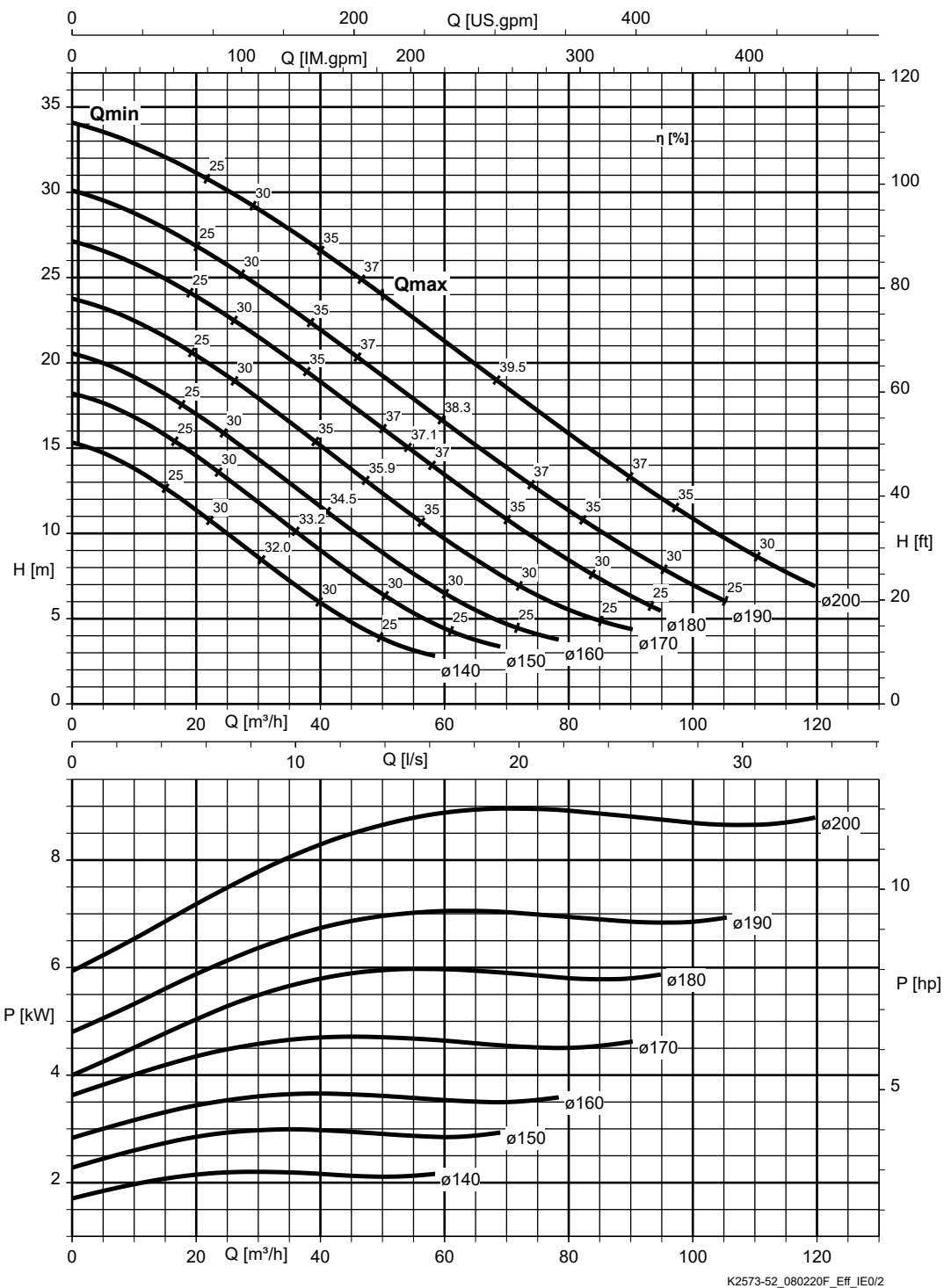
Table 35: Motor assignment⁶⁷⁾

Size ⁶⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F080-180/012C4	140	M	1,24	1,46	3,36	DOL
F080-180/021C4	140	L	2,10	2,47	5,14	DOL
F080-180/012C4	150	M	1,24	1,46	3,36	DOL
F080-180/021C4	150	L	2,10	2,47	5,14	DOL
F080-180/012C4	160	M	1,24	1,46	3,36	DOL
F080-180/021C4	160	L	2,10	2,47	5,14	DOL
F080-180/021C4	170	L	2,10	2,47	5,14	DOL
F080-180/036C4	170	X	3,59	4,06	8,40	DOL / star-delta
F080-180/021C4	180	L	2,10	2,47	5,14	DOL
F080-180/036C4	180	X	3,59	4,06	8,40	DOL / star-delta
F080-180/036C4	190	X	3,59	4,06	8,40	DOL / star-delta
F080-180/036C4	200	X	3,59	4,06	8,40	DOL / star-delta
F080-180/045C4	200	X	4,48	5,04	10,70	DOL / star-delta
F080-180/036C4	210	X	3,59	4,06	8,40	DOL / star-delta
F080-180/045C4	210	X	4,48	5,04	10,70	DOL / star-delta

⁶⁷⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁶⁸⁾ C: motors to IE3, F: without

Amarex F-max 080-220, n = 2900 rpm (effective speed), without IE



Free passage = 80 mm

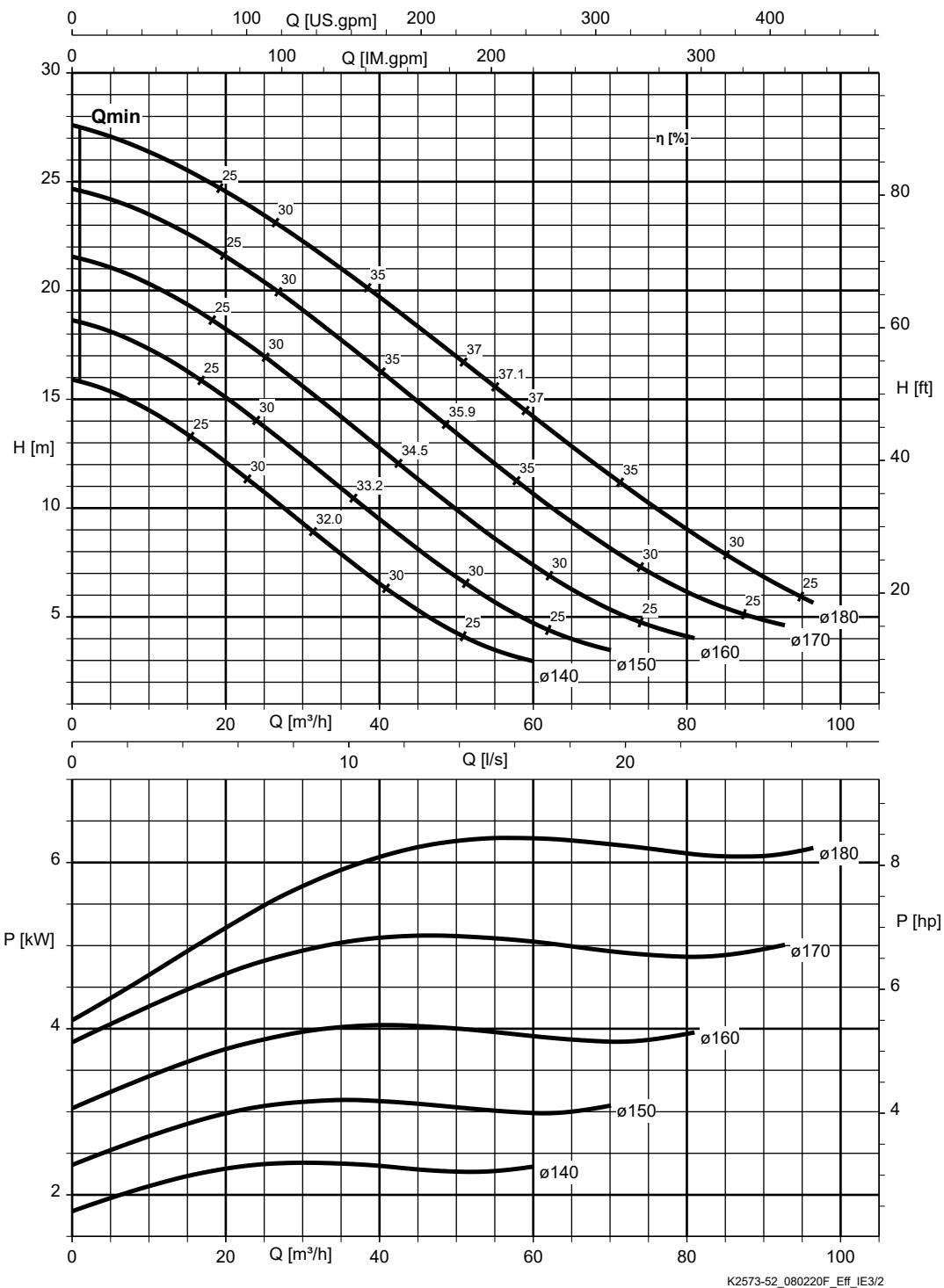
Table 36: Motor assignment⁶⁹⁾

Size ⁷⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F080-220/024F2	140	M	2,40	2,95	4,89	DOL
F080-220/040F2	140	M	4,00	4,86	8,17	DOL
F080-220/040F2	150	M	4,00	4,86	8,17	DOL
F080-220/049F2	150	L	4,90	5,83	9,85	DOL
F080-220/040F2	160	M	4,00	4,86	8,17	DOL
F080-220/049F2	160	L	4,90	5,83	9,85	DOL
F080-220/049F2	170	L	4,90	5,83	9,85	DOL
F080-220/073F2	170	L	7,30	8,72	14,70	DOL / star-delta
F080-220/049F2	180	L	4,90	5,83	9,85	DOL
F080-220/073F2	180	L	7,30	8,72	14,70	DOL / star-delta
F080-220/084F2	180	X	8,40	9,85	16,80	DOL / star-delta
F080-220/073F2	190	L	7,30	8,72	14,70	DOL / star-delta
F080-220/084F2	190	X	8,40	9,85	16,80	DOL / star-delta
F080-220/073F2	200	L	7,30	8,72	14,70	DOL / star-delta
F080-220/084F2	200	X	8,40	9,85	16,80	DOL / star-delta

⁶⁹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁷⁰⁾ C: motors to IE3, F: without

Amarex F-max 080-220, n = 2900 rpm (effective speed), IE3



Free passage = 80 mm

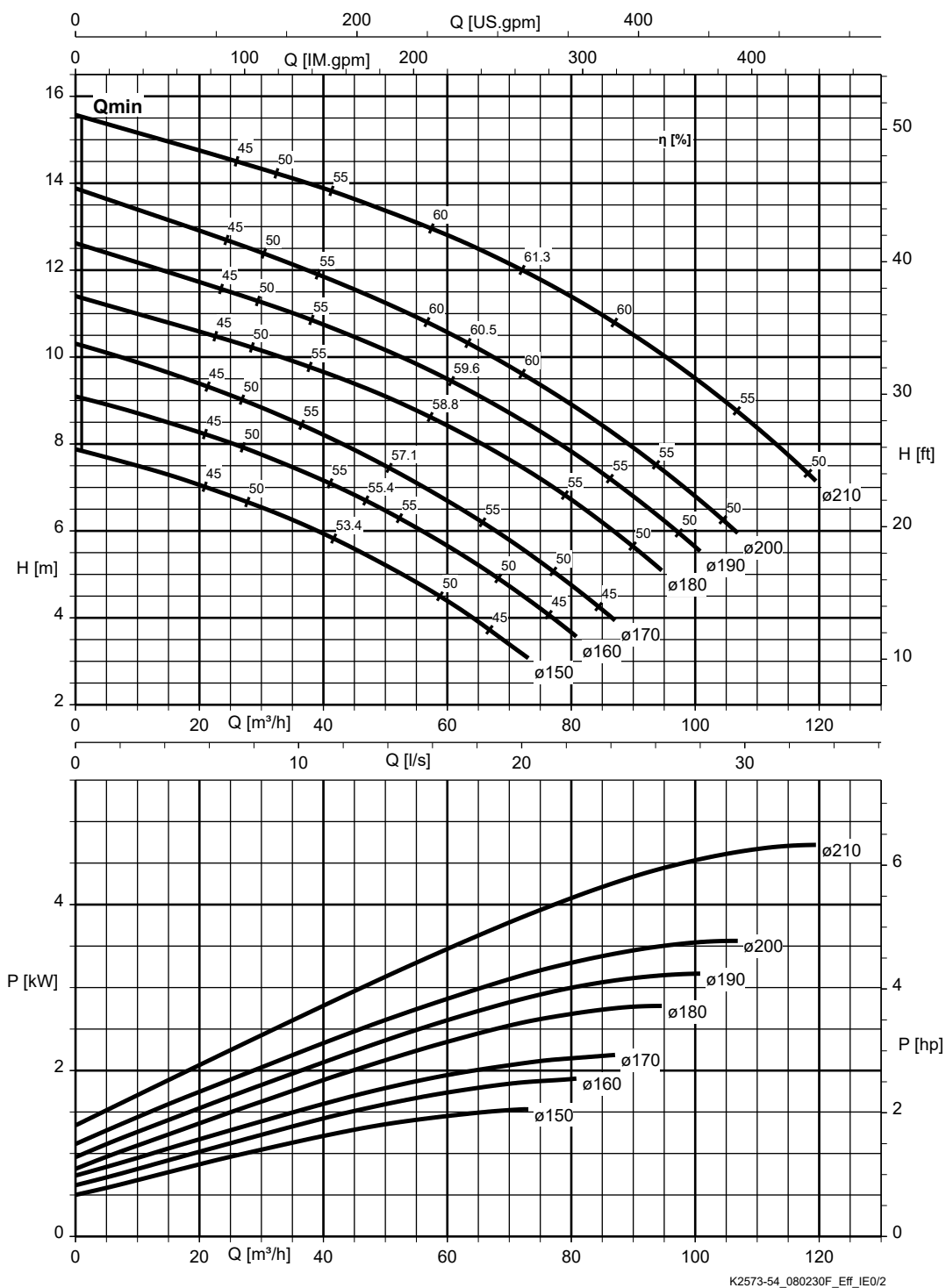
Table 37: Motor assignment⁷¹⁾

Size ⁷²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F080-220/029C2	140	M	2,97	3,41	6,29	DOL
F080-220/035C2	140	L	3,57	4,06	7,46	DOL
F080-220/035C2	150	L	3,57	4,06	7,46	DOL
F080-220/045C2	150	L	4,54	5,13	10,10	DOL / star-delta
F080-220/045C2	160	L	4,54	5,13	10,10	DOL / star-delta
F080-220/060C2	160	X	6,00	6,71	12,70	DOL / star-delta
F080-220/060C2	170	X	6,00	6,71	12,70	DOL / star-delta
F080-220/060C2	180	X	6,00	6,71	12,70	DOL / star-delta

⁷¹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁷²⁾ C: motors to IE3, F: without

Amarex F-max 080-230, n = 1450 rpm (effective speed), without IE



Free passage = 80 mm

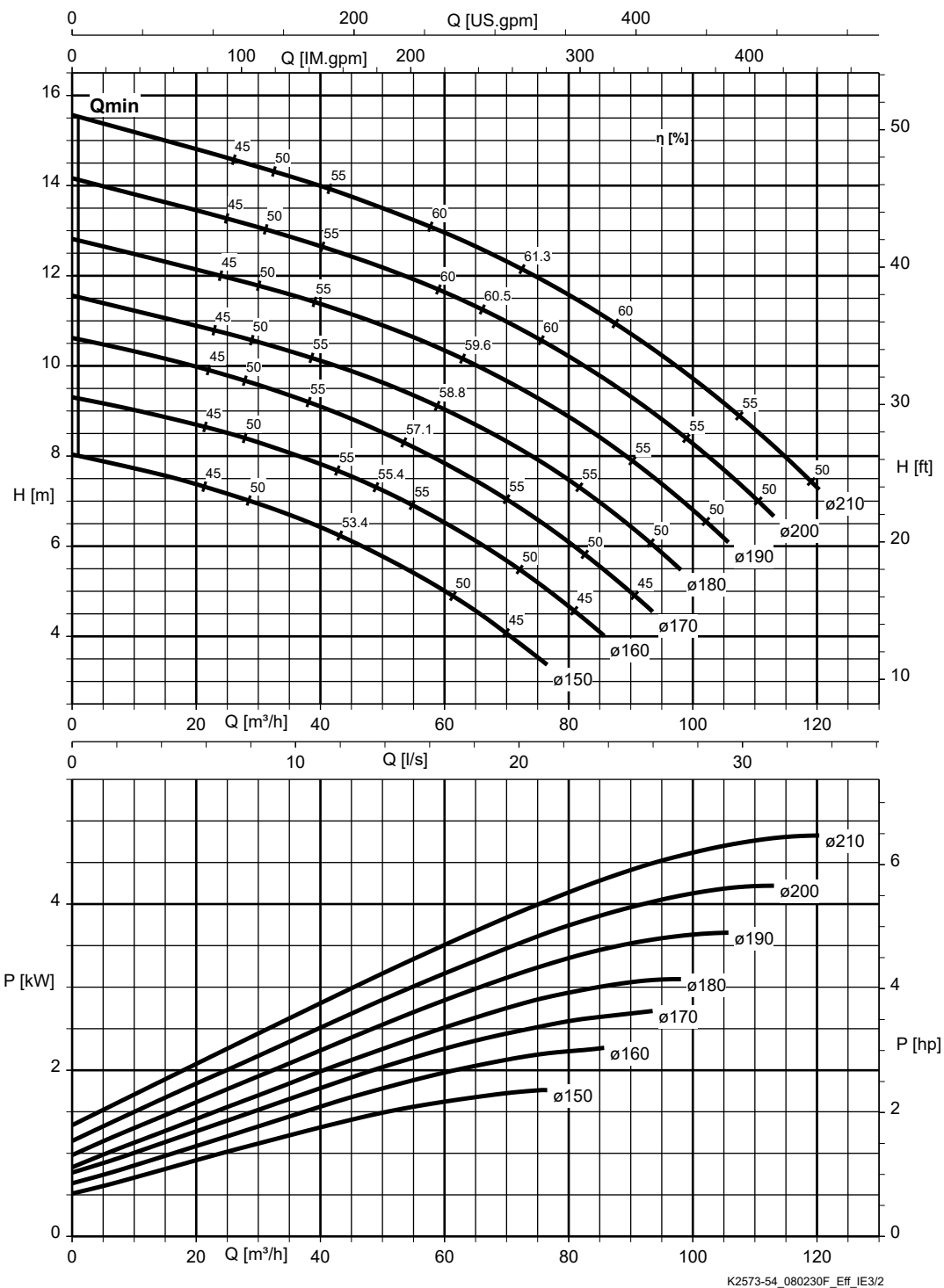
Table 38: Motor assignment⁷³⁾

Size ⁷⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F080-230/017F4	150	M	1,67	2,13	3,71	DOL
F080-230/023F4	150	M	2,30	2,98	5,15	DOL
F080-230/017F4	160	M	1,67	2,13	3,71	DOL
F080-230/023F4	160	M	2,30	2,98	5,15	DOL
F080-230/035F4	160	L	3,55	4,41	7,56	DOL
F080-230/017F4	170	M	1,67	2,13	3,71	DOL
F080-230/023F4	170	M	2,30	2,98	5,15	DOL
F080-230/035F4	170	L	3,55	4,41	7,56	DOL
F080-230/023F4	180	M	2,30	2,98	5,15	DOL
F080-230/035F4	180	L	3,55	4,41	7,56	DOL
F080-230/039F4	180	L	3,90	5,01	9,91	DOL
F080-230/023F4	190	M	2,30	2,98	5,15	DOL
F080-230/035F4	190	L	3,55	4,41	7,56	DOL
F080-230/039F4	190	L	3,90	5,01	9,91	DOL
F080-230/035F4	200	L	3,55	4,41	7,56	DOL
F080-230/039F4	200	L	3,90	5,01	9,91	DOL
F080-230/035F4	210	L	3,55	4,41	7,56	DOL
F080-230/039F4	210	L	3,90	5,01	9,91	DOL
F080-230/065F4	210	X	6,50	7,89	13,40	DOL / star-delta

⁷³⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁷⁴⁾ C: motors to IE3, F: without

Amarex F-max 080-230, n = 1450 rpm (effective speed), IE3



Free passage = 80 mm

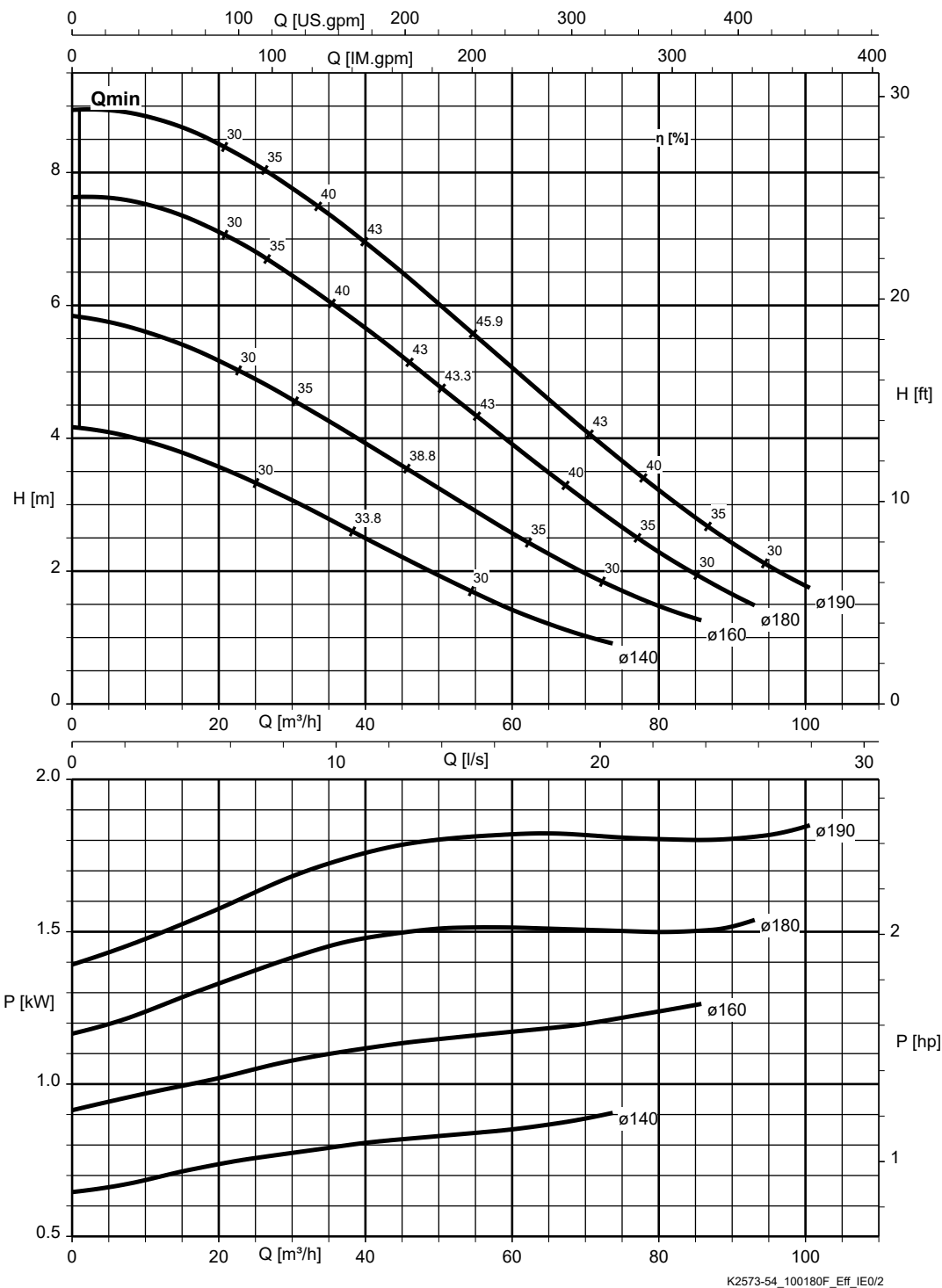
Table 39: Motor assignment⁷⁵⁾

Size ⁷⁶⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F080-230/021C4	150	L	2,10	2,47	5,14	DOL
F080-230/036C4	150	X	3,59	4,06	8,40	DOL / star-delta
F080-230/021C4	160	L	2,10	2,47	5,14	DOL
F080-230/036C4	160	X	3,59	4,06	8,40	DOL / star-delta
F080-230/036C4	170	X	3,59	4,06	8,40	DOL / star-delta
F080-230/045C4	170	X	4,48	5,04	10,70	DOL / star-delta
F080-230/036C4	180	X	3,59	4,06	8,40	DOL / star-delta
F080-230/045C4	180	X	4,48	5,04	10,70	DOL / star-delta
F080-230/036C4	190	X	3,59	4,06	8,40	DOL / star-delta
F080-230/045C4	190	X	4,48	5,04	10,70	DOL / star-delta
F080-230/045C4	200	X	4,48	5,04	10,70	DOL / star-delta
F080-230/045C4	210	X	4,48	5,04	10,70	DOL / star-delta

⁷⁵⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁷⁶⁾ C: motors to IE3, F: without

Amarex F-max 100-180, n = 1450 rpm (effective speed), without IE



Free passage = 100 mm

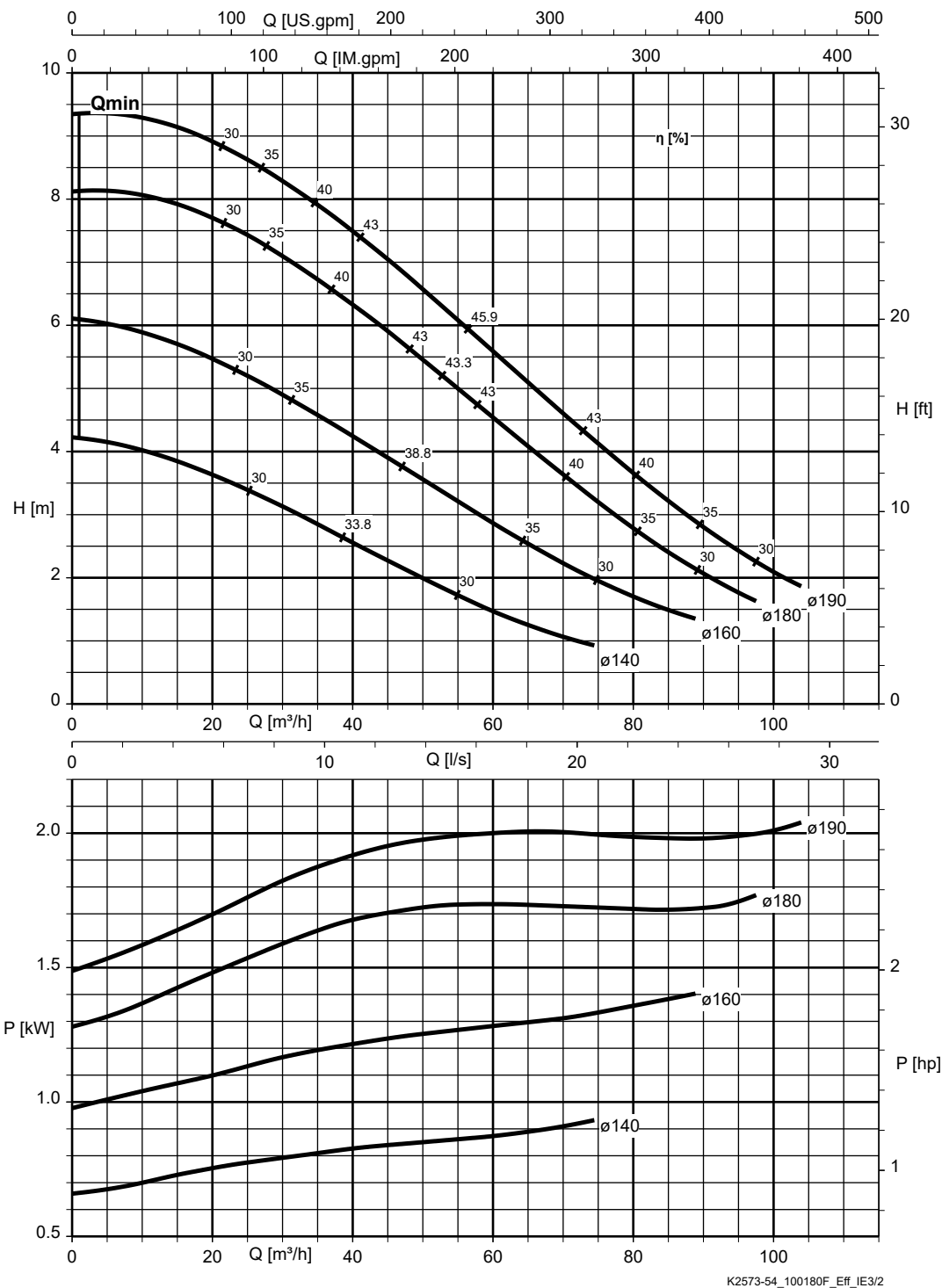
Table 40: Motor assignment⁷⁷⁾

Size ⁷⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F100-180/017F4	140	M	1,67	2,13	3,71	DOL
F100-180/023F4	140	M	2,30	2,98	5,15	DOL
F100-180/017F4	160	M	1,67	2,13	3,71	DOL
F100-180/023F4	160	M	2,30	2,98	5,15	DOL
F100-180/017F4	180	M	1,67	2,13	3,71	DOL
F100-180/023F4	180	M	2,30	2,98	5,15	DOL
F100-180/017F4	190	M	1,67	2,13	3,71	DOL
F100-180/023F4	190	M	2,30	2,98	5,15	DOL
F100-180/035F4	190	L	3,55	4,41	7,56	DOL

⁷⁷⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁷⁸⁾ C: motors to IE3, F: without

Amarex F-max 100-180, n = 1450 rpm (effective speed), IE3



Free passage = 100 mm

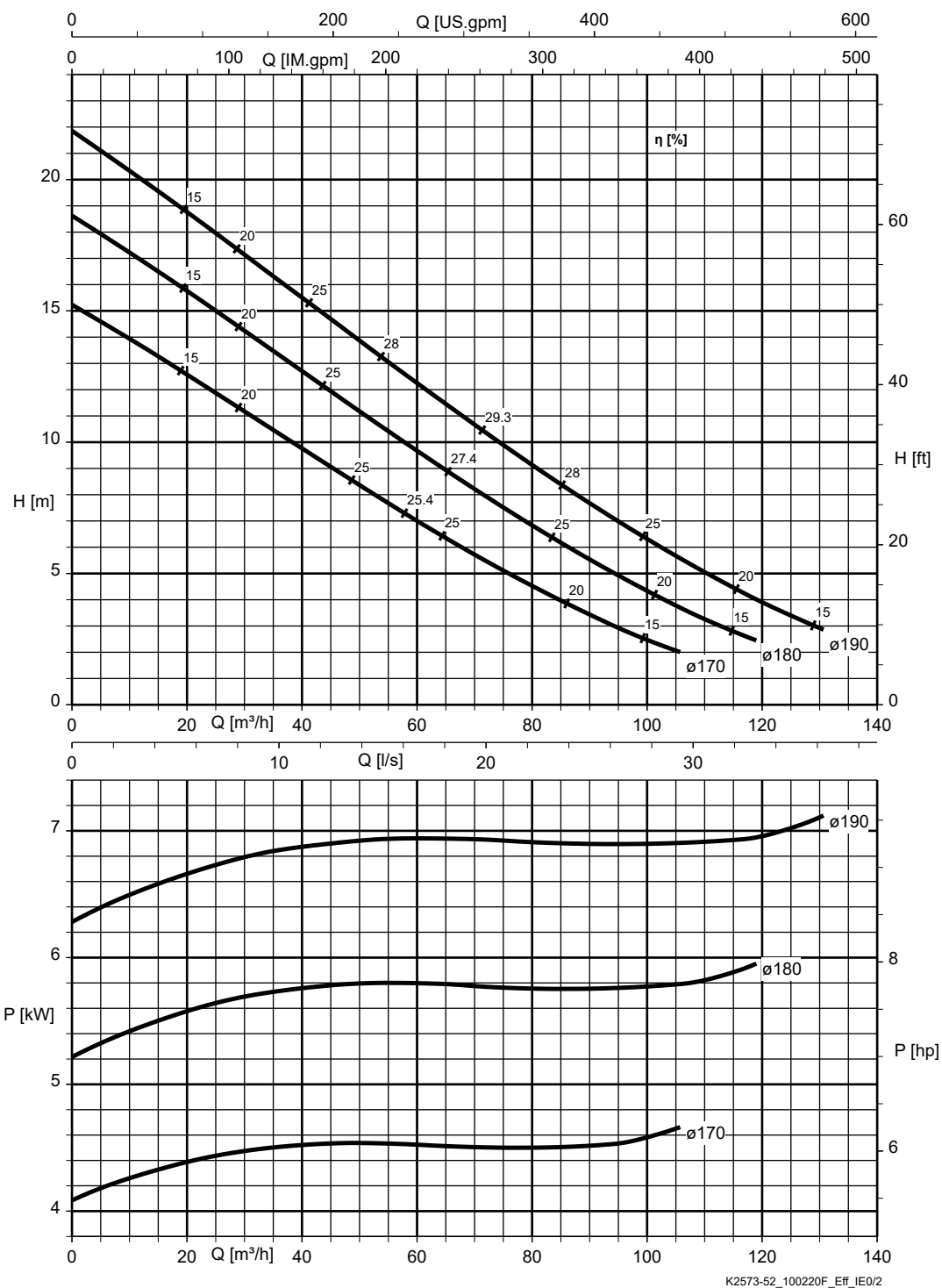
Table 41: Motor assignment⁷⁹⁾

Size ⁸⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F100-180/012C4	140	M	1,24	1,46	3,36	DOL
F100-180/021C4	140	L	2,10	2,47	5,14	DOL
F100-180/012C4	160	M	1,24	1,46	3,36	DOL
F100-180/021C4	160	L	2,10	2,47	5,14	DOL
F100-180/036C4	160	X	3,59	4,06	8,40	DOL / star-delta
F100-180/021C4	180	L	2,10	2,47	5,14	DOL
F100-180/036C4	180	X	3,59	4,06	8,40	DOL / star-delta
F100-180/021C4	190	L	2,10	2,47	5,14	DOL
F100-180/036C4	190	X	3,59	4,06	8,40	DOL / star-delta

⁷⁹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁸⁰⁾ C: motors to IE3, F: without

Amarex F-max 100-220, n = 2900 rpm (effective speed), without IE



Free passage = 100 mm

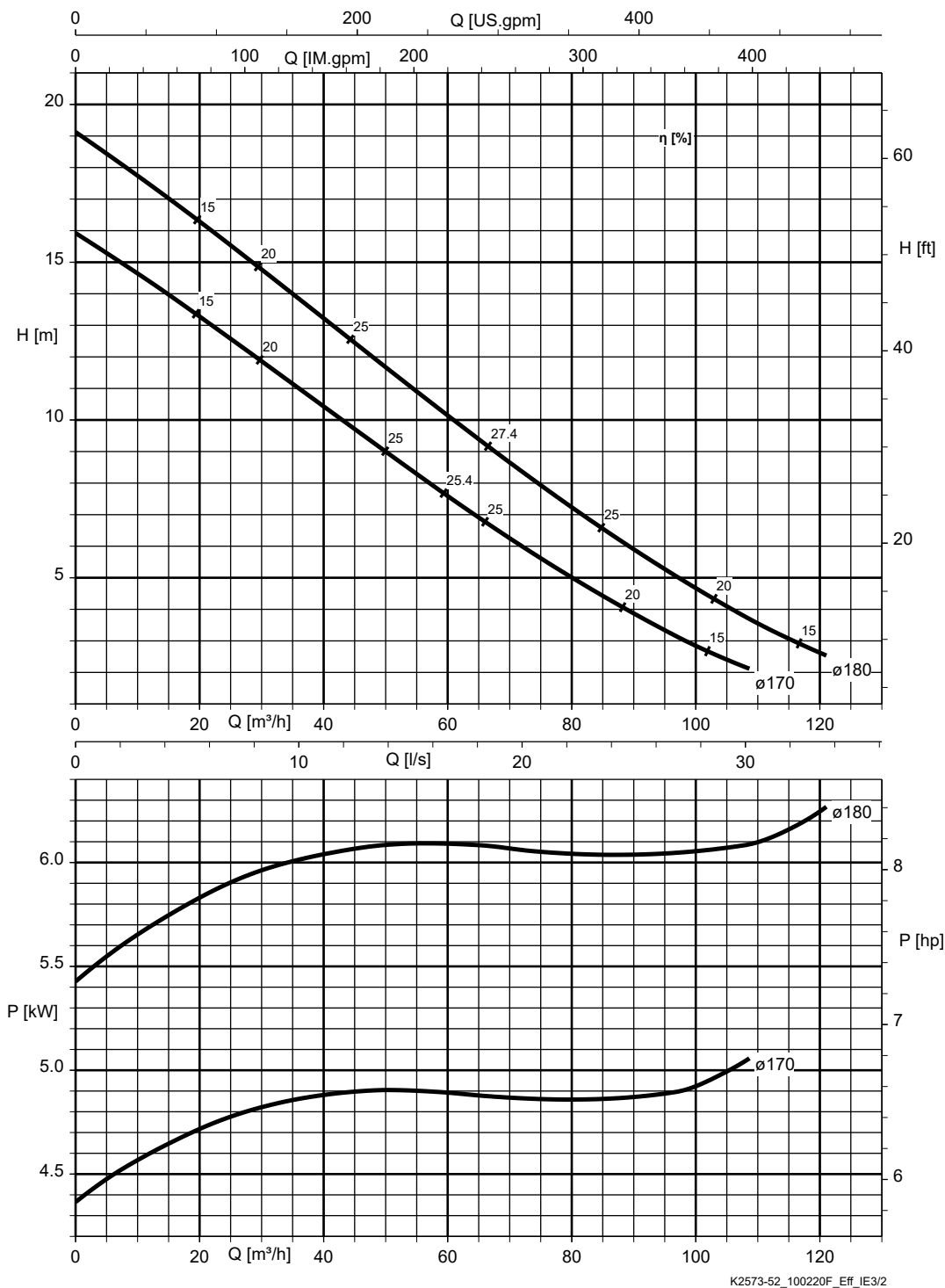
Table 42: Motor assignment⁸¹⁾

Size ⁸²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F100-220/049F2	170	L	4,90	5,83	9,85	DOL
F100-220/073F2	170	L	7,30	8,72	14,70	DOL / star-delta
F100-220/073F2	180	L	7,30	8,72	14,70	DOL / star-delta
F100-220/084F2	180	X	8,40	9,85	16,80	DOL / star-delta
F100-220/073F2	190	L	7,30	8,72	14,70	DOL / star-delta
F100-220/084F2	190	X	8,40	9,85	16,80	DOL / star-delta

⁸¹ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁸² C: motors to IE3, F: without

Amarex F-max 100-220, n = 2900 rpm (effective speed), IE3



Free passage = 100 mm

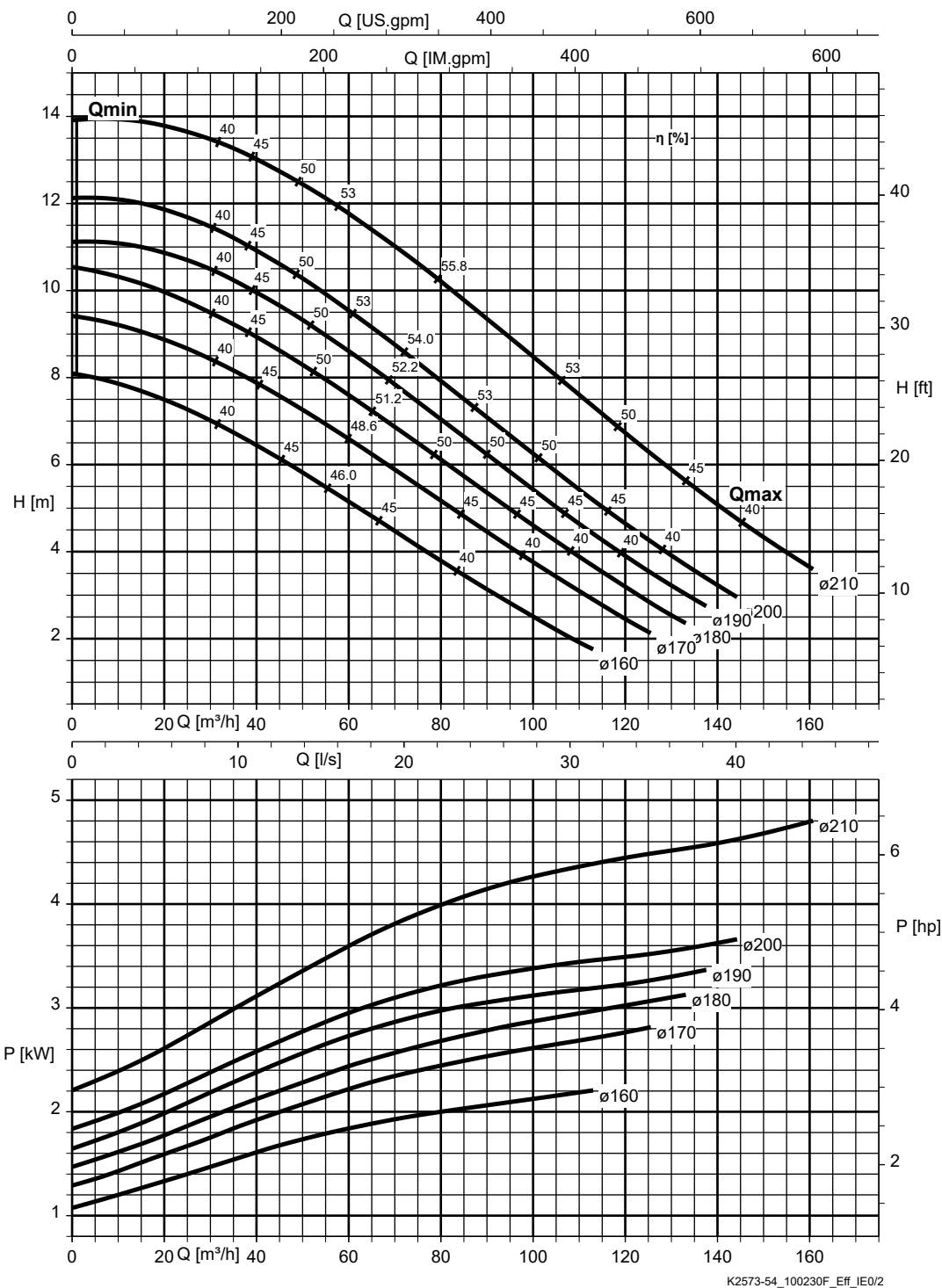
Table 43: Motor assignment⁸³⁾

Size ⁸⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F100-220/060C2	170	X	6,00	6,71	12,70	DOL / star-delta
F100-220/060C2	180	X	6,00	6,71	12,70	DOL / star-delta

⁸³ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁸⁴ C: motors to IE3, F: without

Amarex F-max 100-230, n = 1450 rpm (effective speed), without IE



Free passage = 100 mm

Table 44: Motor assignment⁸⁵⁾⁸⁶⁾

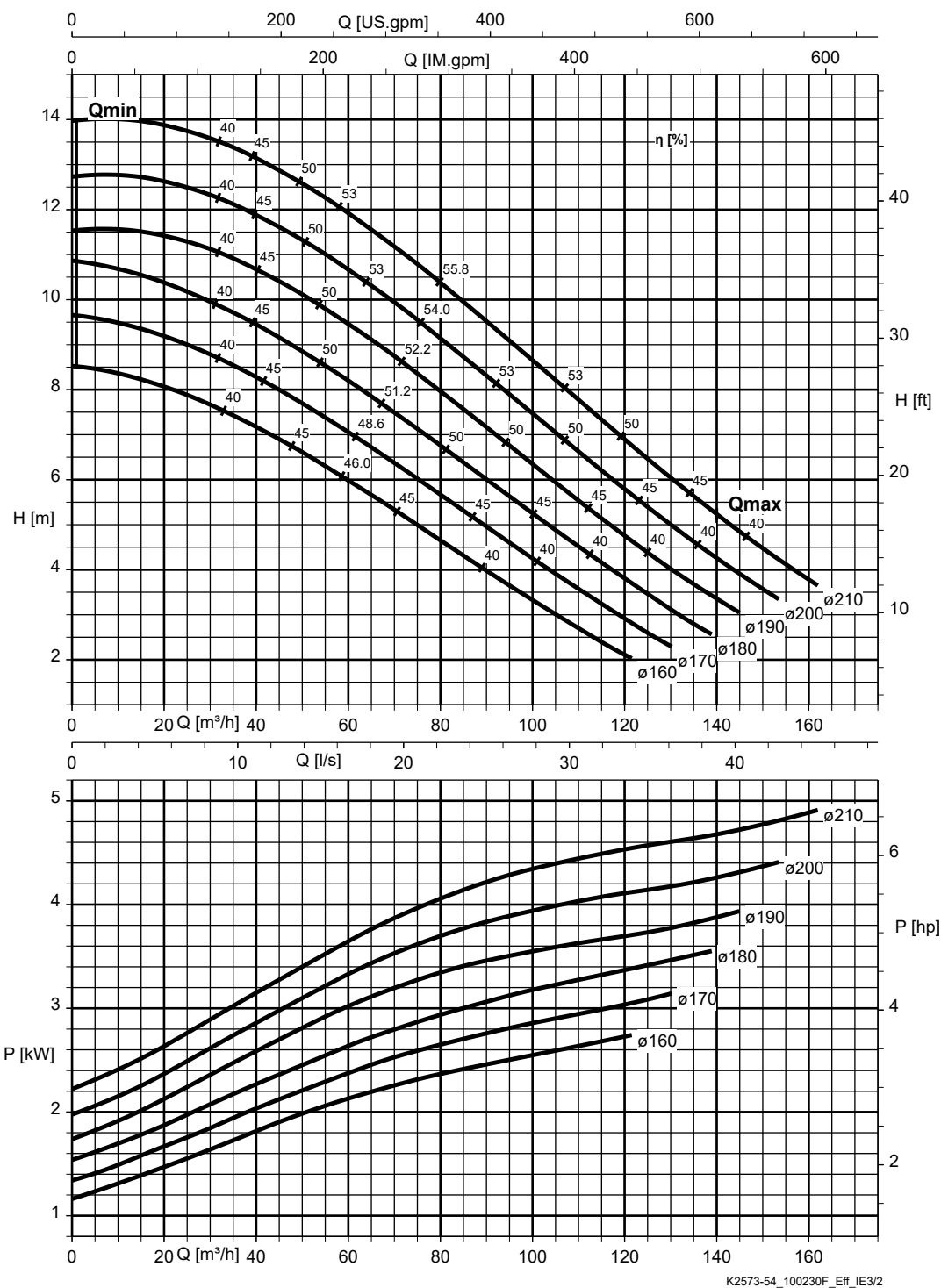
Size ⁸⁷⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F100-230/017F4	160	M	1,67	2,13	3,71	DOL
F100-230/023F4	160	M	2,30	2,98	5,15	DOL
F100-230/035F4	160	L	3,55	4,41	7,56	DOL
F100-230/023F4	170	M	2,30	2,98	5,15	DOL
F100-230/035F4	170	L	3,55	4,41	7,56	DOL
F100-230/023F4	180	M	2,30	2,98	5,15	DOL
F100-230/035F4	180	L	3,55	4,41	7,56	DOL
F100-230/039F4	180	L	3,90	5,01	9,91	DOL
F100-230/023F4	190	M	2,30	2,98	5,15	DOL
F100-230/035F4	190	L	3,55	4,41	7,56	DOL
F100-230/039F4	190	L	3,90	5,01	9,91	DOL
F100-230/035F4	200	L	3,55	4,41	7,56	DOL
F100-230/039F4	200	L	3,90	5,01	9,91	DOL
F100-230/065F4	200	X	6,50	7,89	13,40	DOL / star-delta
F100-230/035F4	210	L	3,55	4,41	7,56	DOL
F100-230/039F4	210	L	3,90	5,01	9,91	DOL
F100-230/065F4	210	X	6,50	7,89	13,40	DOL / star-delta

⁸⁵ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁸⁶ Q_{max} Applies to explosion-proof pump sets only.

⁸⁷ C: motors to IE3, F: without

Amarex F-max 100-230, n = 1450 rpm (effective speed), IE3



Free passage = 100 mm

Table 45: Motor assignment⁸⁸⁾⁸⁹⁾

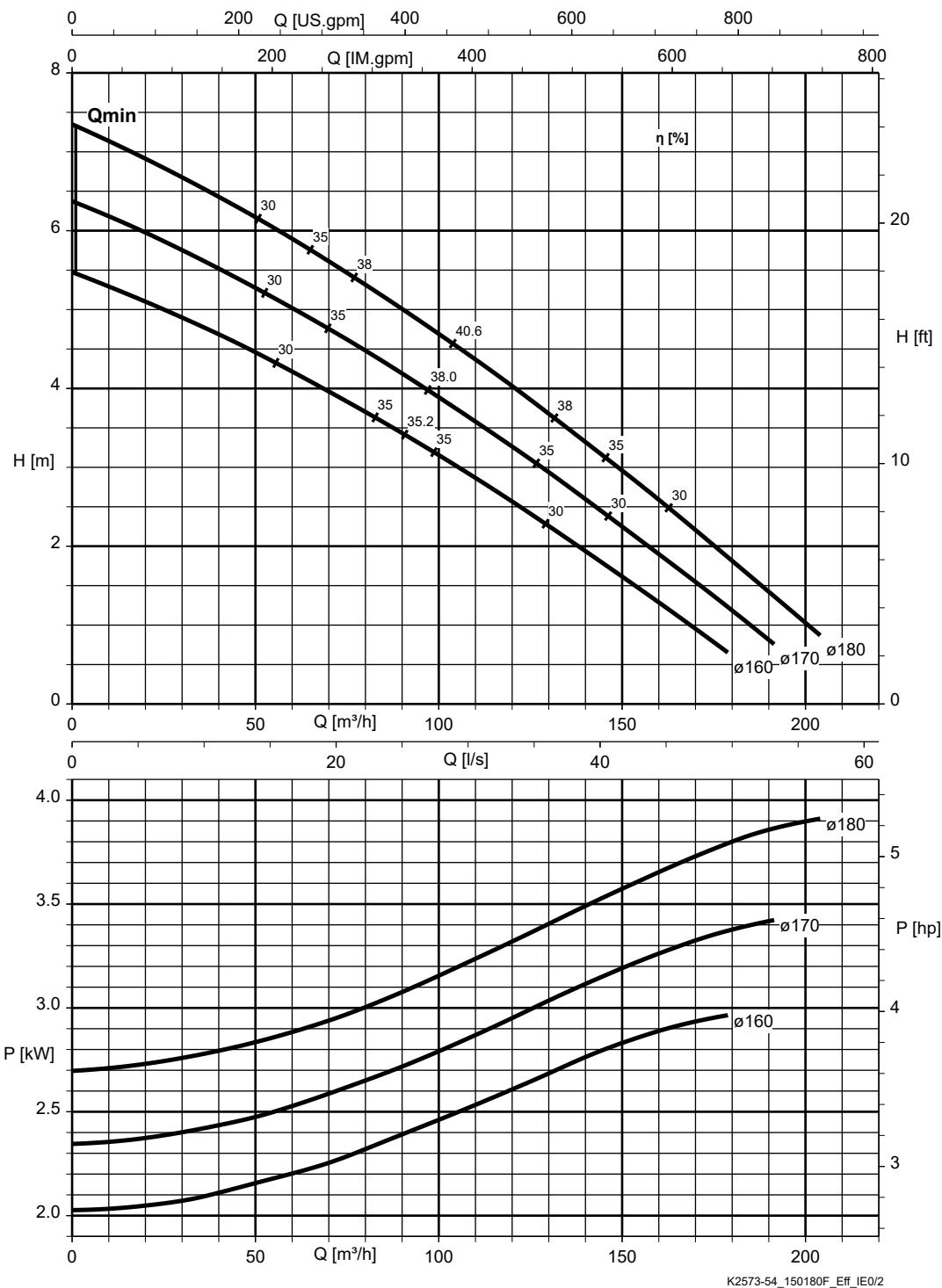
Size ⁹⁰⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F100-230/021C4	160	L	2,10	2,47	5,14	DOL
F100-230/036C4	160	X	3,59	4,06	8,40	DOL / star-delta
F100-230/045C4	160	X	4,48	5,04	10,70	DOL / star-delta
F100-230/036C4	170	X	3,59	4,06	8,40	DOL / star-delta
F100-230/045C4	170	X	4,48	5,04	10,70	DOL / star-delta
F100-230/036C4	180	X	3,59	4,06	8,40	DOL / star-delta
F100-230/045C4	180	X	4,48	5,04	10,70	DOL / star-delta
F100-230/036C4	190	X	3,59	4,06	8,40	DOL / star-delta
F100-230/045C4	190	X	4,48	5,04	10,70	DOL / star-delta
F100-230/045C4	200	X	4,48	5,04	10,70	DOL / star-delta
F100-230/045C4	210	X	4,48	5,04	10,70	DOL / star-delta

⁸⁸ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁸⁹ Q_{max} Applies to explosion-proof pump sets only.

⁹⁰ C: motors to IE3, F: without

Amarex F-max 150-180, n = 1450 rpm (effective speed), without IE



Free passage = 100 mm

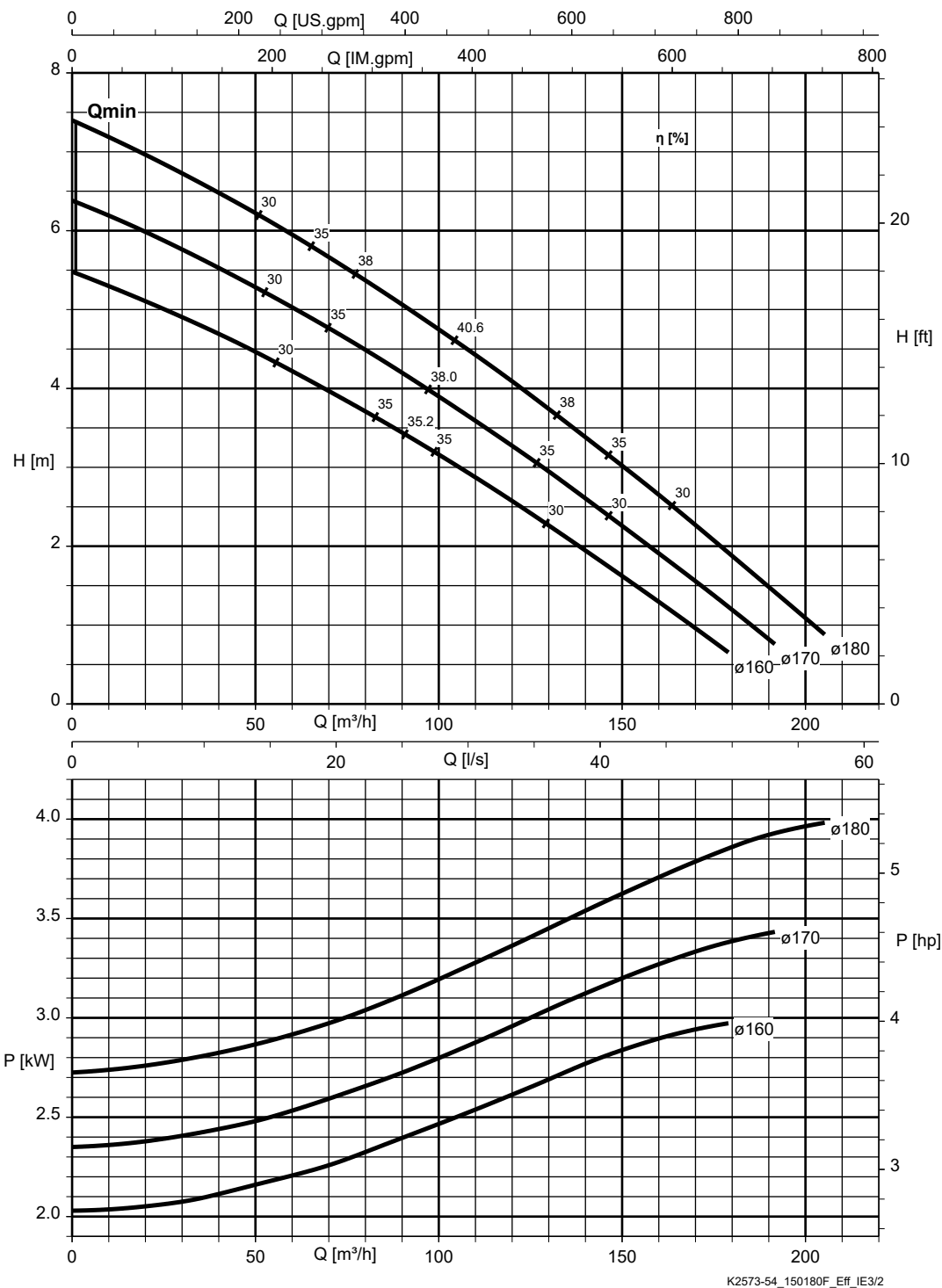
Table 46: Motor assignment⁹¹⁾

Size ⁹²⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F150-180/065F4	160	X	6,50	7,89	13,40	DOL / star-delta
F150-180/077F4	160	X	7,70	9,20	15,90	DOL / star-delta
F150-180/065F4	170	X	6,50	7,89	13,40	DOL / star-delta
F150-180/077F4	170	X	7,70	9,20	15,90	DOL / star-delta
F150-180/065F4	180	X	6,50	7,89	13,40	DOL / star-delta
F150-180/077F4	180	X	7,70	9,20	15,90	DOL / star-delta

⁹¹⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁹²⁾ C: motors to IE3, F: without

Amarex F-max 150-180, n = 1450 rpm (effective speed), IE3



Free passage = 100 mm

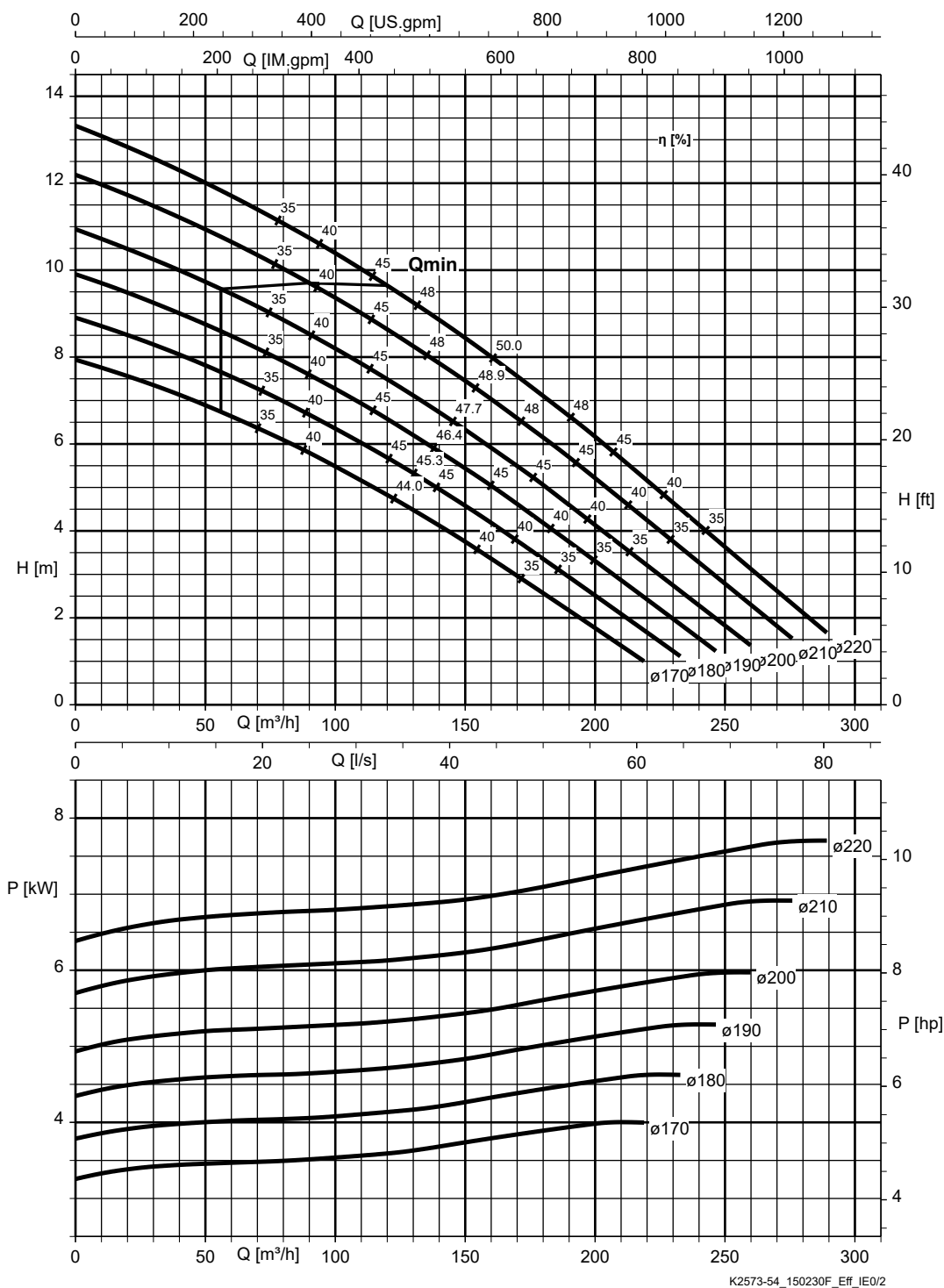
Table 47: Motor assignment⁹³⁾

Size ⁹⁴⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F150-180/036C4	160	X	3,59	4,06	8,40	DOL / star-delta
F150-180/045C4	160	X	4,48	5,04	10,70	DOL / star-delta
F150-180/036C4	170	X	3,59	4,06	8,40	DOL / star-delta
F150-180/045C4	170	X	4,48	5,04	10,70	DOL / star-delta
F150-180/045C4	180	X	4,48	5,04	10,70	DOL / star-delta

⁹³ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁹⁴ C: motors to IE3, F: without

Amarex F-max 150-230, n = 1450 rpm (effective speed), without IE



Free passage = 100 mm

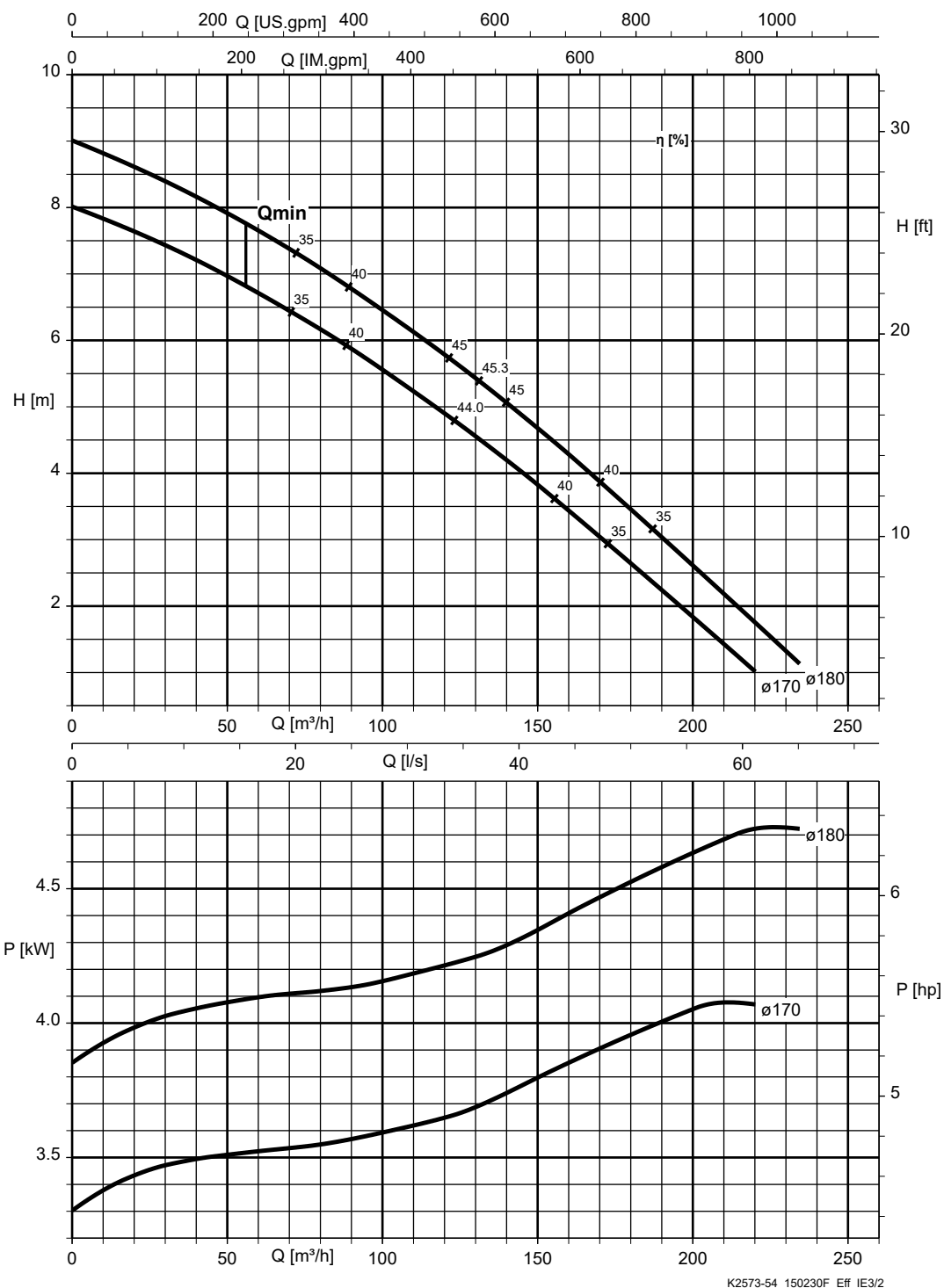
Table 48: Motor assignment⁹⁵⁾

Size ⁹⁶⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]	[A]	
F150-230/065F4	170	X	6,50	7,89	13,40	DOL / star-delta
F150-230/077F4	170	X	7,70	9,20	15,90	DOL / star-delta
F150-230/065F4	180	X	6,50	7,89	13,40	DOL / star-delta
F150-230/077F4	180	X	7,70	9,20	15,90	DOL / star-delta
F150-230/065F4	190	X	6,50	7,89	13,40	DOL / star-delta
F150-230/077F4	190	X	7,70	9,20	15,90	DOL / star-delta
F150-230/065F4	200	X	6,50	7,89	13,40	DOL / star-delta
F150-230/077F4	200	X	7,70	9,20	15,90	DOL / star-delta
F150-230/065F4	210	X	6,50	7,89	13,40	DOL / star-delta
F150-230/077F4	210	X	7,70	9,20	15,90	DOL / star-delta
F150-230/077F4	220	X	7,70	9,20	15,90	DOL / star-delta

⁹⁵⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁹⁶⁾ C: motors to IE3, F: without

Amarex F-max 150-230, n = 1450 rpm (effective speed), IE3



Free passage = 100 mm

Table 49: Motor assignment⁹⁷⁾

Size ⁹⁸⁾	Impeller diameter	Motor size	P ₂	P ₁	I _N	Starting method
	[mm]		[kW]	[kW]		
F150-230/045C4	170	X	4,48	5,04	10,70	DOL / star-delta
F150-230/045C4	180	X	4,48	5,04	10,70	DOL / star-delta

⁹⁷⁾ Only characteristic curves are shown that are completely covered by the motor. Other versions can be selected in the sales configurator.

⁹⁸⁾ C: motors to IE3, F: without



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