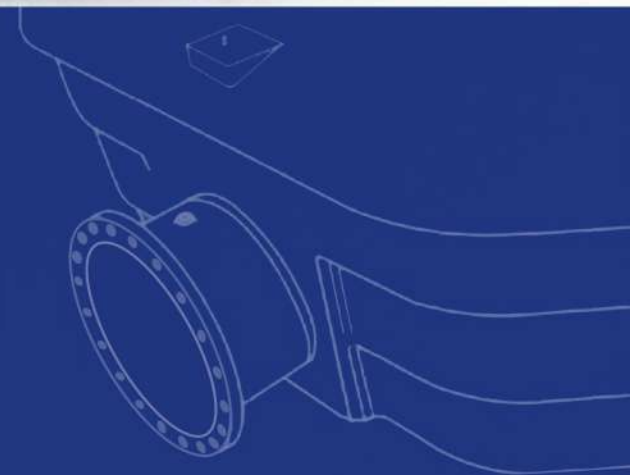


MOTOBOMBAS

RIO DO SUL



Linha Radial Simples
Linha Semi Axial Simples
Linha Semi Axial Dupla



MOTOBOMBAS

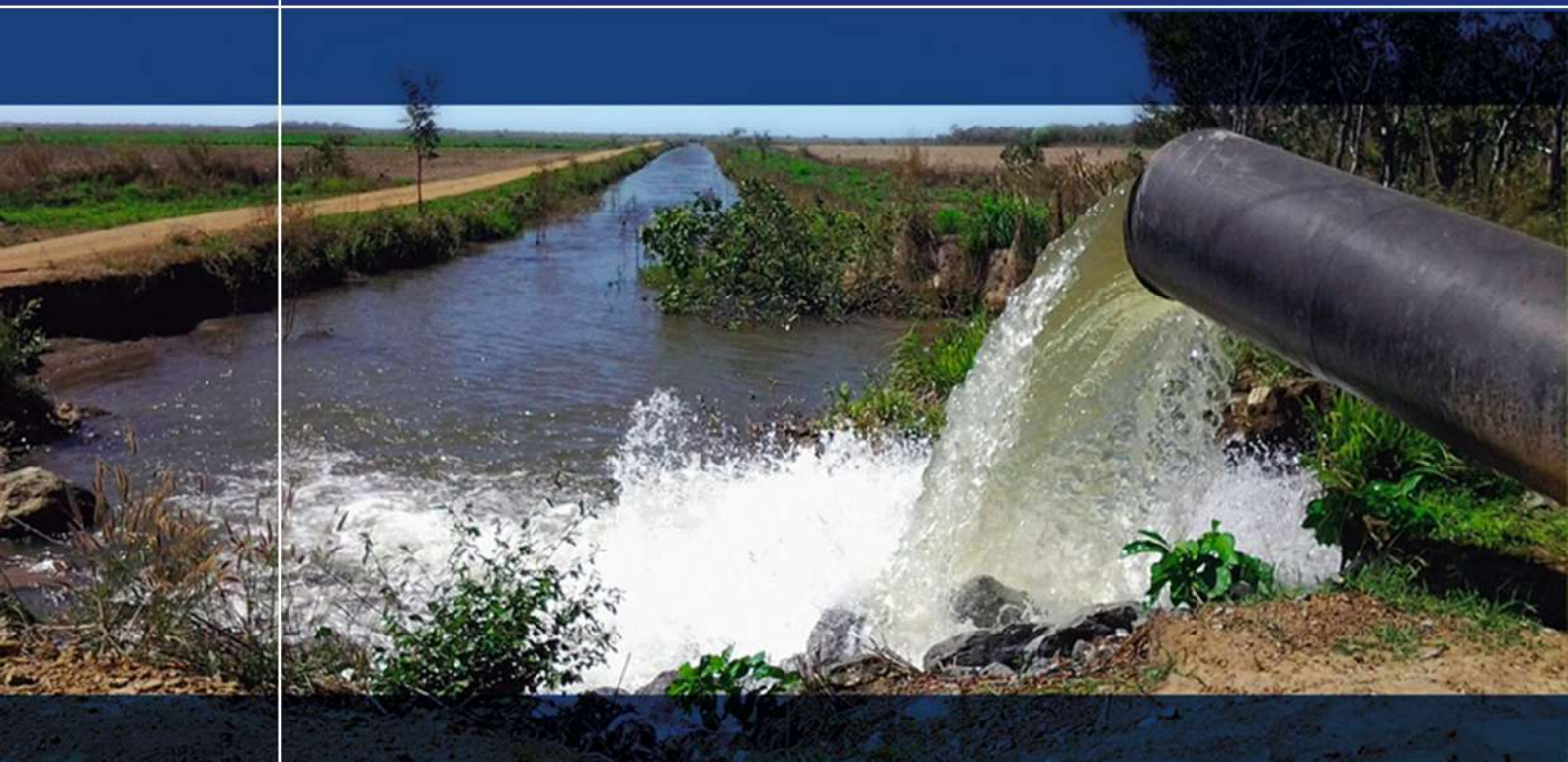
RIO DO SUL



3ª edição - junho 2023

MOTOBOMBAS

RIO DO SUL



MOTOBOMBAS RIO DO SUL, fundada em 10 de Março de 1994 com seu modelo de excelência empresarial em todos os seus negócios, está determinada a, continuamente, gerar valores aos seus colaboradores, clientes e para a sociedade.

Para conduzir as operações dentro de um modelo de desenvolvimento sustentável, assegurando a adequada utilização de recursos naturais e a prevenção da poluição; estar em conformidade com a legislação; promover ambientes de trabalho limpos organizados e saudáveis; manter uma comunicação aberta com a sociedade como parte do objetivo de melhoria contínua do desempenho ambiental.



MELHORIA DE PROCESSOS E SINERGIA.

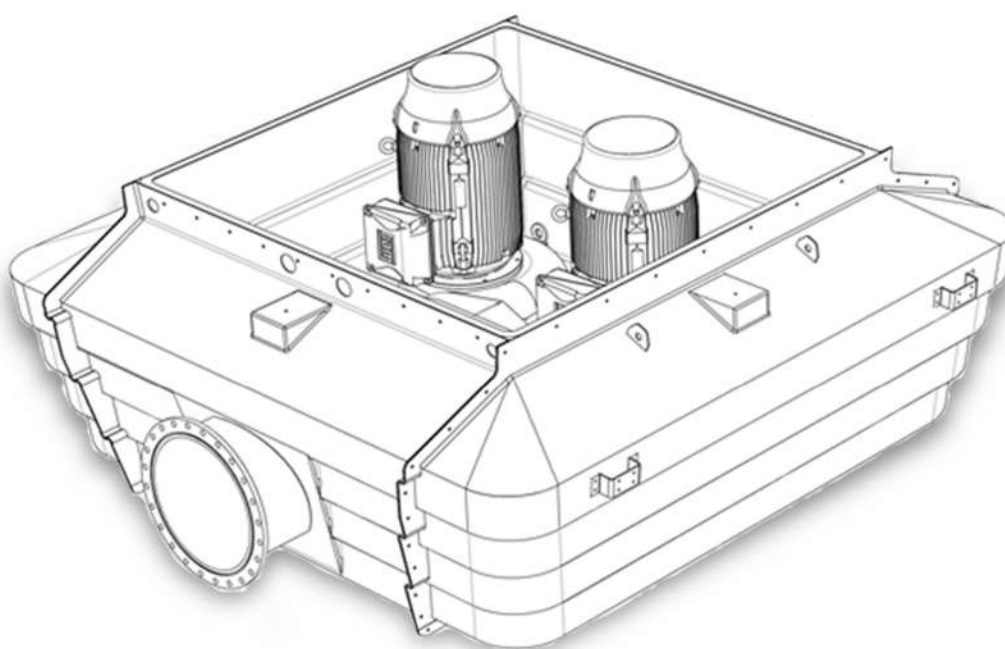
Aprimoramento dos processos de fabricação e atendimento aos objetivos estabelecidos e orientados para a geração de valor agregado, velocidade nas ações conduzidas pelo sistema de gestão eficaz. Utilizar e promover fortemente a sinergia entre seus colaboradores para compartilhar conhecimento e recursos.



MOTOBOMBAS

RIO DO SUL

INFORMAÇÕES TÉCNICAS



**“Um novo conceito em
bombeamento”**

INFORMAÇÕES TÉCNICAS

Aplicação

As Motobombas centrífugas Flutuantes **Rio do Sul** modelo **AFG** foram especialmente projetadas para aplicação nos diversos processos de bombeamento.

Fabricadas em materiais de alta tecnologia específicos para cada tipo de aplicação.

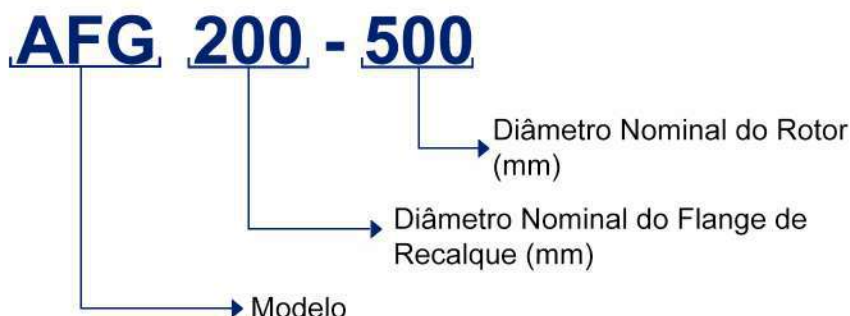
São recomendadas para o bombeamento de água, limpa, bruta ou salgada, para os principais setores:

- Saneamento
- Indústria
- Mineração
- Drenagem
- Irrigação

Descrição geral

Horizontal, simples estágio. Sucção vertical e descarga horizontal, o projeto "back-pull-out" permite a manutenção e serviços de reparo pela parte traseira, sem desconectar do flutuante.

Denominação:



Fórmula para Alteração de Diâmetro de Rotor

$$\text{Vazão} = Q1 = Q0 \times \frac{D1}{D0}$$

$$\text{Altura manométrica} = H1 = H0 \times \left[\frac{D1}{D0} \right]^2$$

$$\text{Pôtença} = N1 = N0 \times \left[\frac{D1}{D0} \right]^3$$

Onde:

Q0= Vazão inicial, em m³/h;

H0= Pressão inicial, em m.c.a;

N0= Pôtença inicial, em cv;

D0= Diâmetro original, em mm;

Q1= Vazão final, em m³/h;

H1= Pressão final, em m.c.a;

N1= Pôtença final, em cv;

D1= Diâmetro alterado, em mm.



Um novo conceito em
Bombeamento

LINHA RADIAL

www.motobombasflutuantes.com.br

SIMPLES

A **Motobomba Flutuante** com patente nº 7901776, foi desenvolvida para recalque de água, seja limpa, bruta ou salgada, utilizadas no saneamento, indústria, mineração e agricultura.

MOTOBOMBAS

RIO DO SUL

MOTOBOMBAS

RIO DO SUL



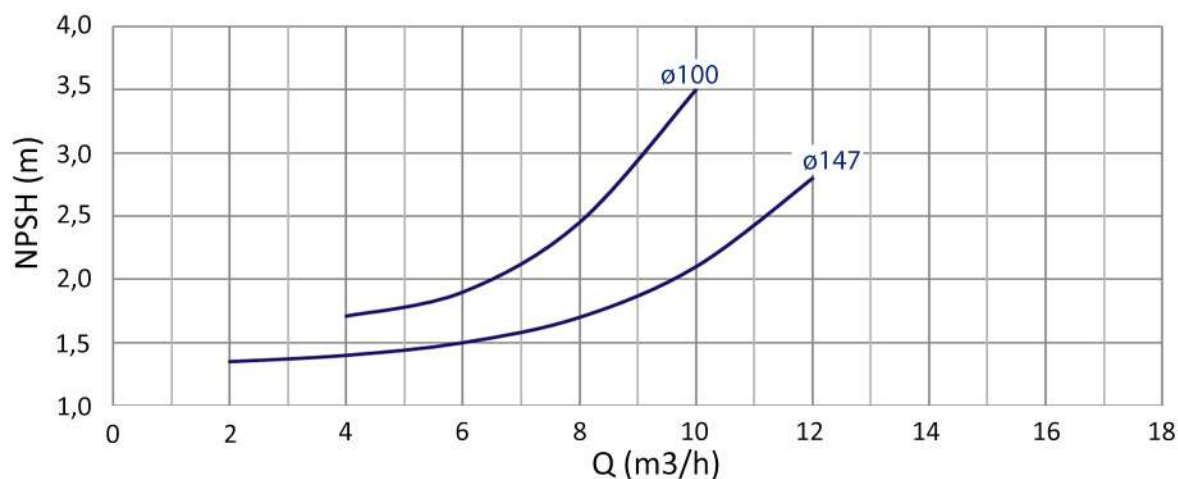
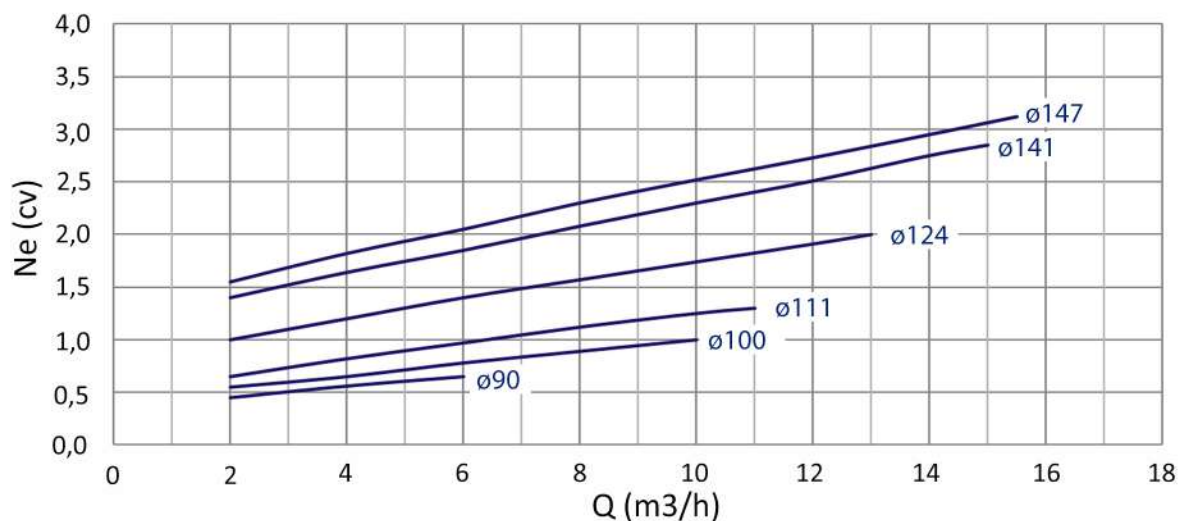
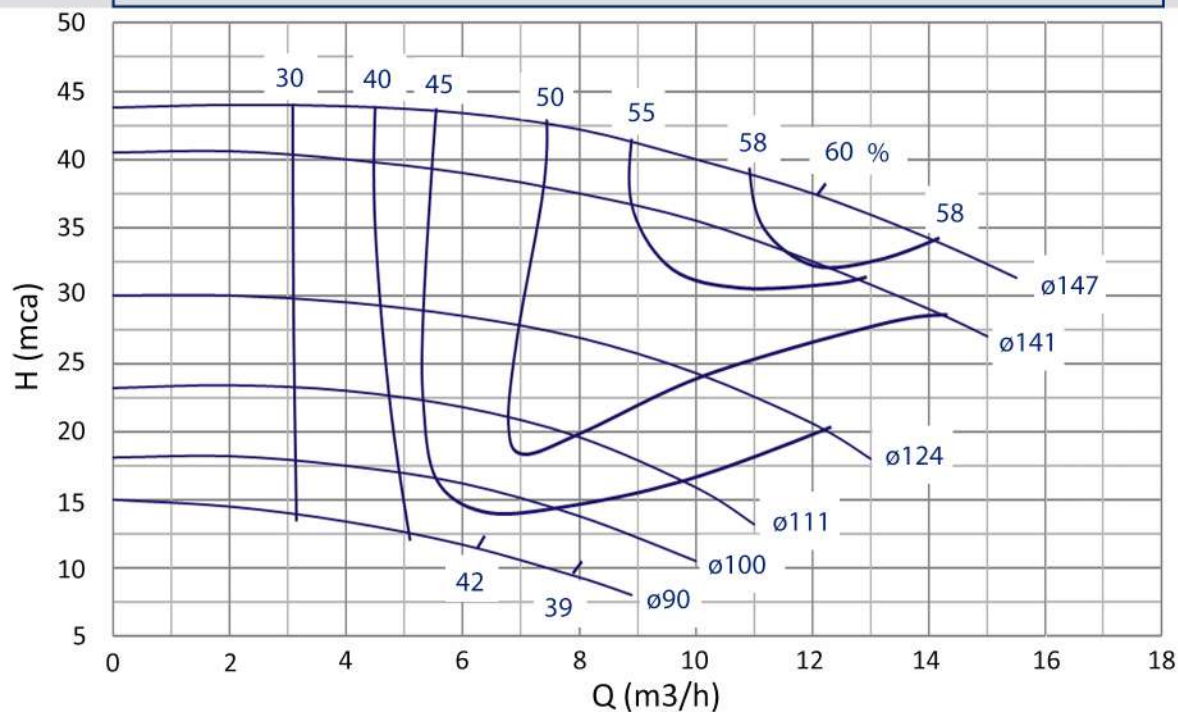
Conjunto Motobomba flutuante
Bomba em ferro fundido, bronze ou inox.
Flutuador em "fiberglass" totalmente vedado.
Acoplamento monobloco sistema "back pull out".
Eixo do motor especial, aço SAE1045 ou SAE4140.
Vedação do eixo: Selo mecânico
Motor Elétrico



Potência de 2 a 500 CV.
Vazão de 2,5 a 445 L/s ou
vazão de 10m³/h até 1800m³/h.
Altura manométrica de 2 a 140 mca.

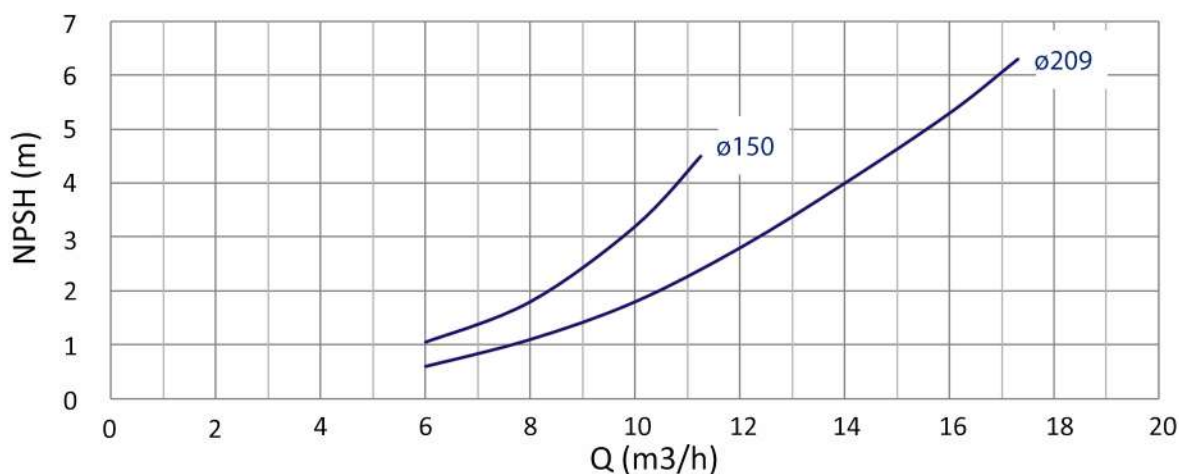
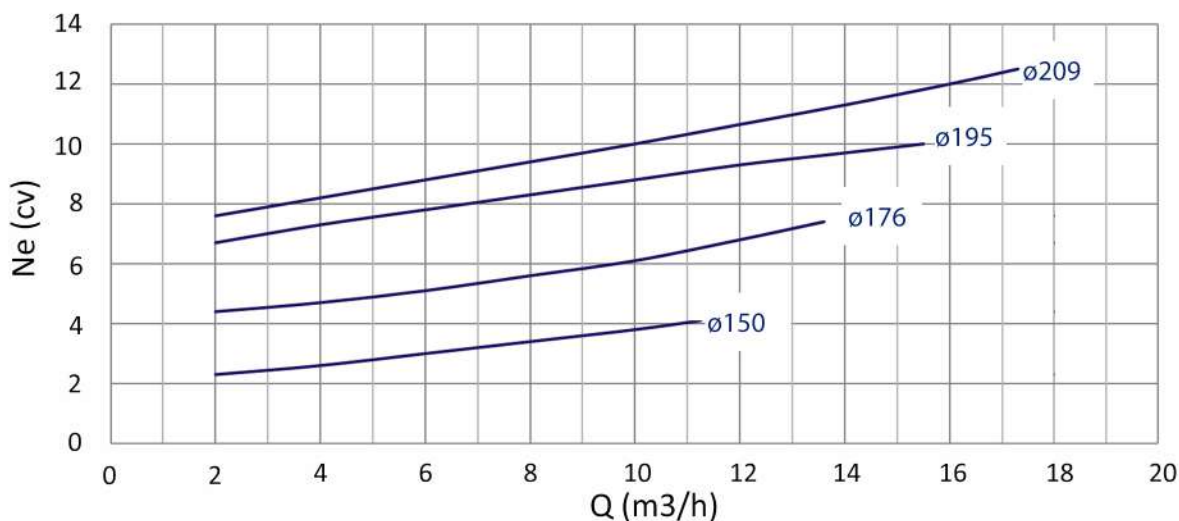
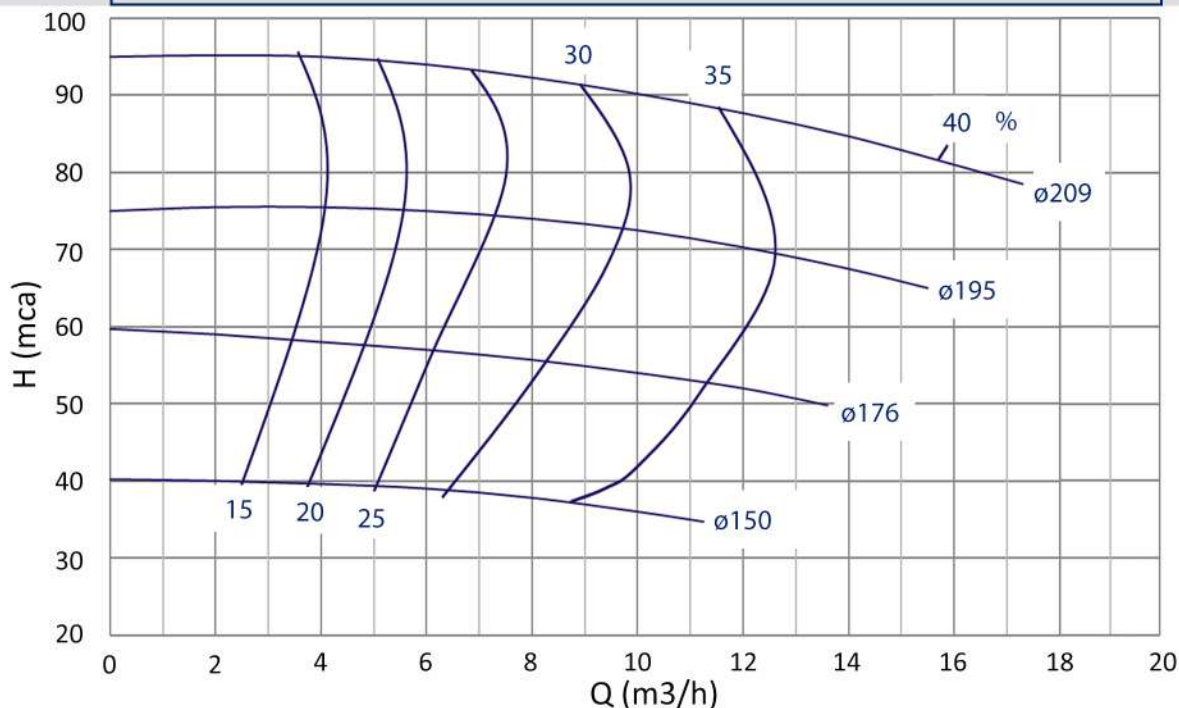
AFG NormBloc Flutuantes Radial

SUCÇÃO 40	CURVA	3600 rpm
RECALQUE 25	Nº 10009101	60 Hz 2 P



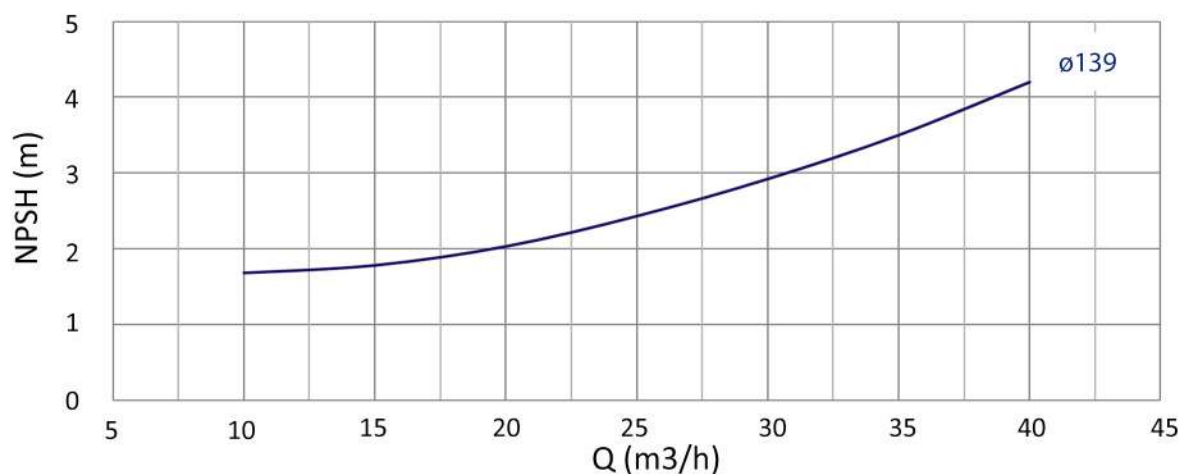
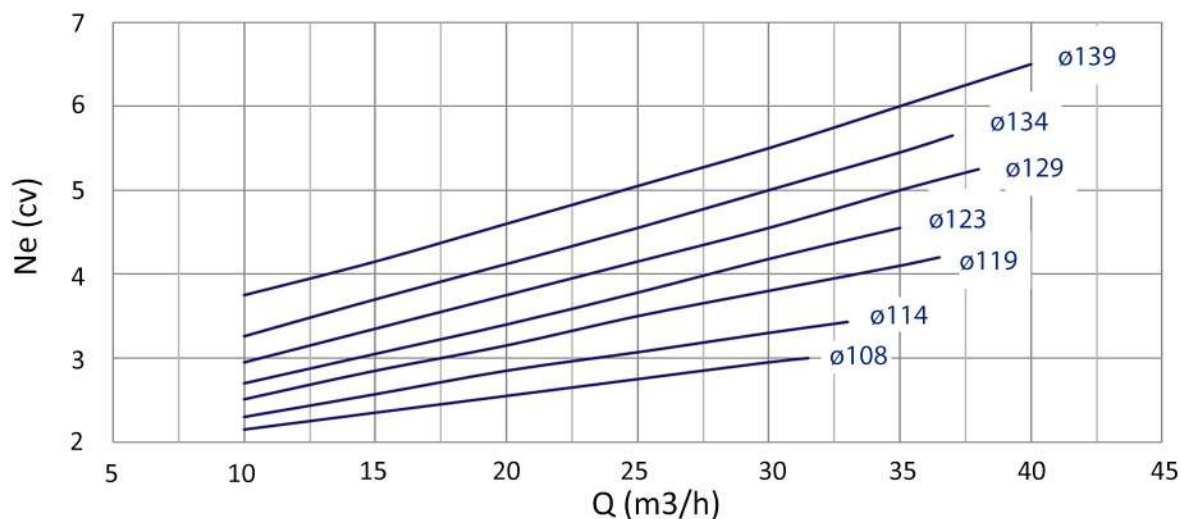
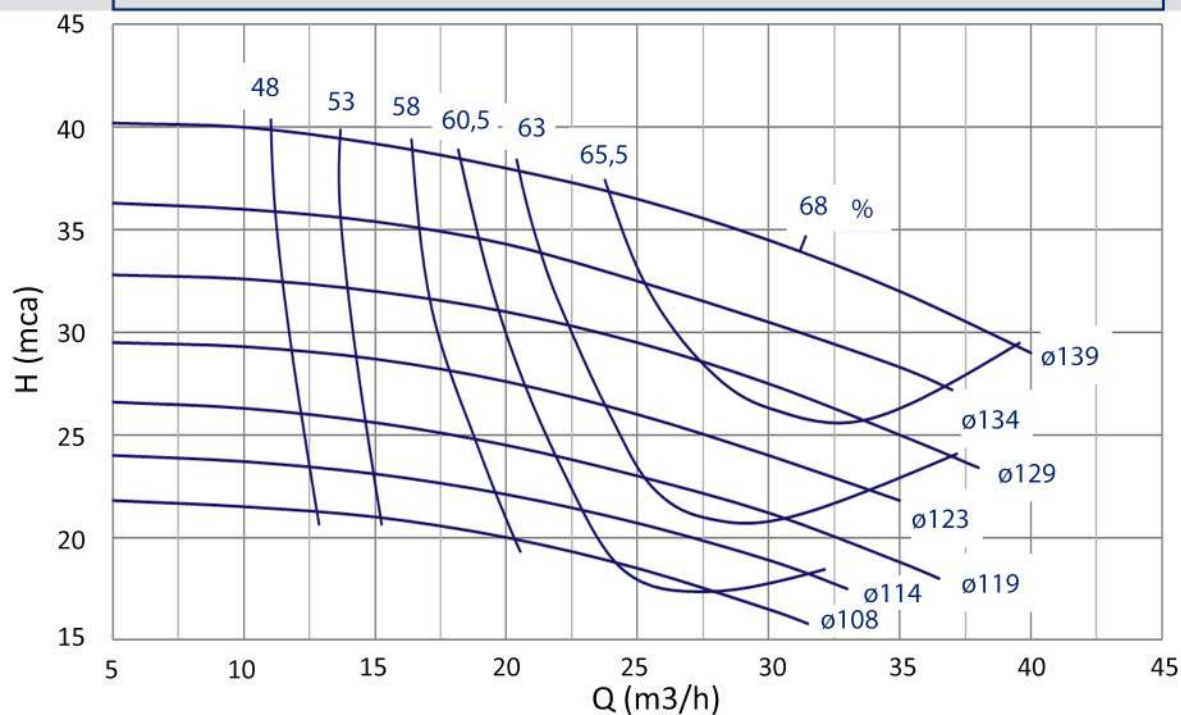
AFG NormBloc Flutuantes Radial

SUCÇÃO 40	CURVA	3600 rpm
RECALQUE 25	Nº 10009202	60 Hz 2 P



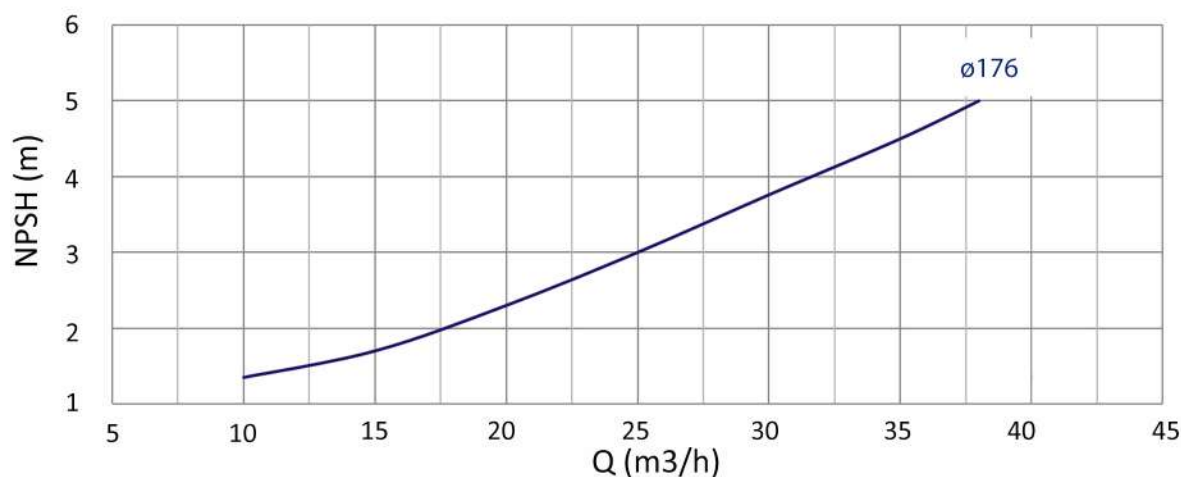
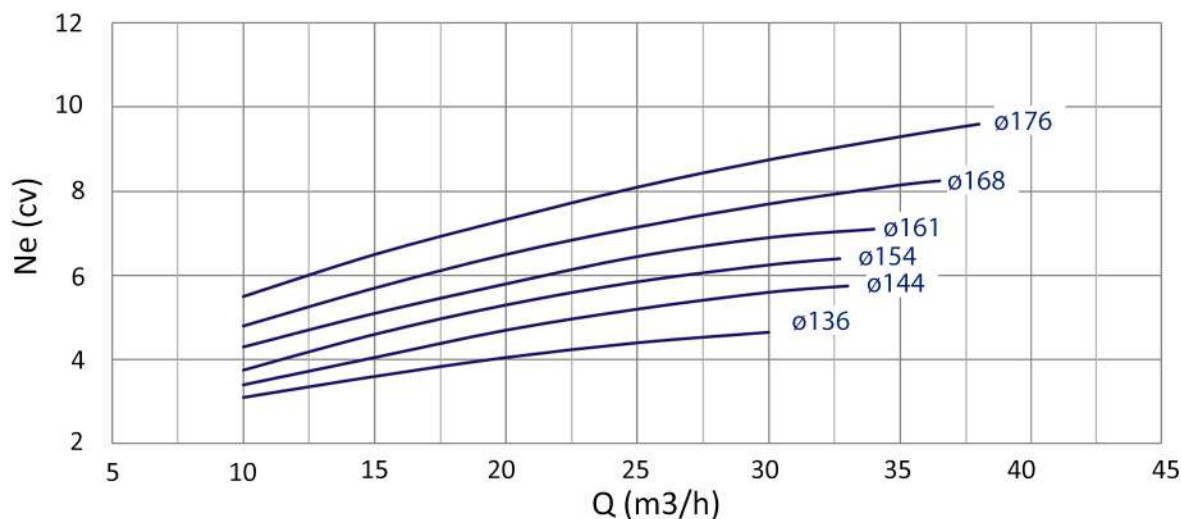
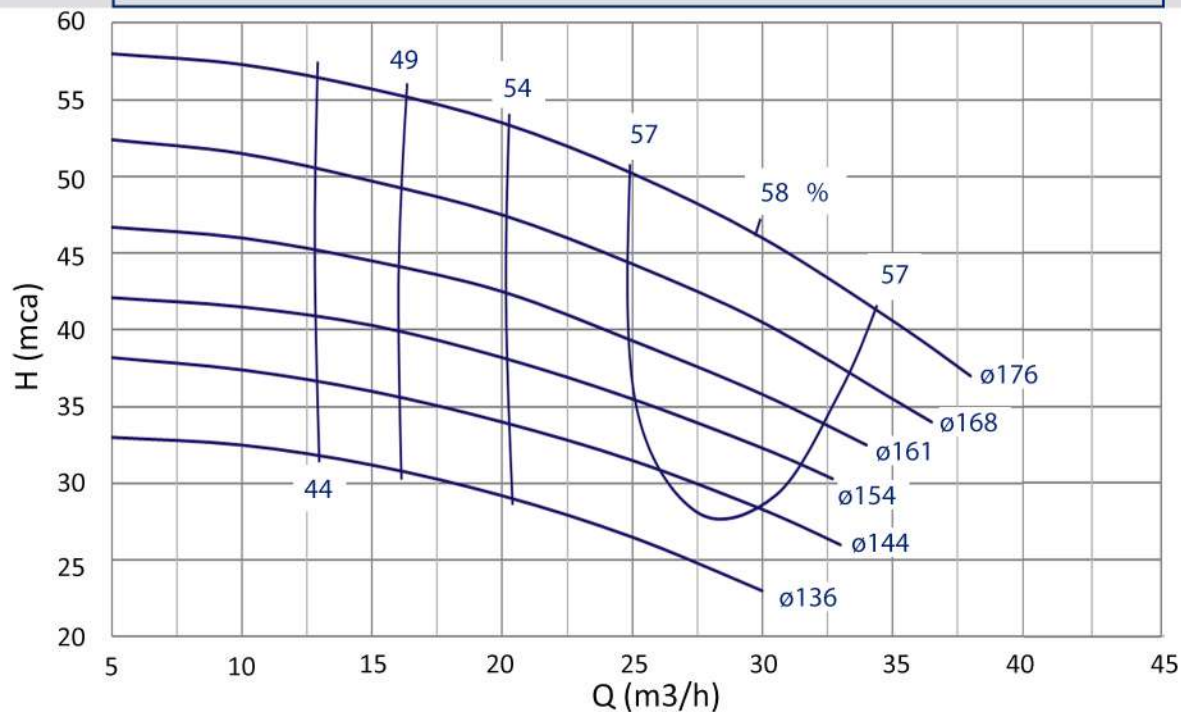
AFG NormBloc Flutuantes Radial

SUCÇÃO 50	CURVA	3600 rpm
RECALQUE 32	Nº 10009302	60 Hz 2 P



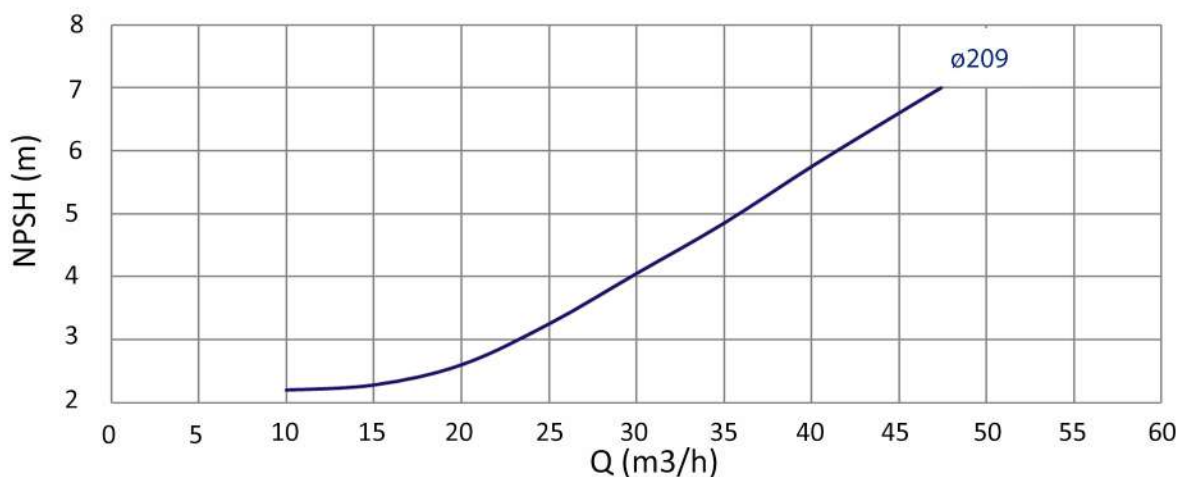
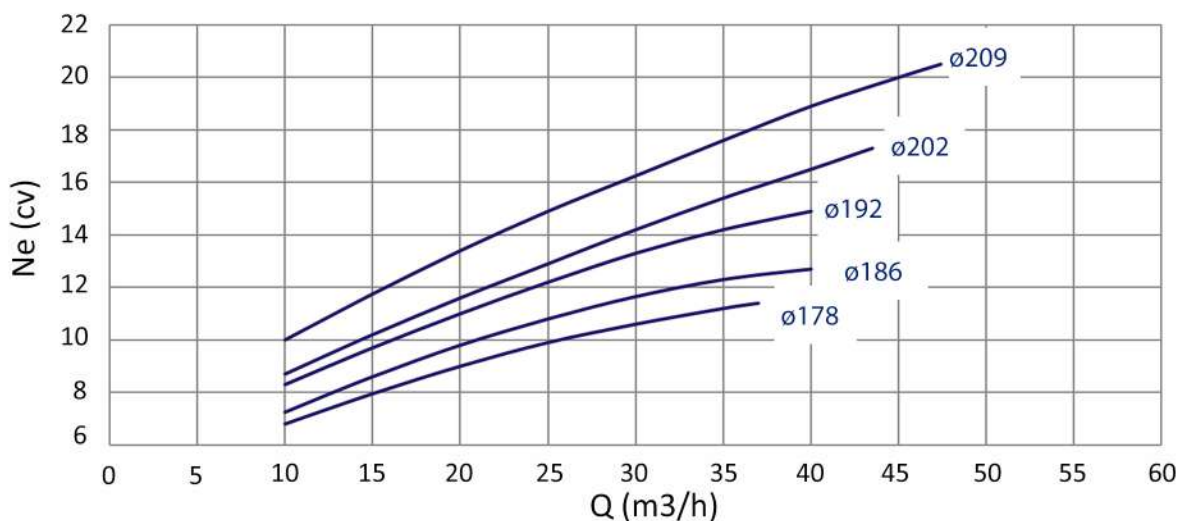
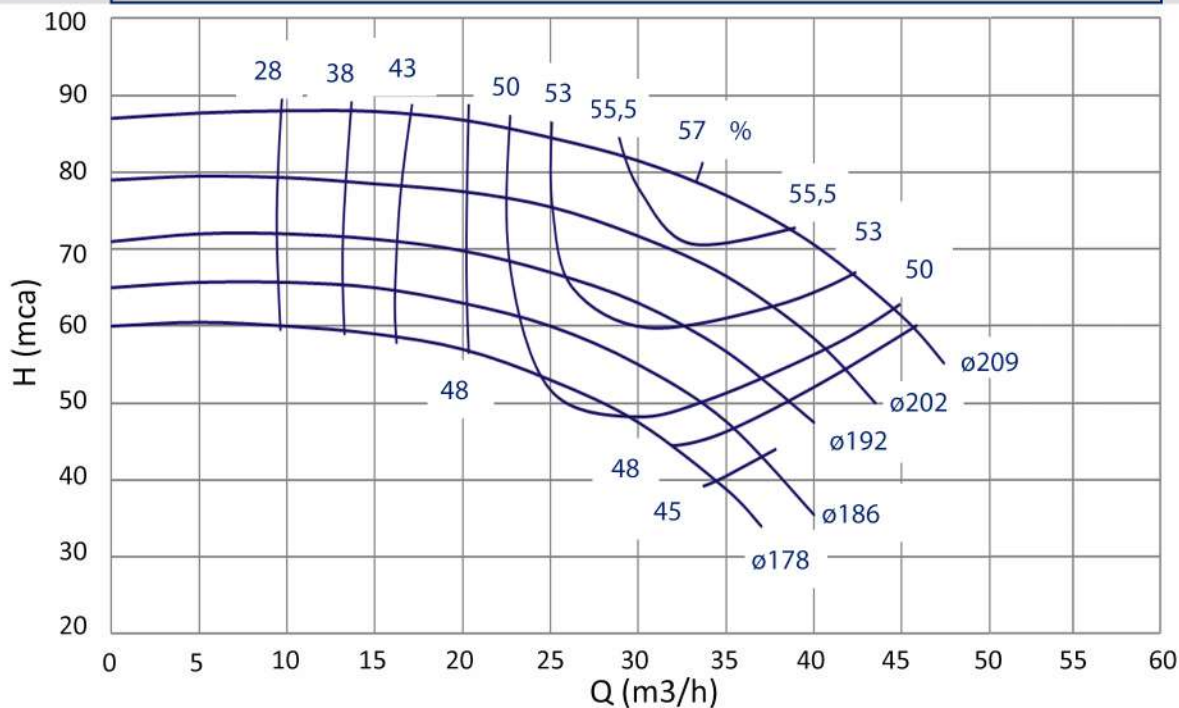
AFG NormBloc Flutuantes Radial

SUCÇÃO 50	CURVA	3600 rpm
RECALQUE 32	Nº 10009402	60 Hz 2 P



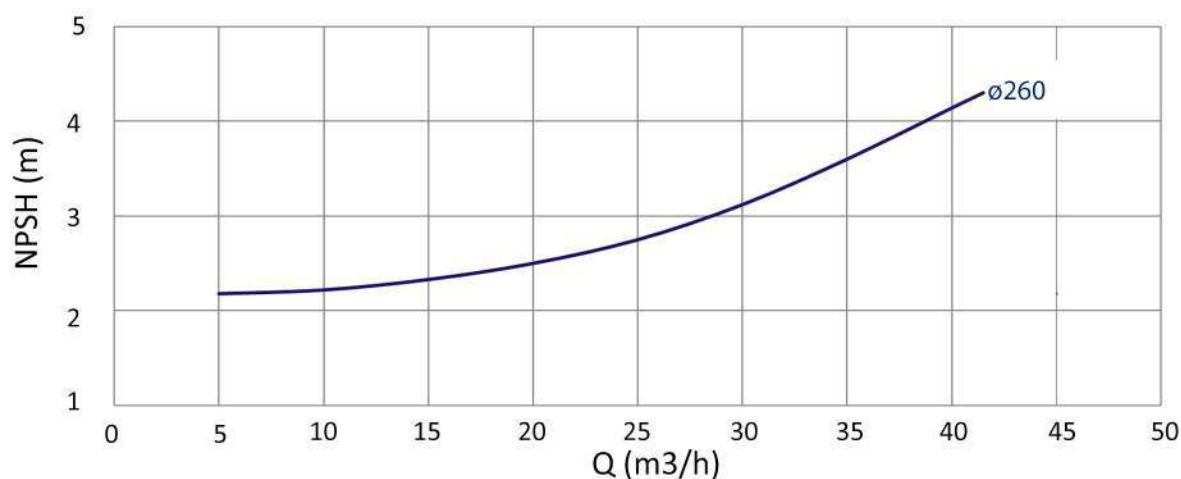
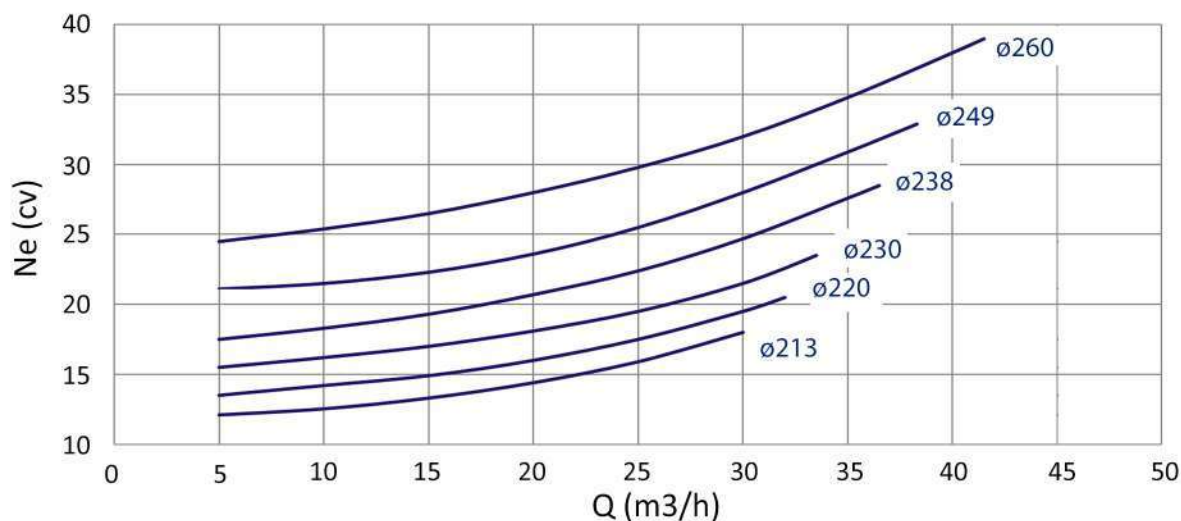
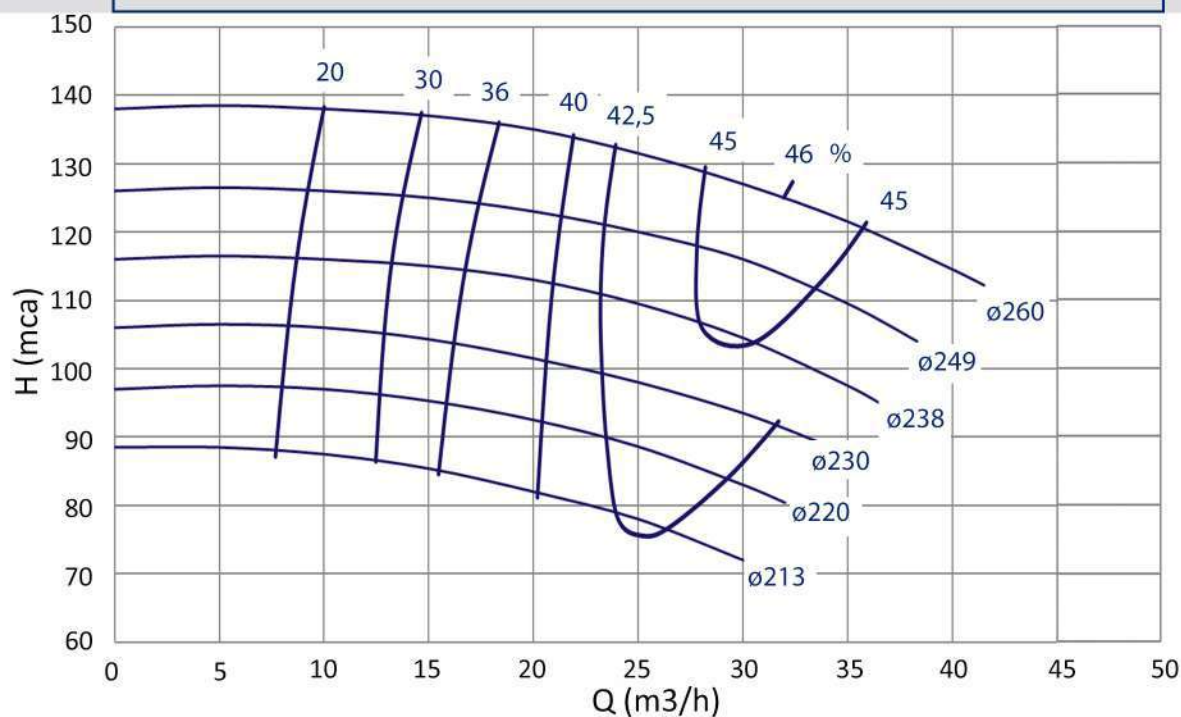
AFG NormBloc Flutuantes Radial

SUCÇÃO 50	CURVA	3600 rpm
RECALQUE 32	Nº 10009502	60 Hz 2 P



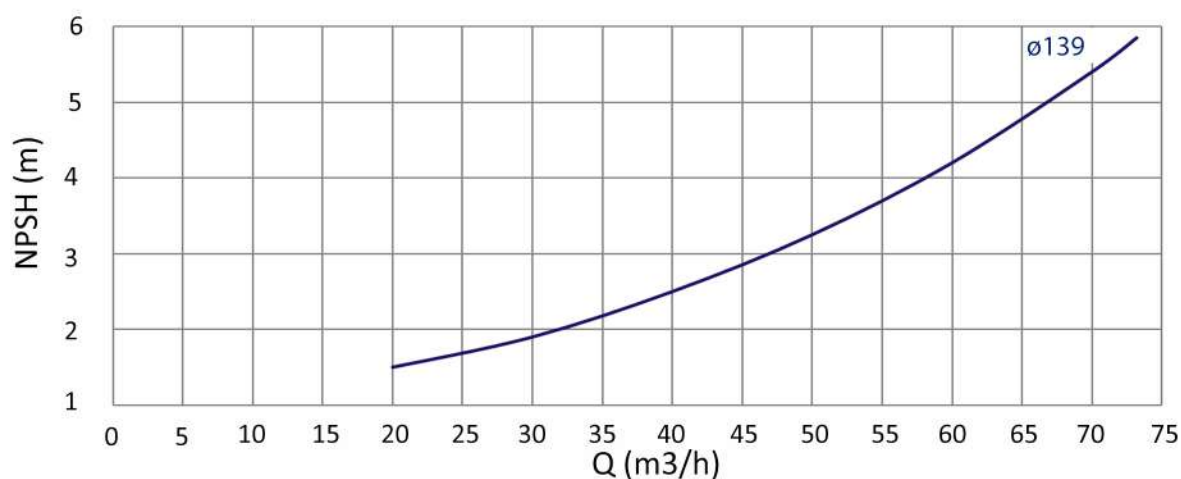
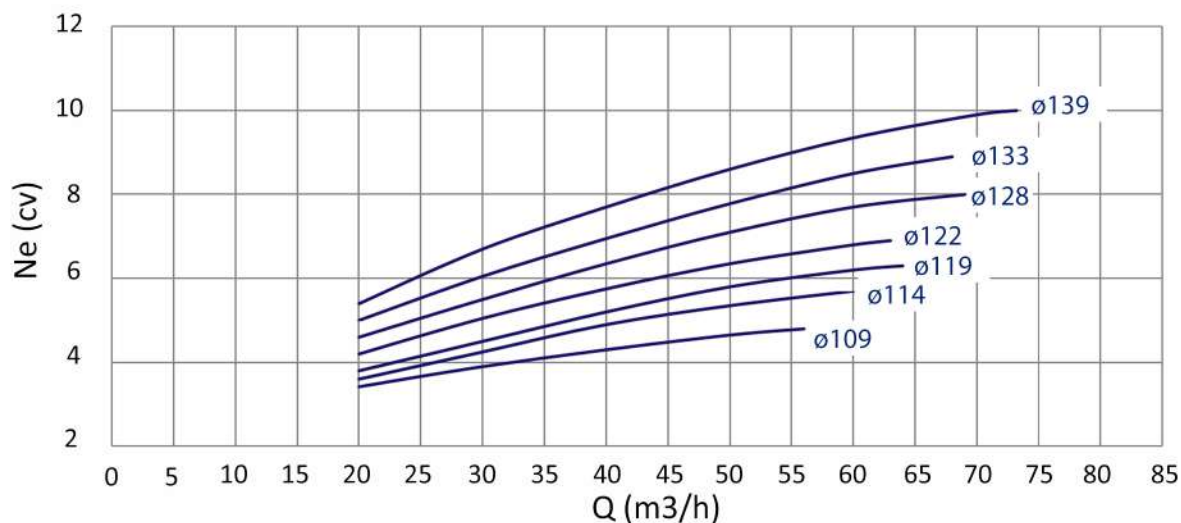
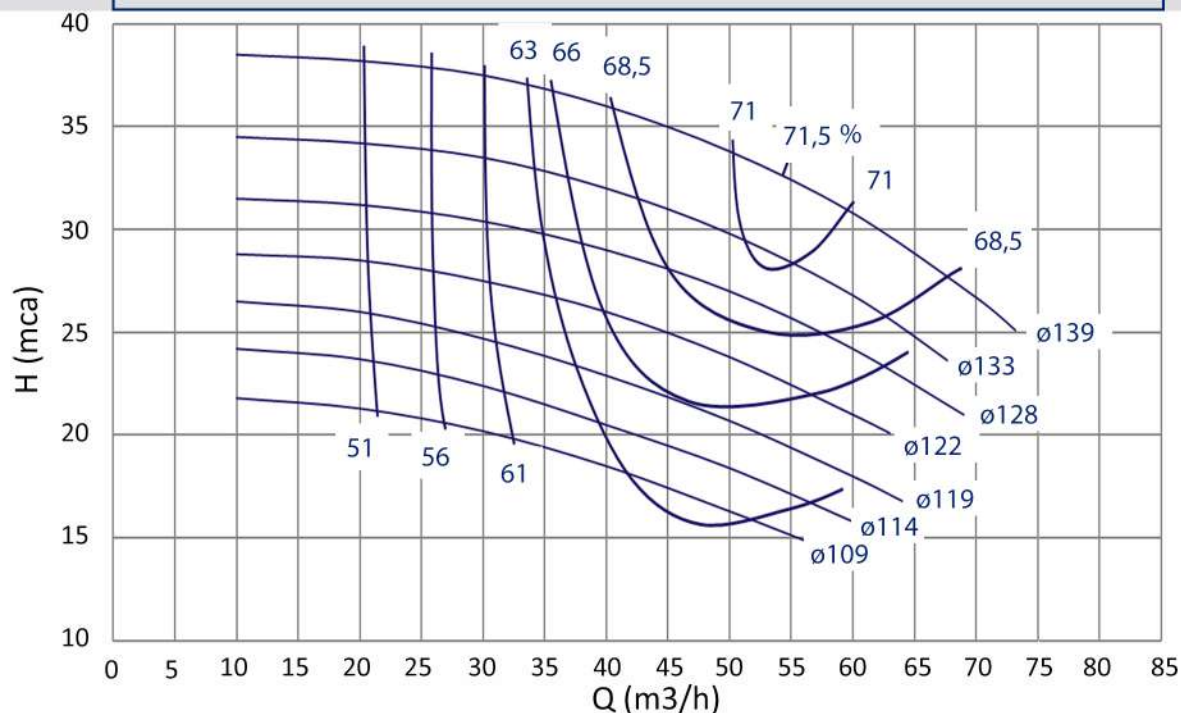
AFG NormBloc Flutuantes Radial

SUCÇÃO 50	CURVA	3600 rpm
RECALQUE 32	Nº 10009602	60 Hz 2 P



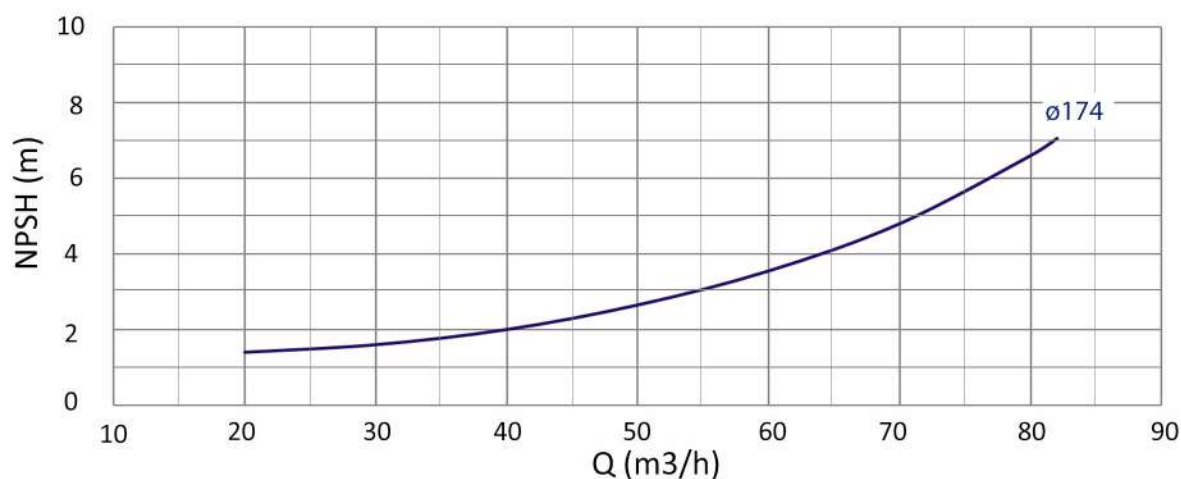
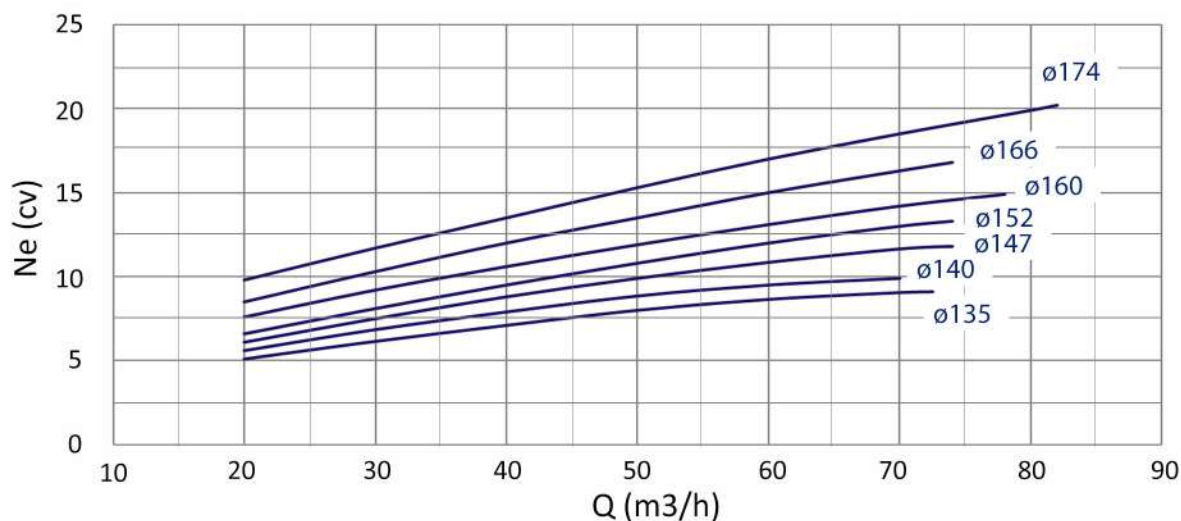
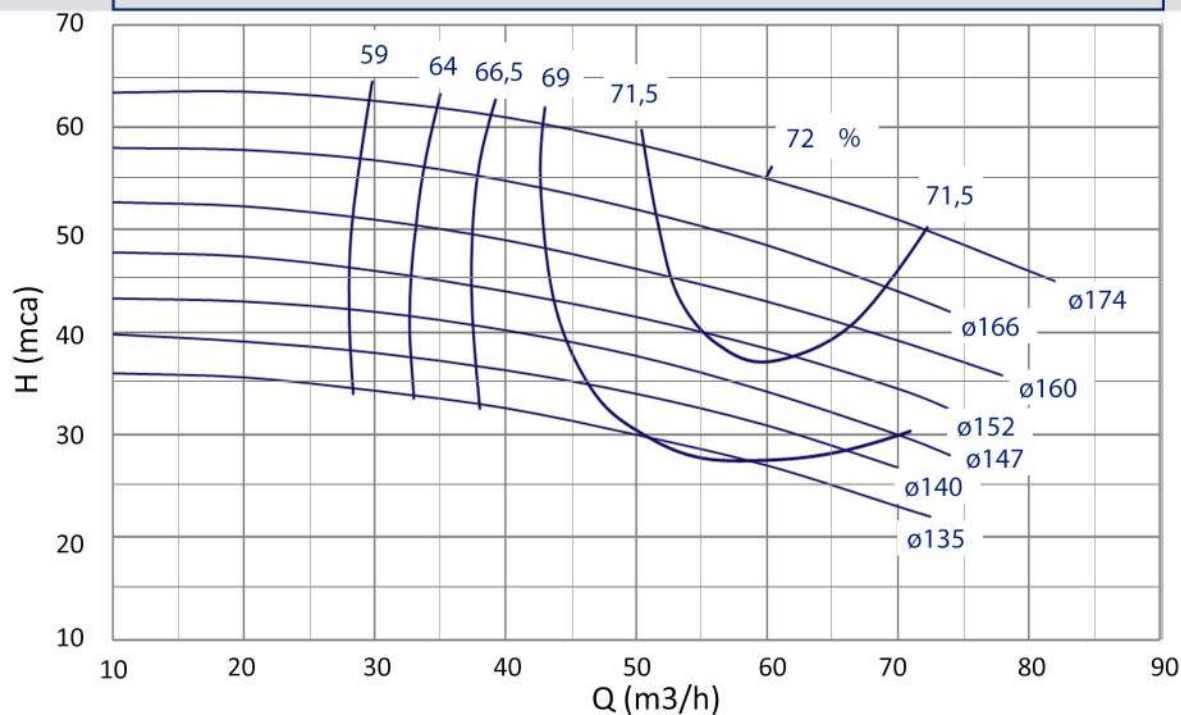
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	3600 rpm
RECALQUE 40	Nº 10010001	60 Hz 2 P



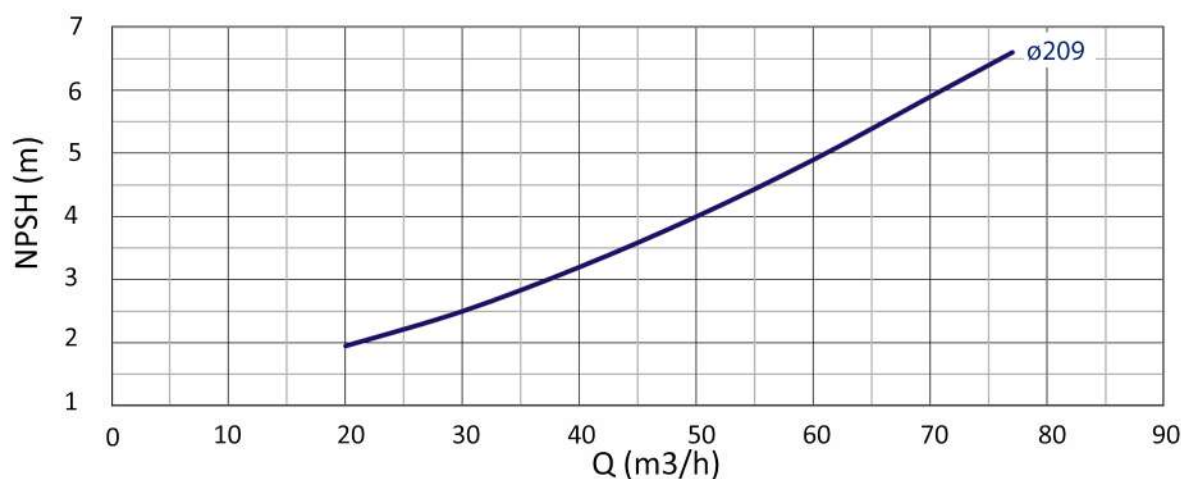
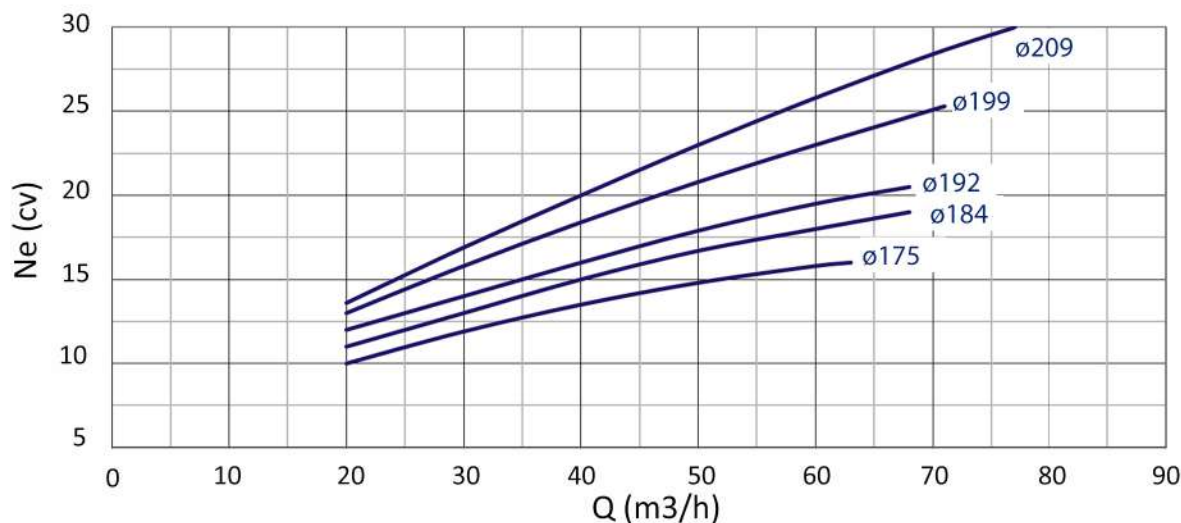
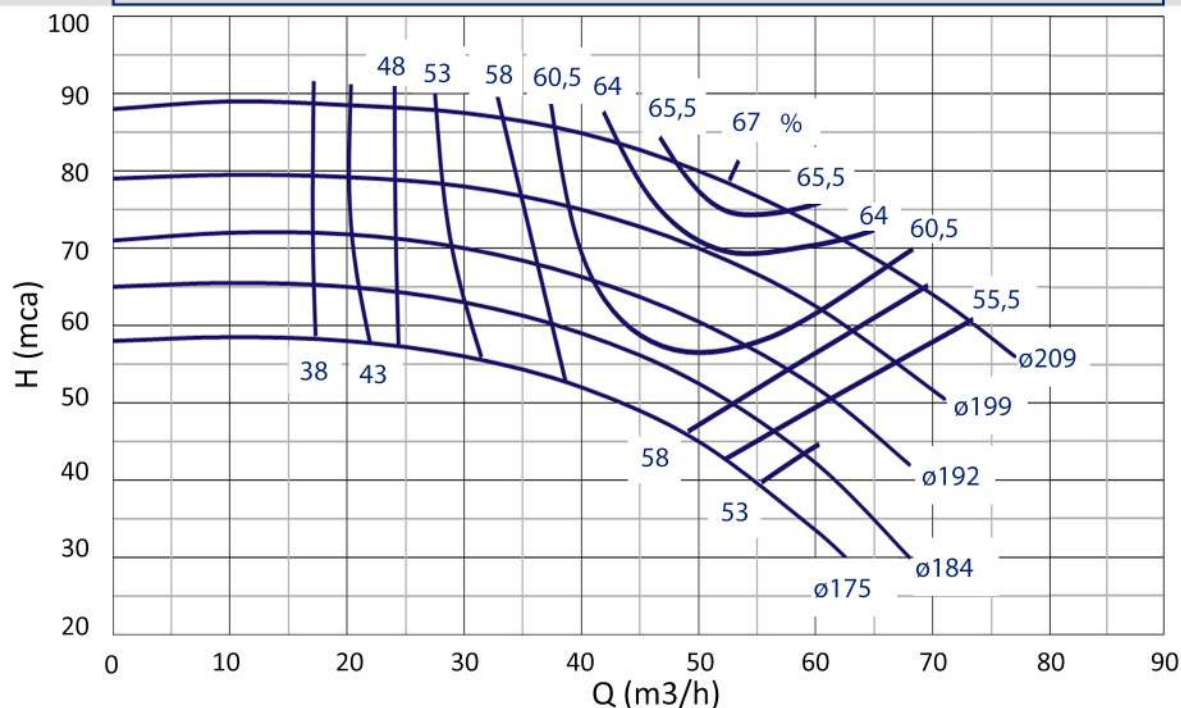
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	3600 rpm
RECALQUE 40	Nº 10010102	60 Hz 2 P



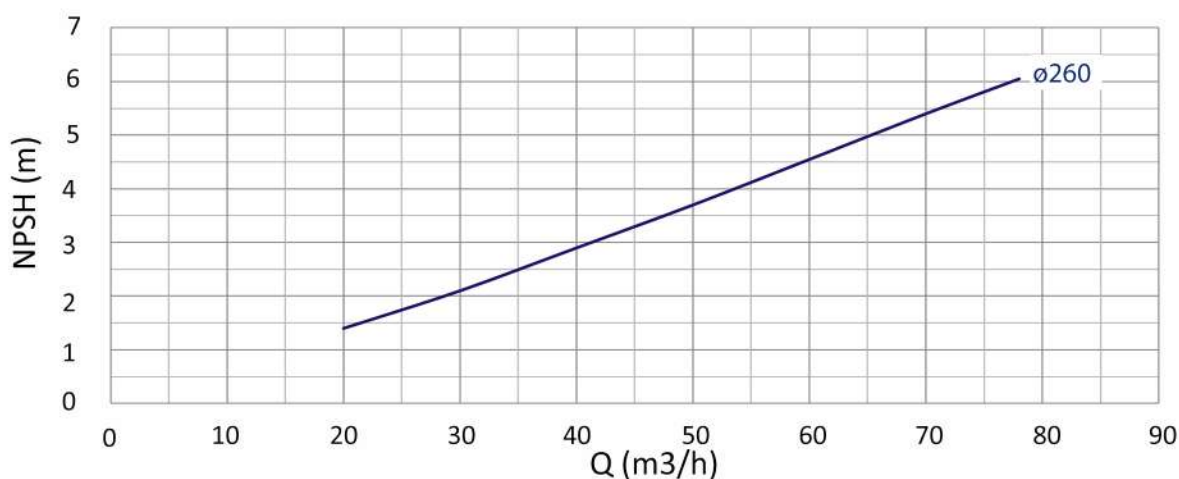
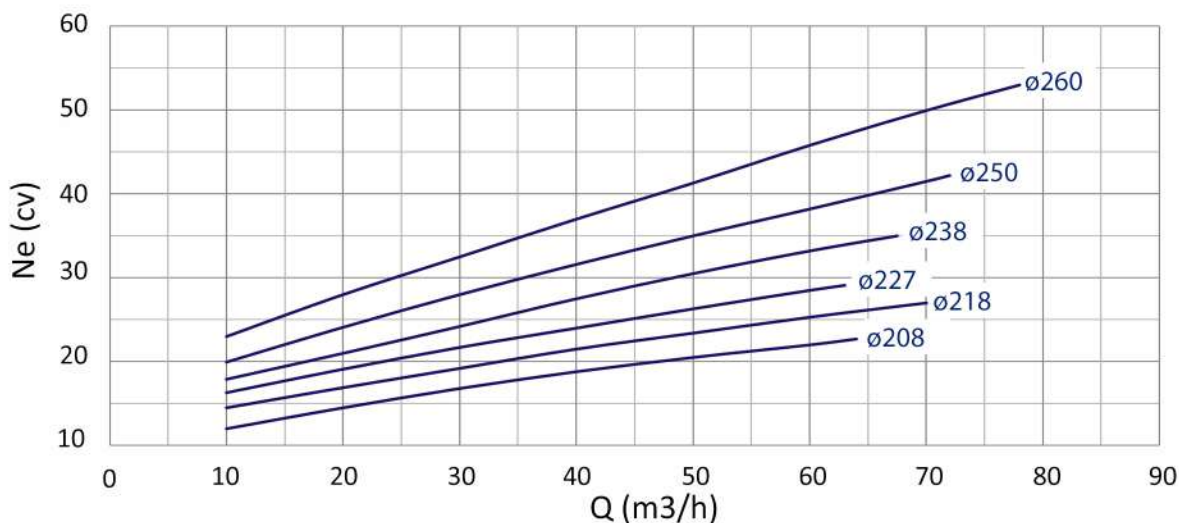
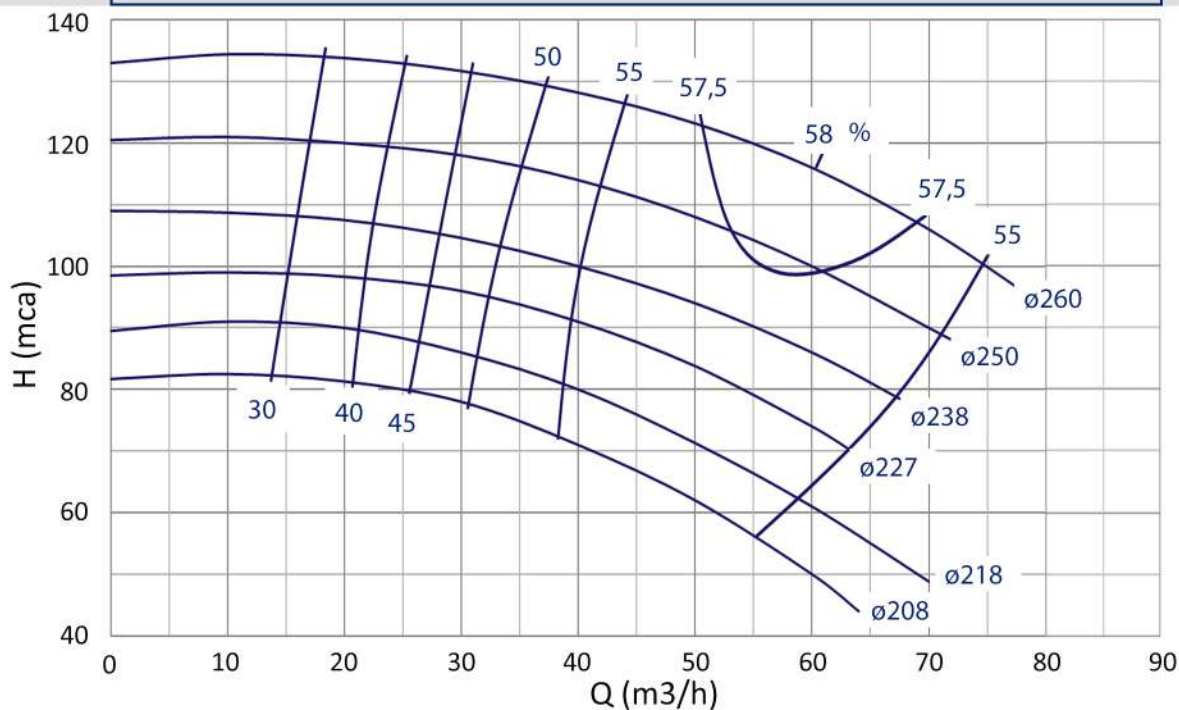
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	3600 rpm
RECALQUE 40	Nº 10010115	60 Hz 2 P



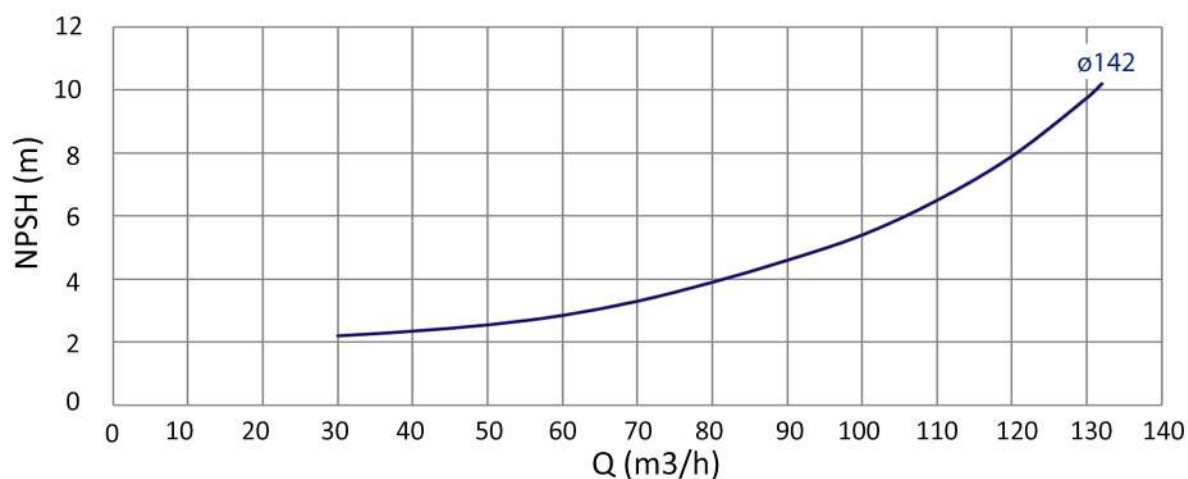
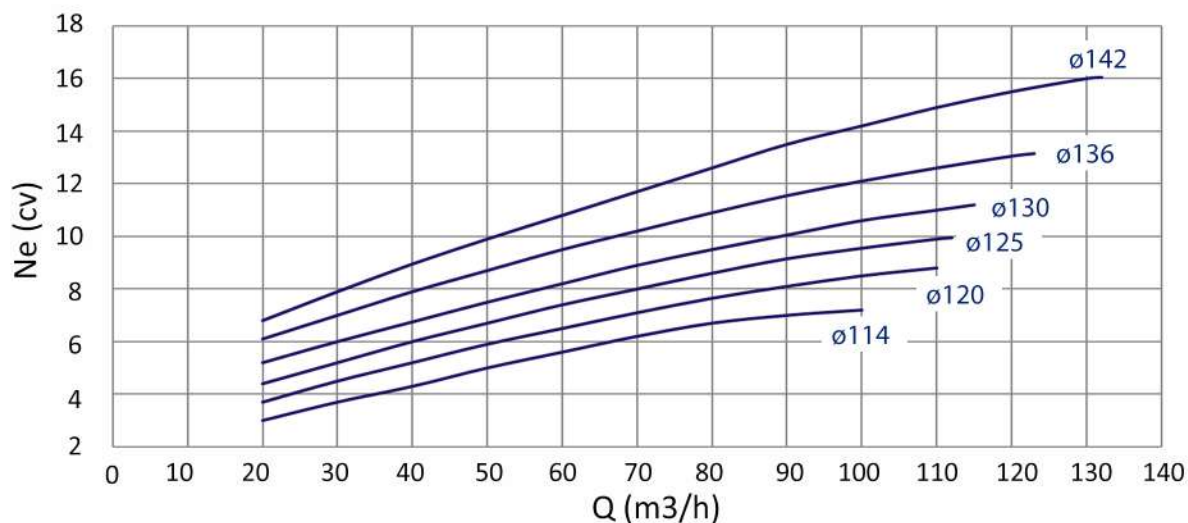
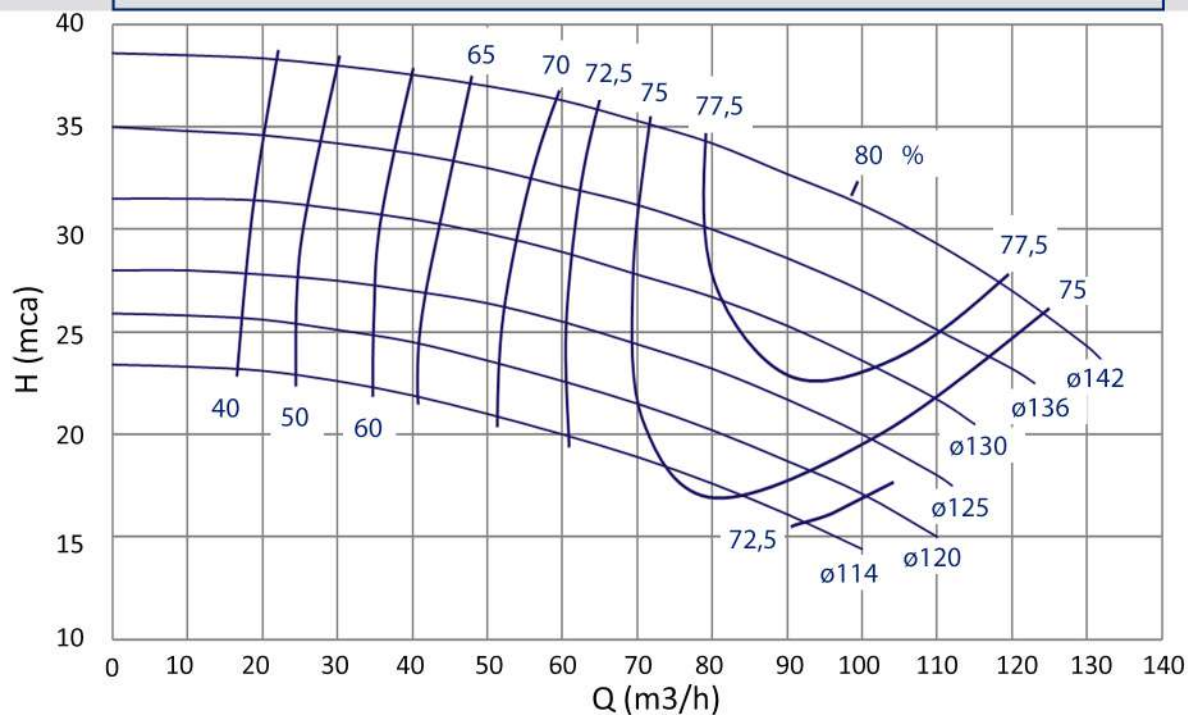
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	3600 rpm
RECALQUE 40	Nº 10010126	60 Hz 2 P



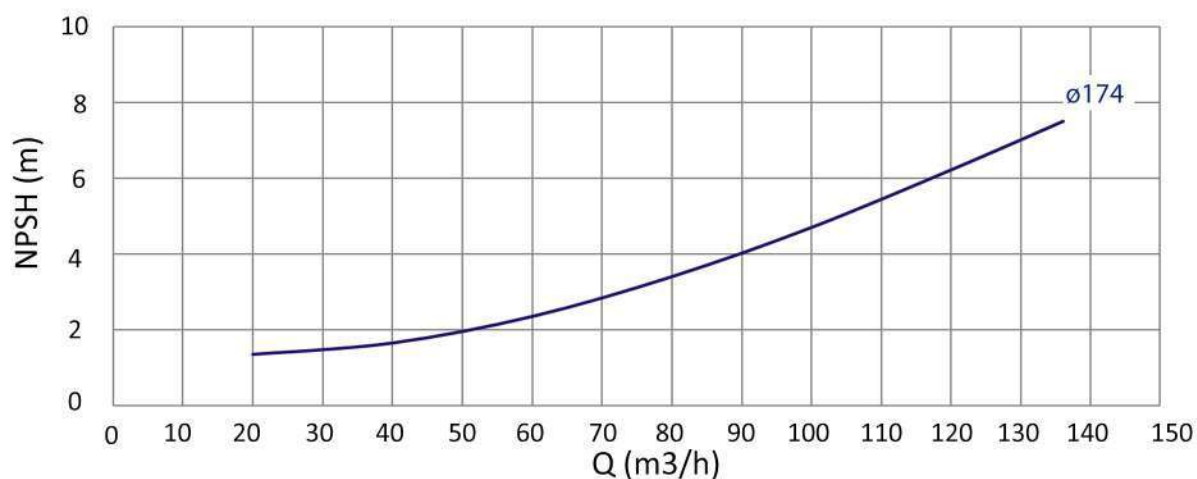
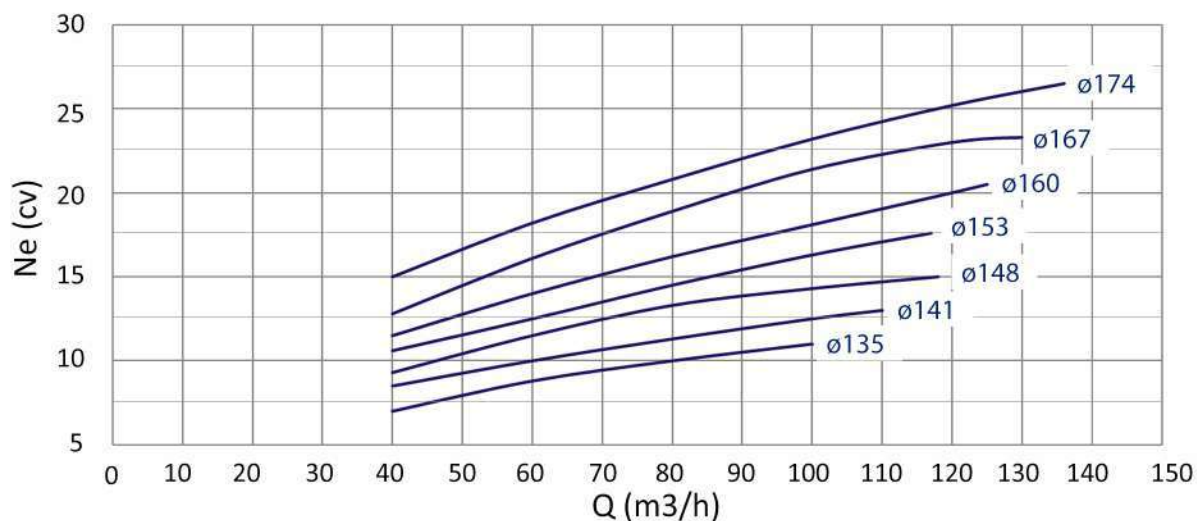
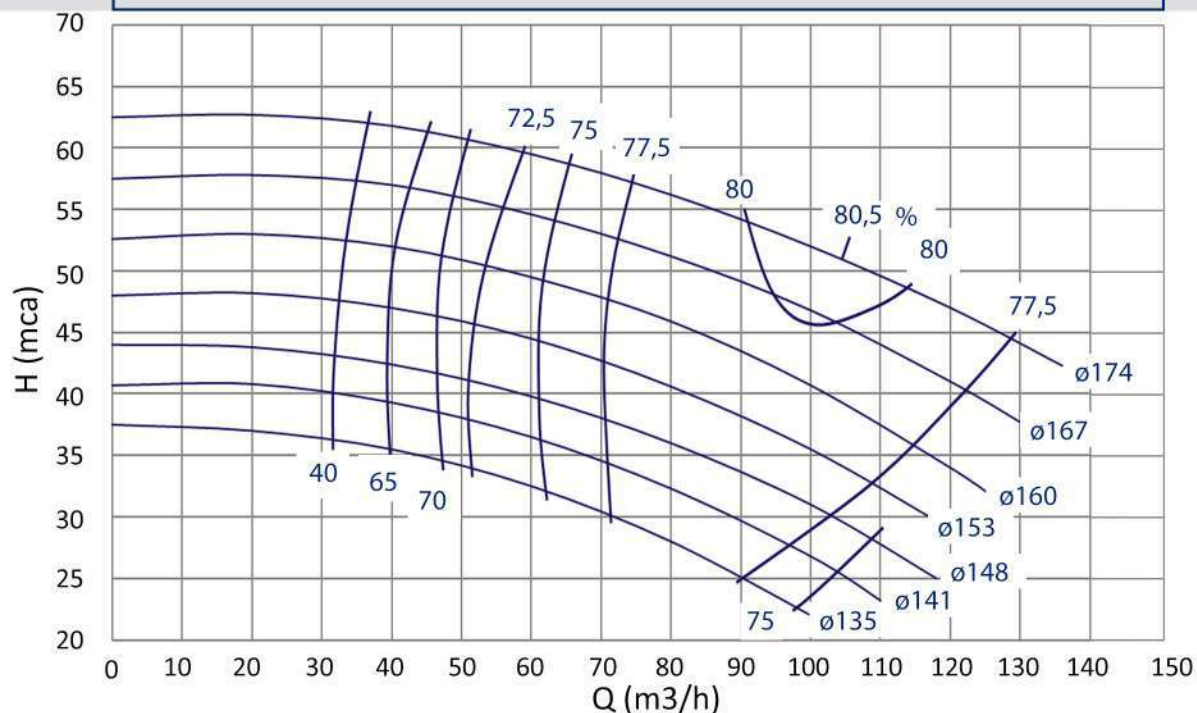
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	3600 rpm
RECALQUE 50	Nº 10010201	60 Hz 2 P



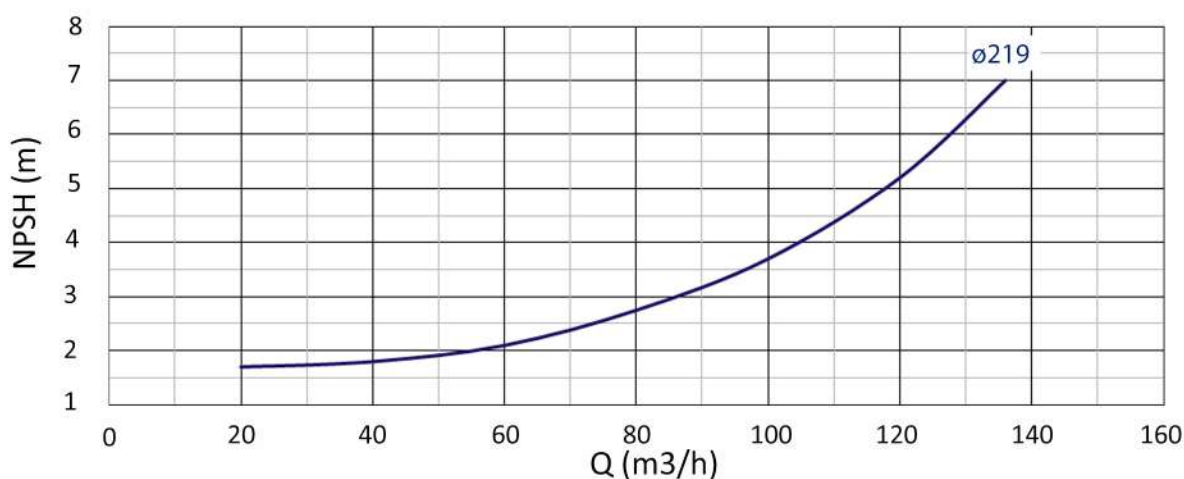
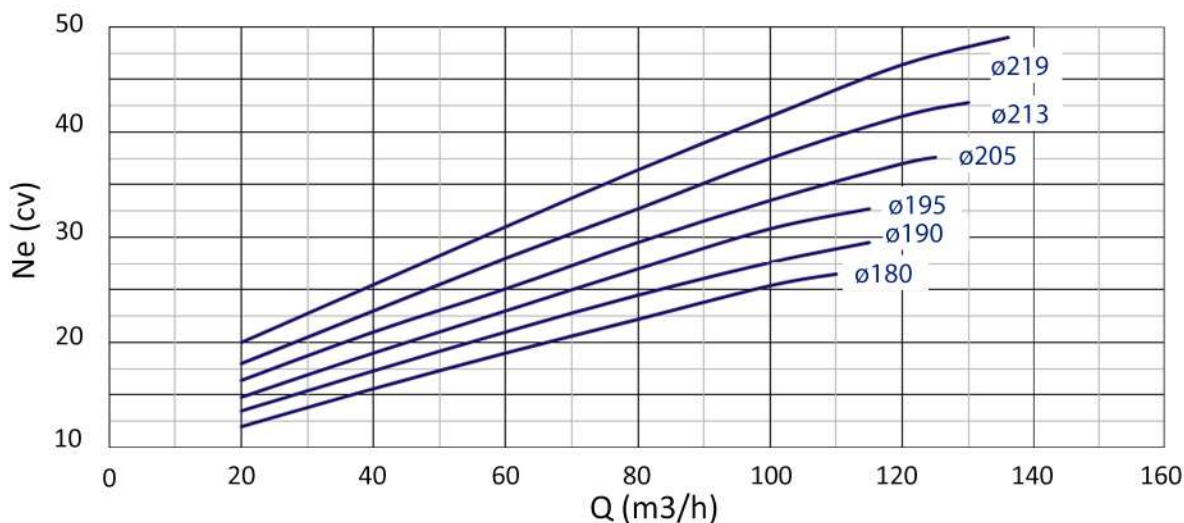
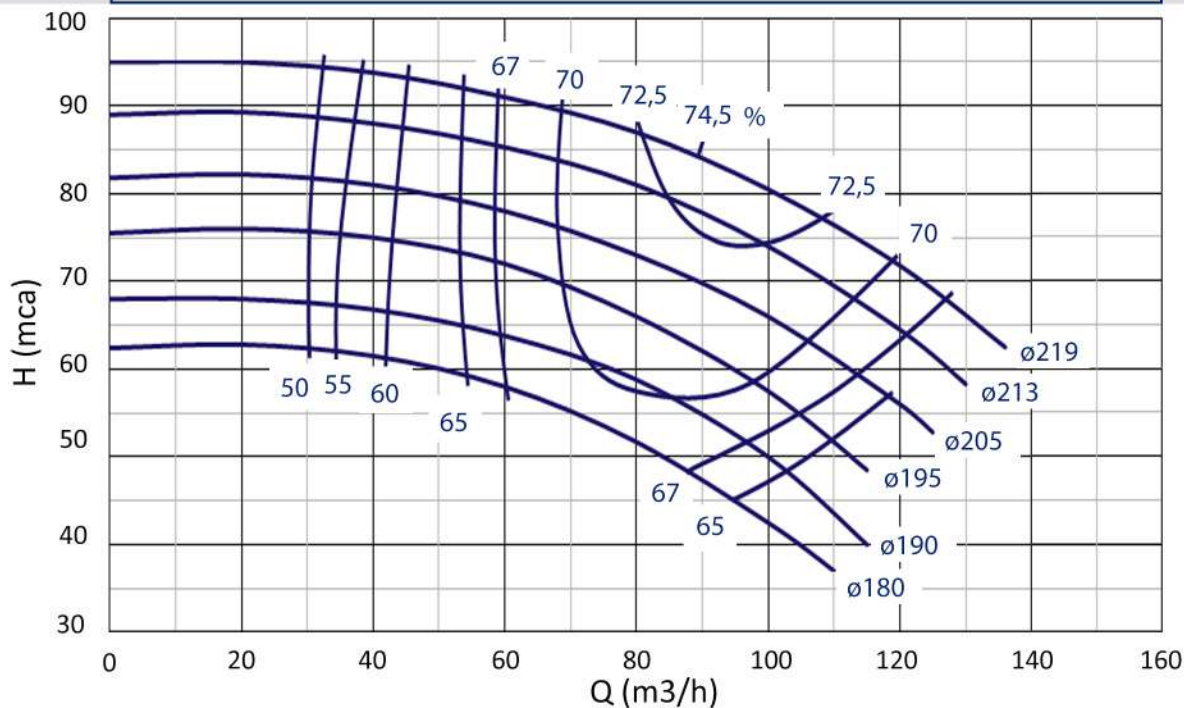
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	3600 rpm
RECALQUE 50	Nº 10010301	60 Hz 2 P



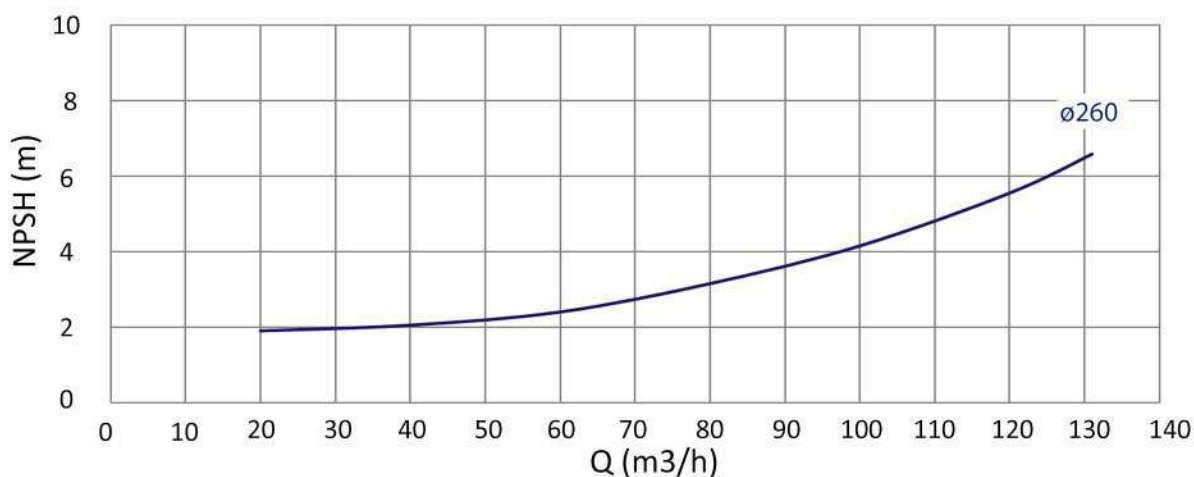
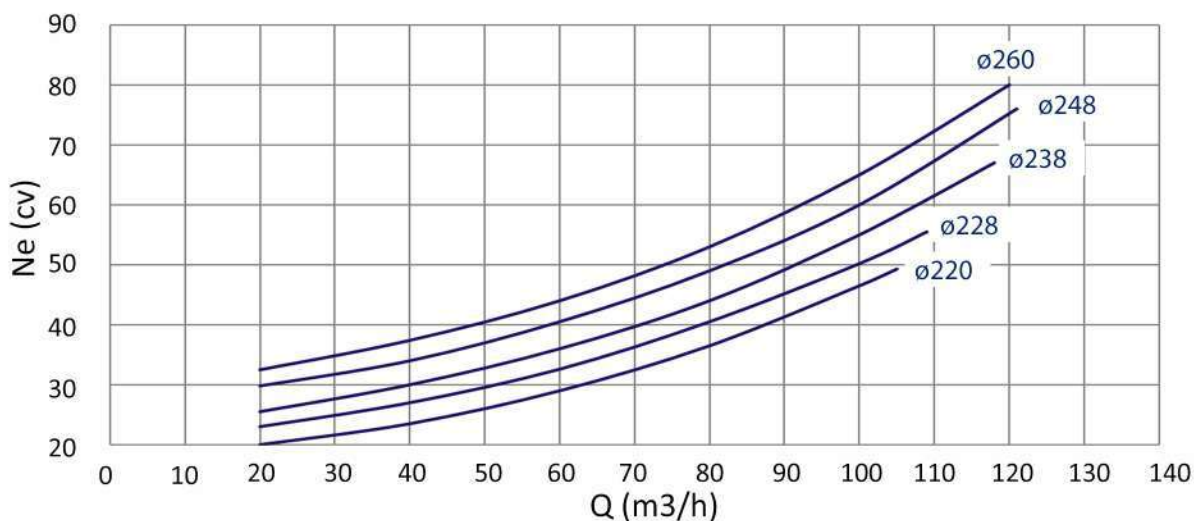
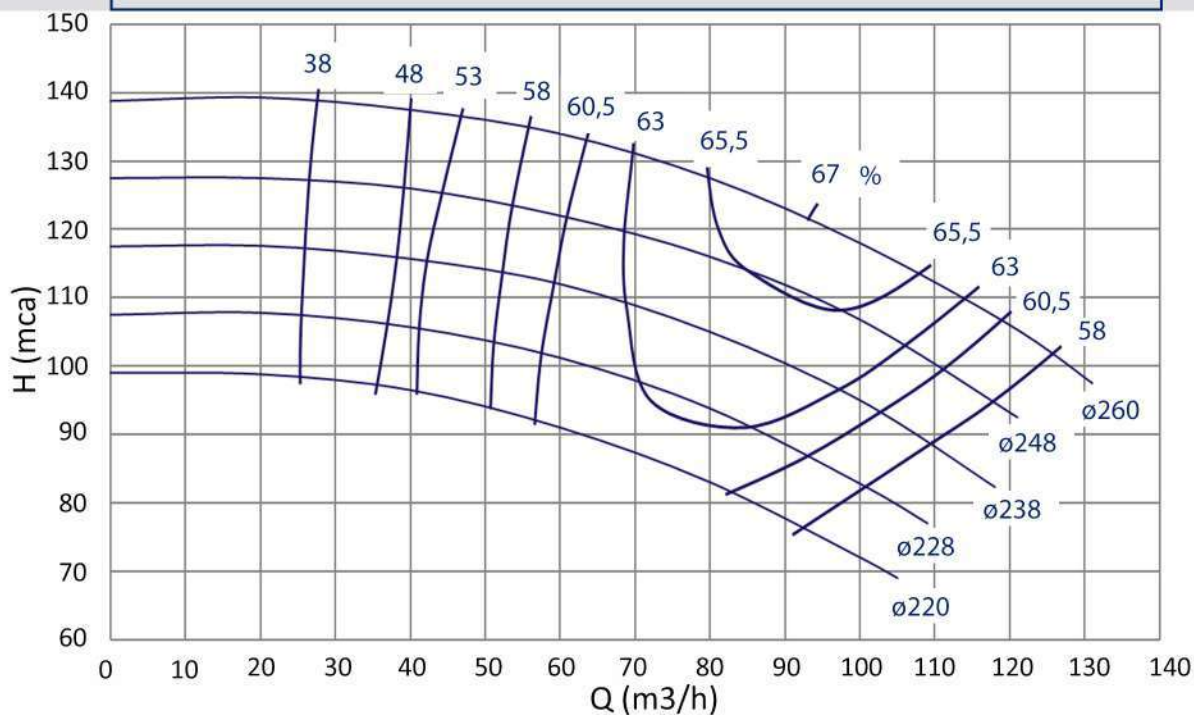
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	3600 rpm
RECALQUE 50	Nº 10010310	60 Hz 2 P



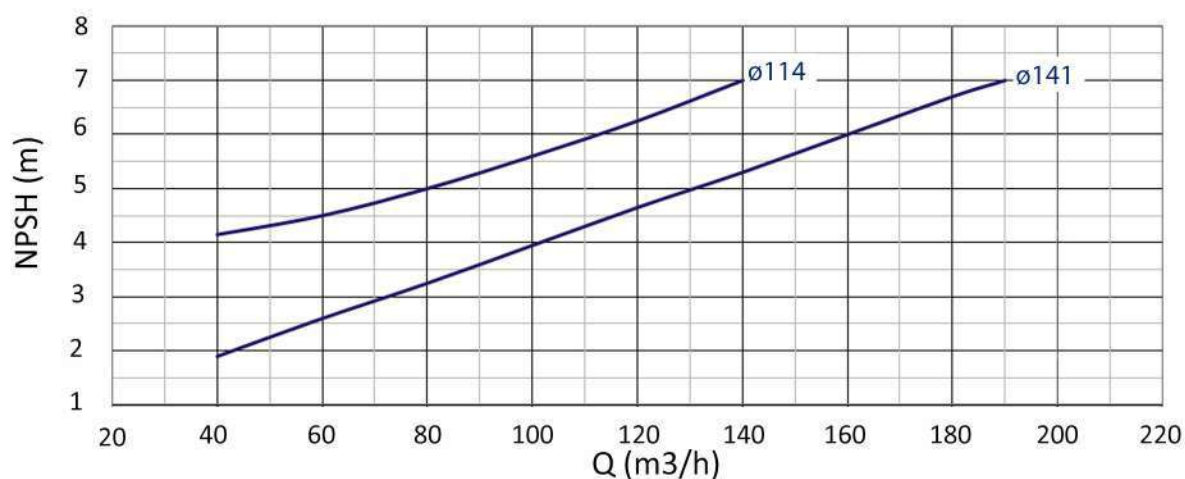
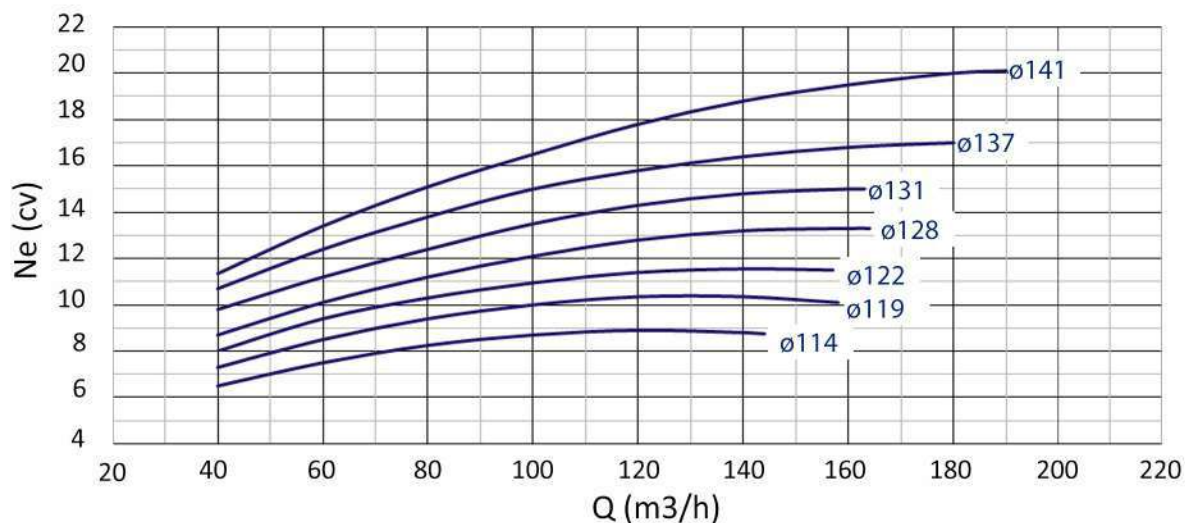
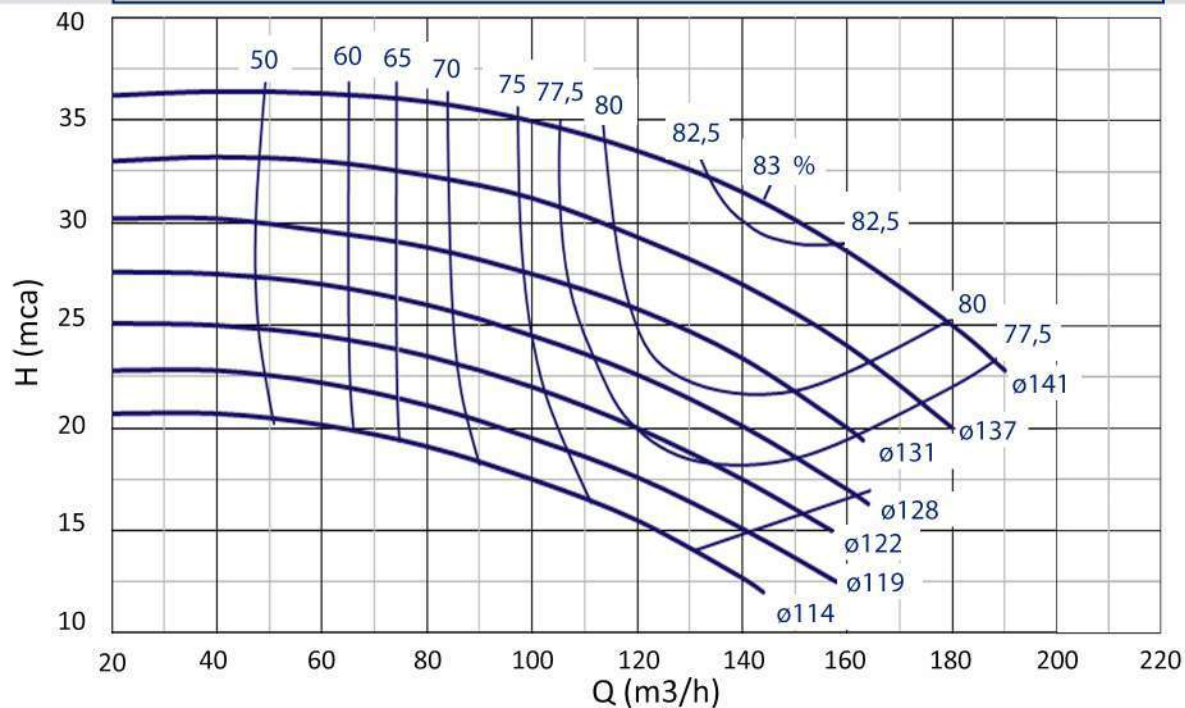
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	3600 rpm
RECALQUE 50	Nº 10010326	60 Hz 2 P



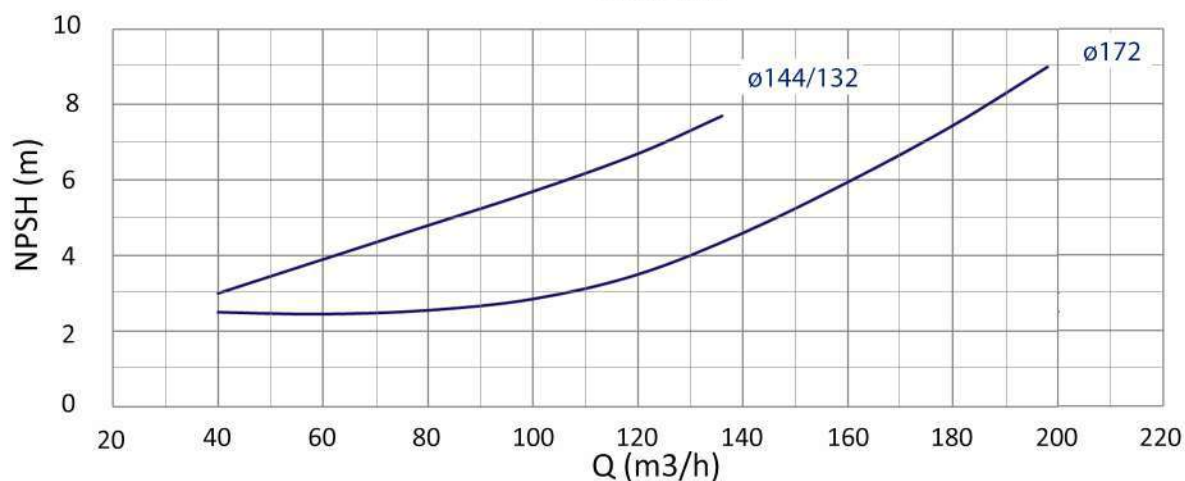
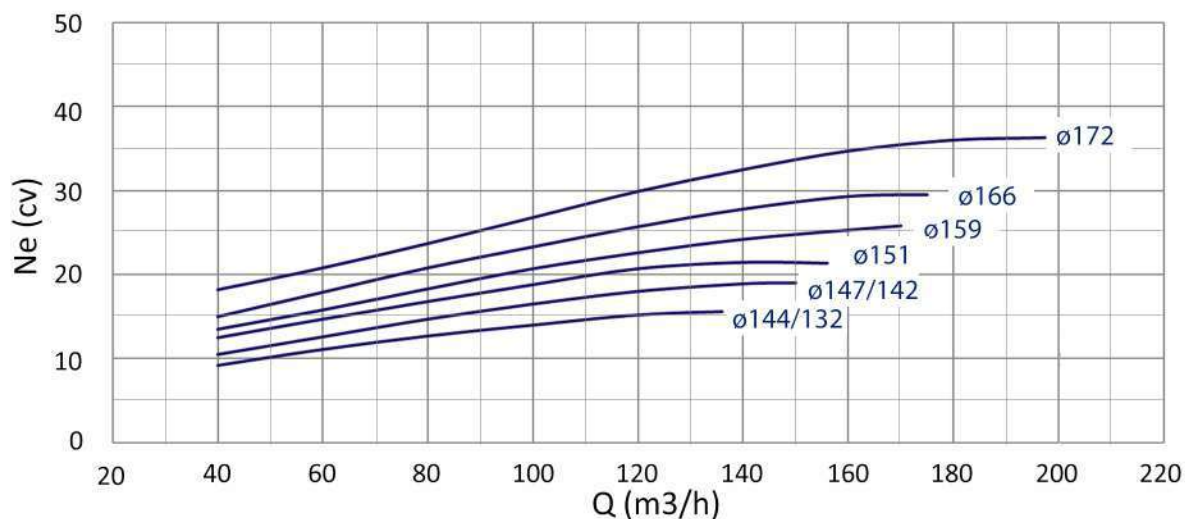
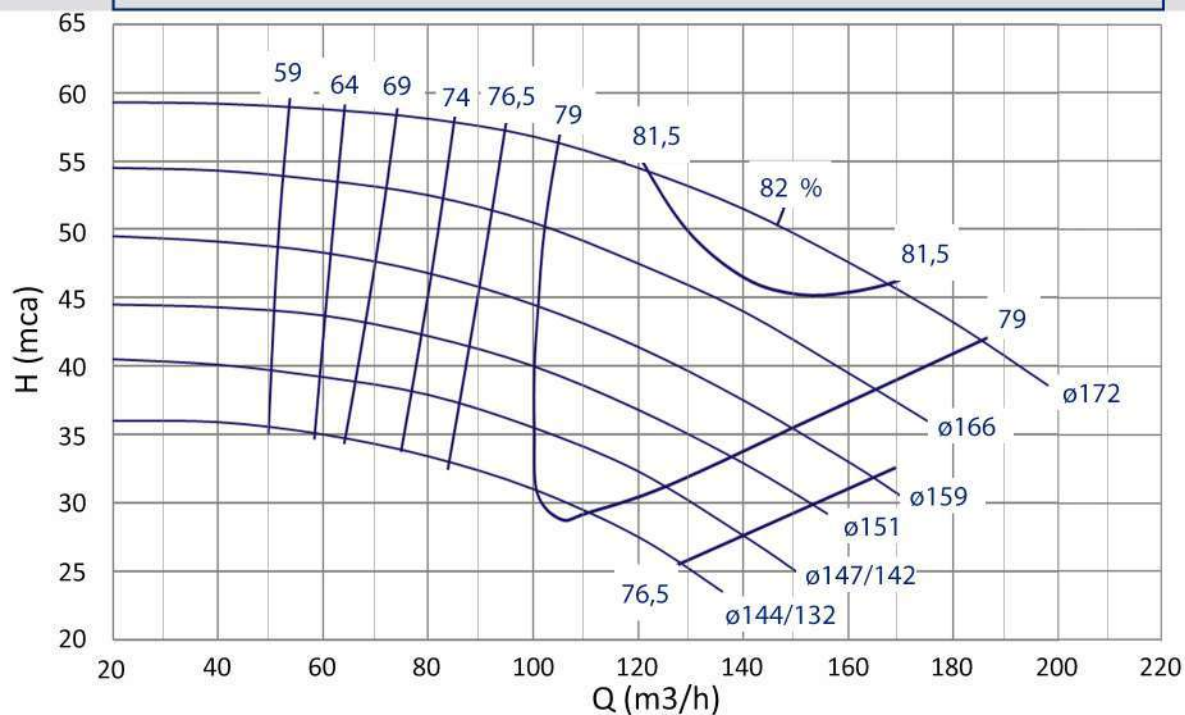
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	3600 rpm
RECALQUE 65	Nº 10010335	60 Hz 2 P



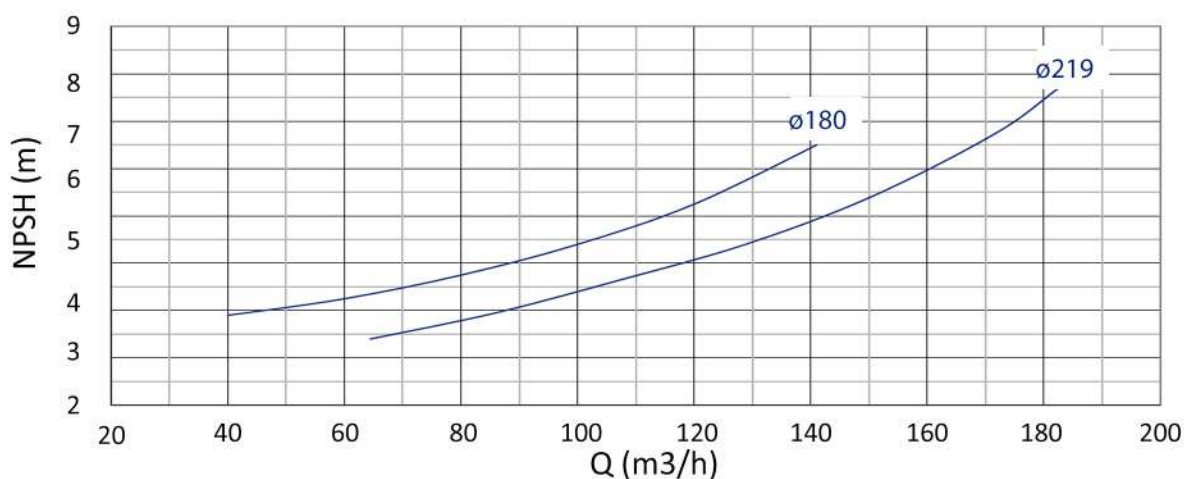
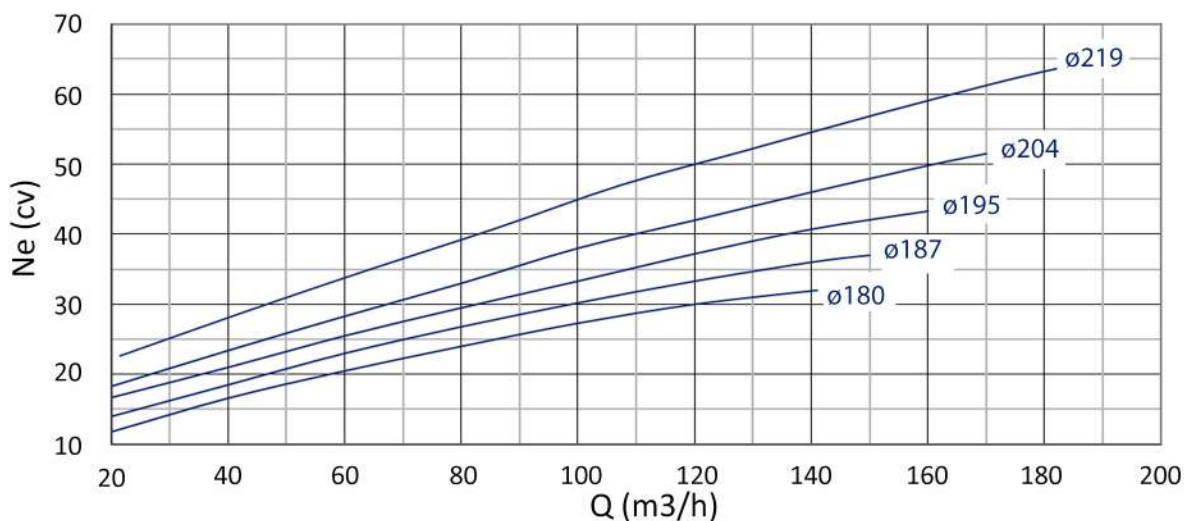
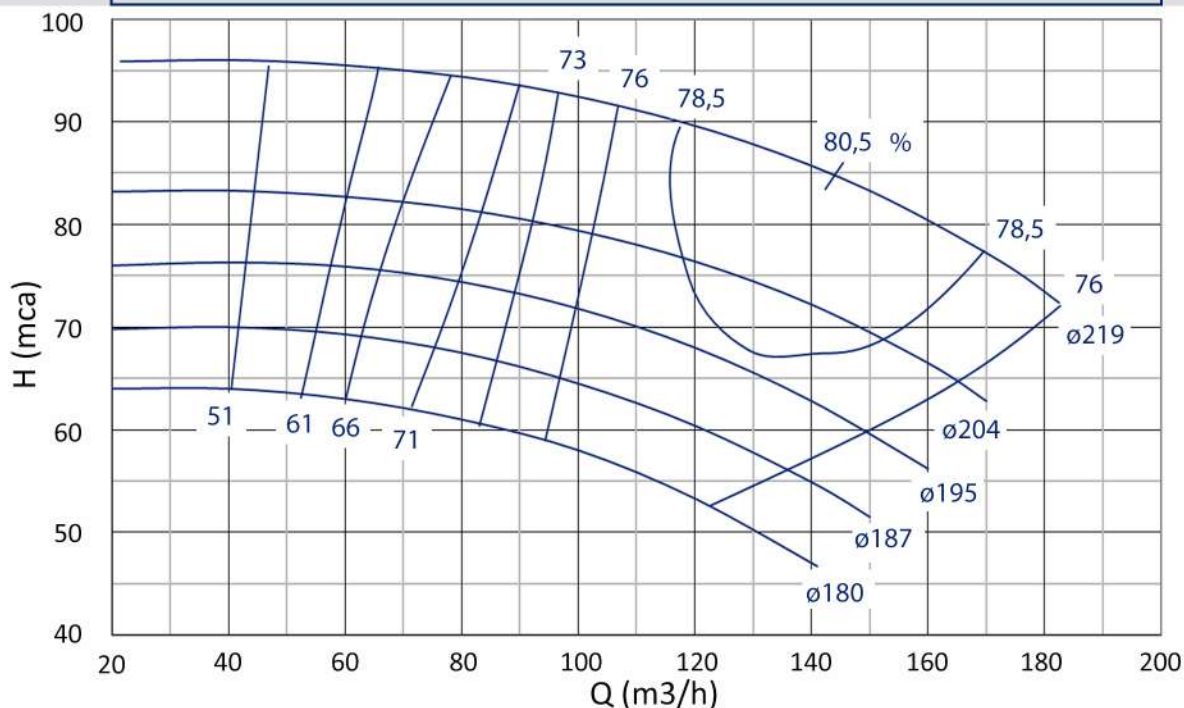
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	3600 rpm
RECALQUE 65	Nº 10010352	60 Hz 2 P



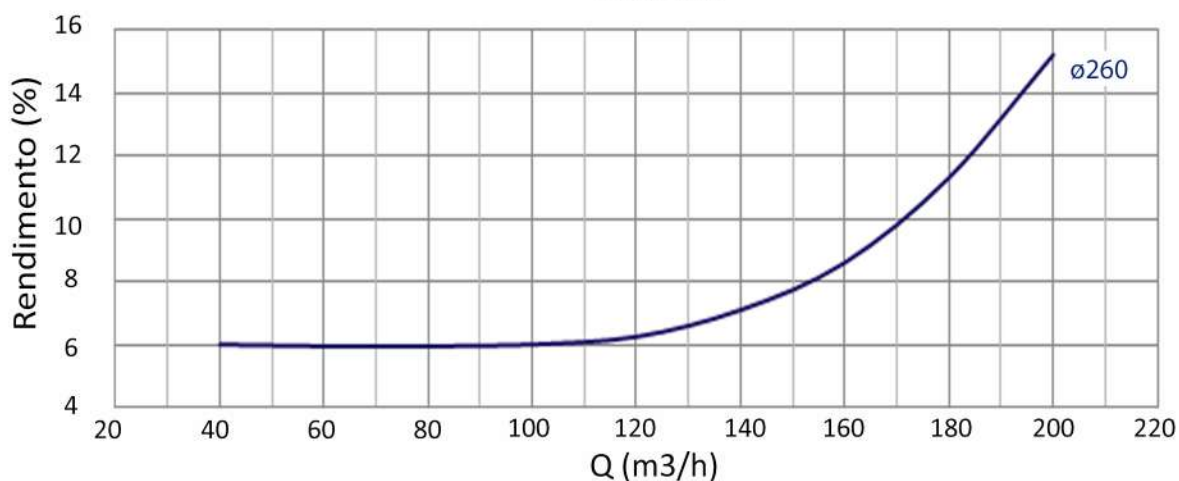
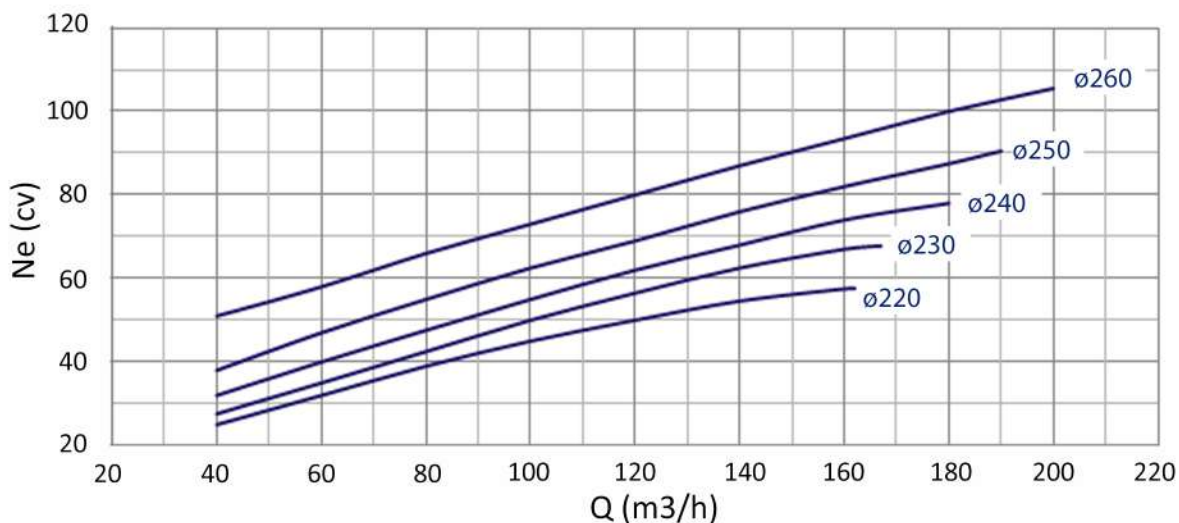
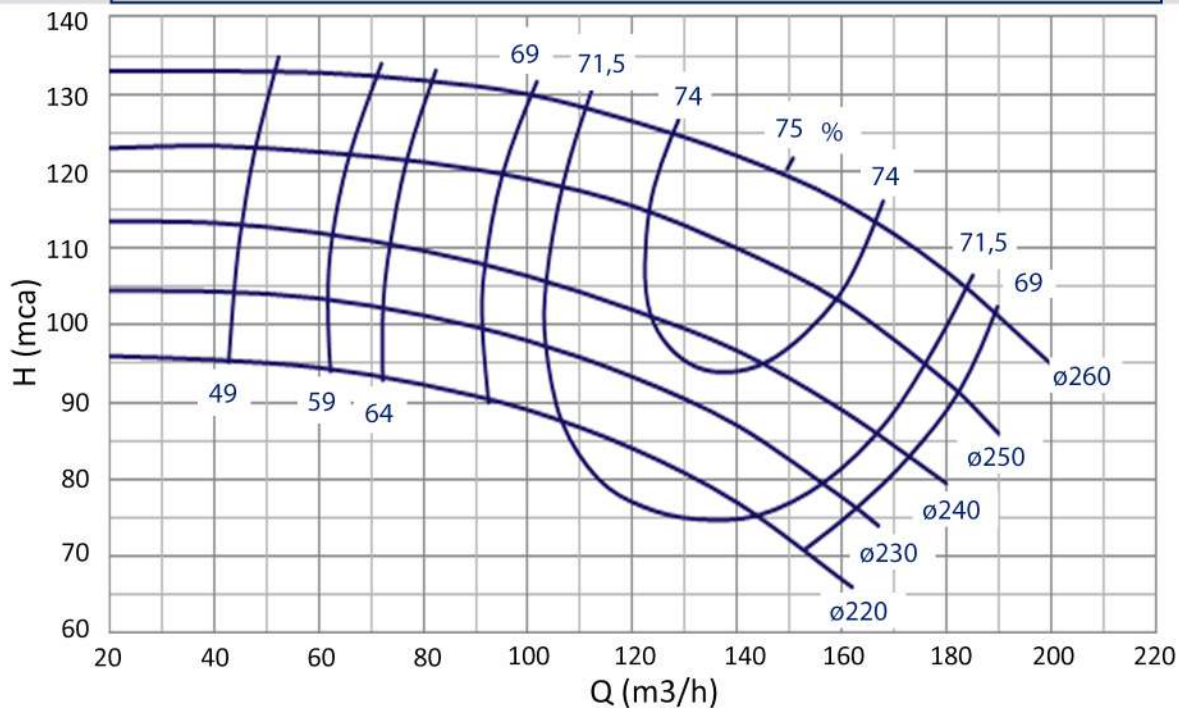
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	3600 rpm
RECALQUE 65	Nº 10010362	60 Hz 2 P



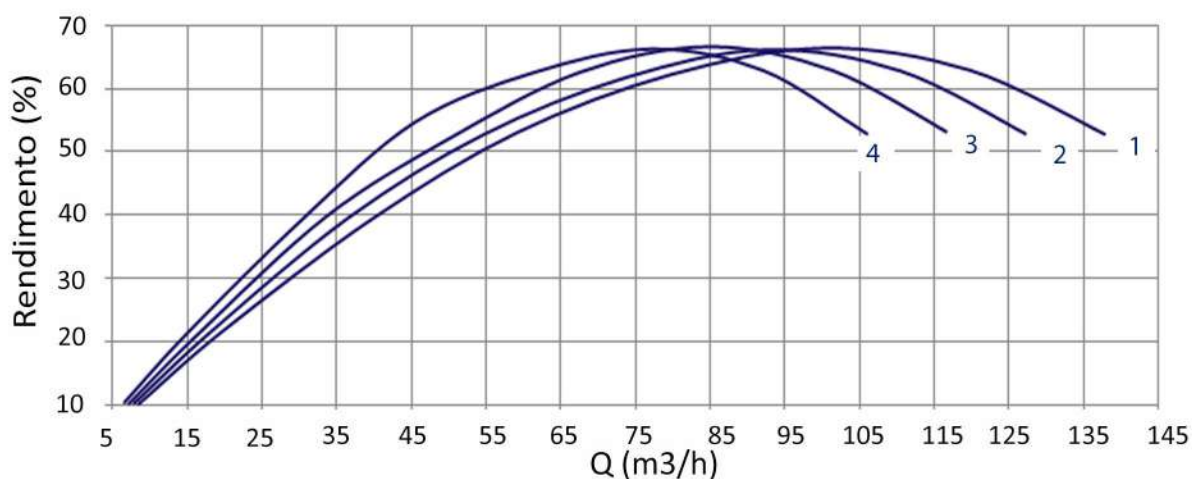
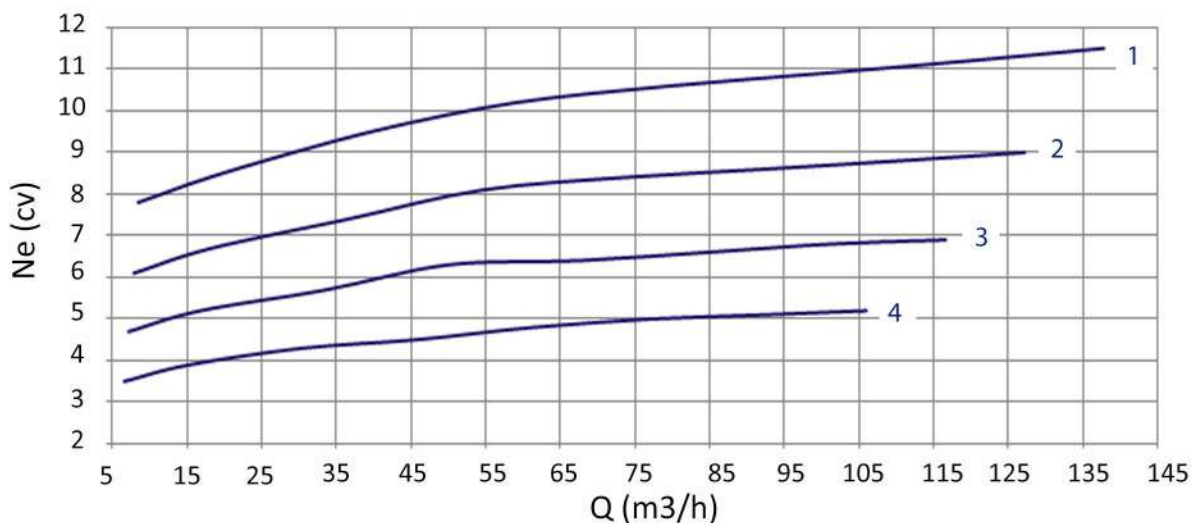
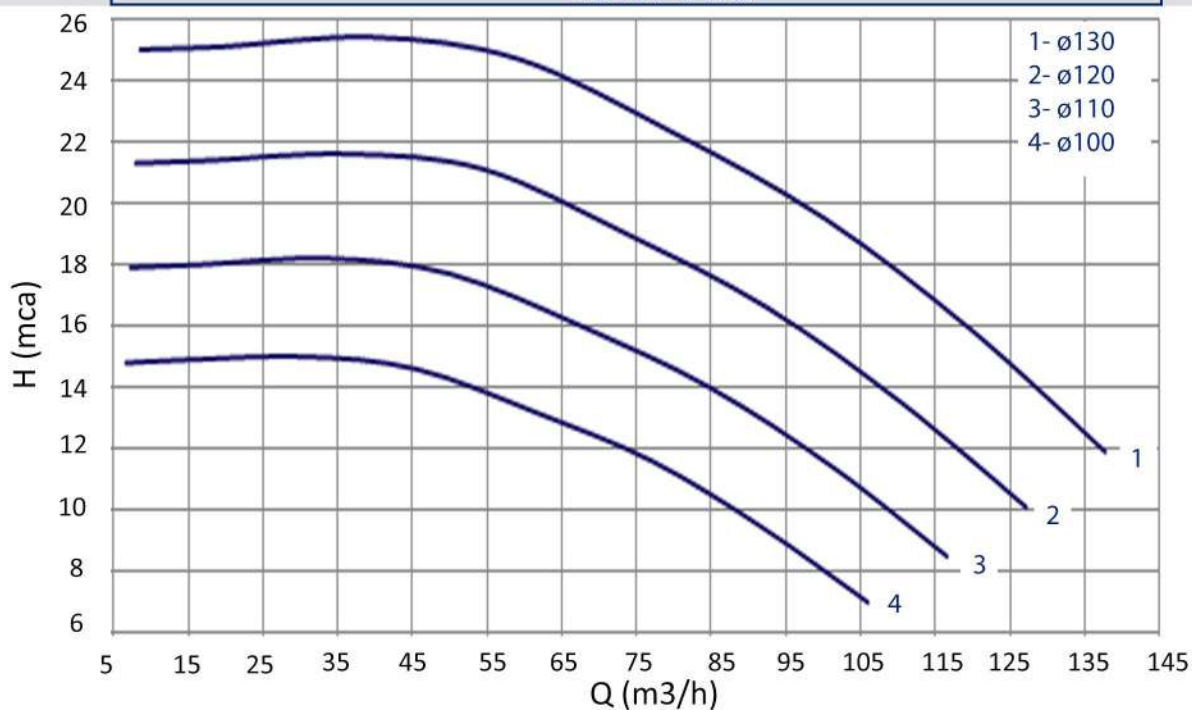
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	3600 rpm
RECALQUE 65	Nº 10010371	60 Hz 2 P



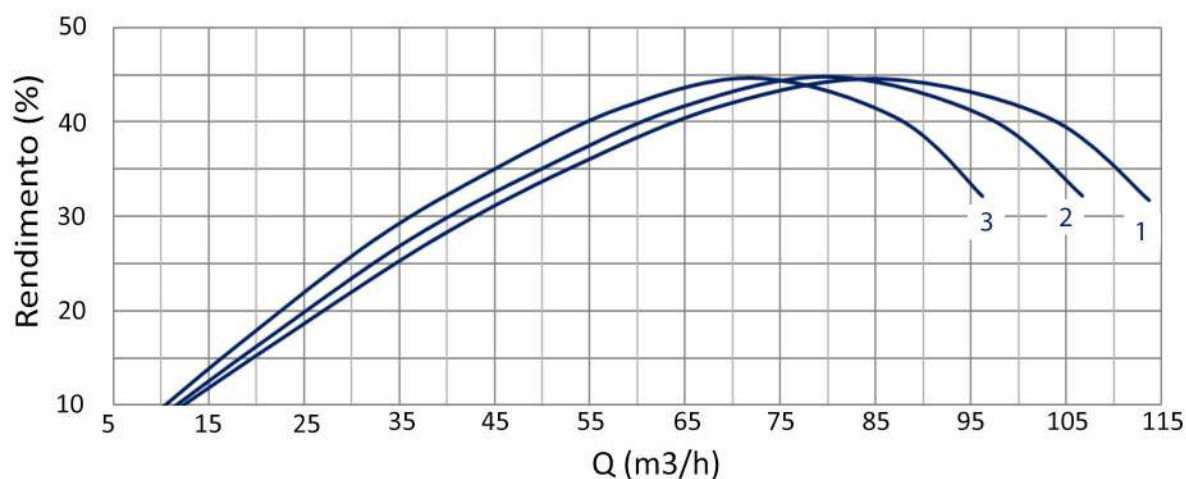
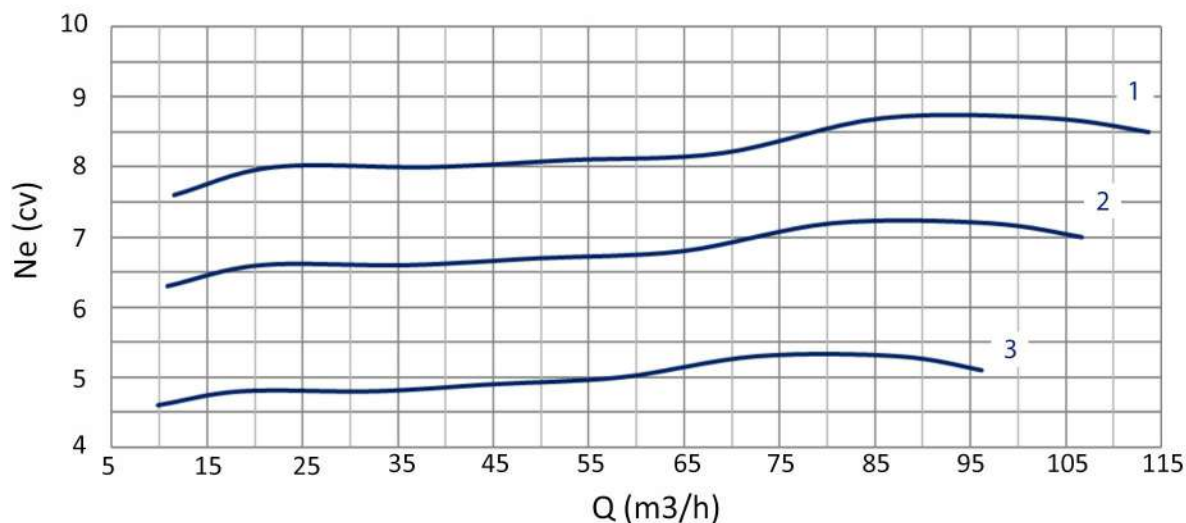
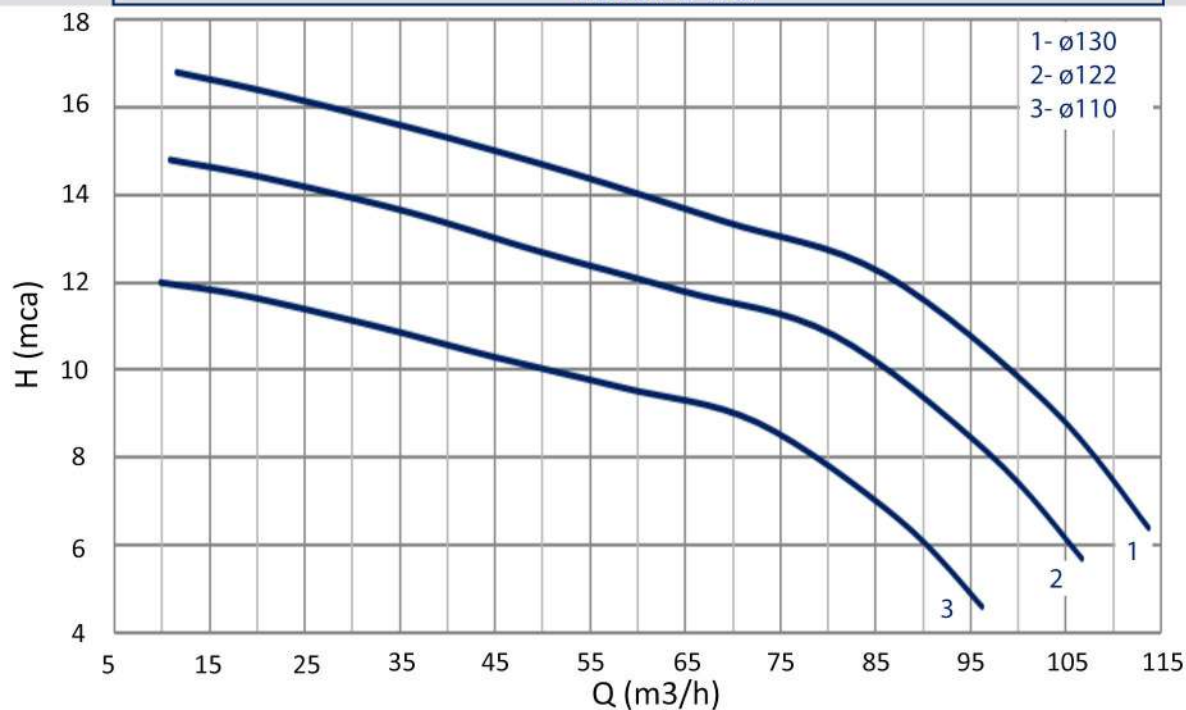
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	3600 rpm
RECALQUE 80	Nº 10010501	60 Hz 2 P
ROTOR 6 PÁS		



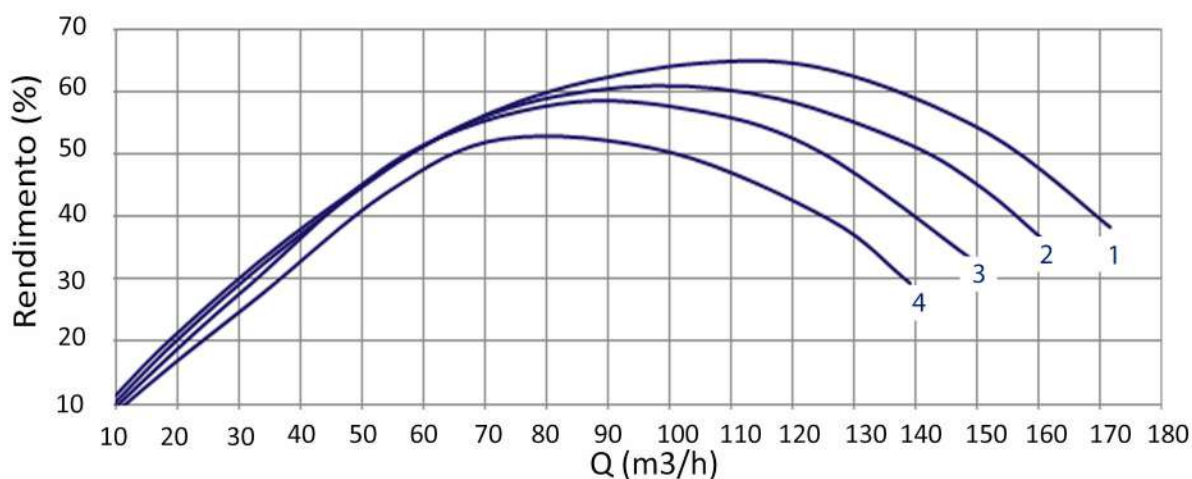
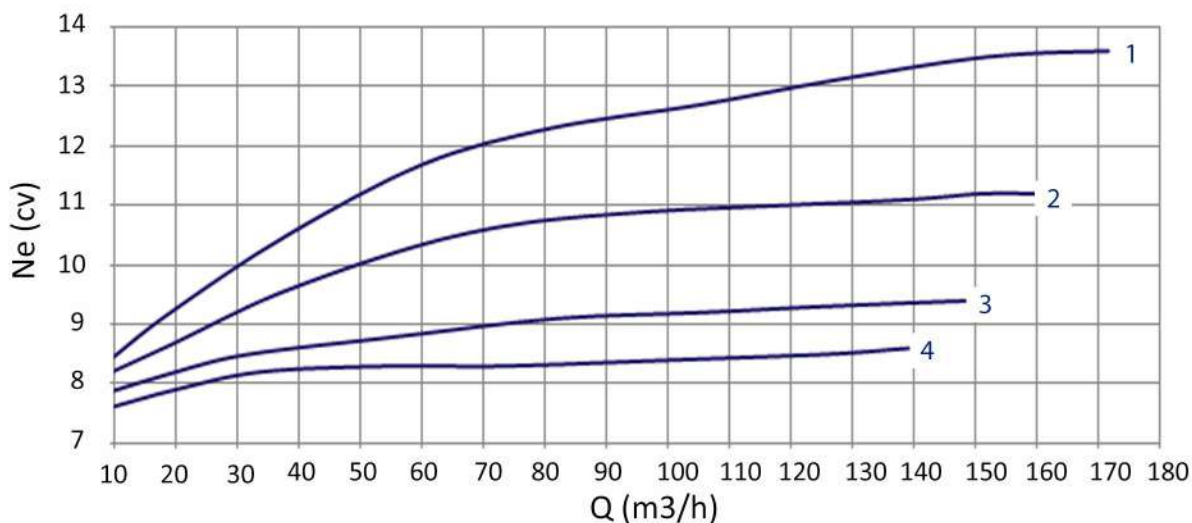
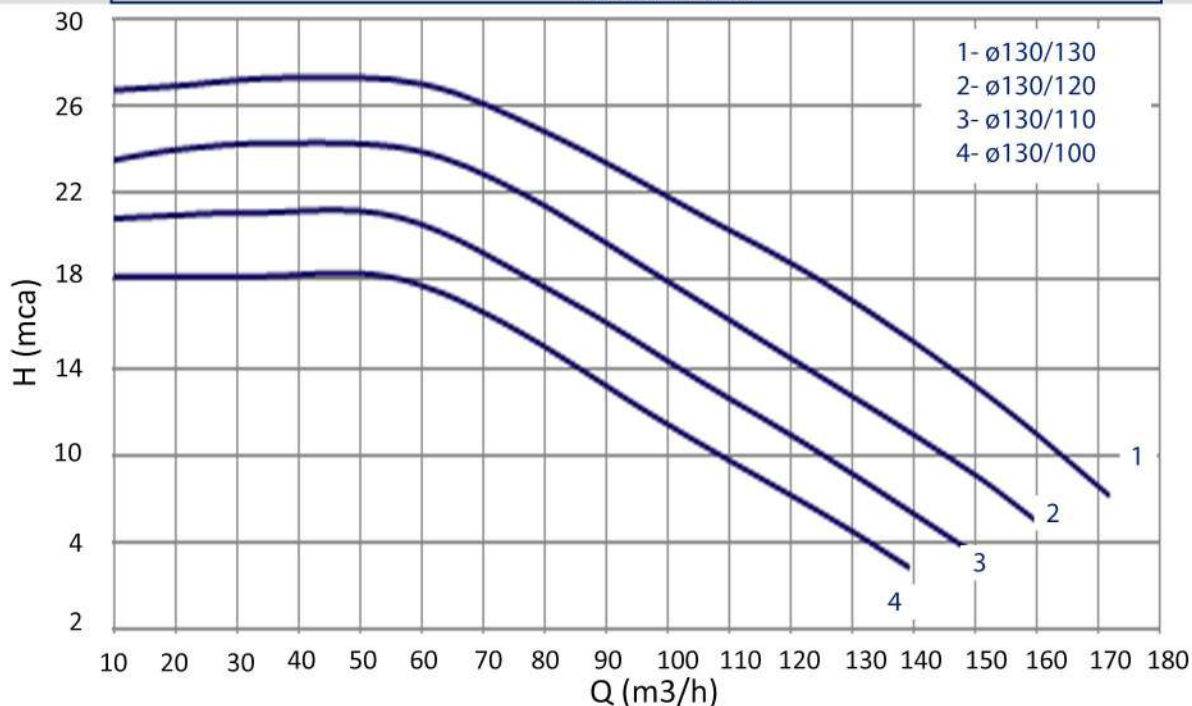
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	3600 rpm
RECALQUE 80	Nº 10010502	60 Hz 2 P
ROTOR 2 PÁS		



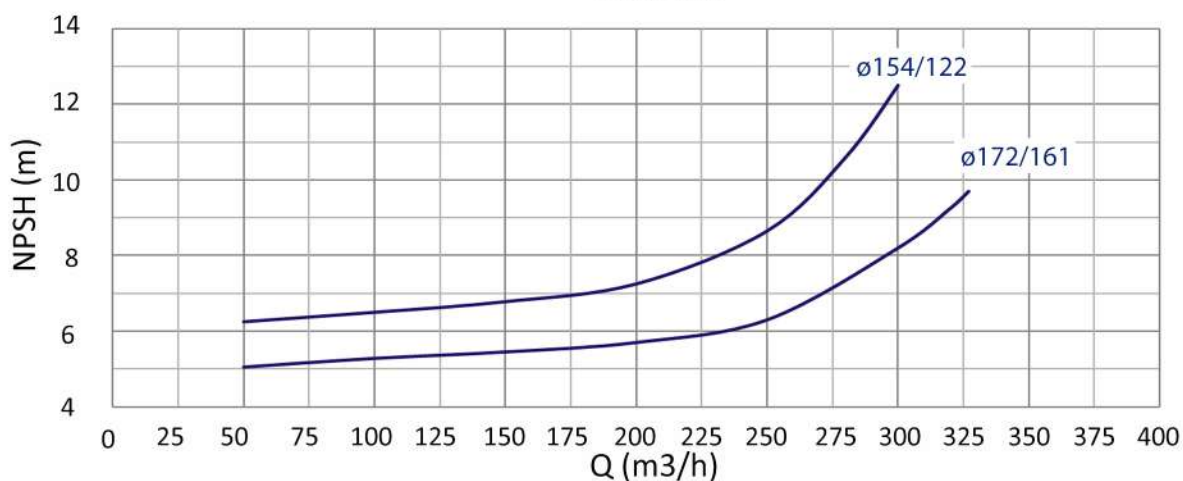
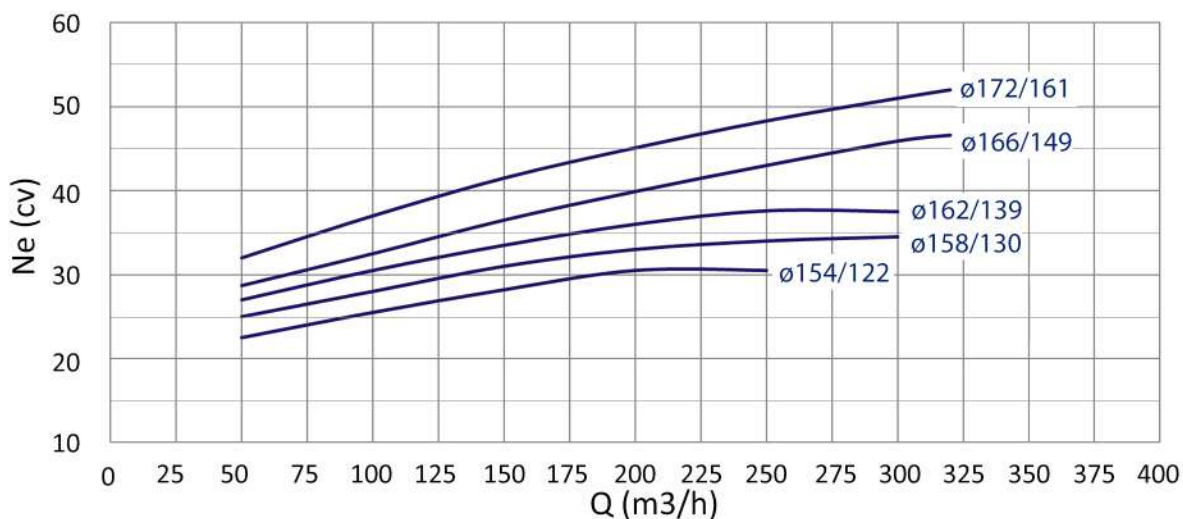
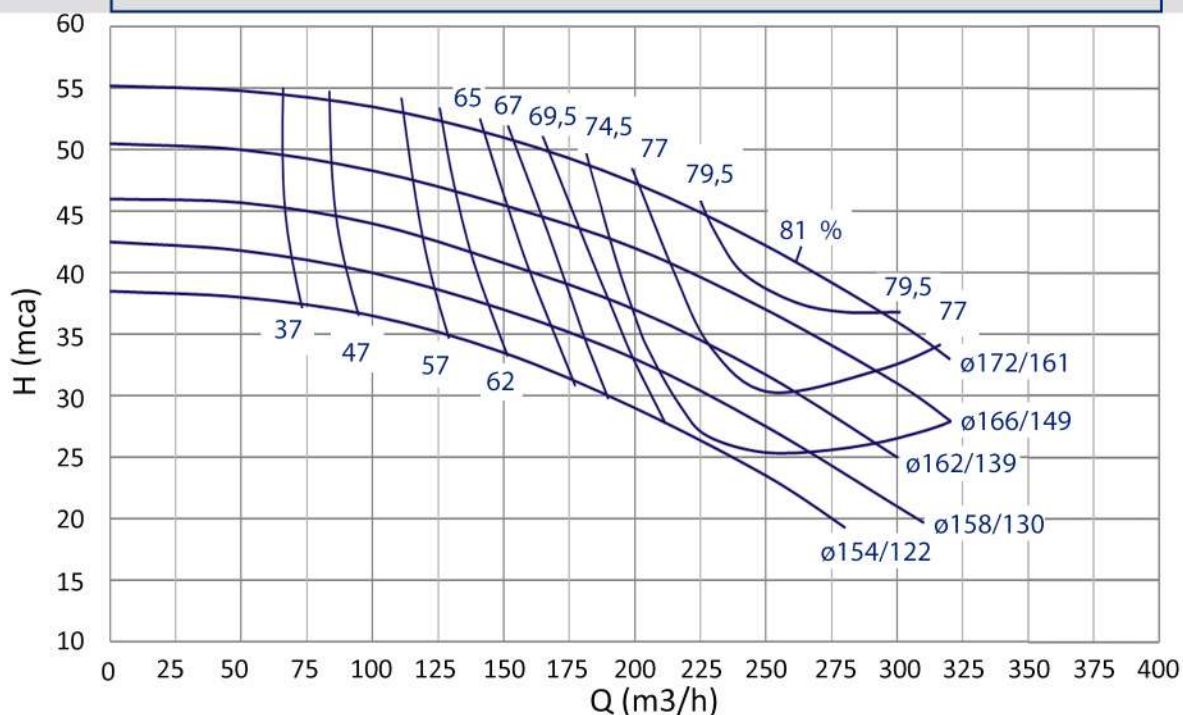
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	3600 rpm
RECALQUE 80	Nº 10010505	60 Hz 2 P
ROTOR 7 PÁS		



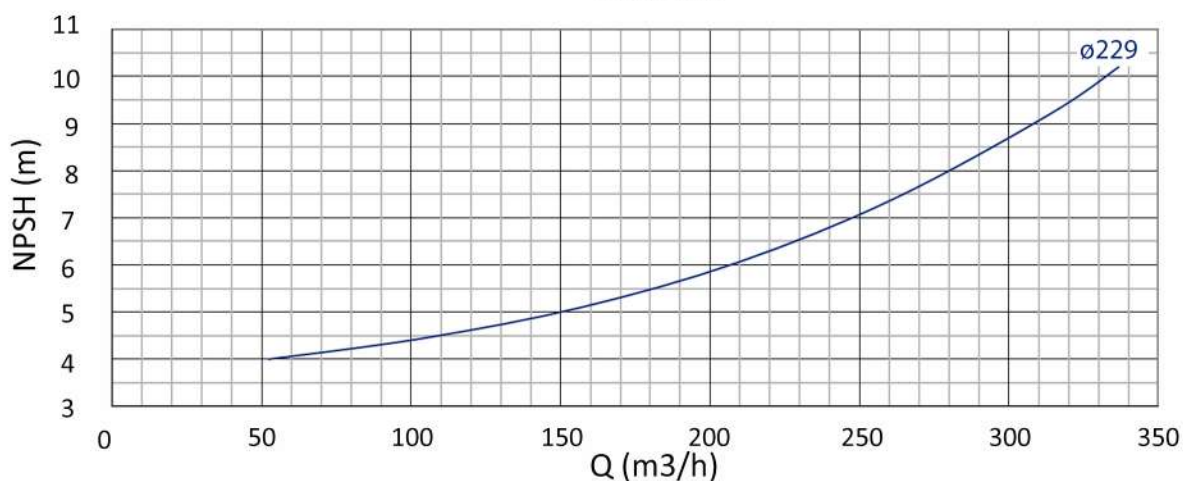
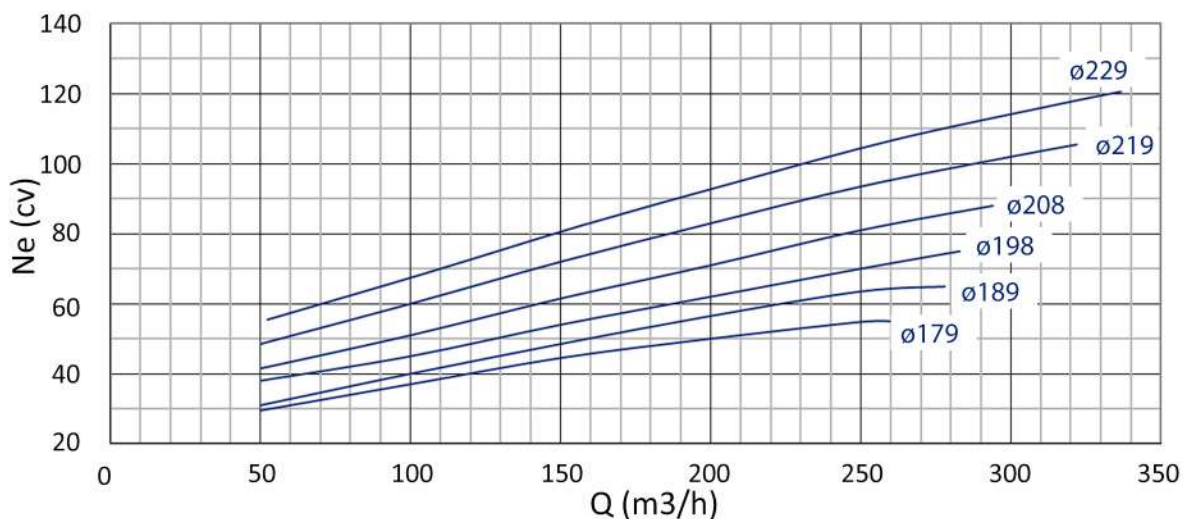
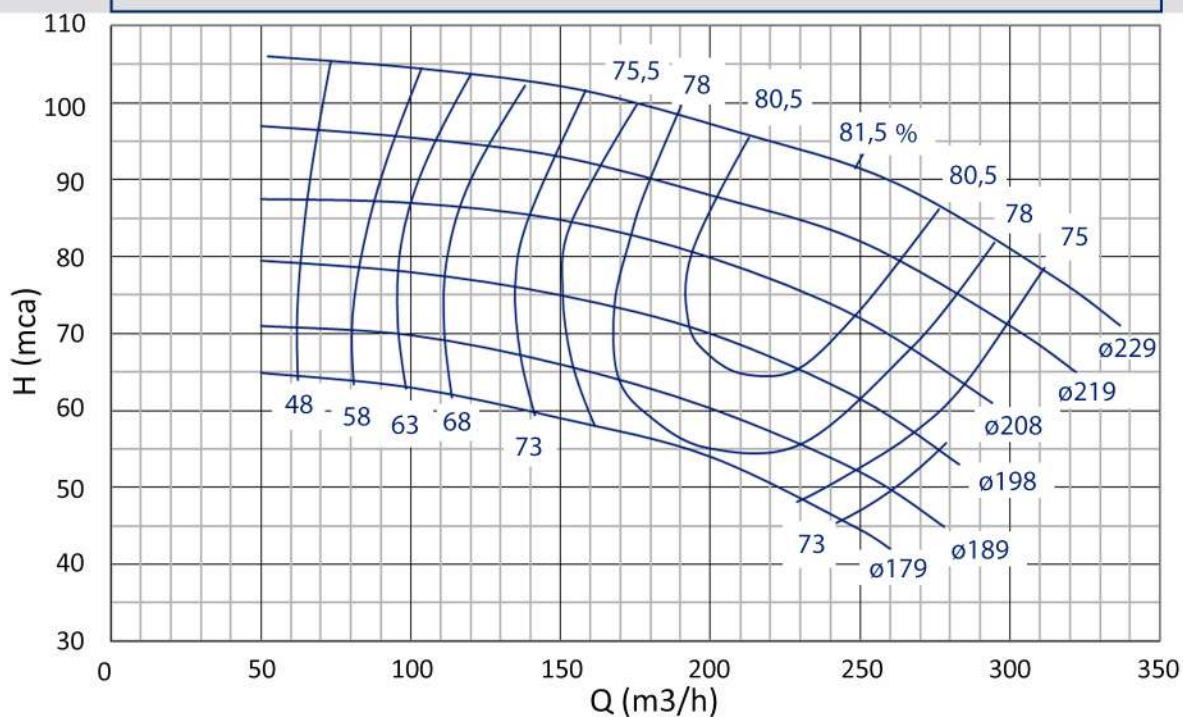
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	3600 rpm
RECALQUE 80	Nº 10010604	60 Hz 2 P



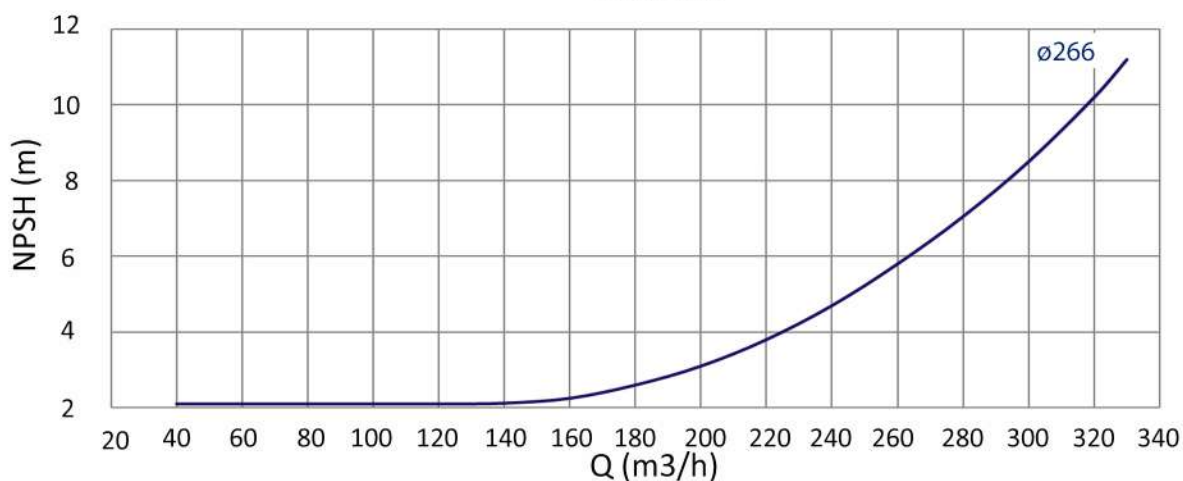
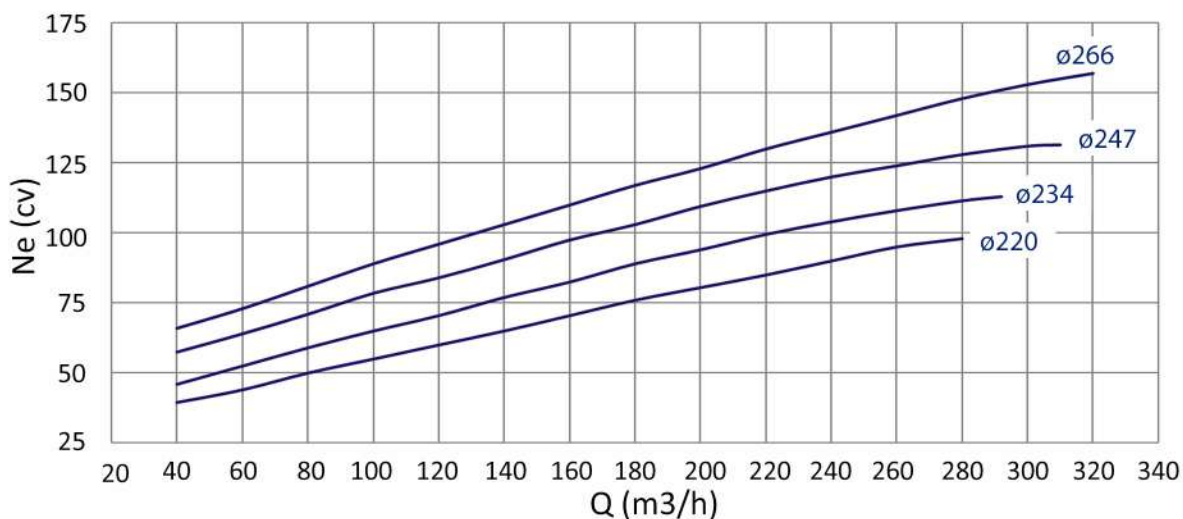
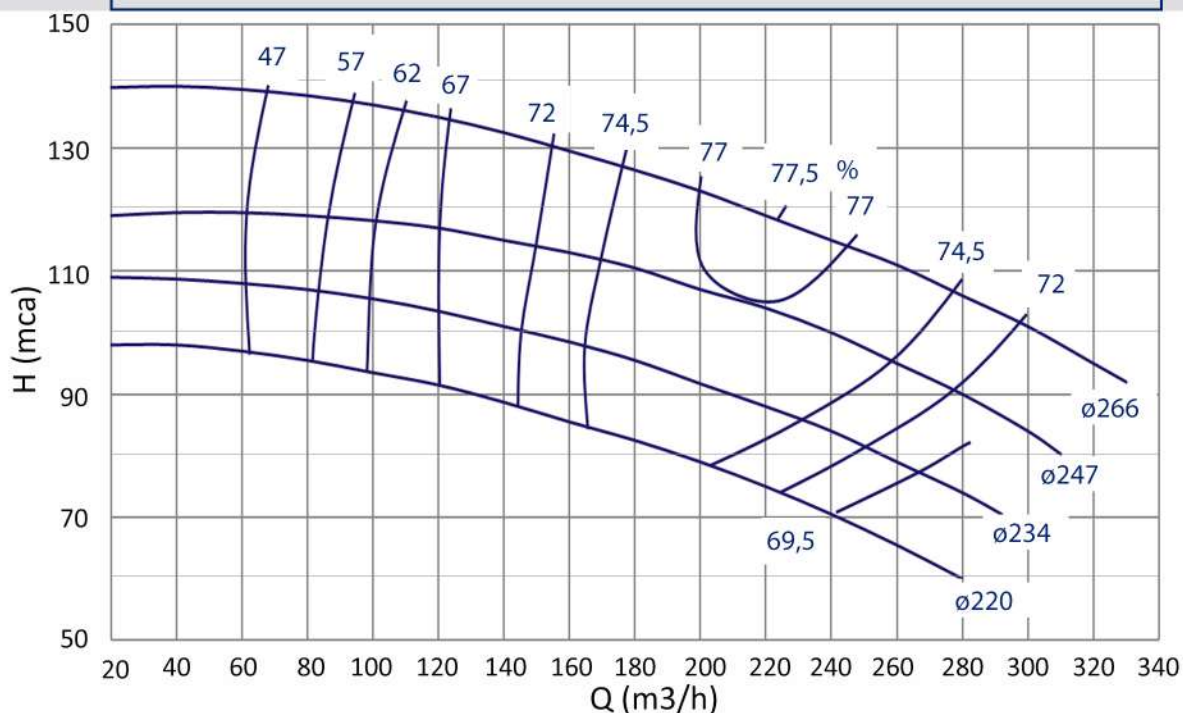
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	3600 rpm
RECALQUE 80	Nº 10010651	60 Hz 2 P



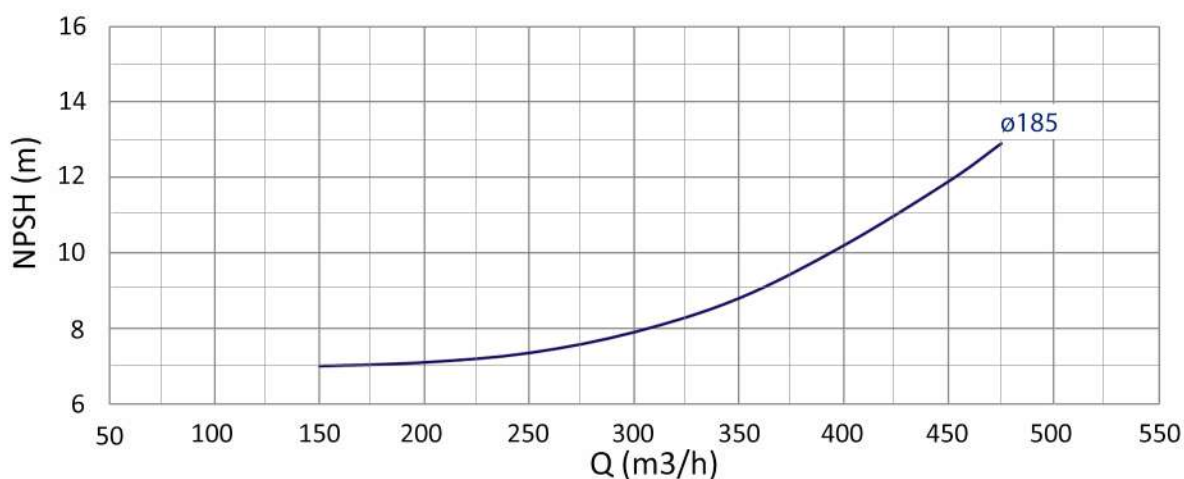
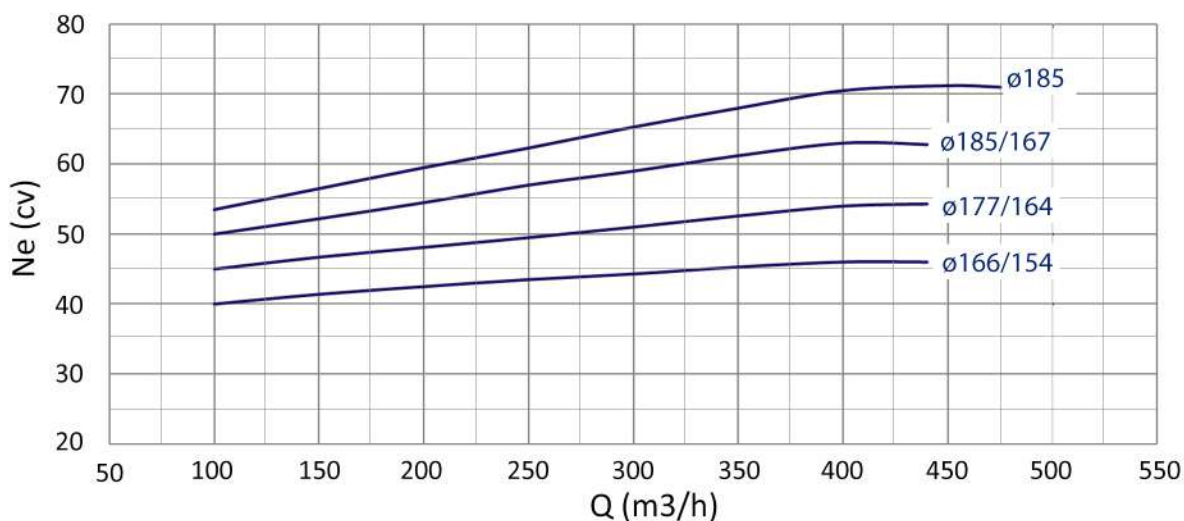
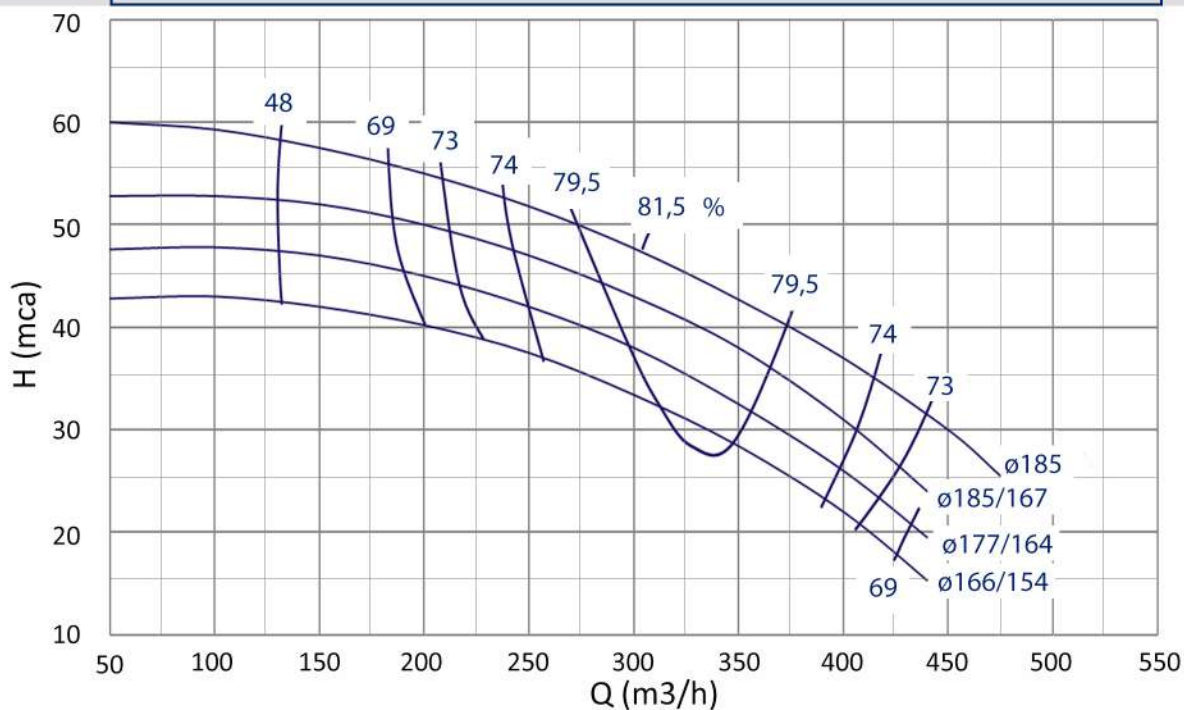
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	3600 rpm
RECALQUE 80	Nº 10010670	60 Hz 2 P



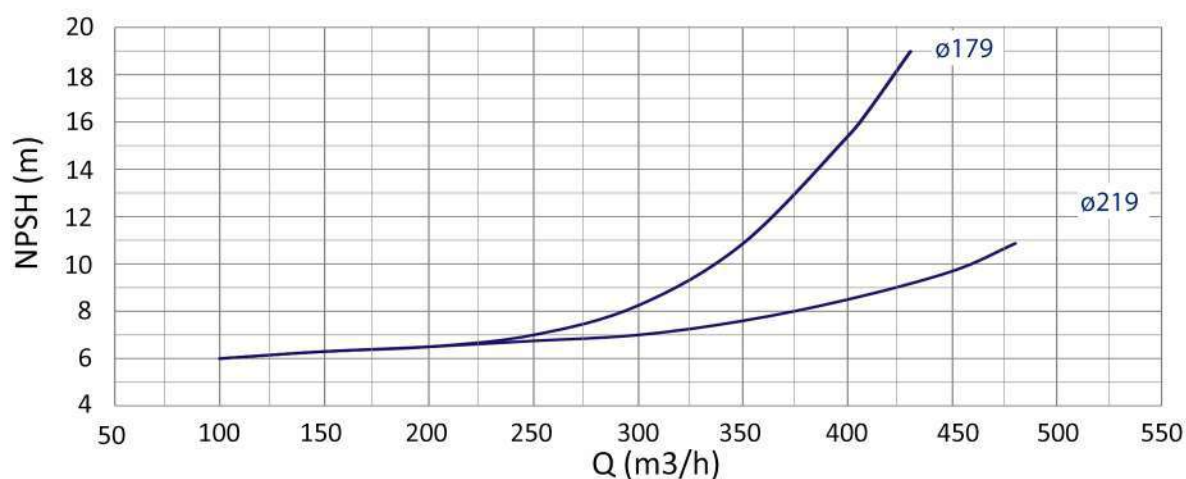
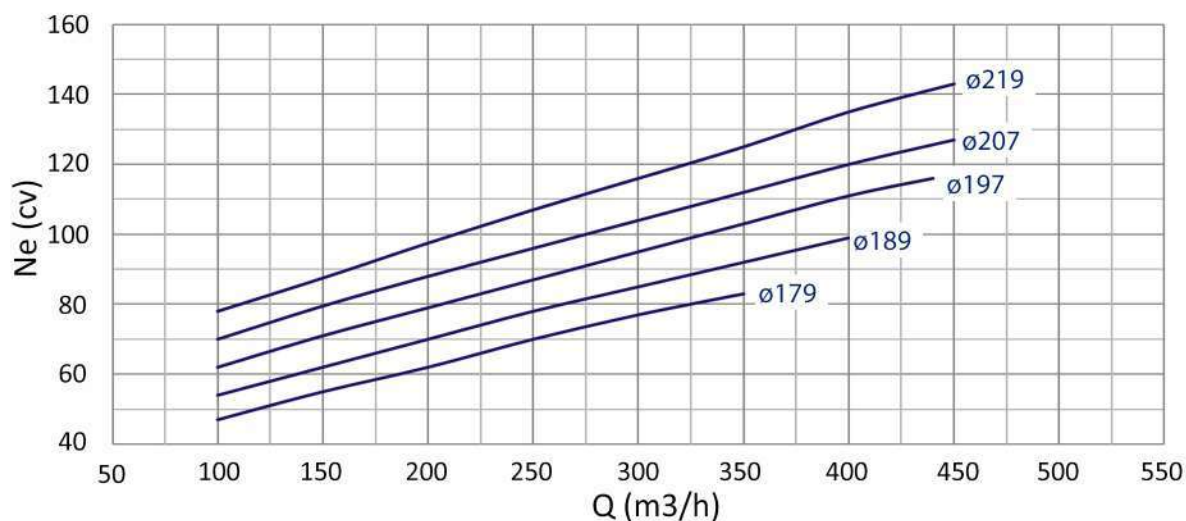
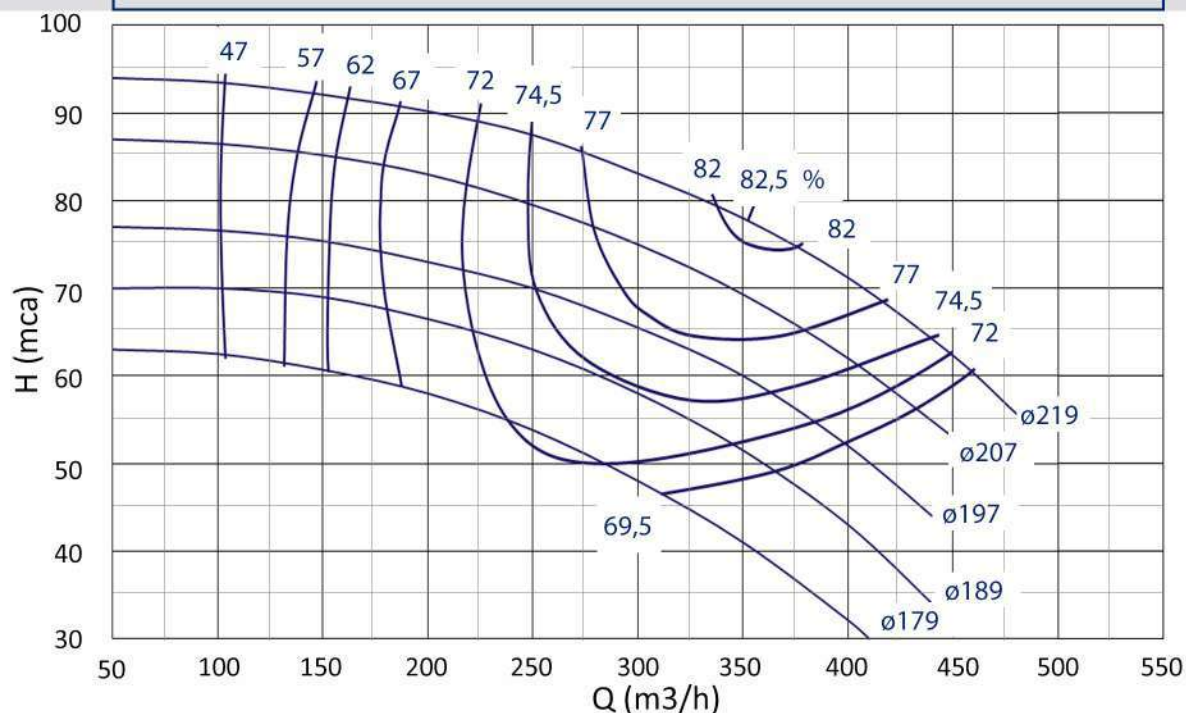
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	3600 rpm
RECALQUE 100	Nº 10010803	60 Hz 2 P



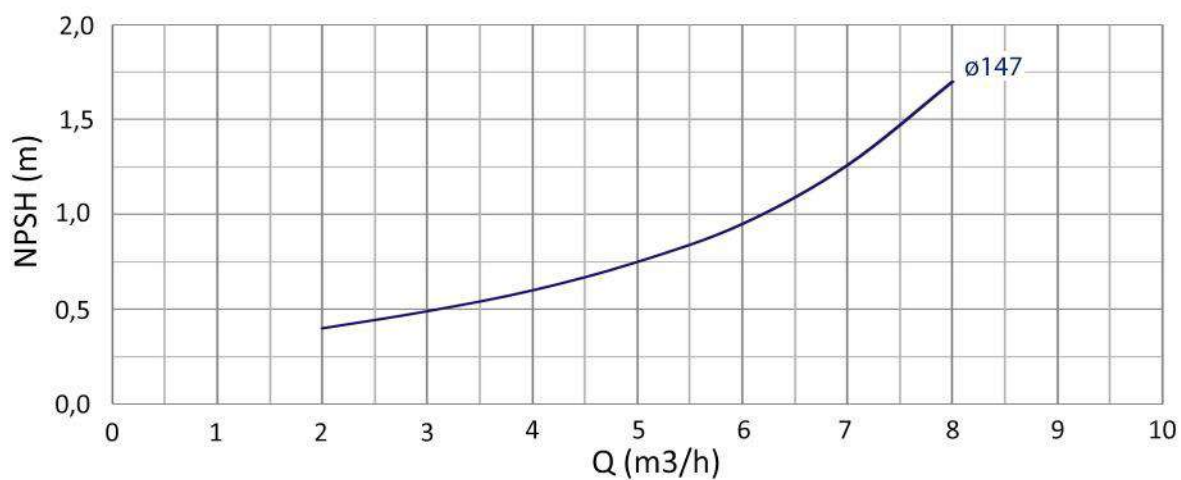
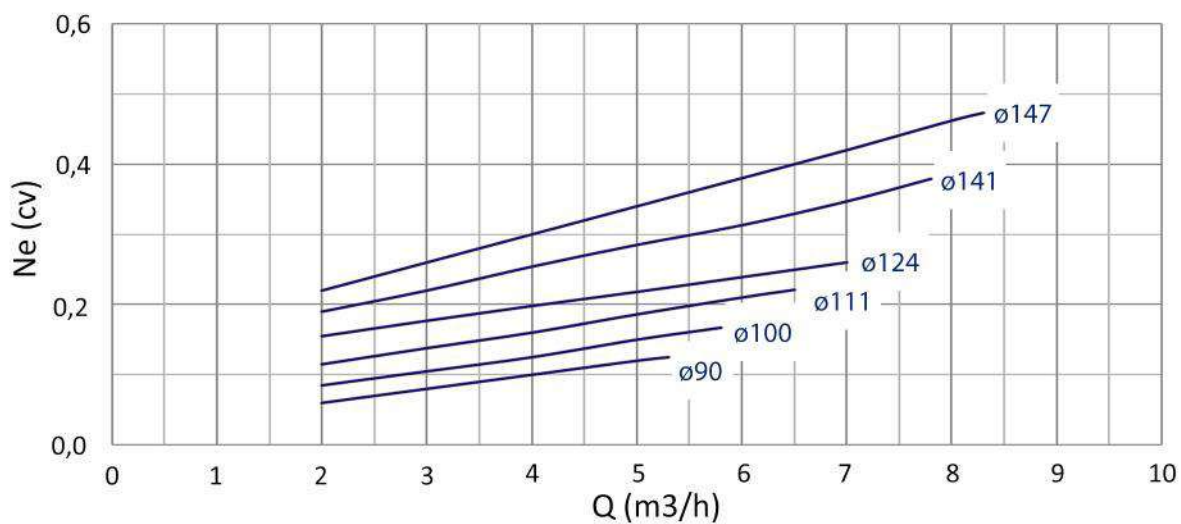
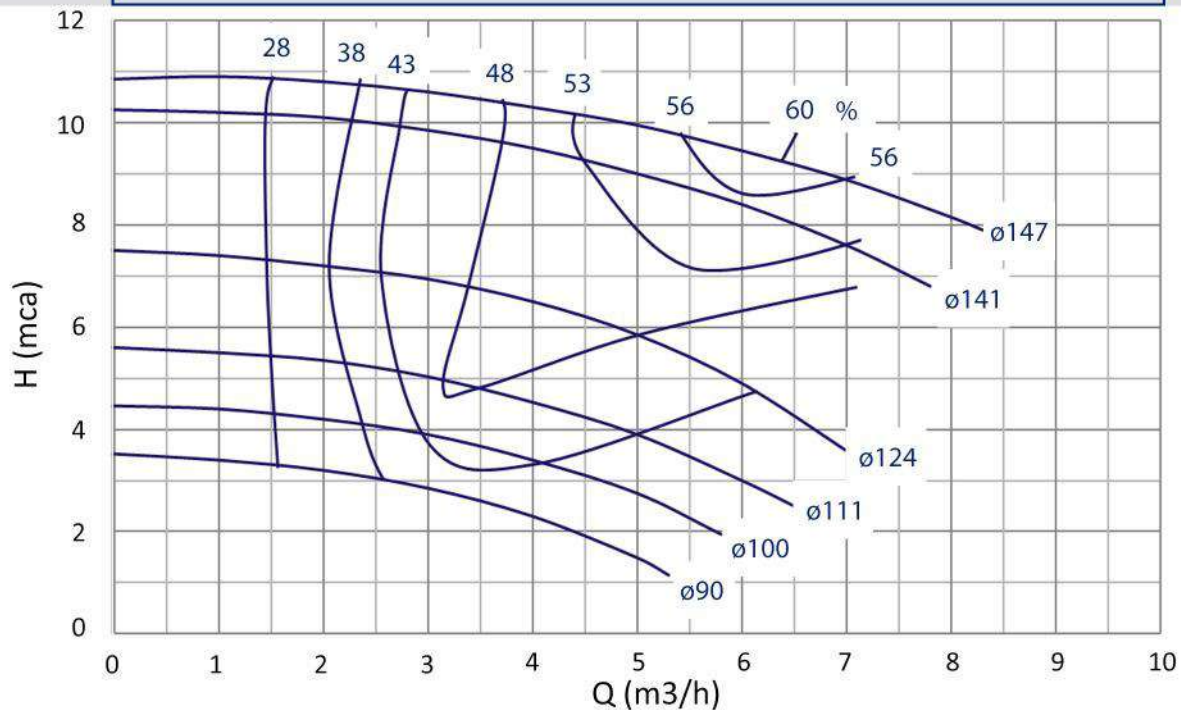
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	3600 rpm
RECALQUE 100	Nº 10010901	60 Hz 2 P



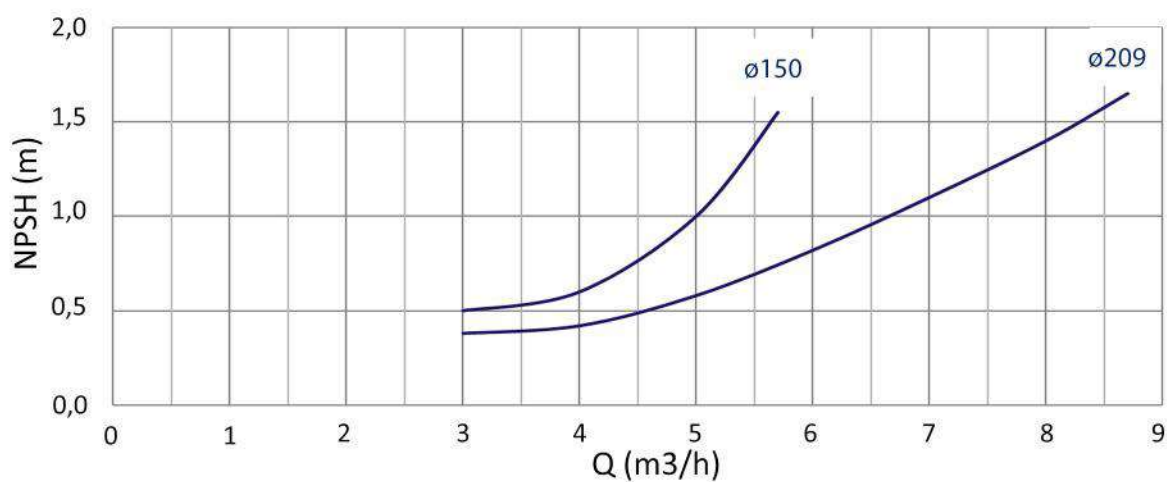
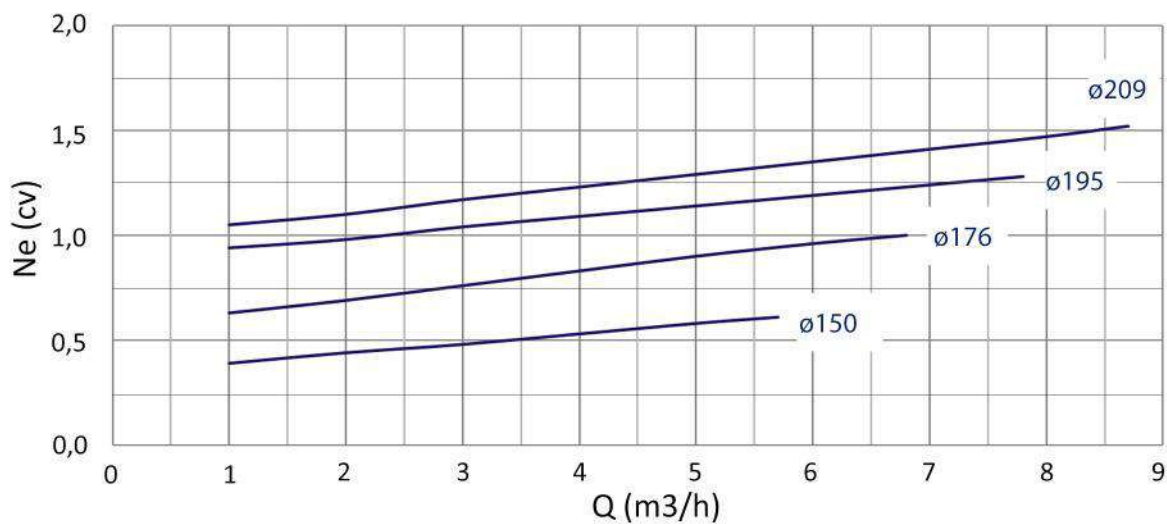
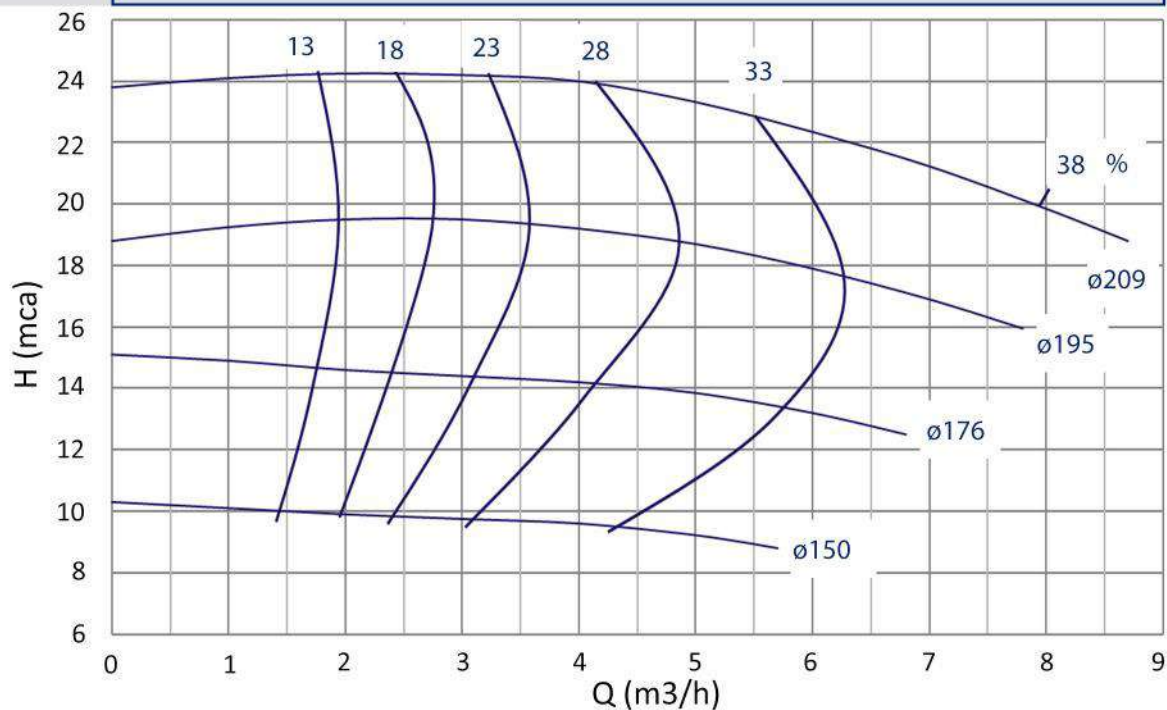
AFG NormBloc Flutuantes Radial

SUCÇÃO 40	CURVA	1800 rpm
RECALQUE 25	Nº 10009102	60 Hz 4 P



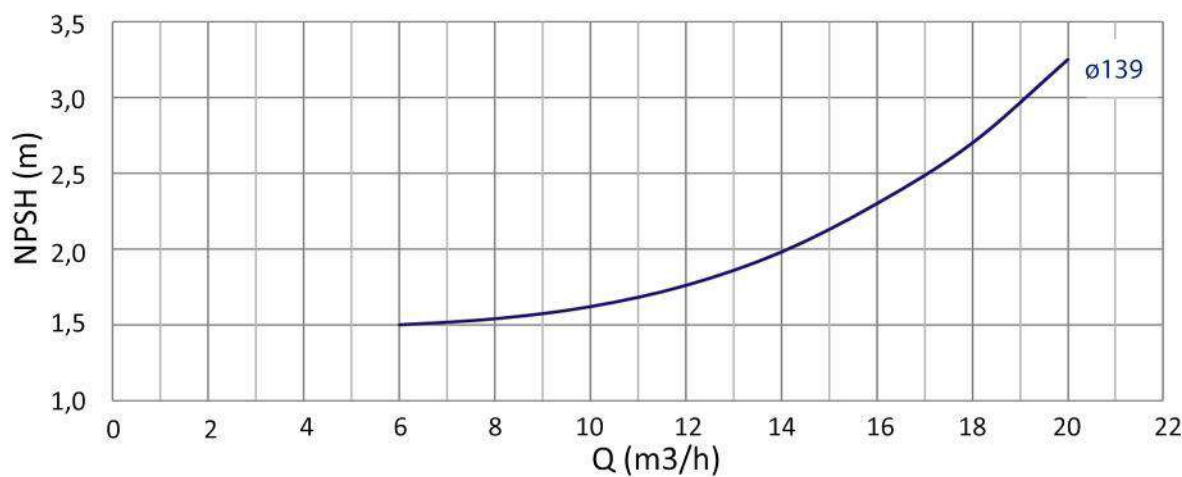
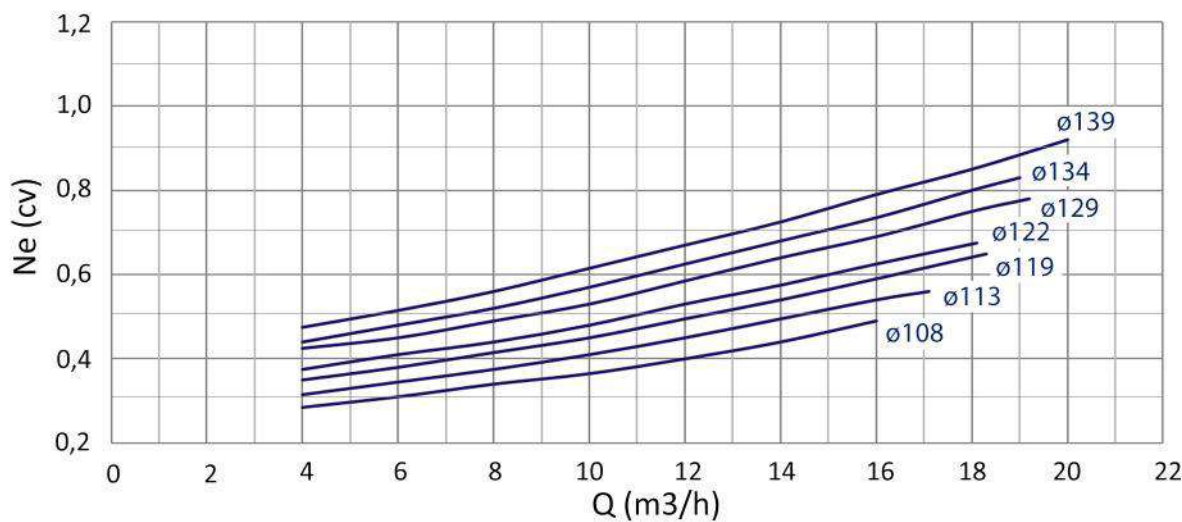
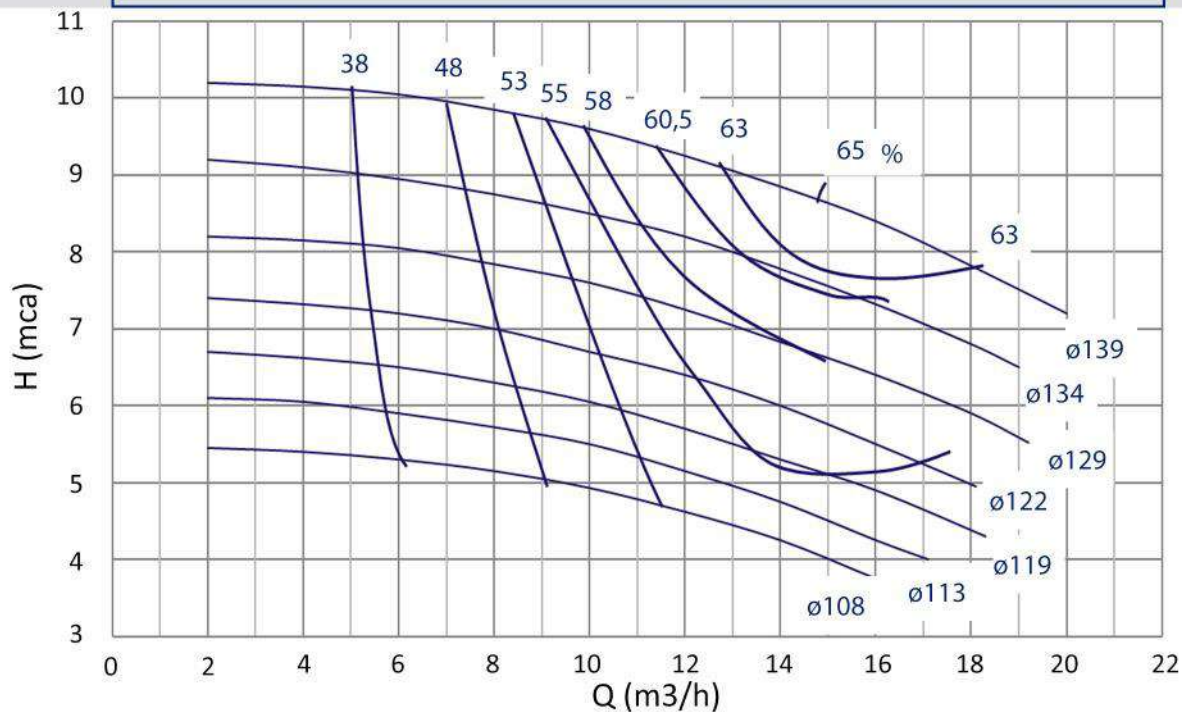
AFG NormBloc Flutuantes Radial

SUCÇÃO 40	CURVA	1800 rpm
RECALQUE 25	Nº 10009201	60 Hz 4 P



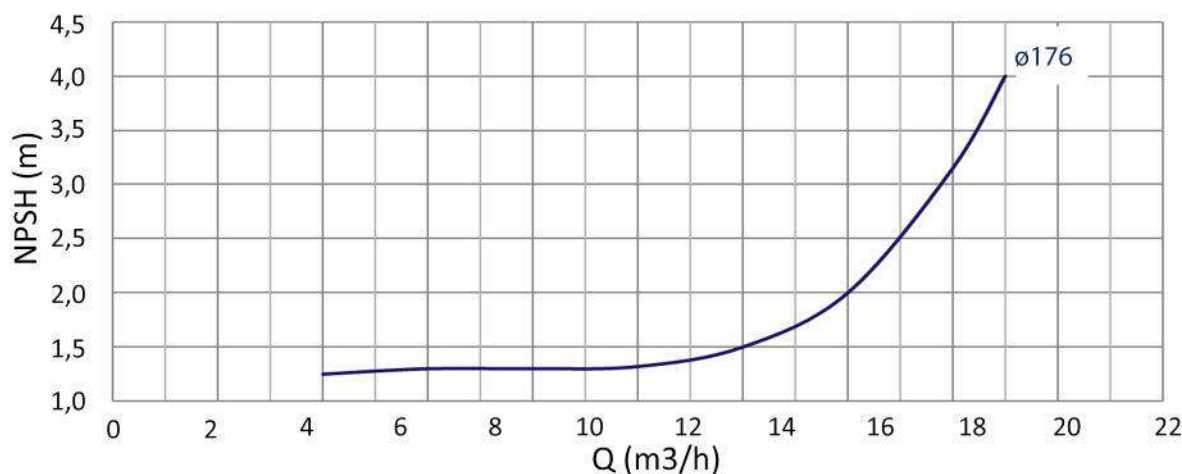
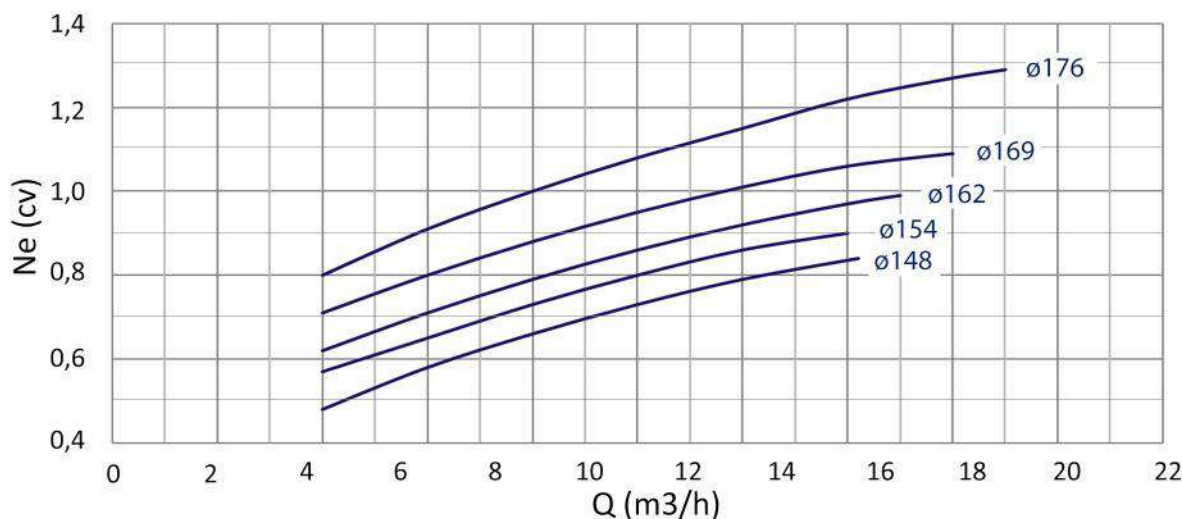
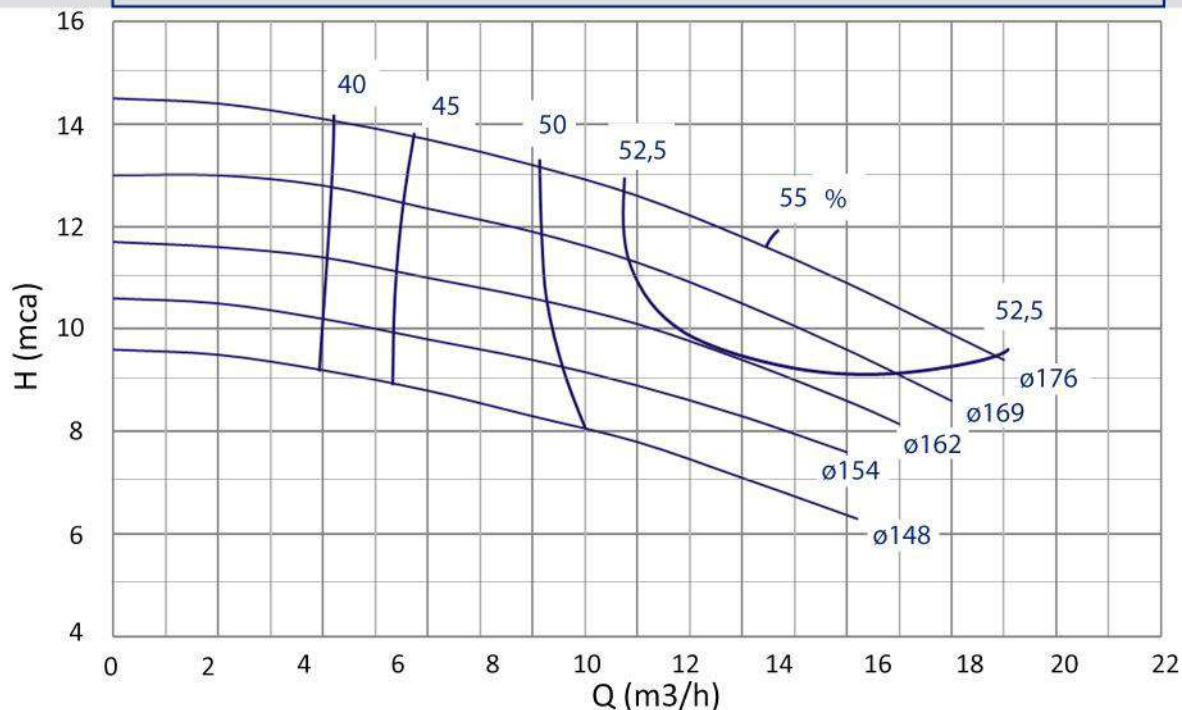
AFG NormBloc Flutuantes Radial

SUCÇÃO 50	CURVA	1800 rpm
RECALQUE 32	Nº 10009301	60 Hz 4 P



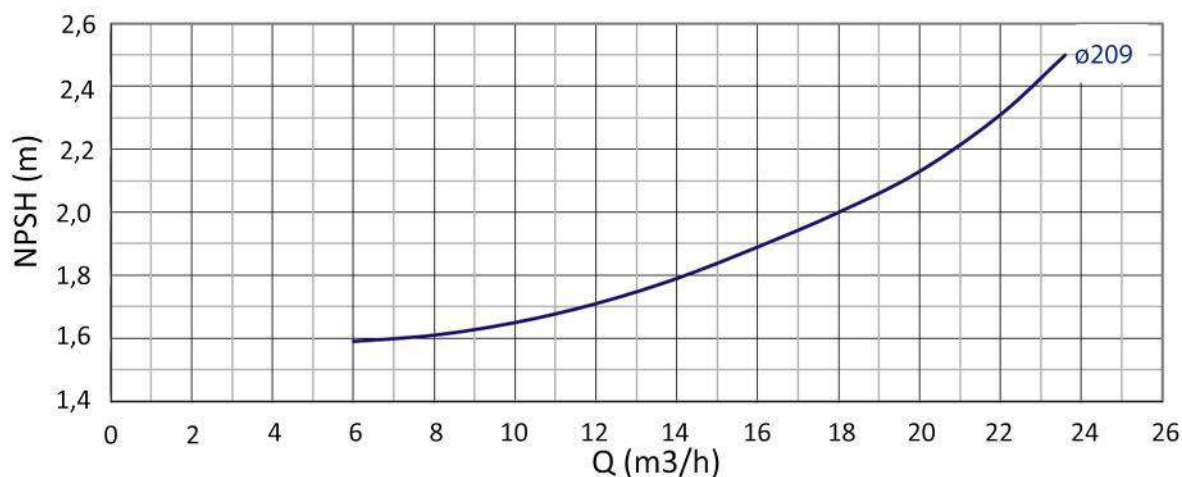
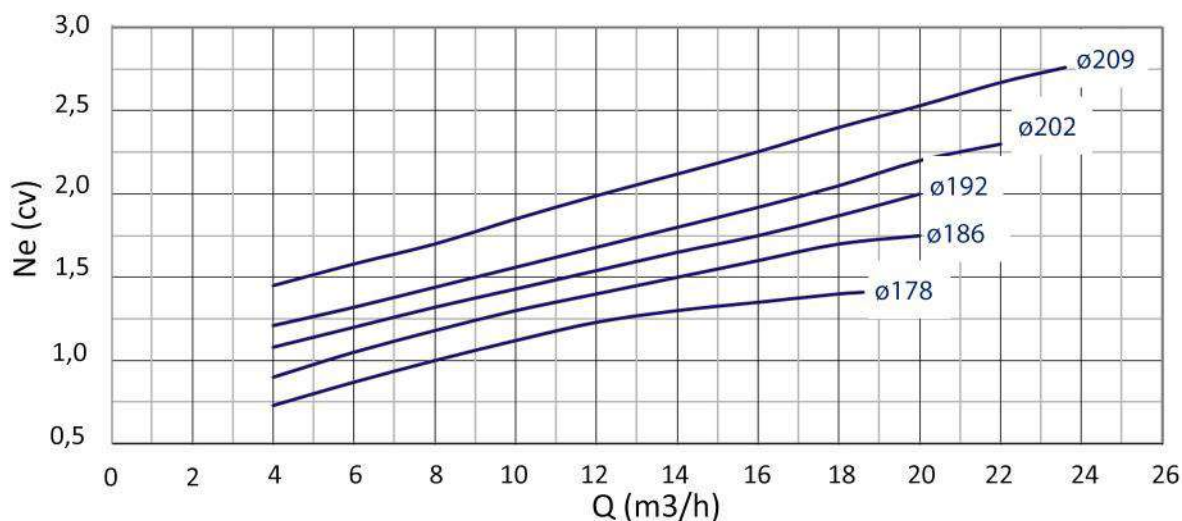
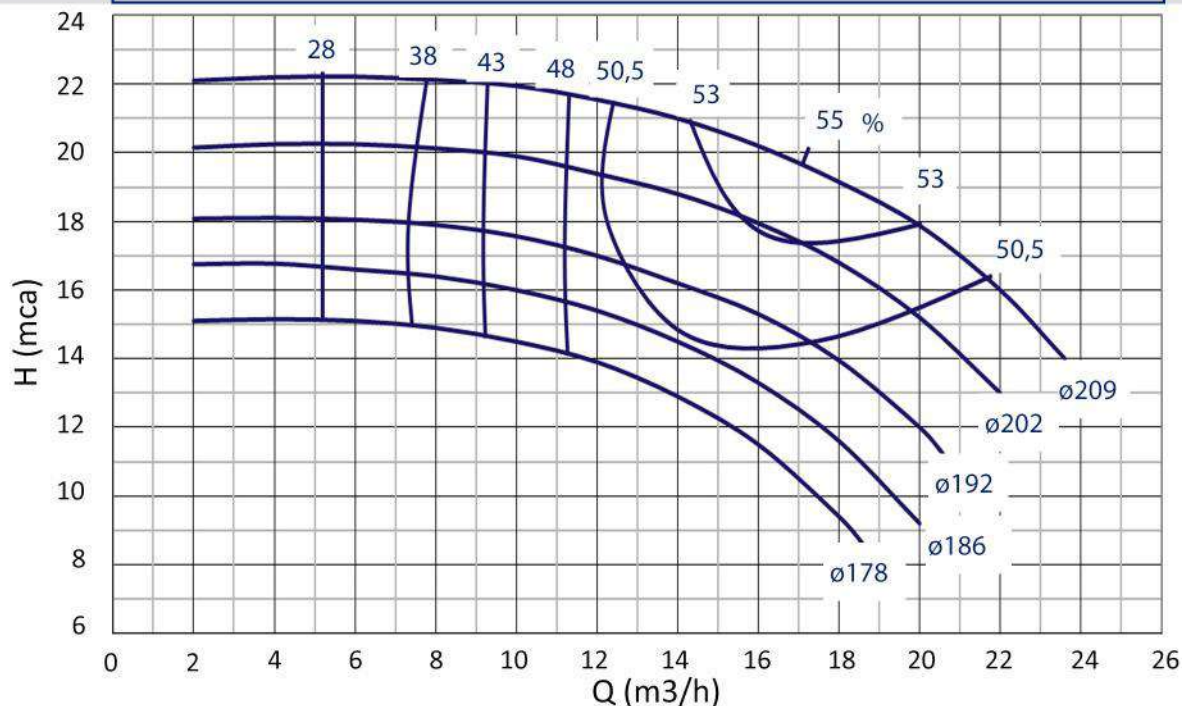
AFG NormBloc Flutuantes Radial

SUCÇÃO 50	CURVA	1800 rpm
RECALQUE 32	Nº 10009401	60 Hz 4 P



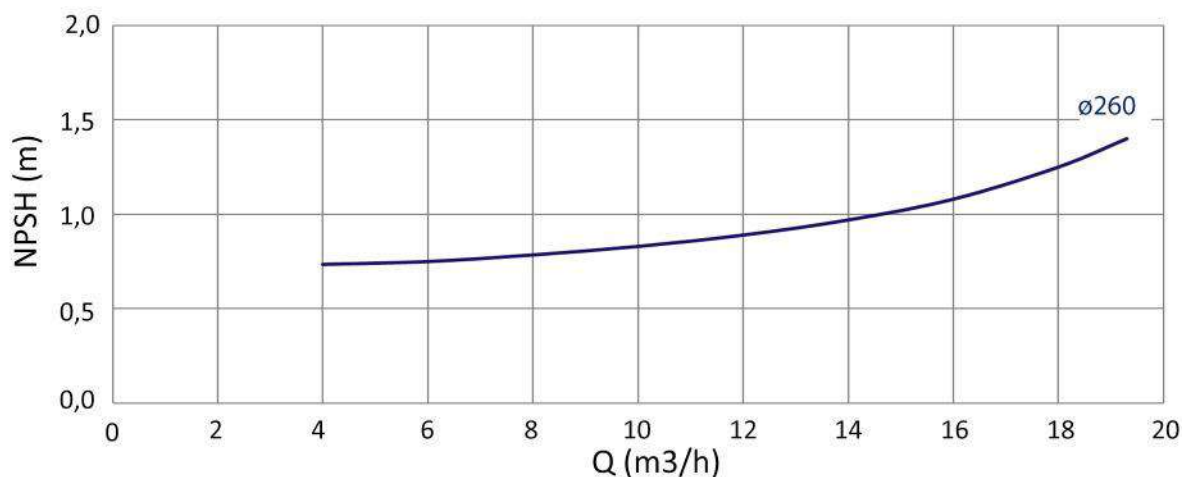
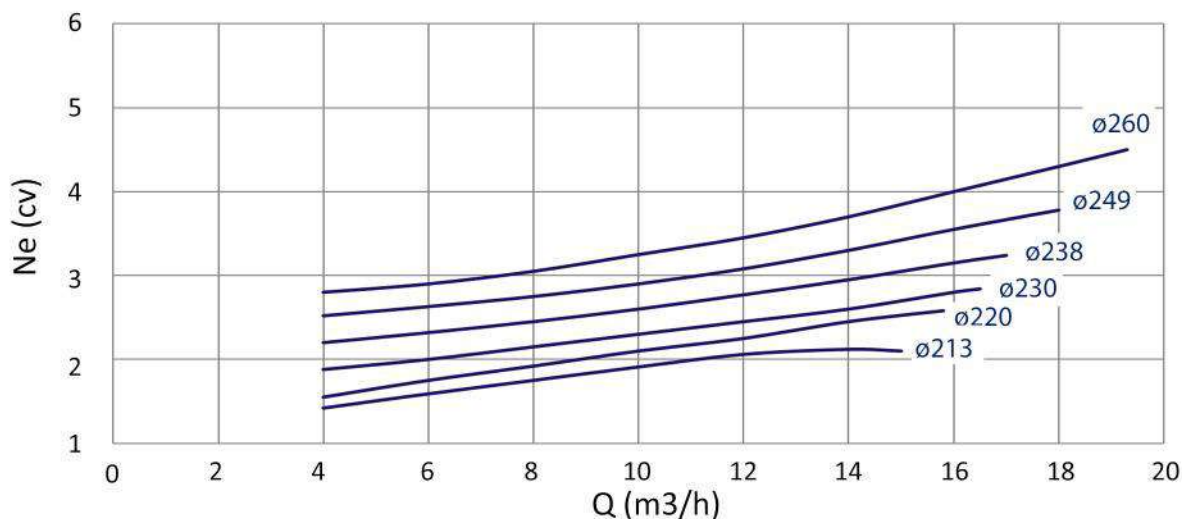
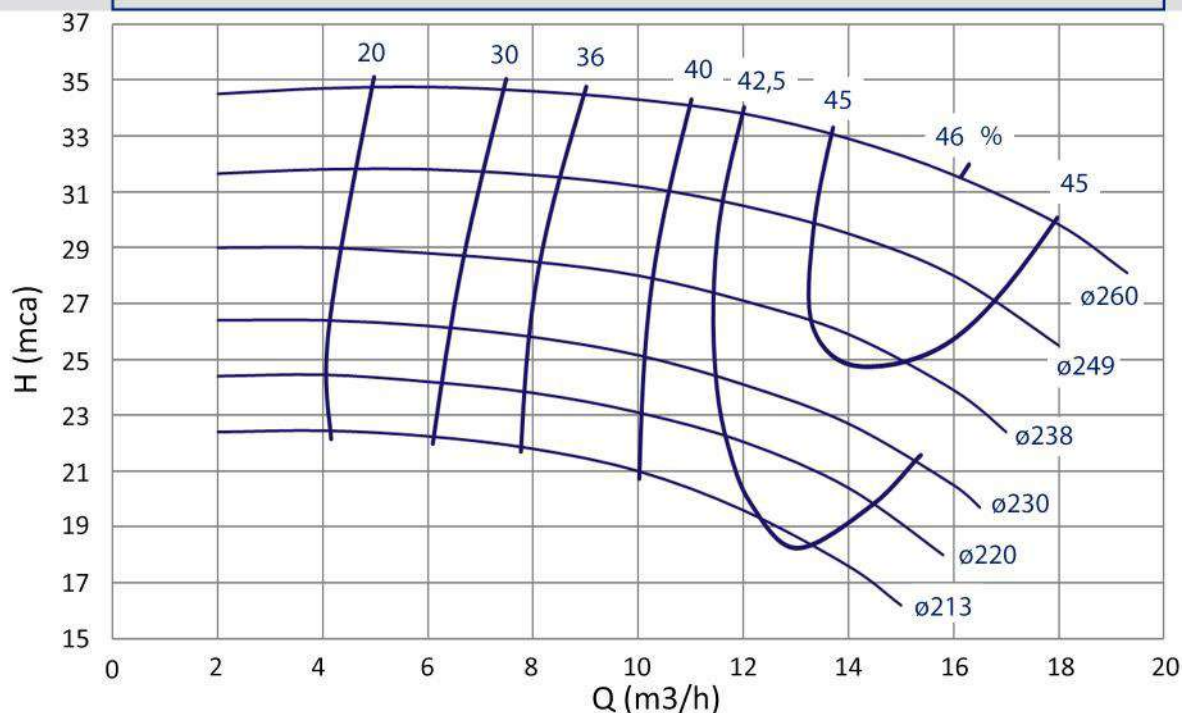
AFG NormBloc Flutuantes Radial

SUCÇÃO 50	CURVA	1800 rpm
RECALQUE 32	Nº 10009501	60 Hz 4 P



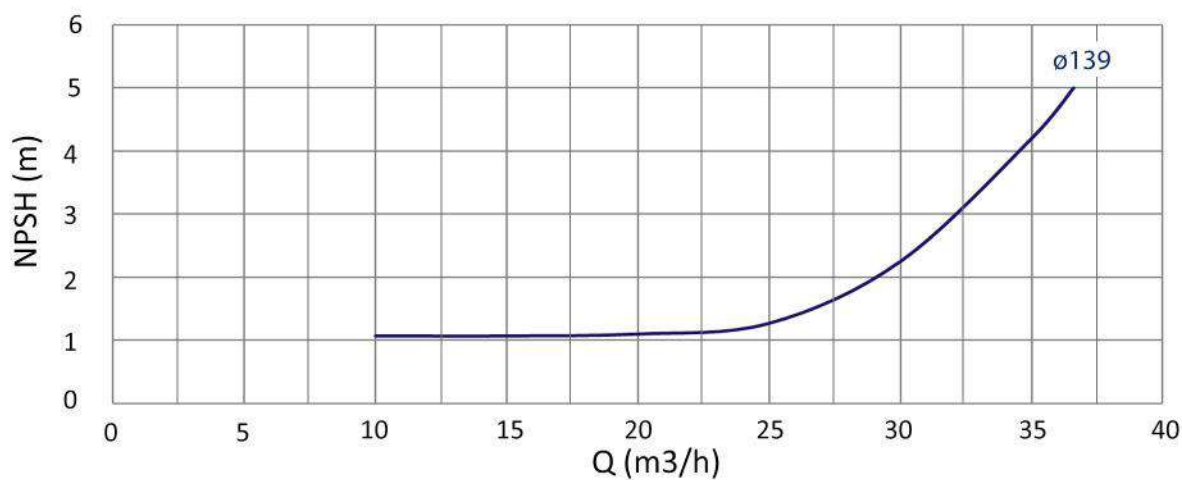
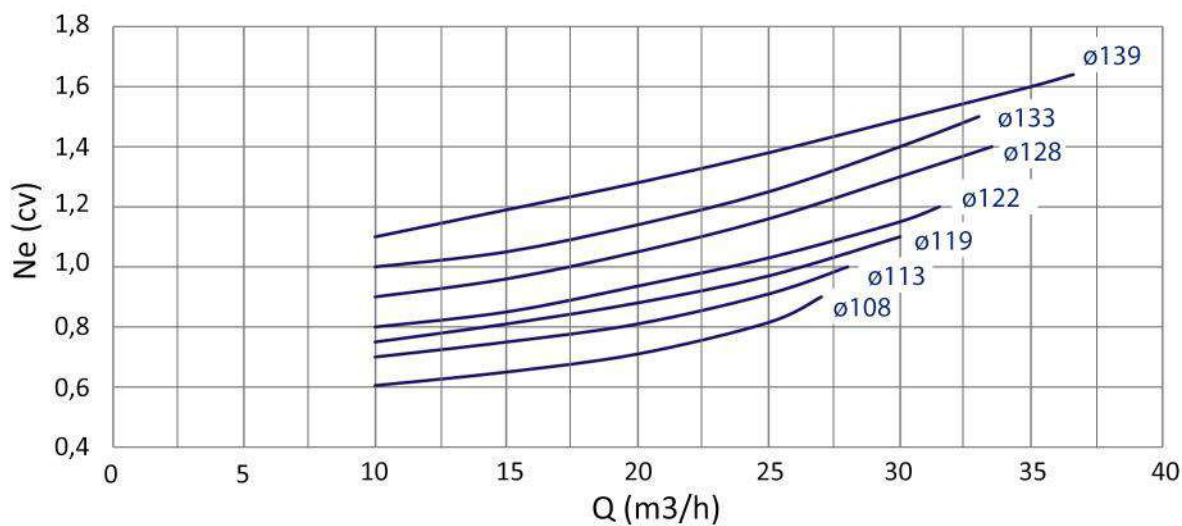
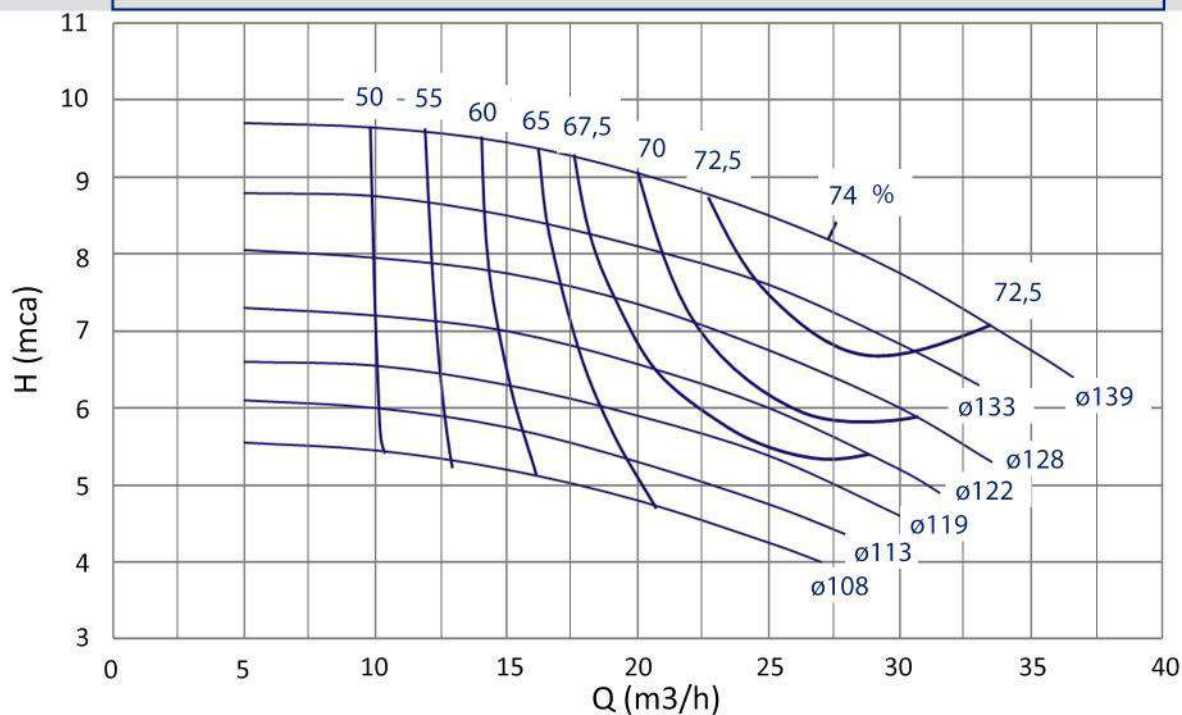
AFG NormBloc Flutuantes Radial

SUCÇÃO 50	CURVA	1800 rpm
RECALQUE 32	Nº 10009601	60 Hz 4 P



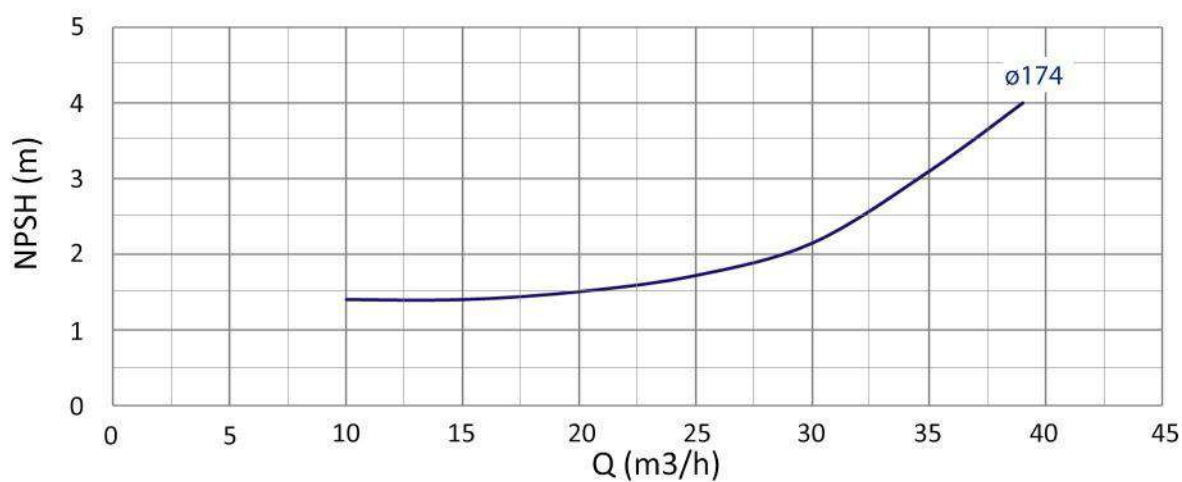
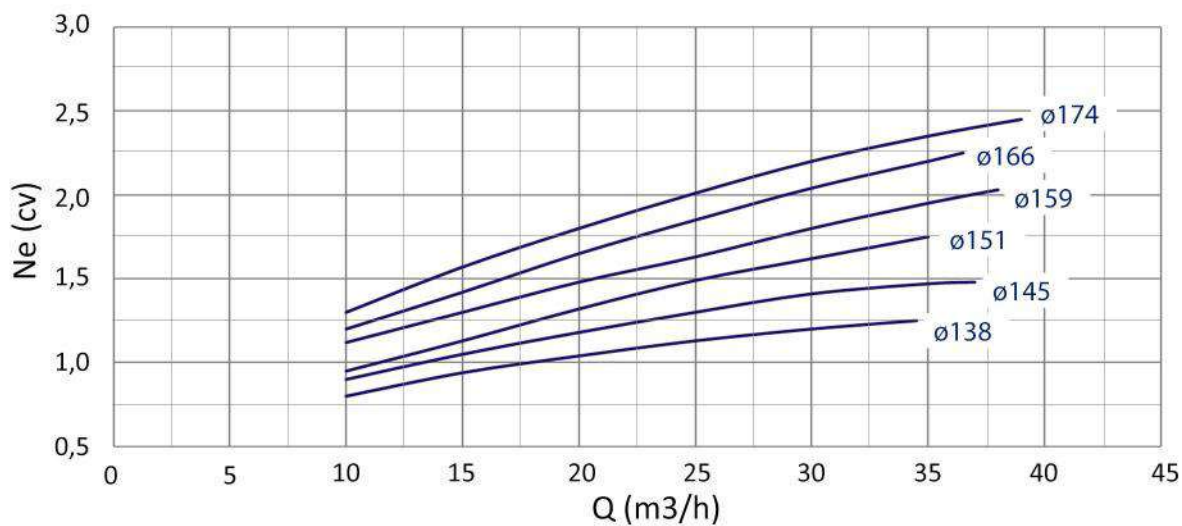
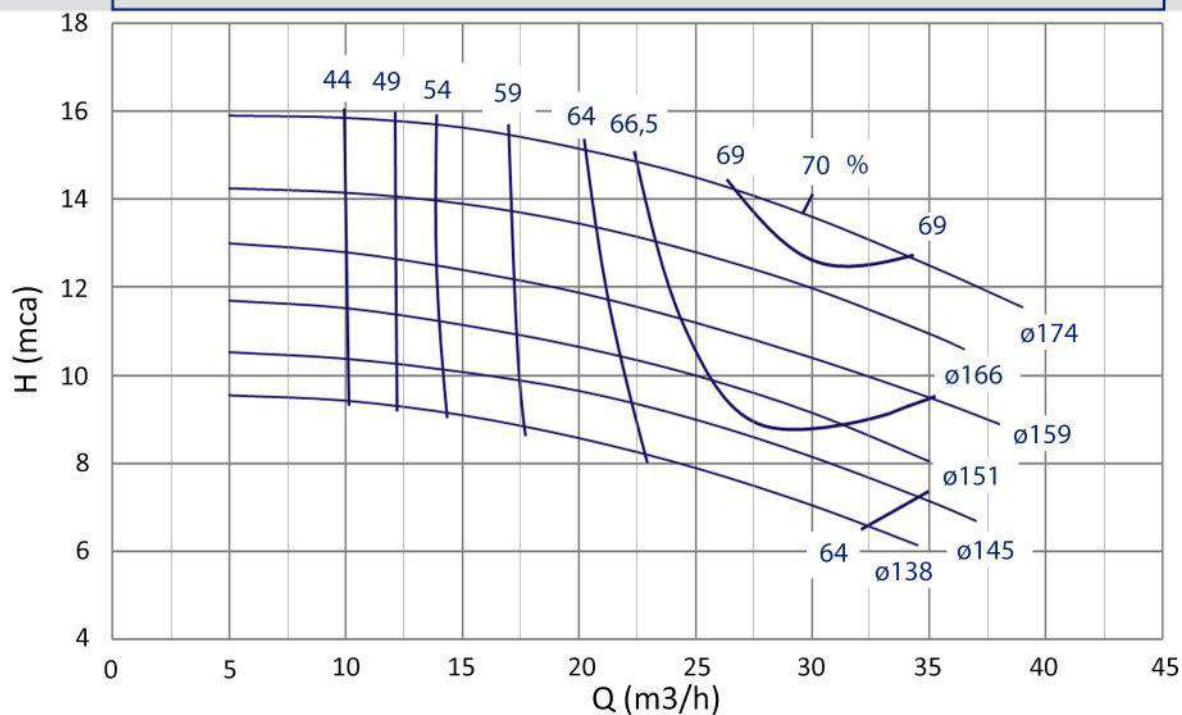
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	1800 rpm
RECALQUE 40	Nº 10010002	60 Hz 4 P



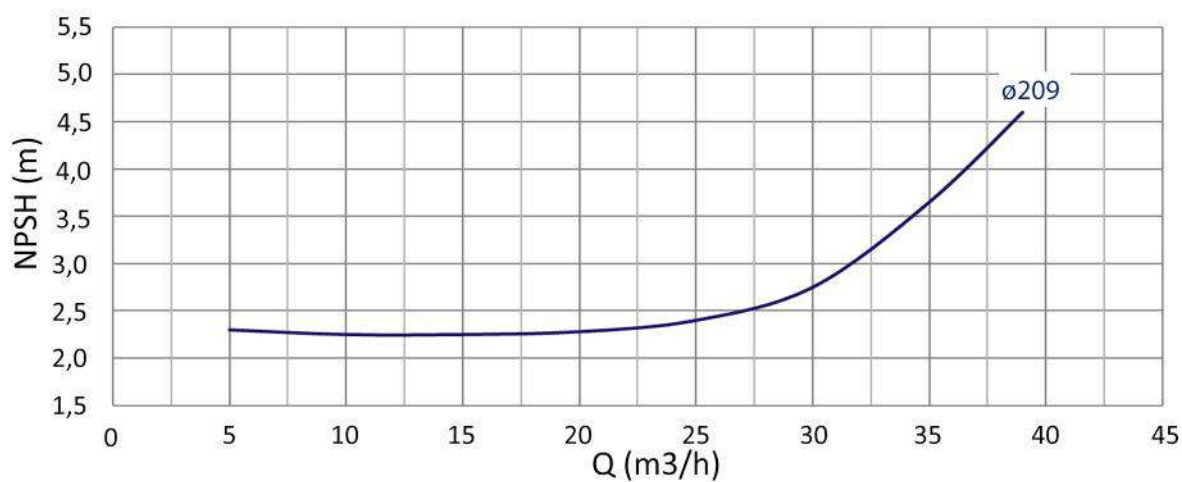
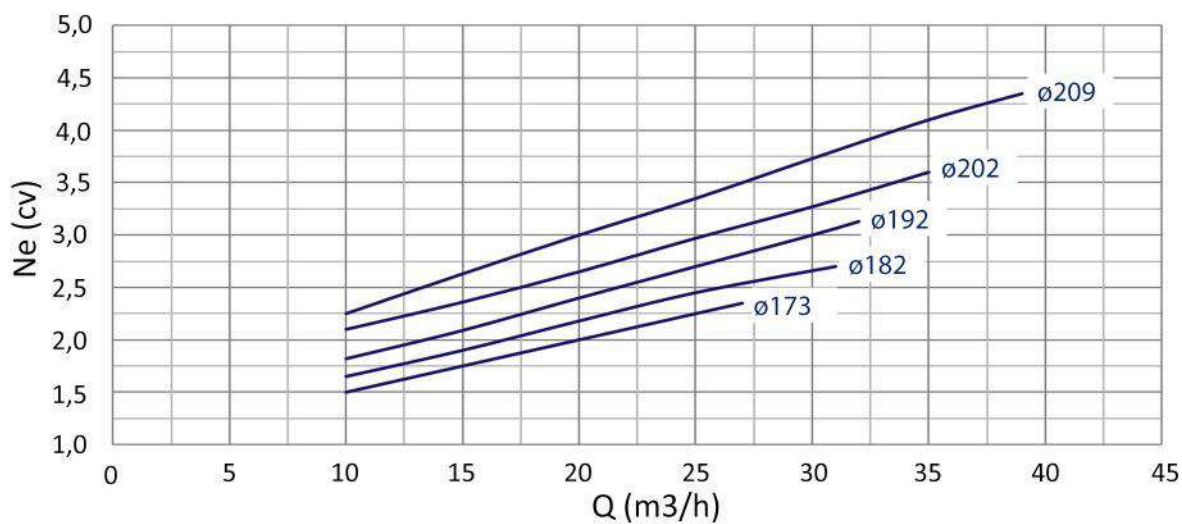
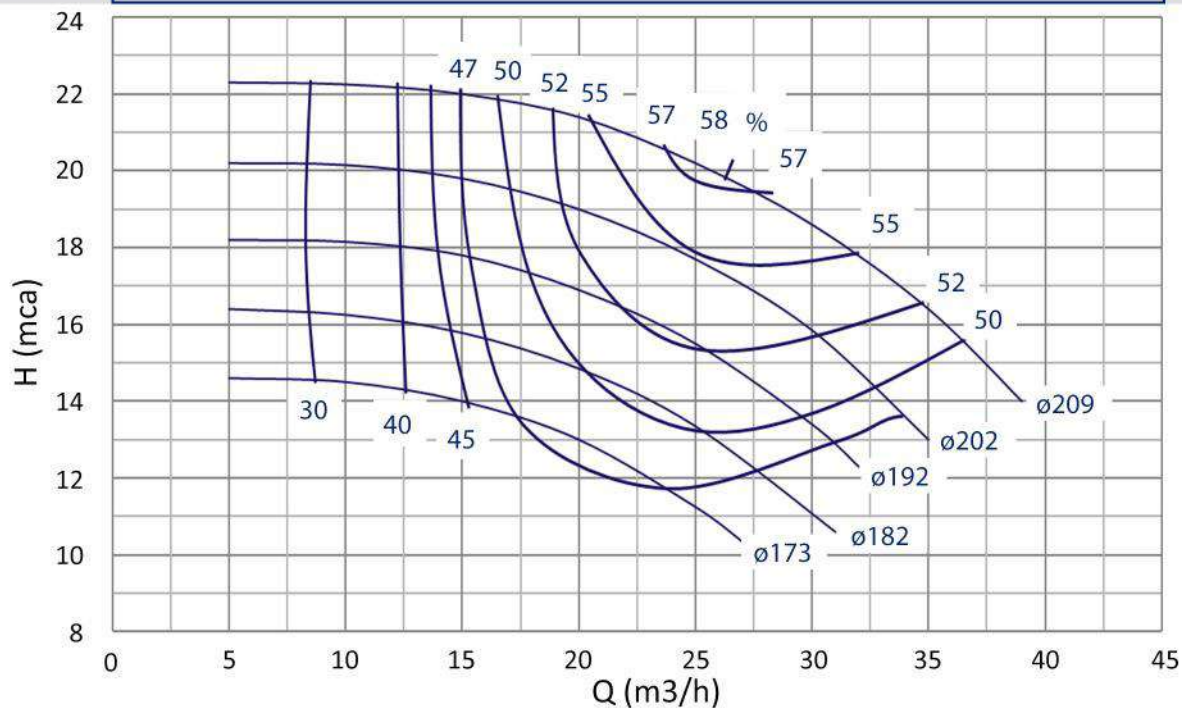
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	1800 rpm
RECALQUE 40	Nº 10010103	60 Hz 4 P



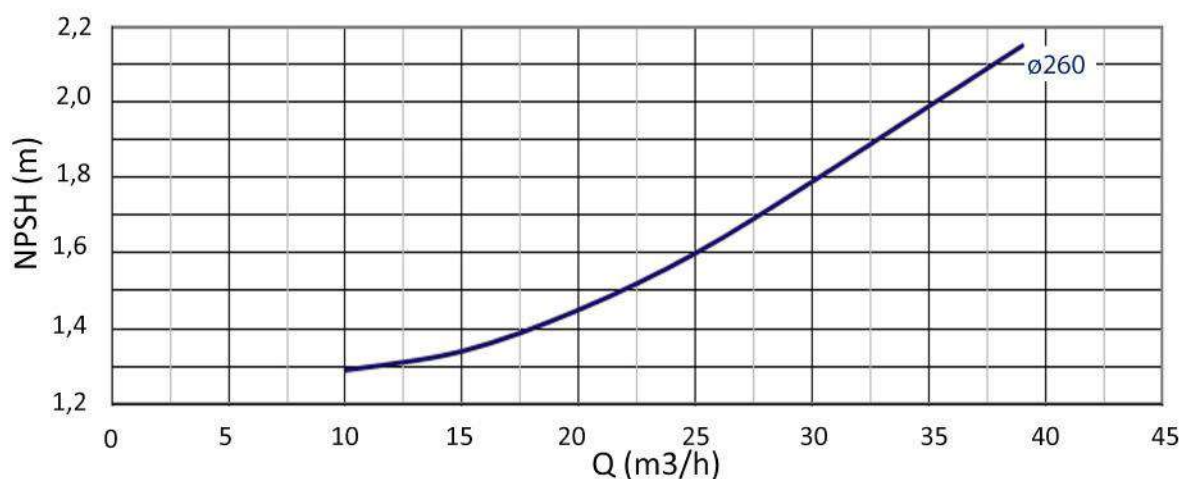
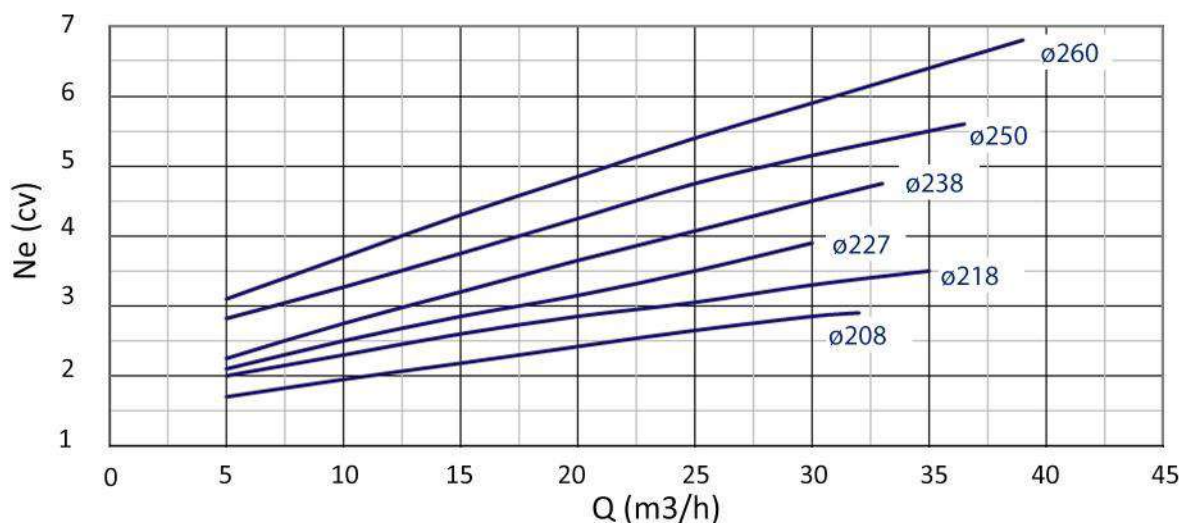
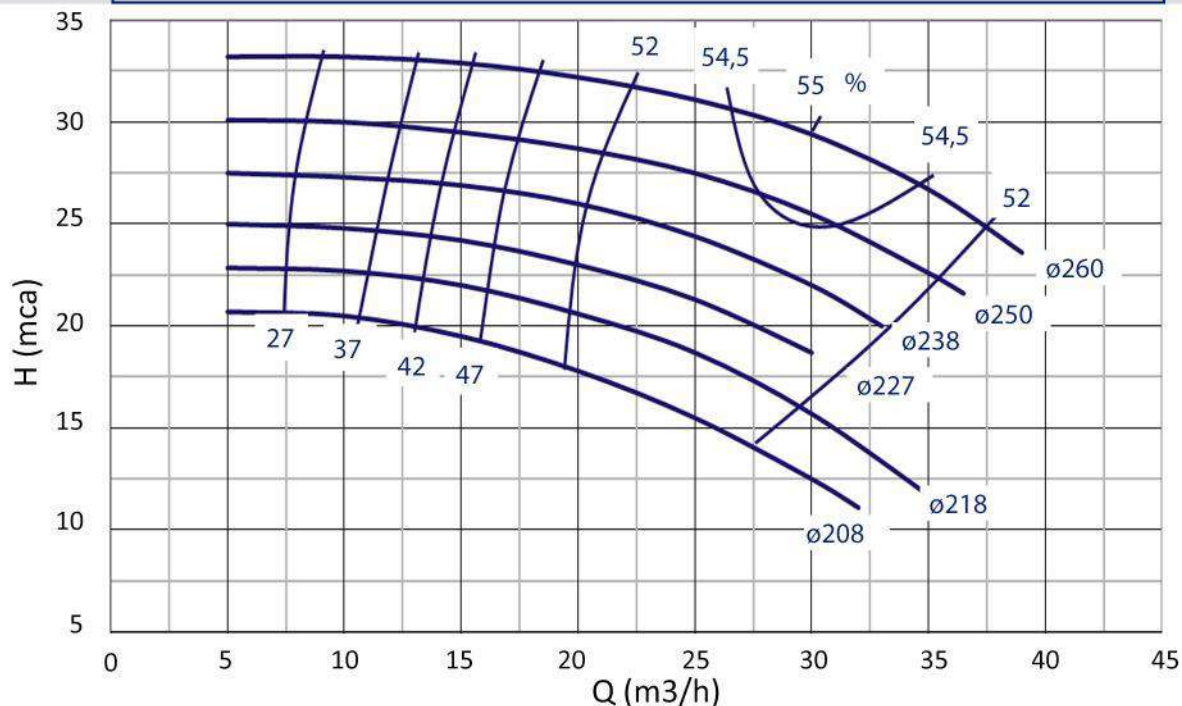
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	1800 rpm
RECALQUE 40	Nº 10010116	60 Hz 4 P



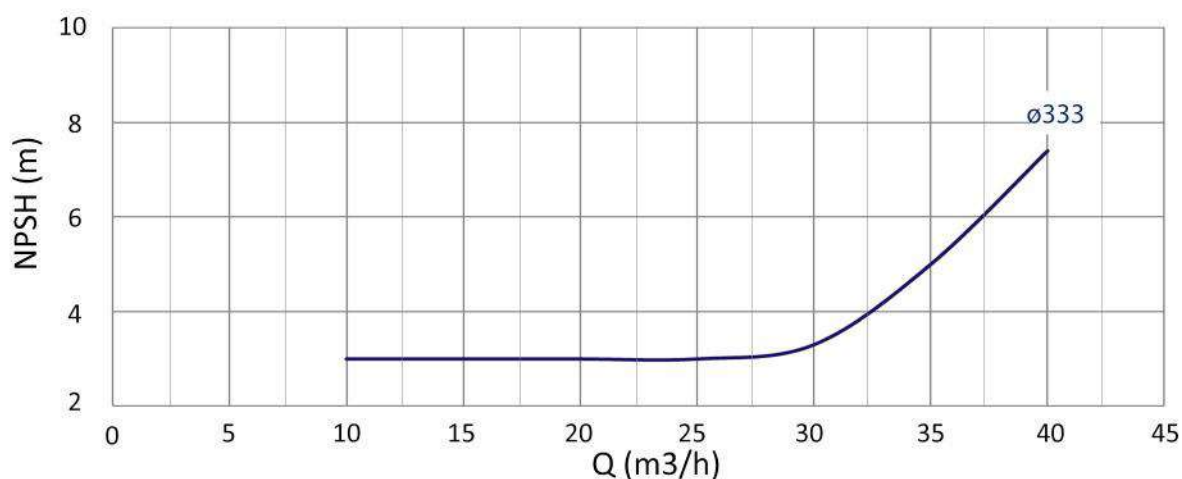
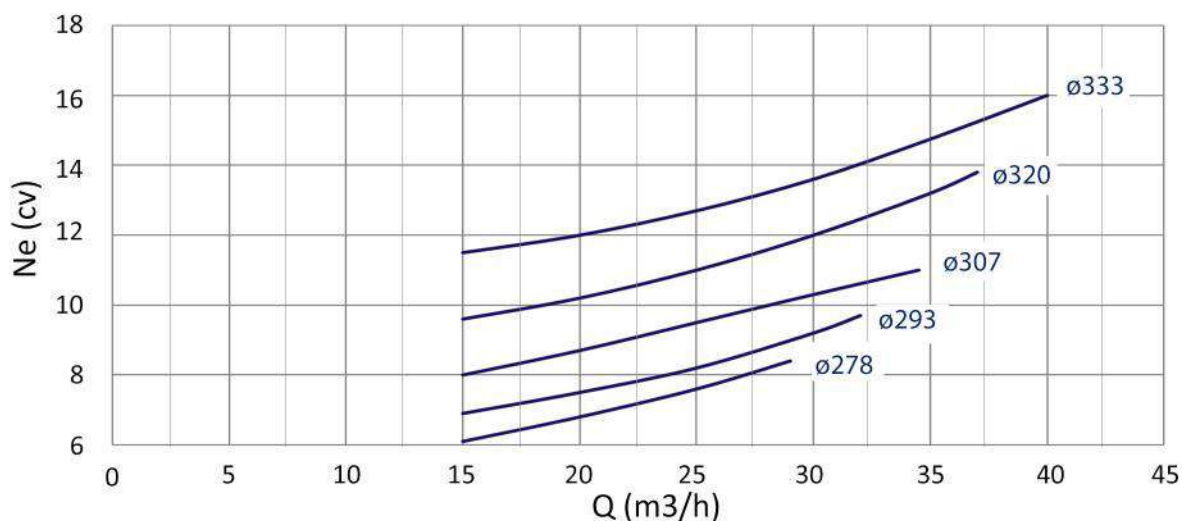
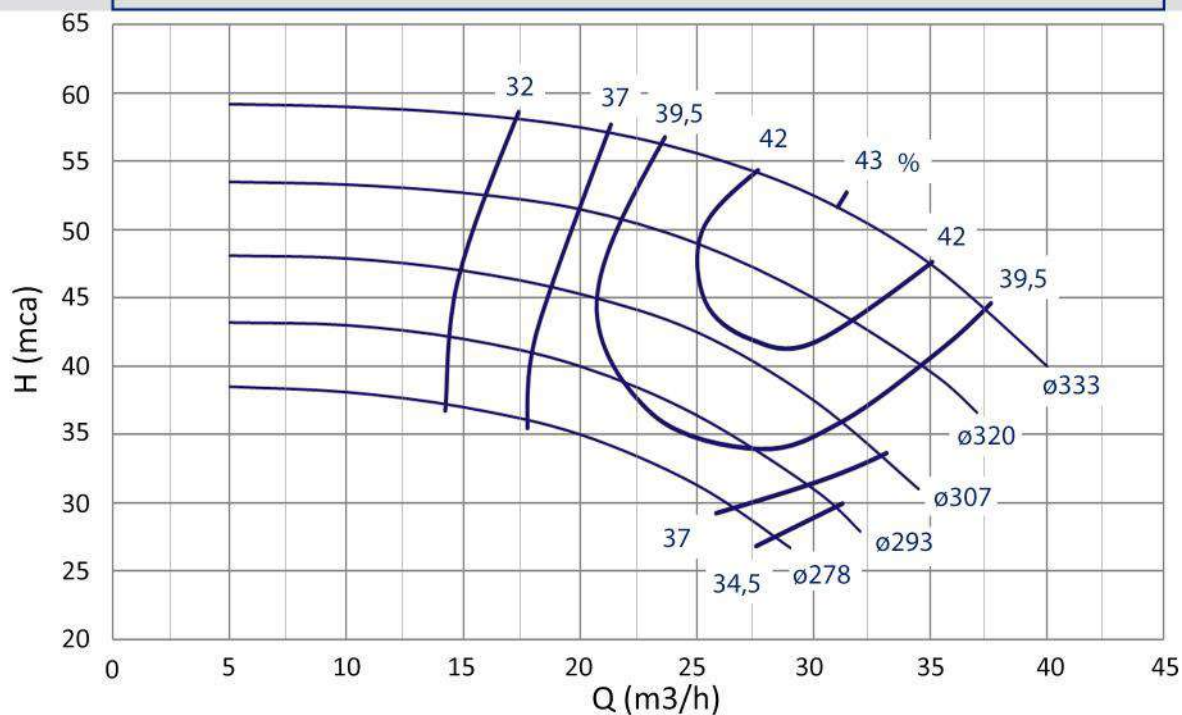
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	1800 rpm
RECALQUE 40	Nº 10010125	60 Hz 4 P



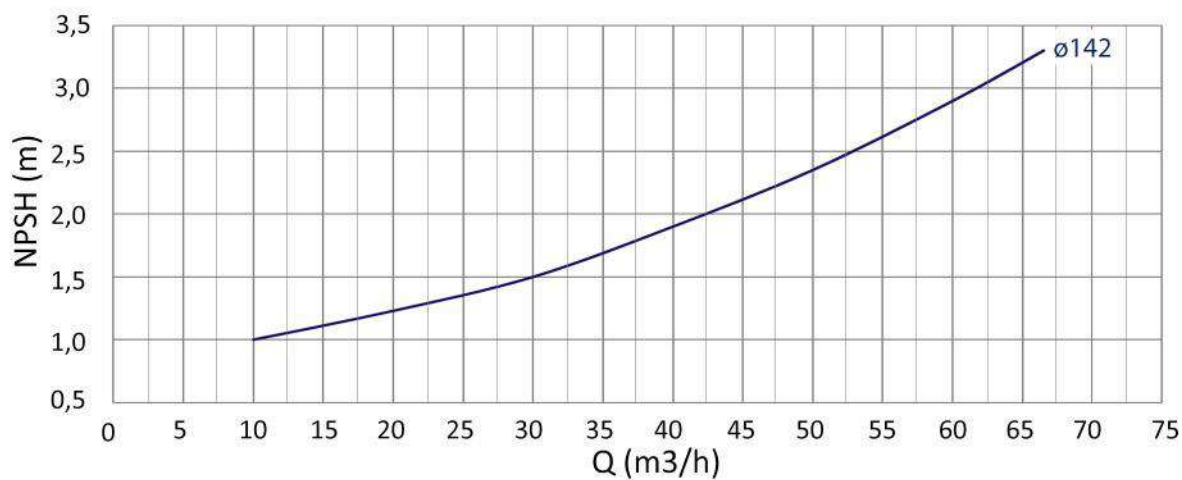
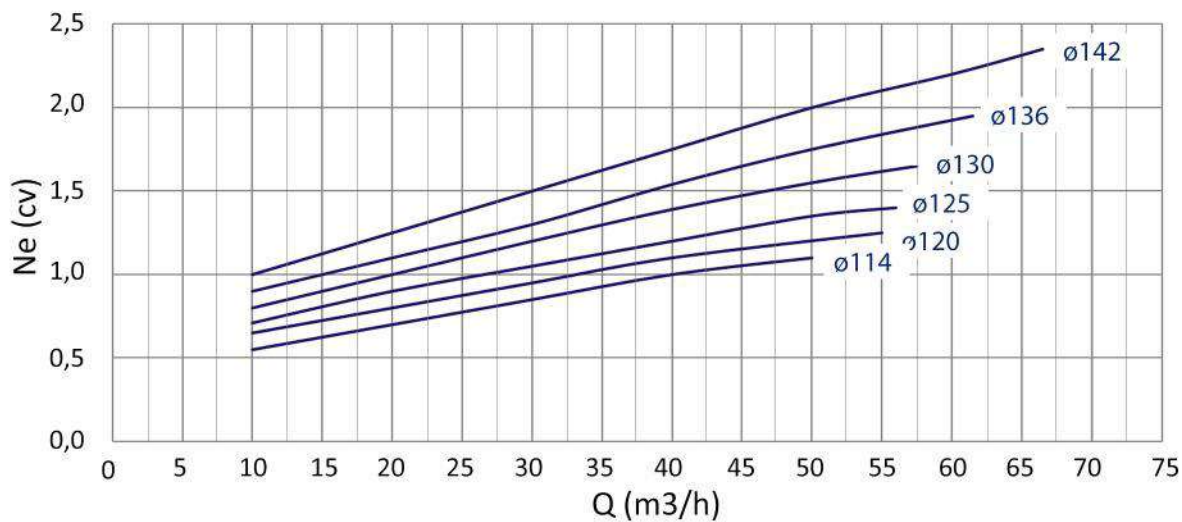
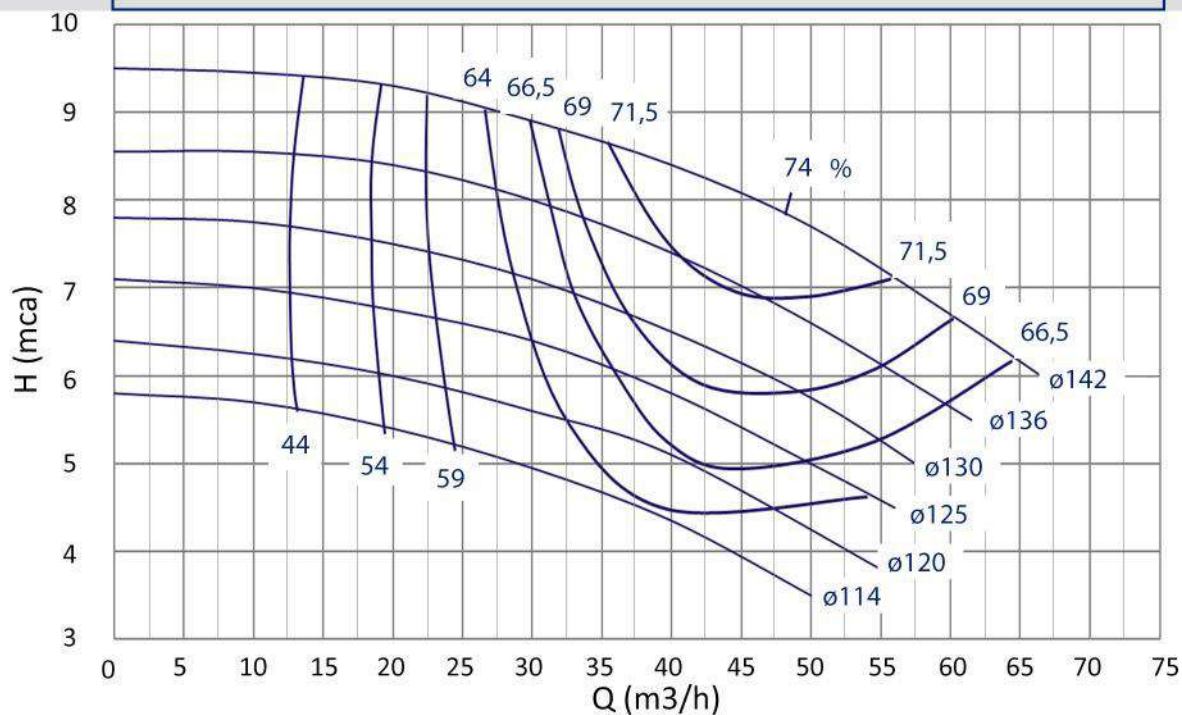
AFG NormBloc Flutuantes Radial

SUCÇÃO 65	CURVA	1800 rpm
RECALQUE 40	Nº 10010141	60 Hz 4 P



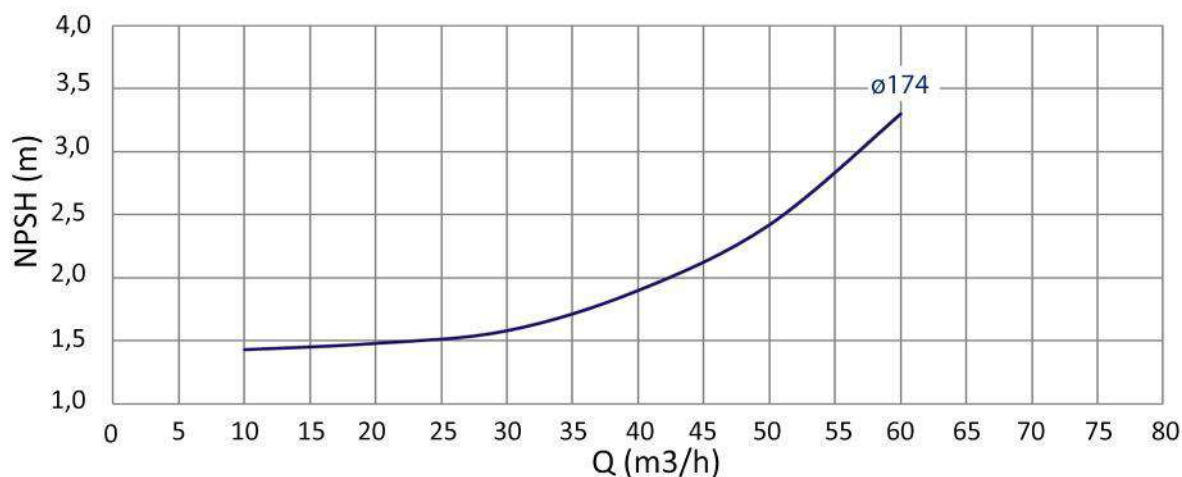
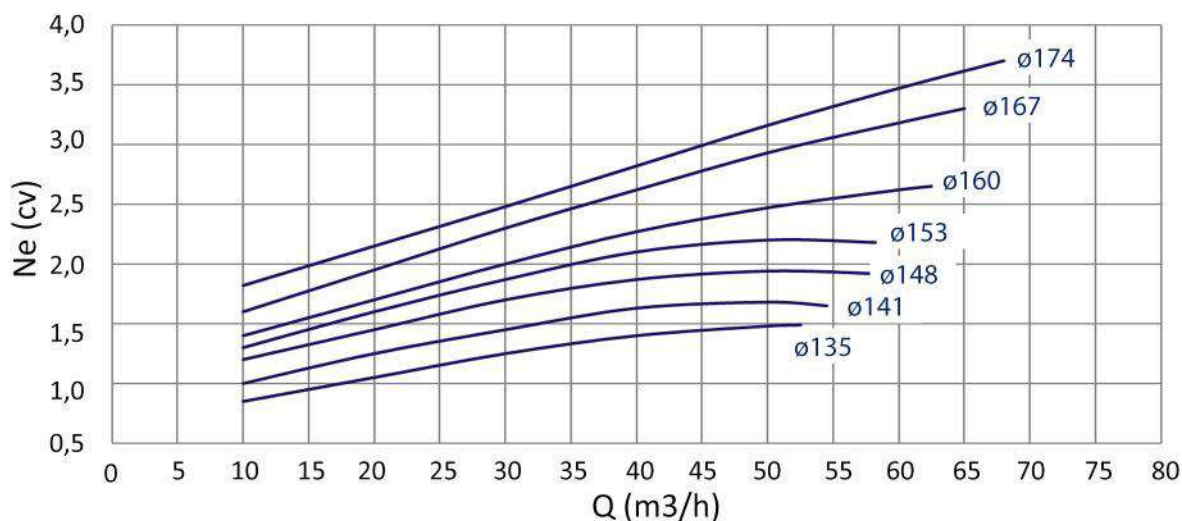
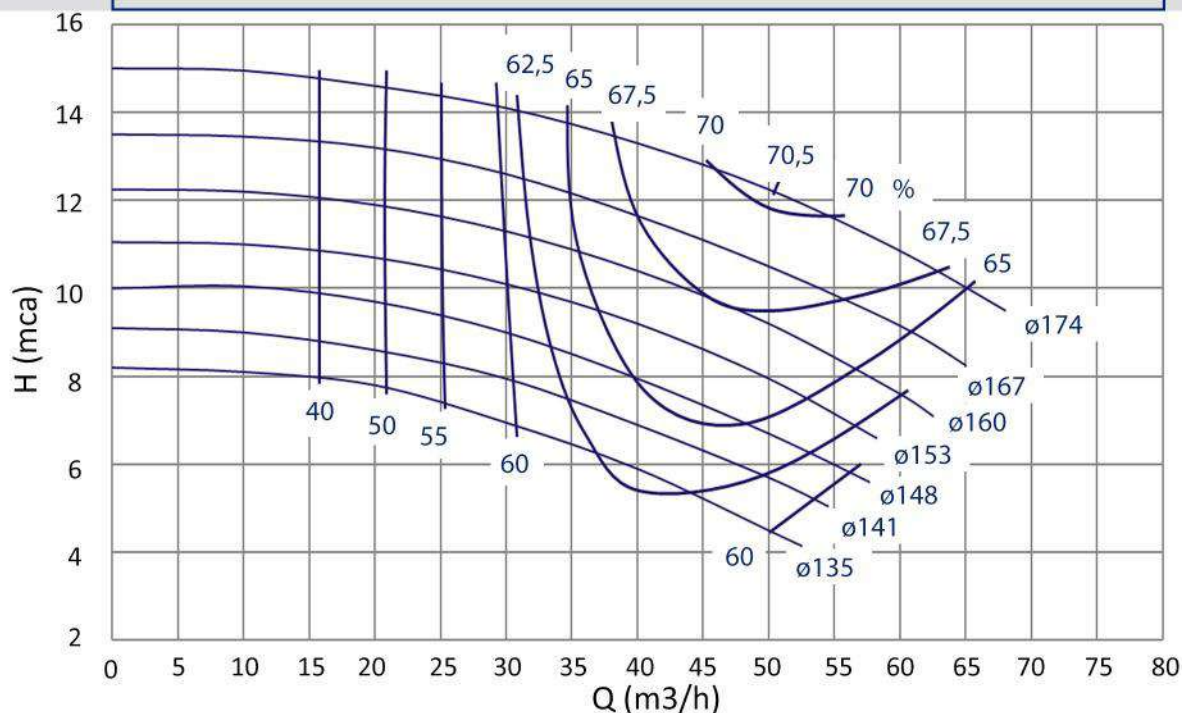
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	1800 rpm
RECALQUE 50	Nº 10010202	60 Hz 4 P



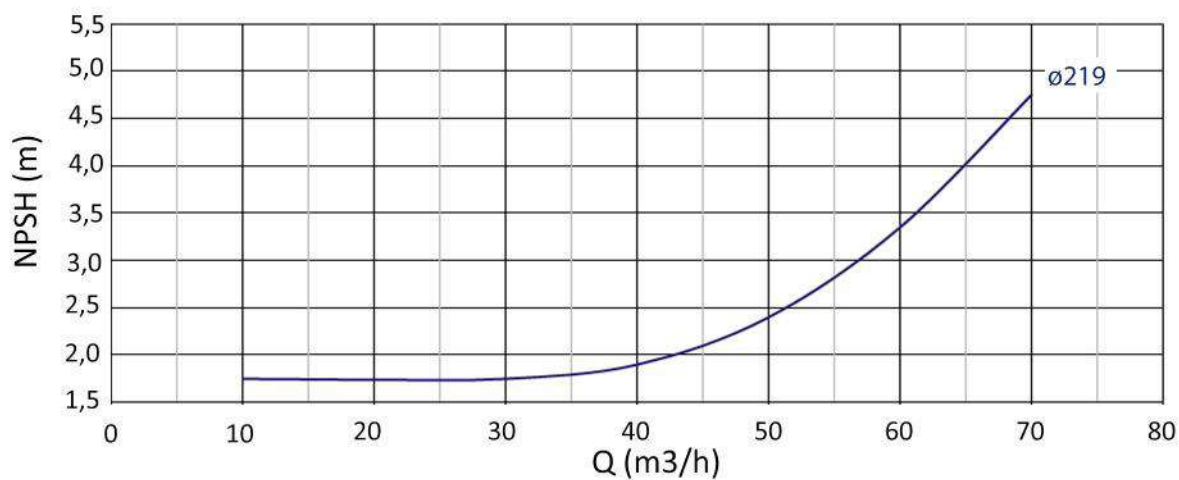
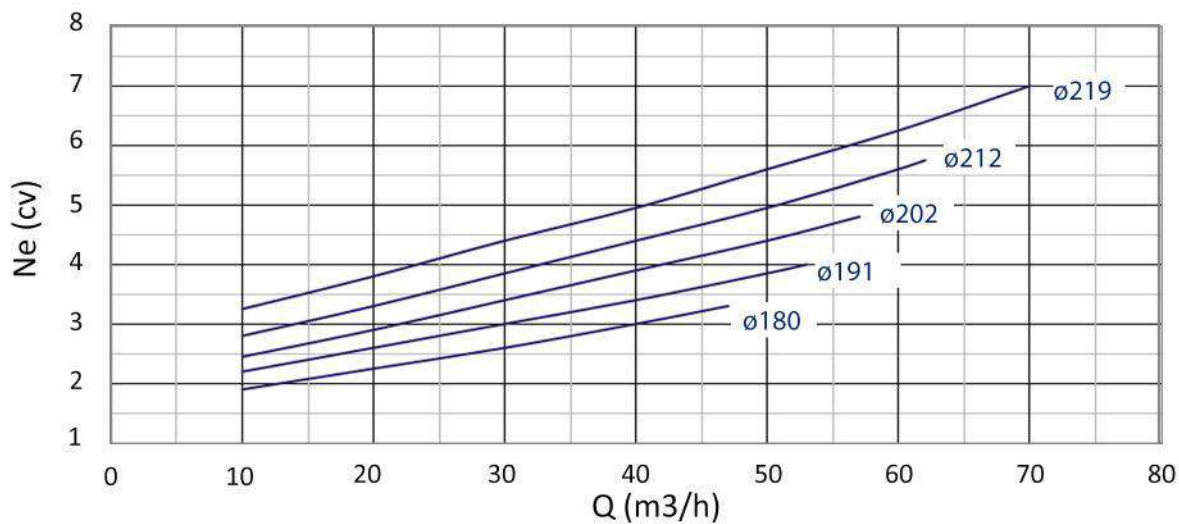
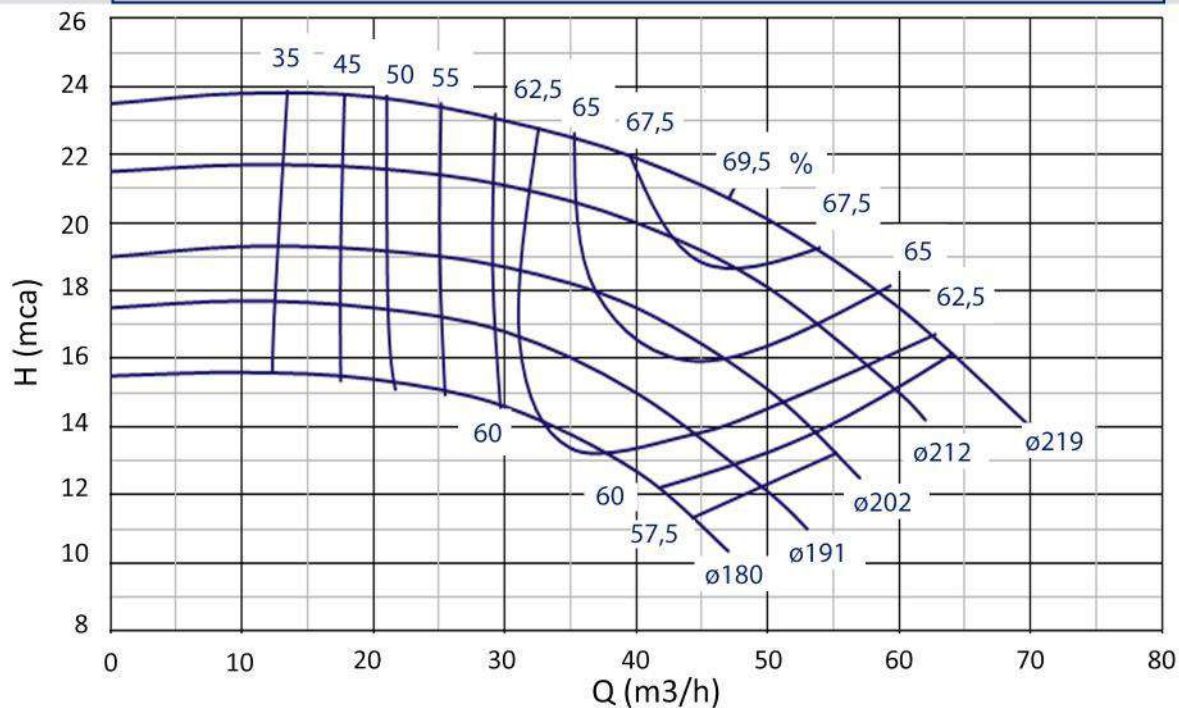
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	1800 rpm
RECALQUE 50	Nº 10010303	60 Hz 4 P



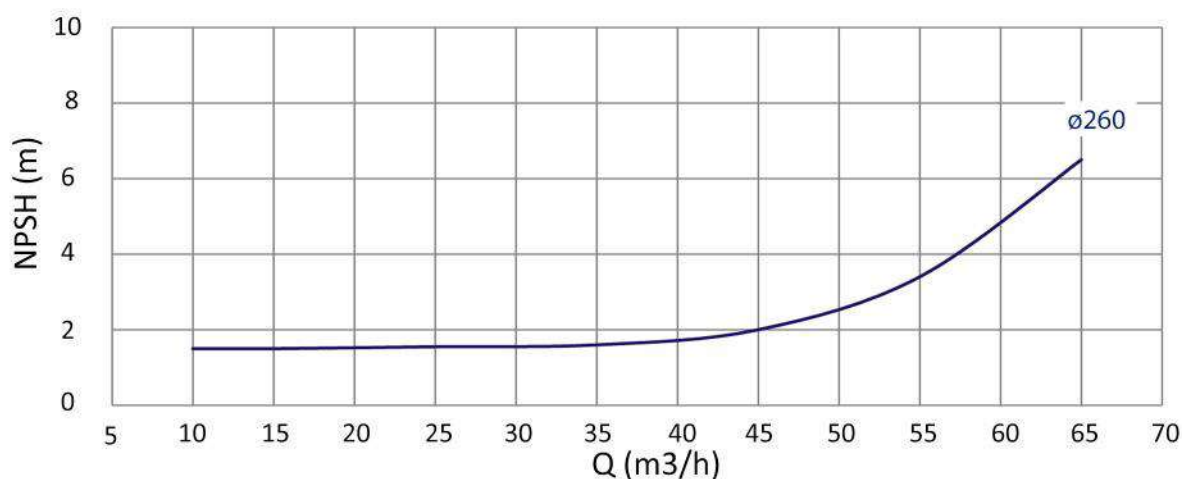
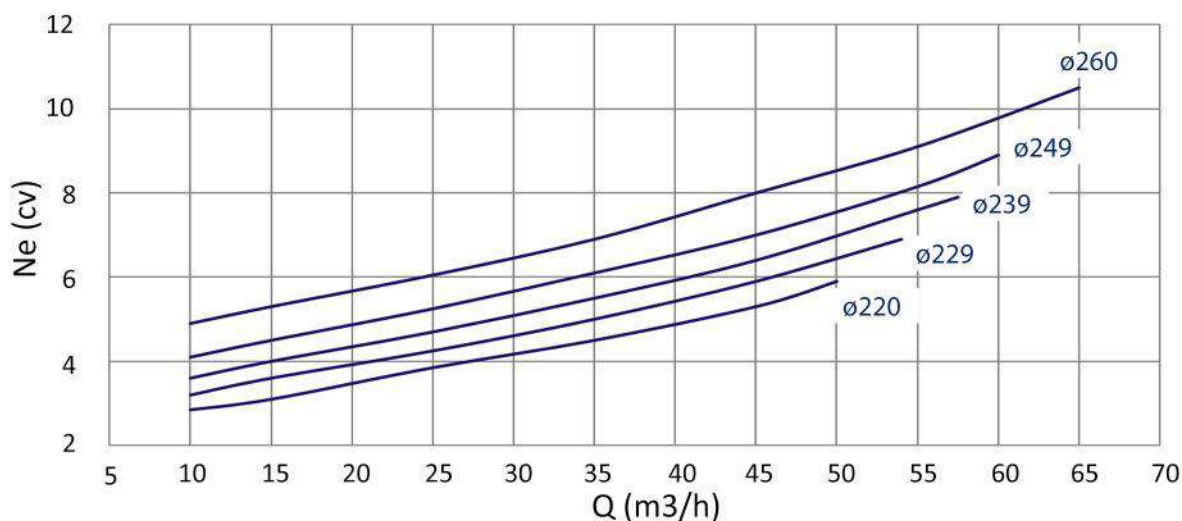
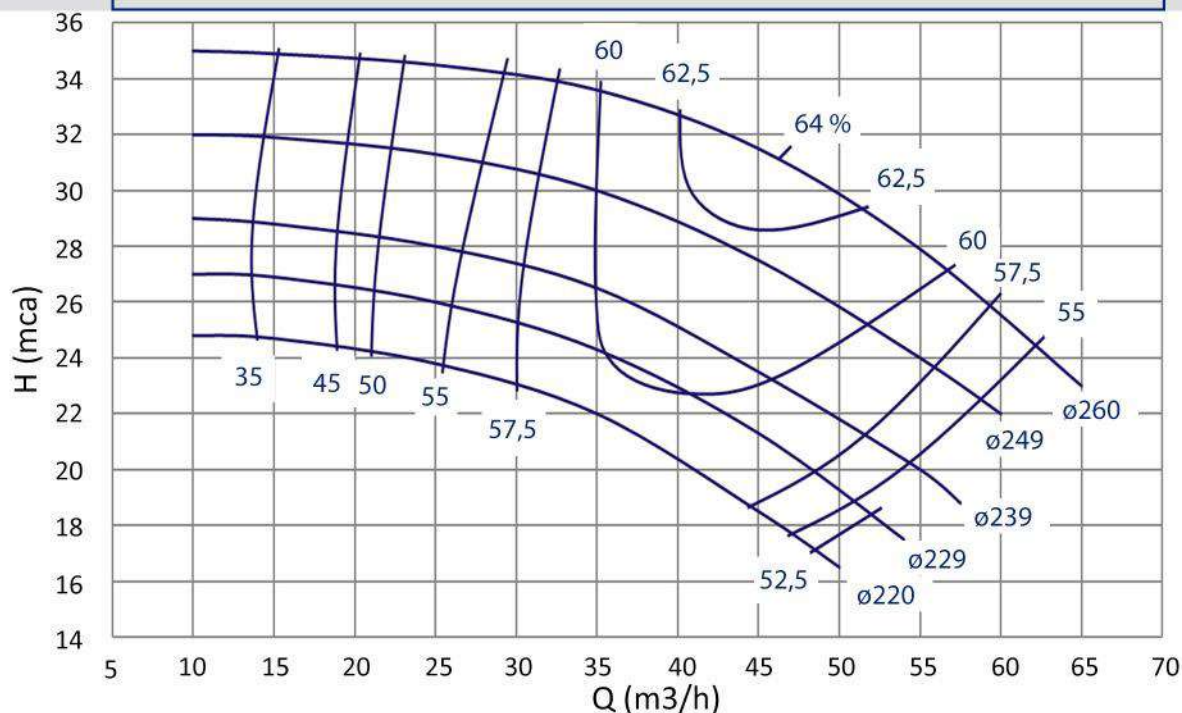
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	1800 rpm
RECALQUE 50	Nº 10010311	60 Hz 4 P



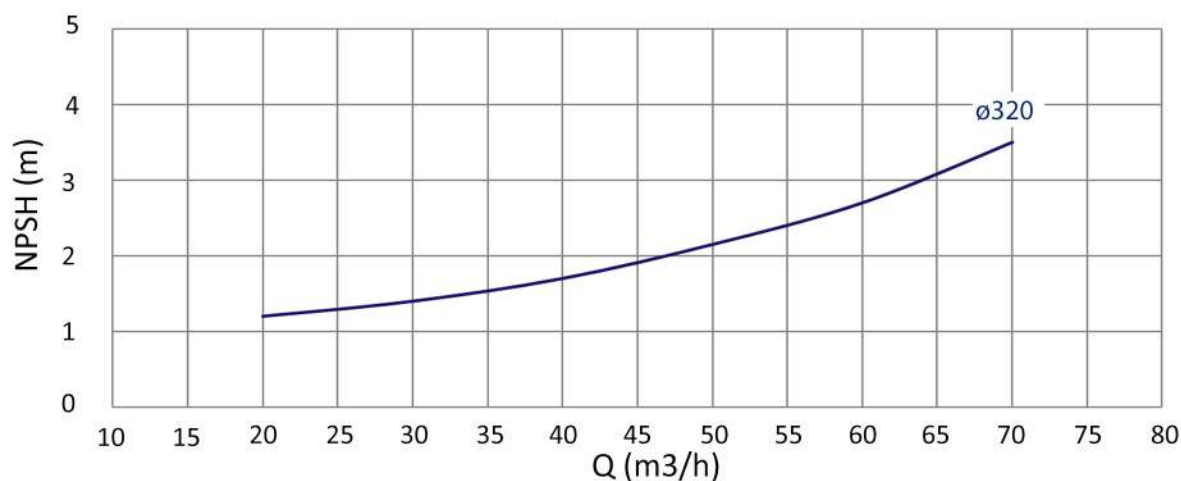
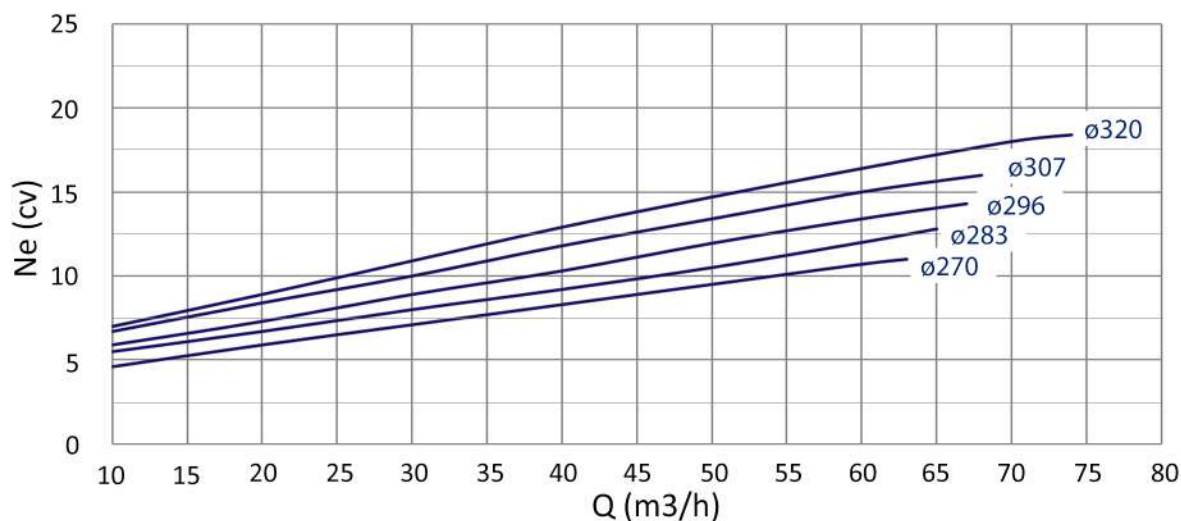
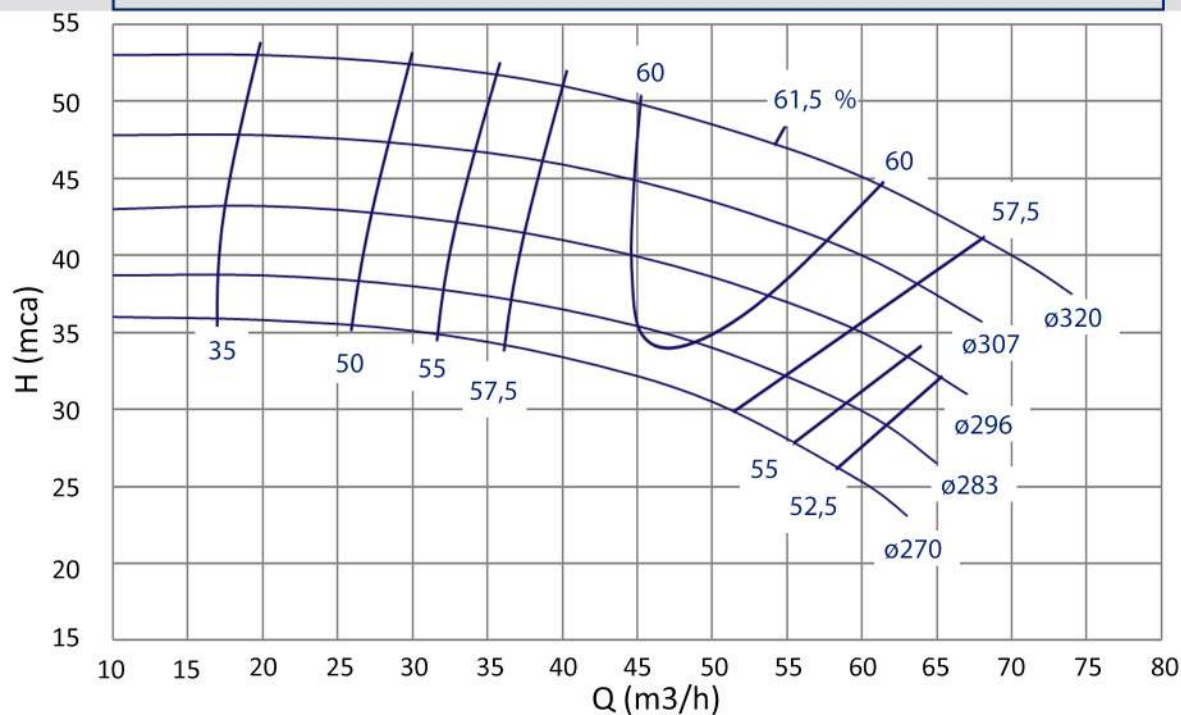
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	1800 rpm
RECALQUE 50	Nº 10010325	60 Hz 4 P



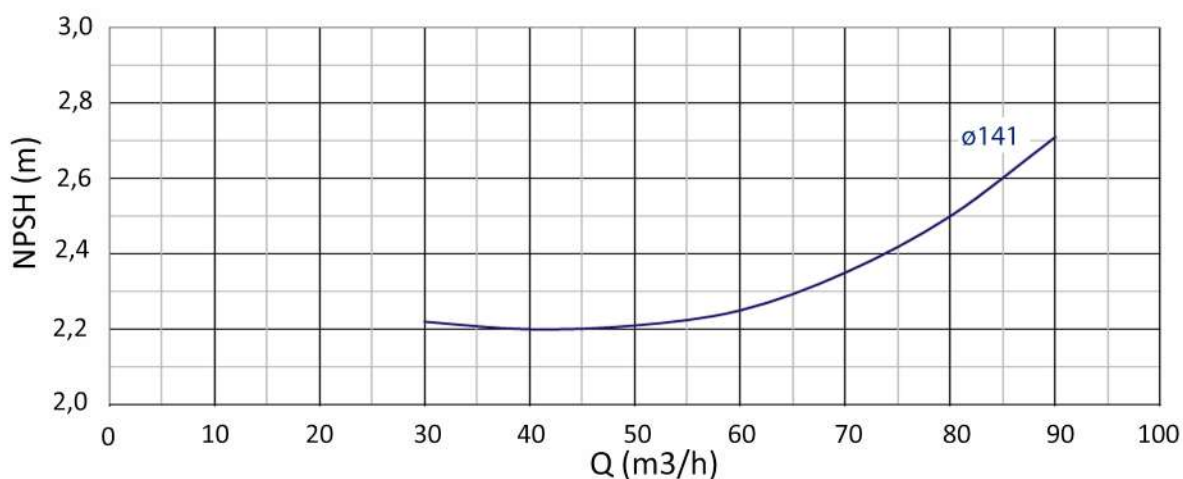
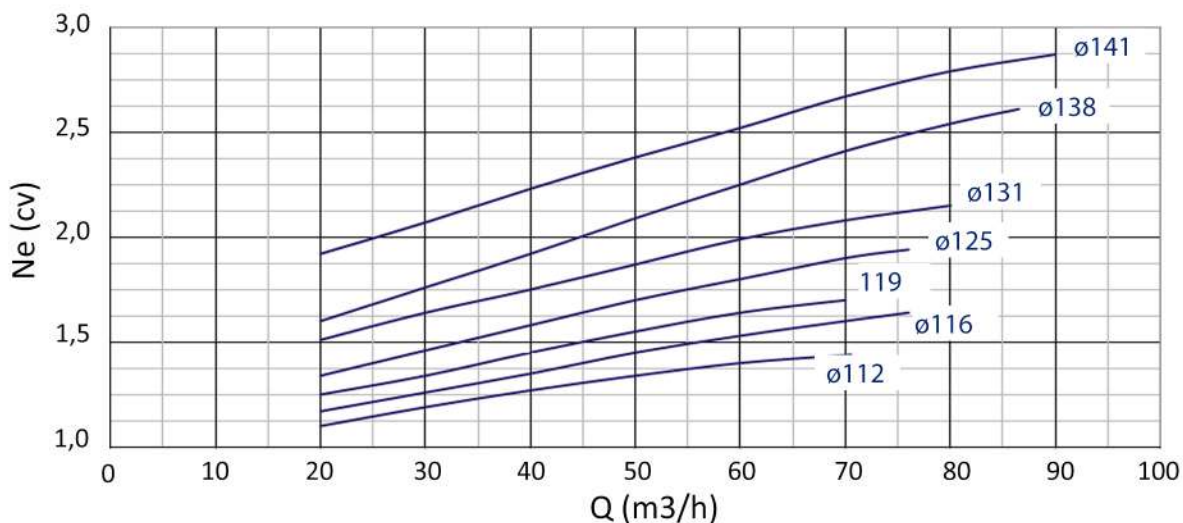
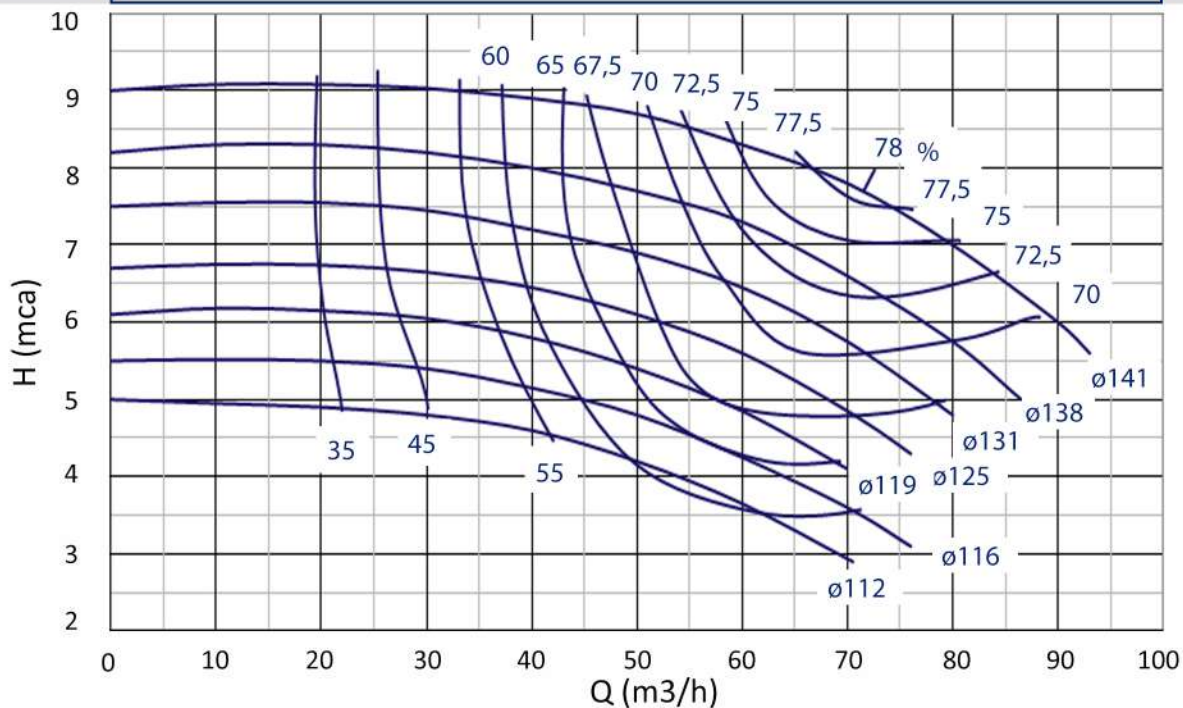
AFG NormBloc Flutuantes Radial

SUCÇÃO 80	CURVA	1800 rpm
RECALQUE 50	Nº 10010330	60 Hz 4 P



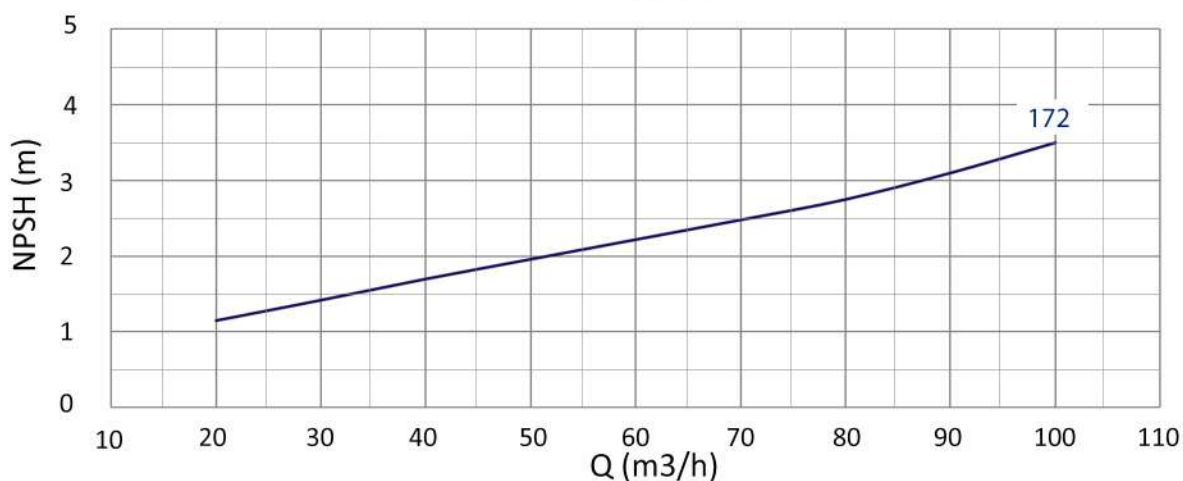
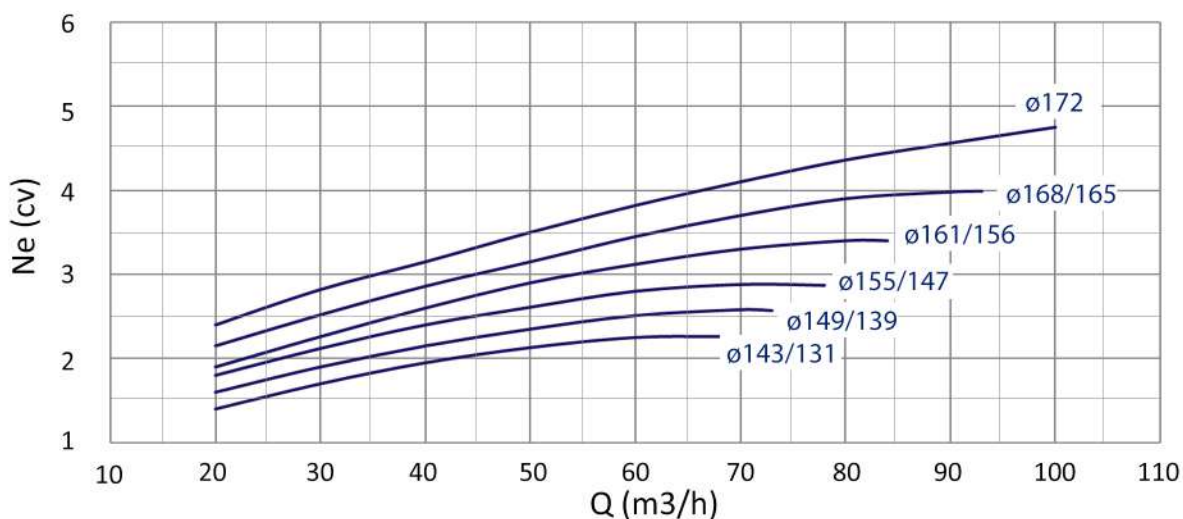
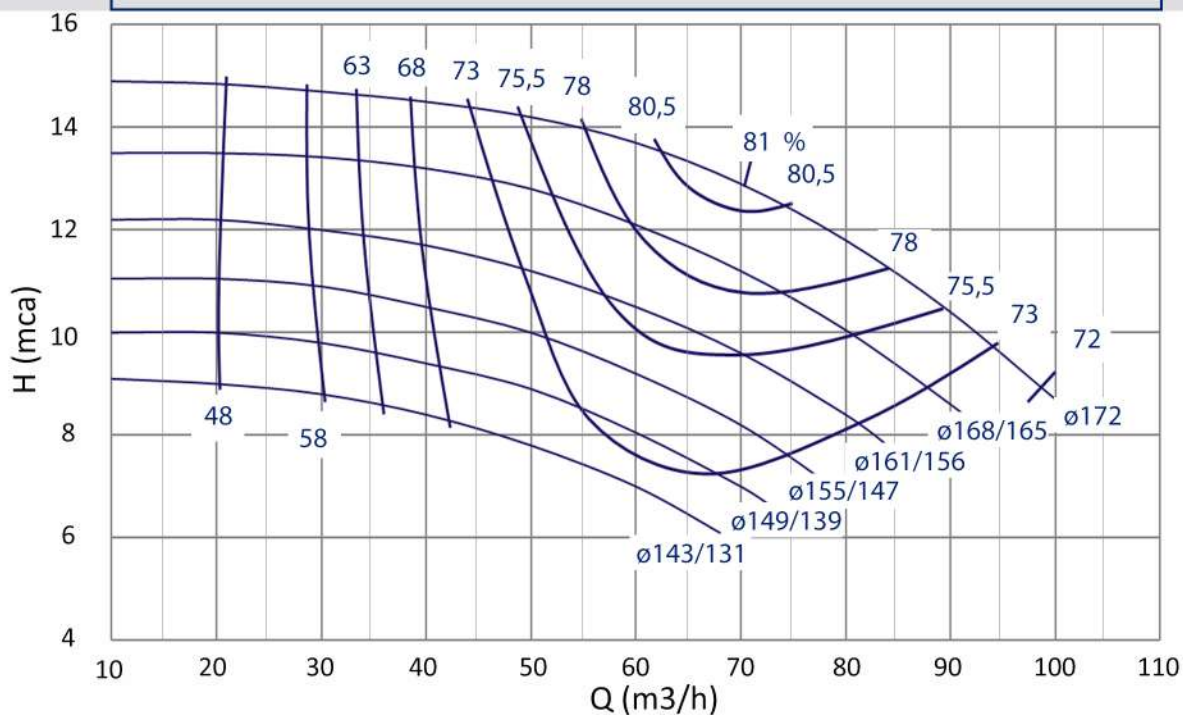
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	1800 rpm
RECALQUE 65	Nº 10010336	60 Hz 4 P



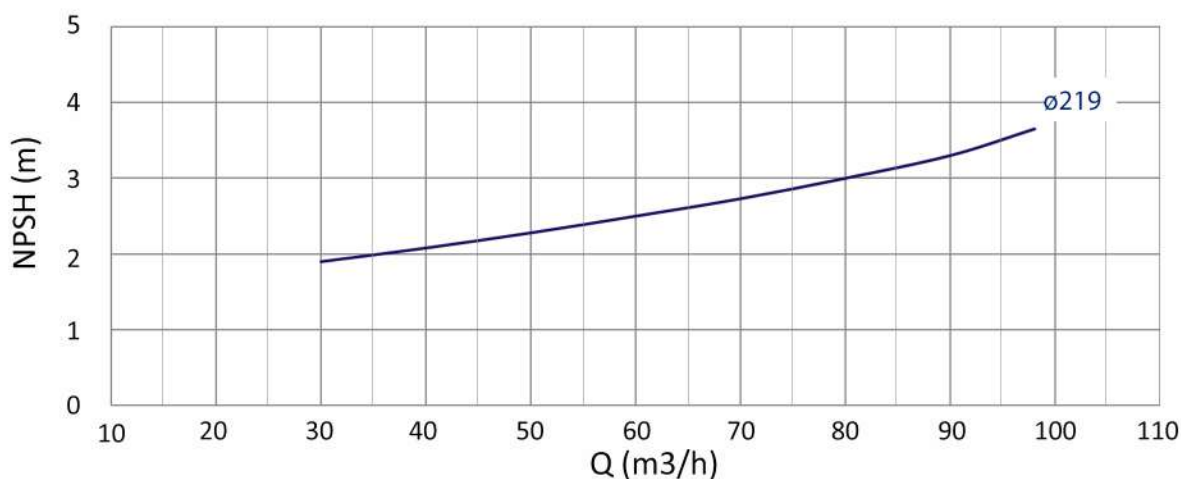
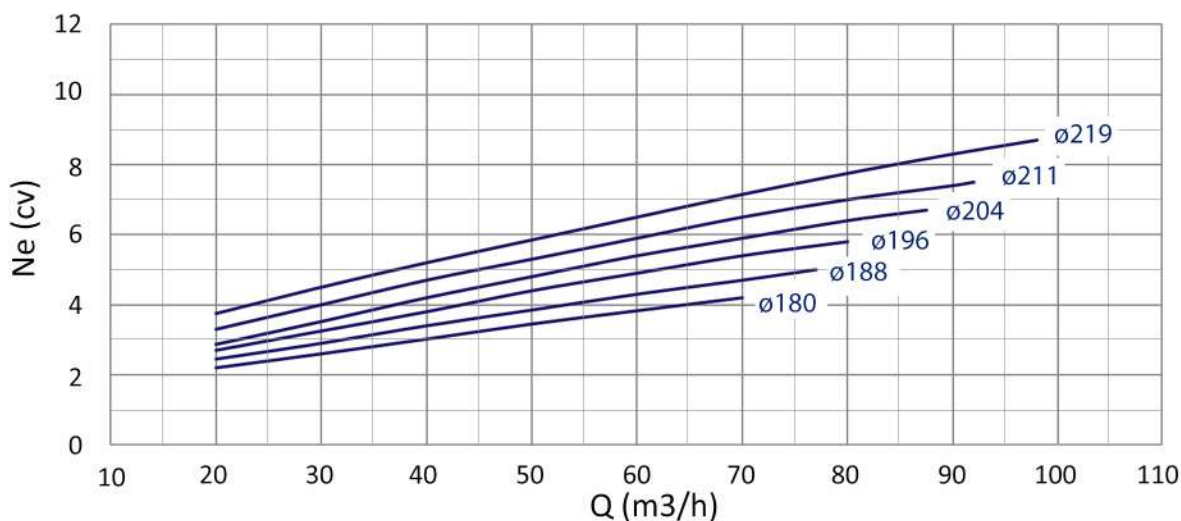
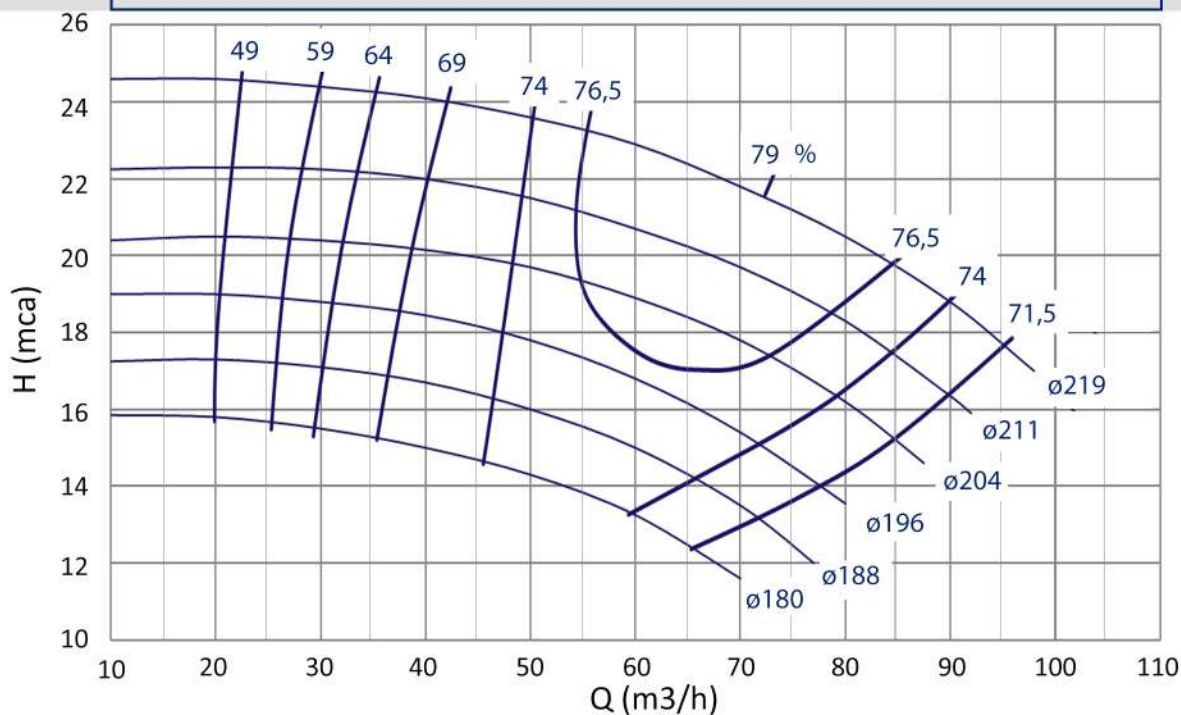
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	1800 rpm
RECALQUE 65	Nº 10010353	60 Hz 4 P



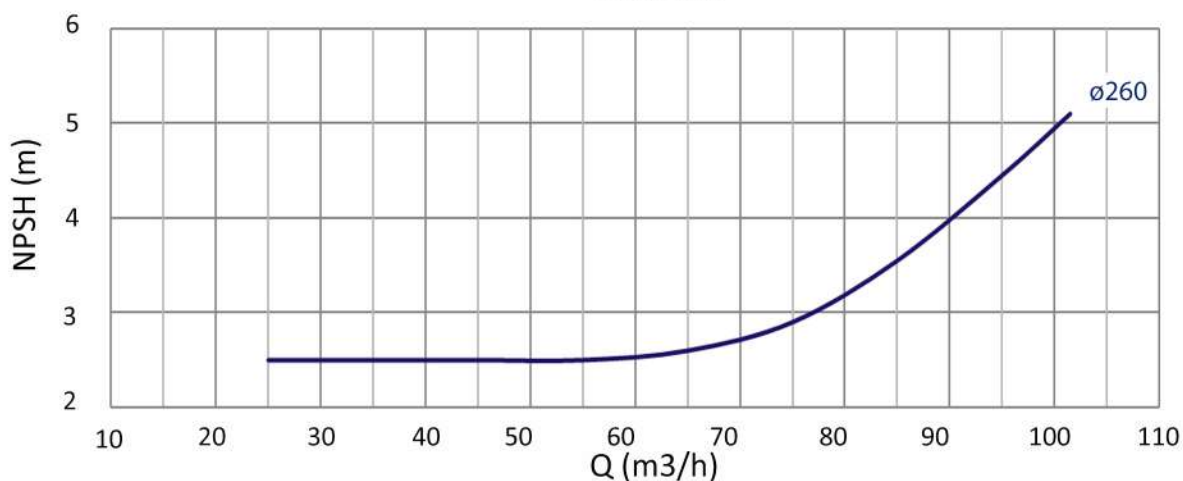
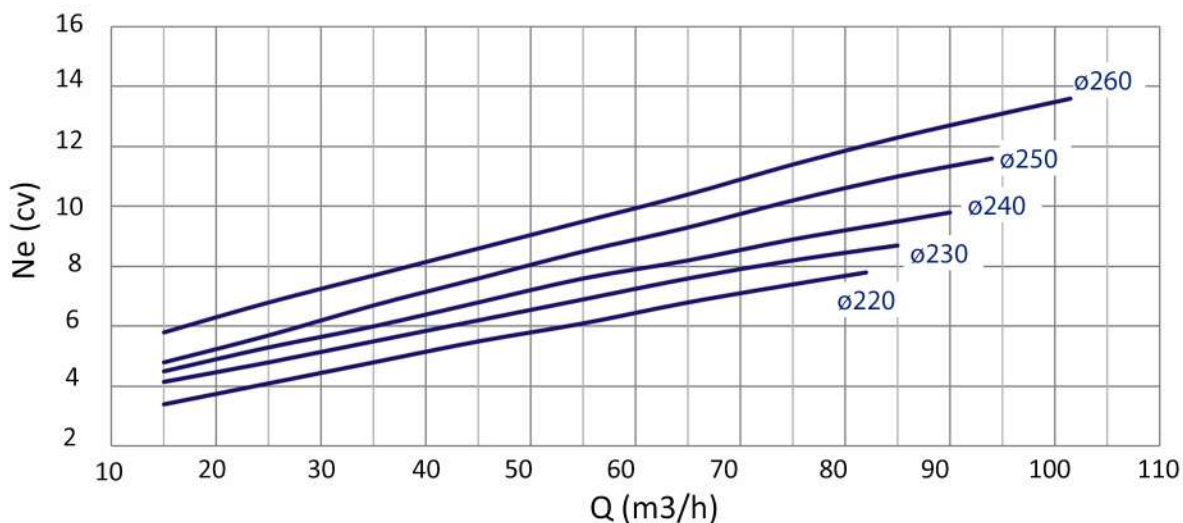
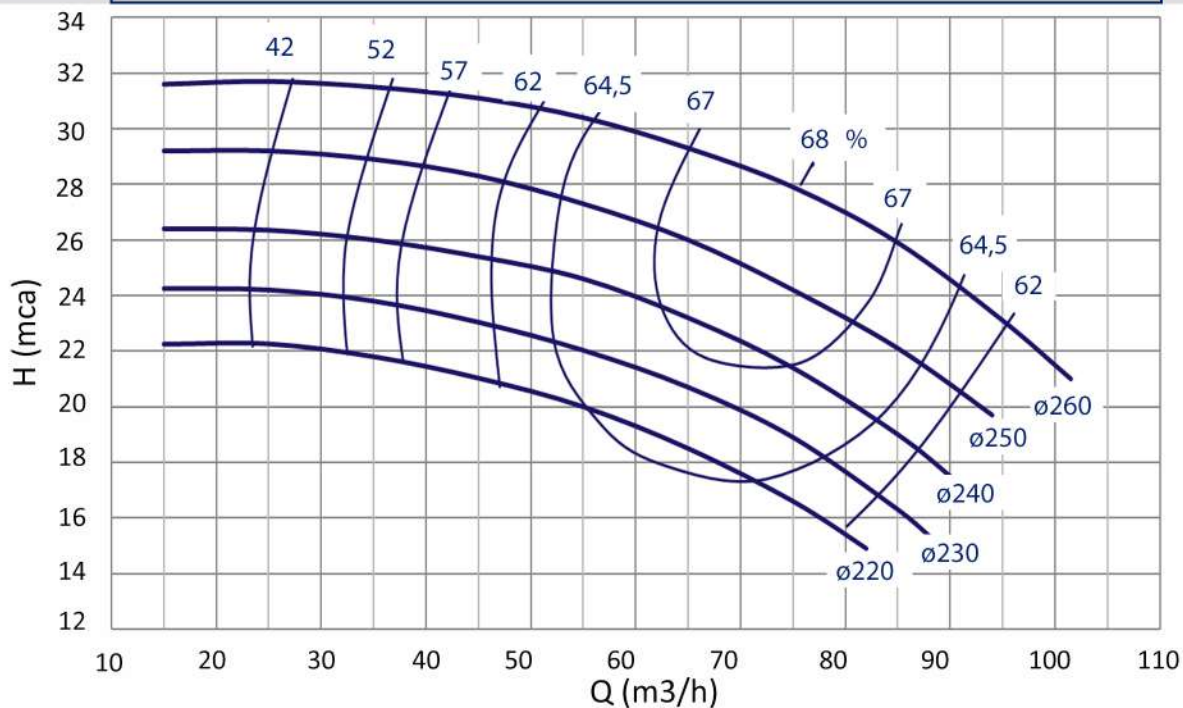
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	1800 rpm
RECALQUE 65	Nº 10010361	60 Hz 4 P



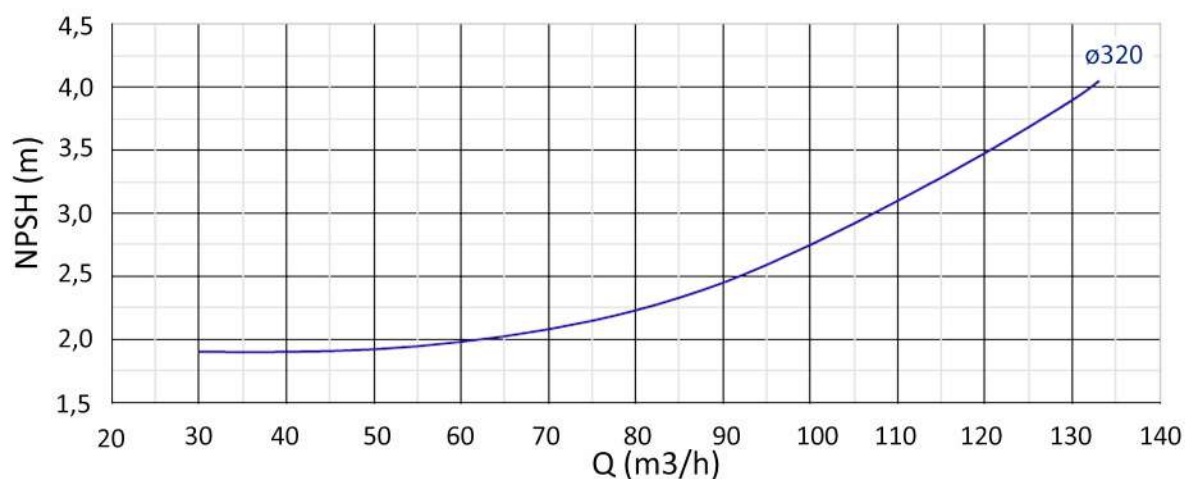
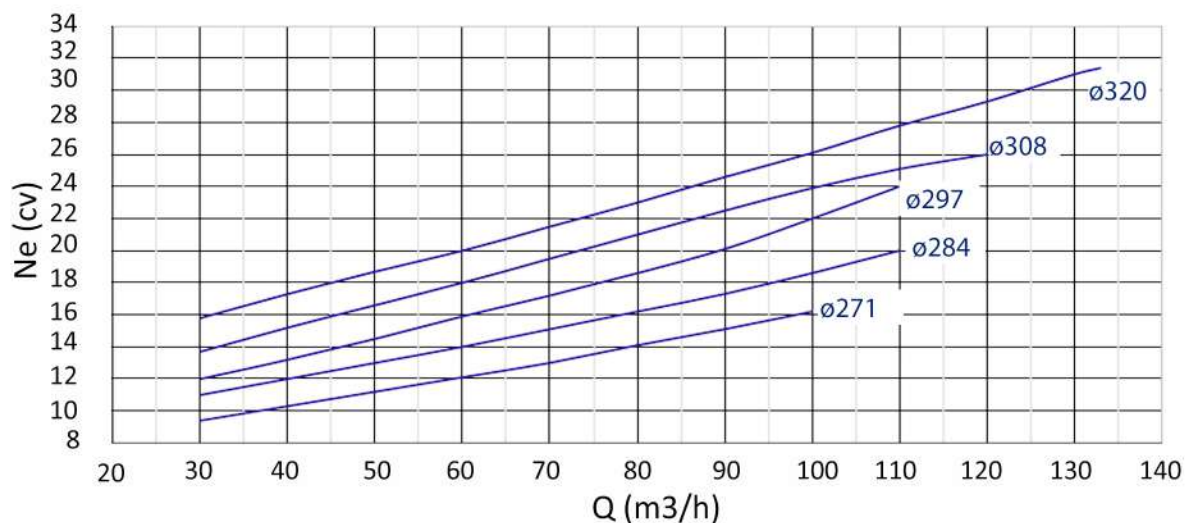
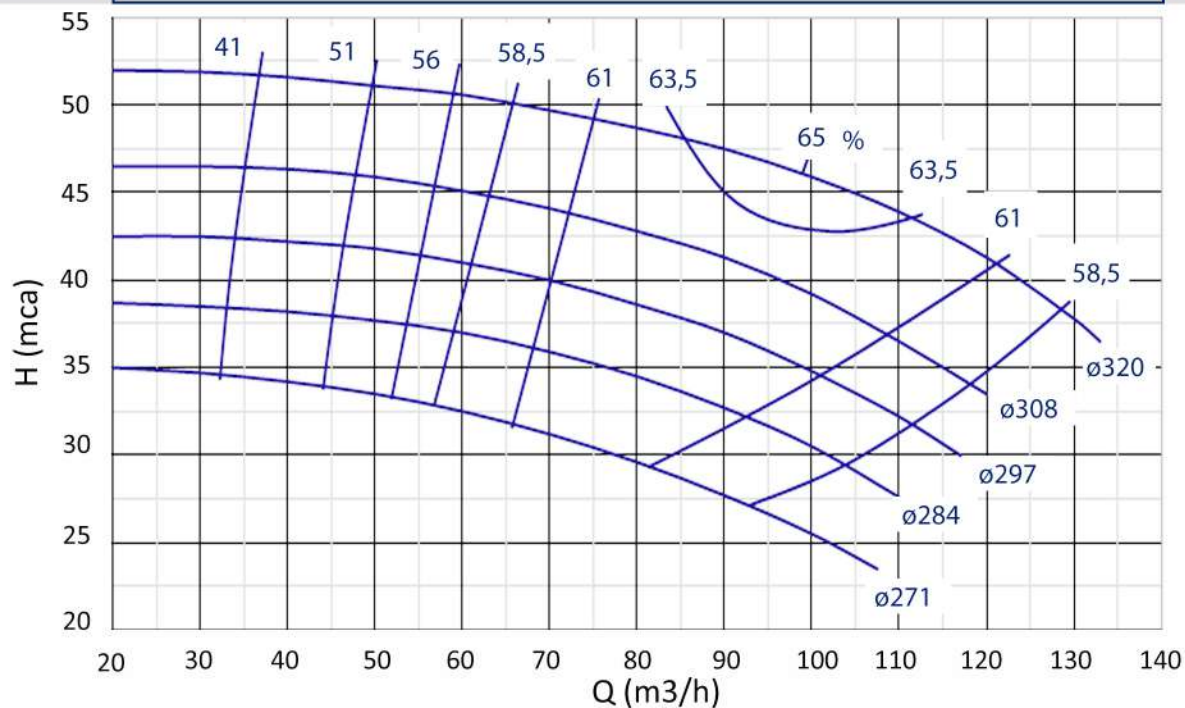
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	1800 rpm
RECALQUE 65	Nº 10010372	60 Hz 4 P



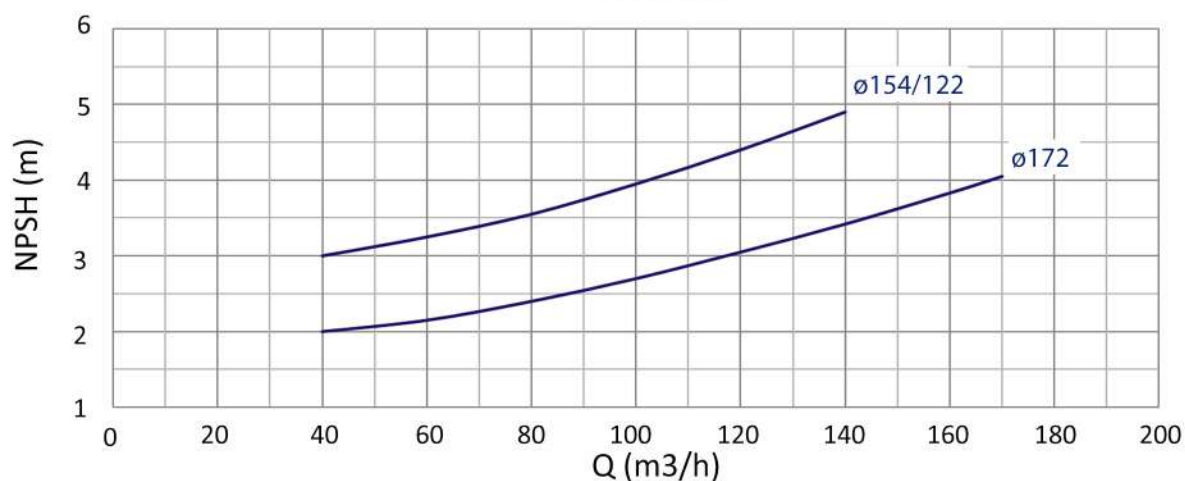
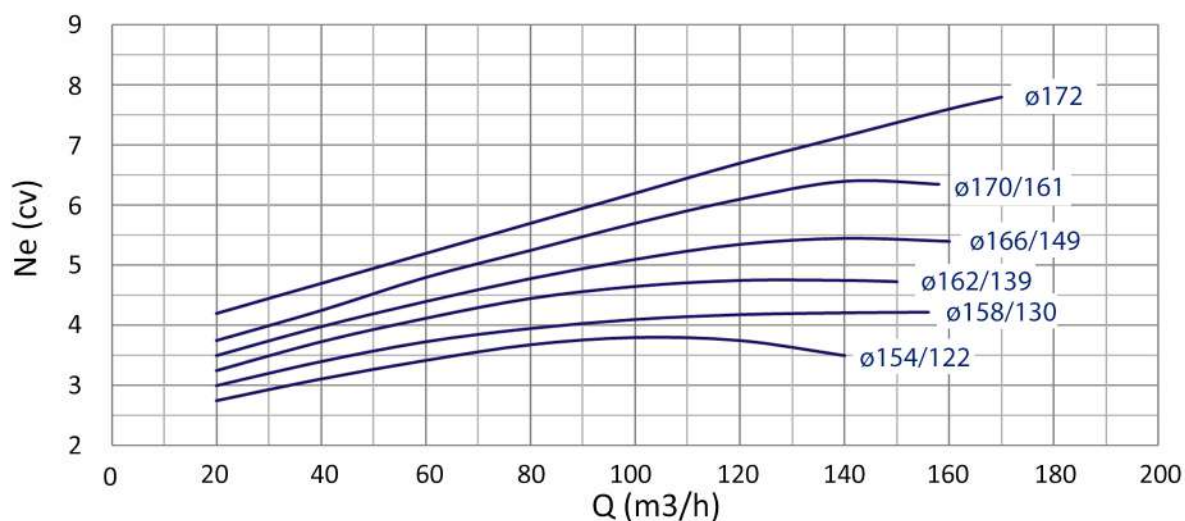
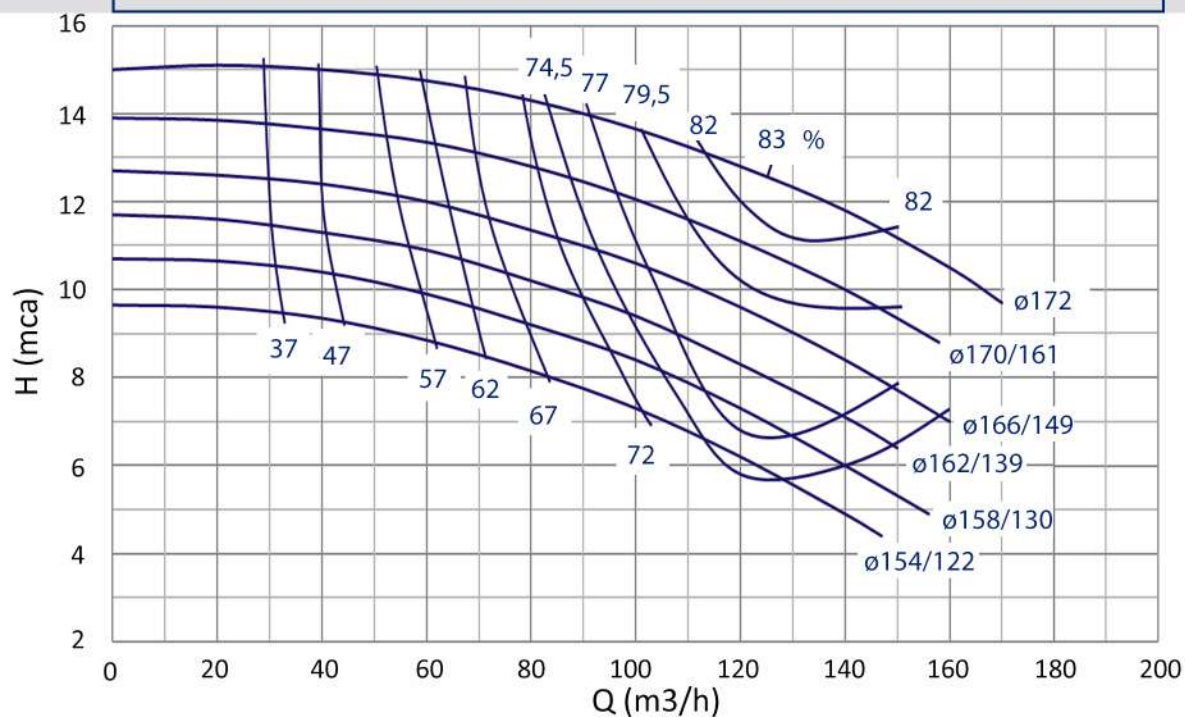
AFG NormBloc Flutuantes Radial

SUCÇÃO 100	CURVA	1800 rpm
RECALQUE 65	Nº 10010381	60 Hz 4 P



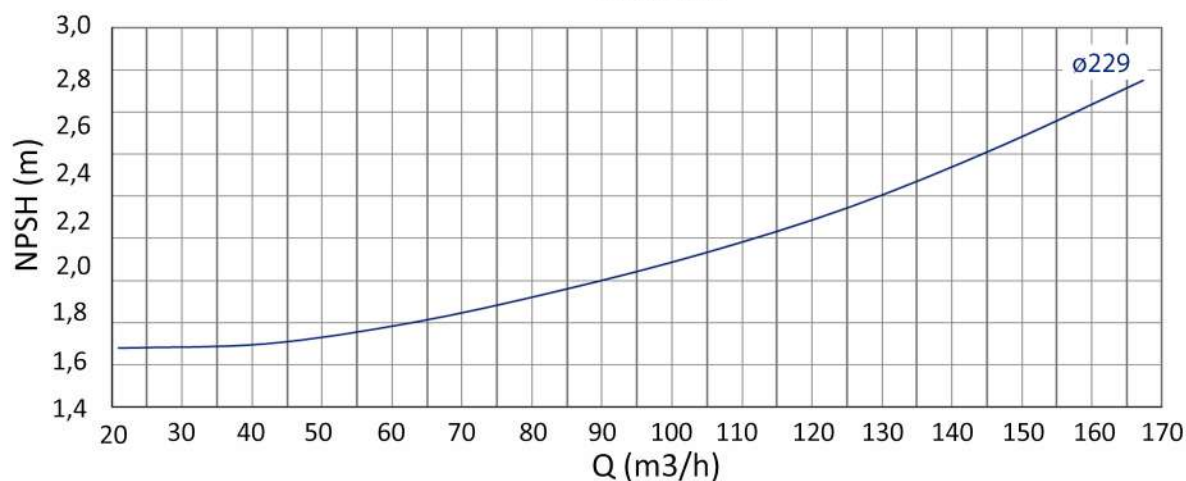
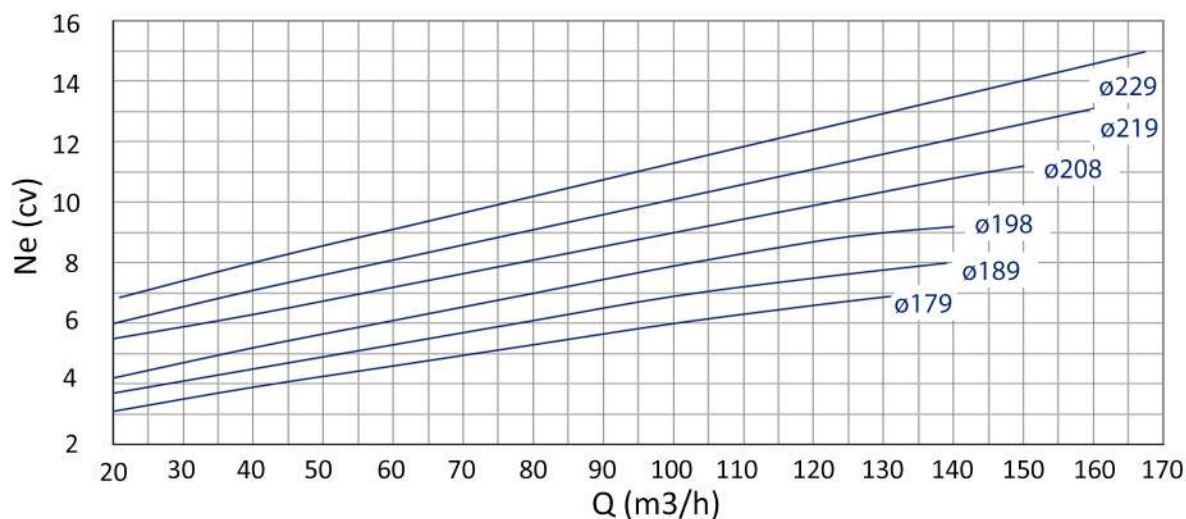
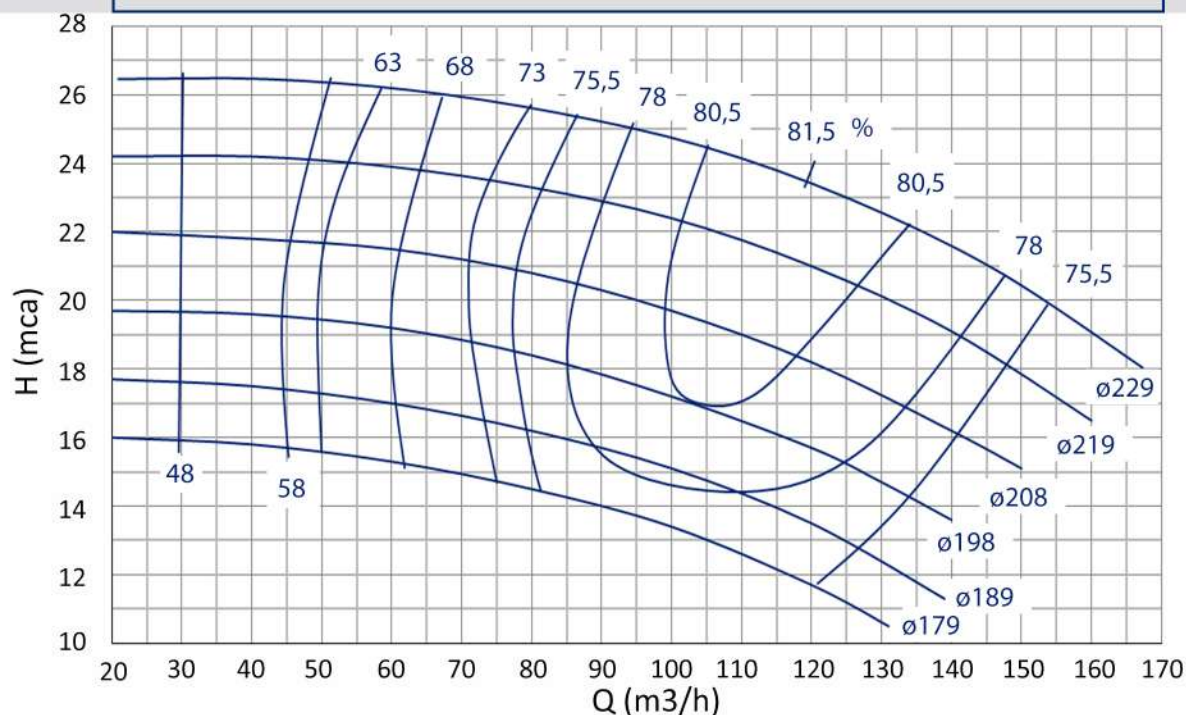
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 80	Nº 10010605	60 Hz 4 P



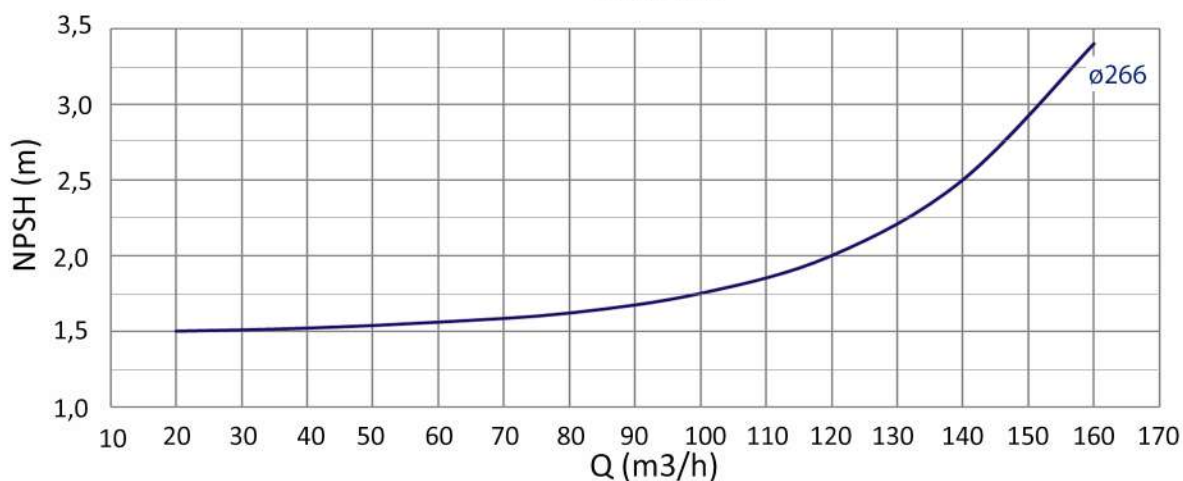
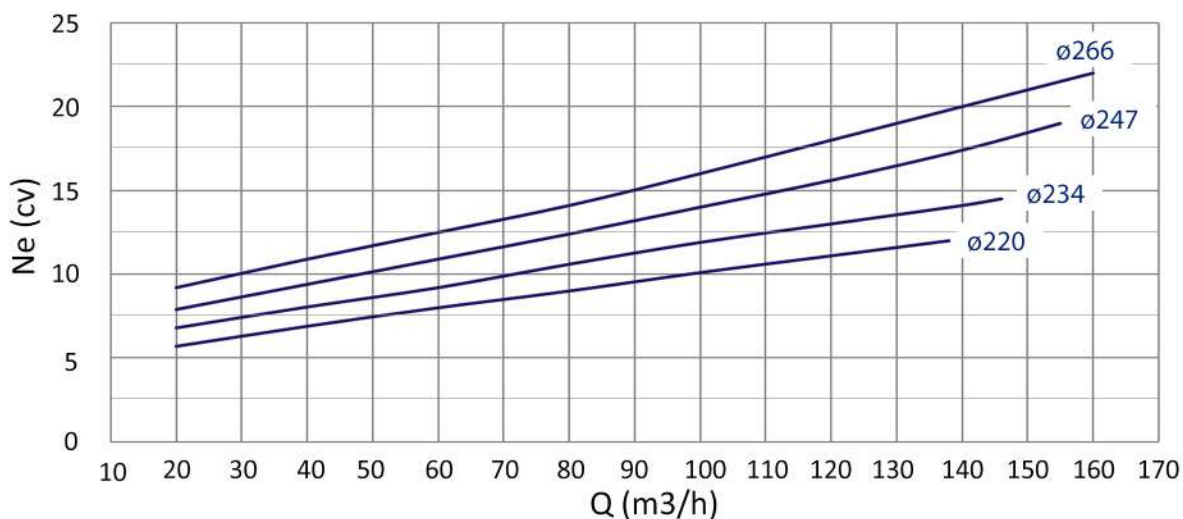
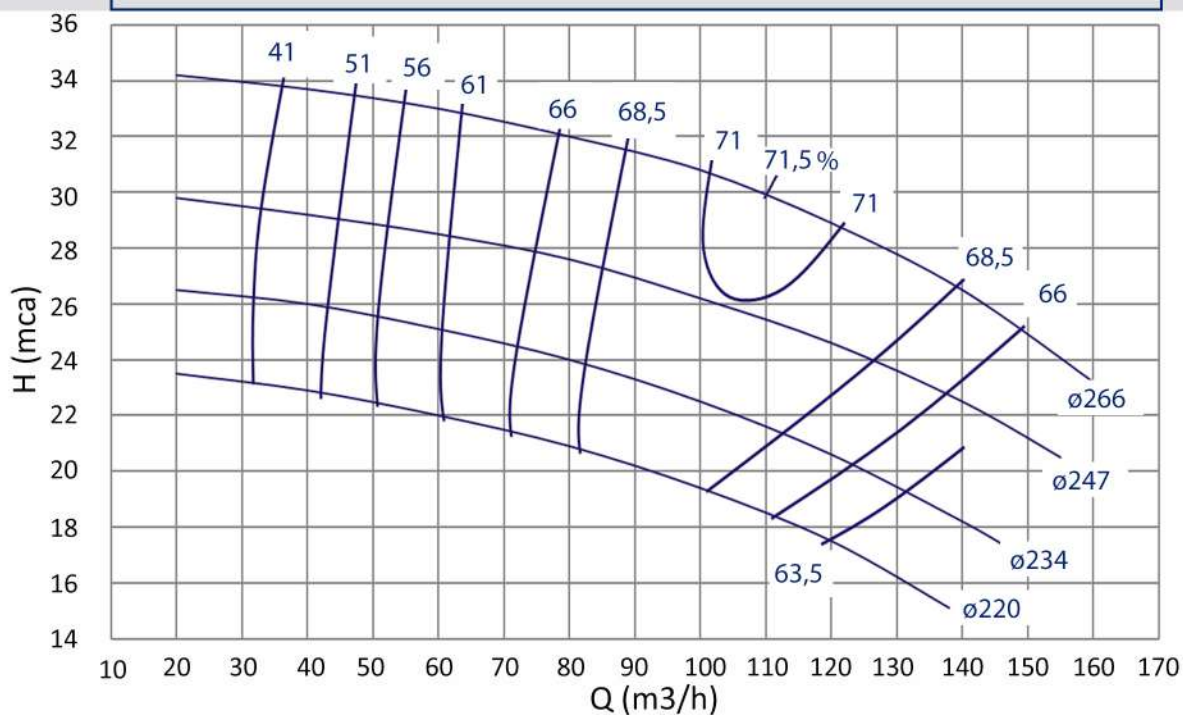
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 80	Nº 10010652	60 Hz 4 P



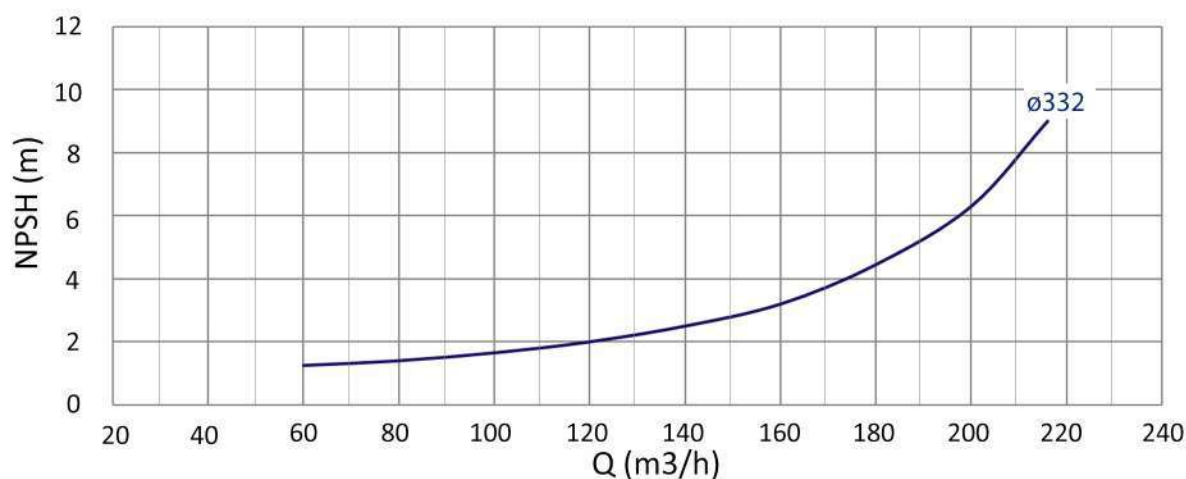
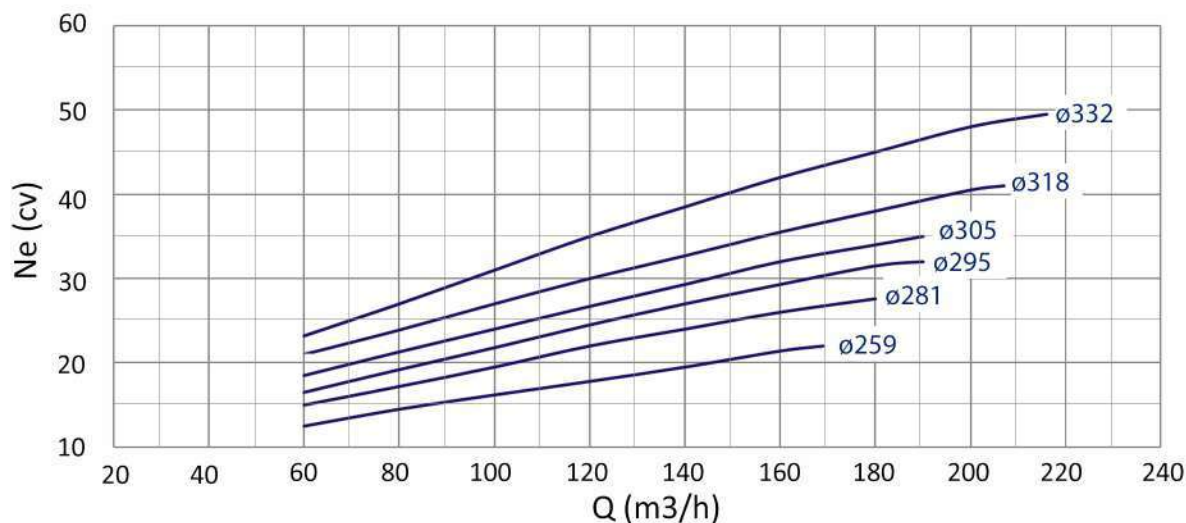
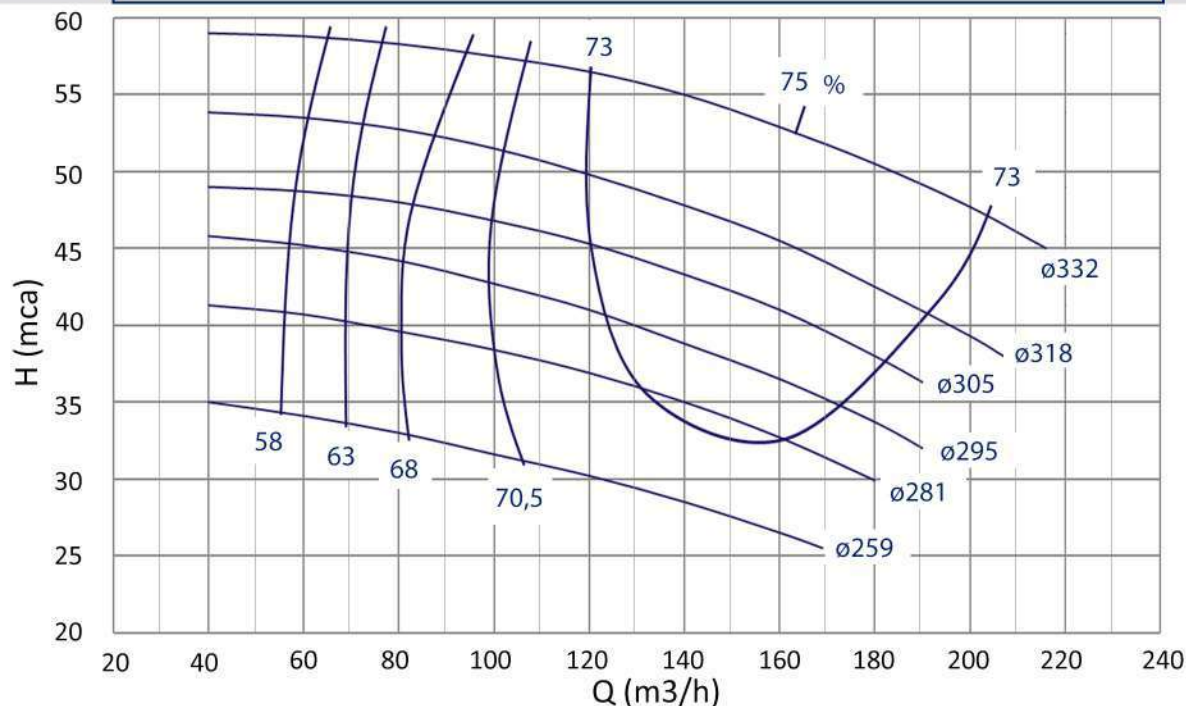
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 80	Nº 10010671	60 Hz 4 P



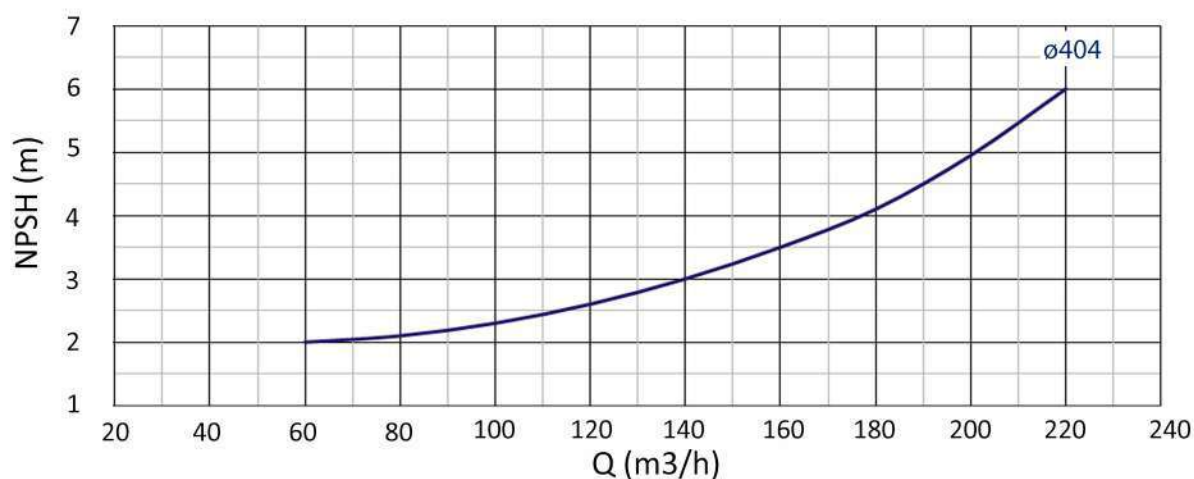
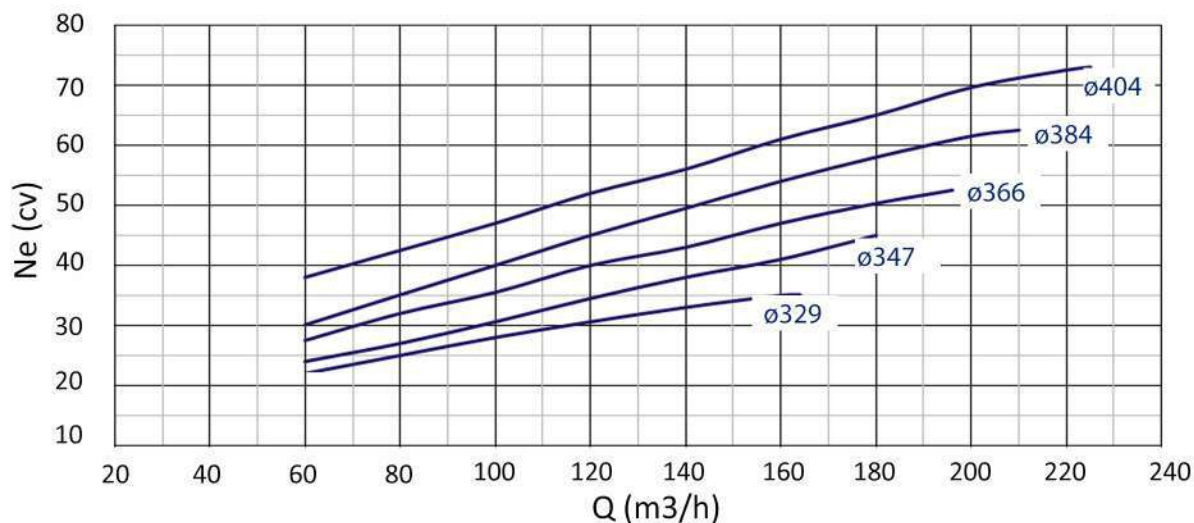
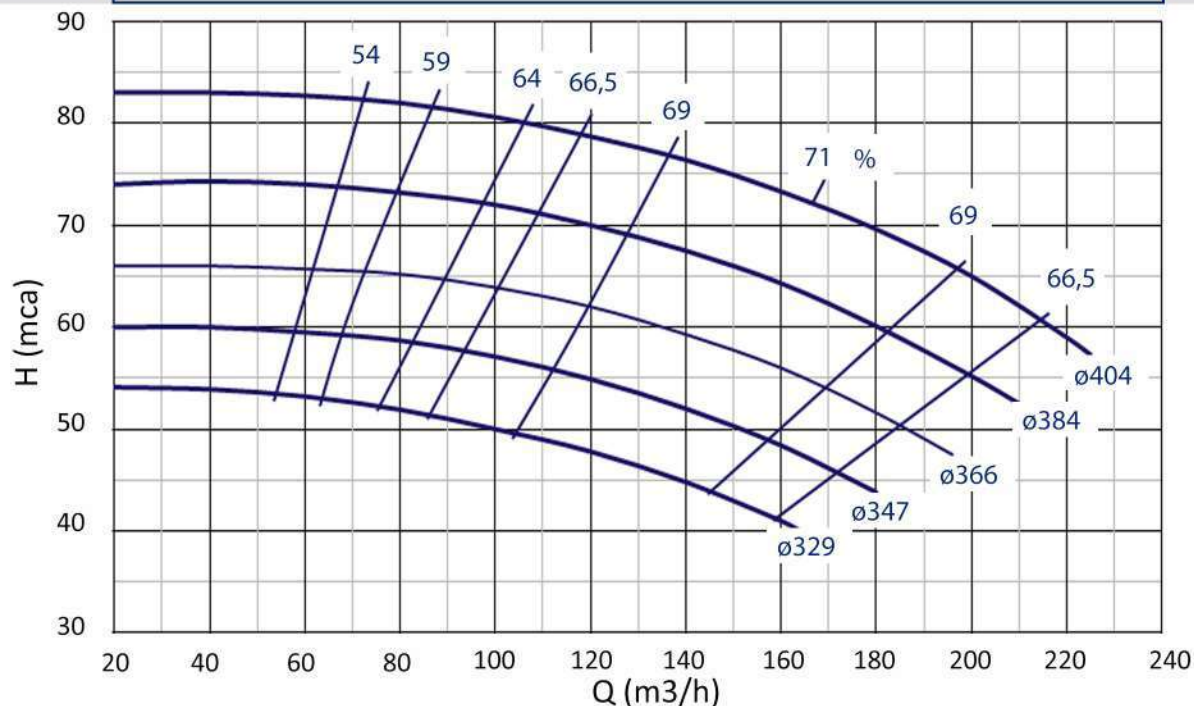
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 80	Nº 10010680	60 Hz 4 P



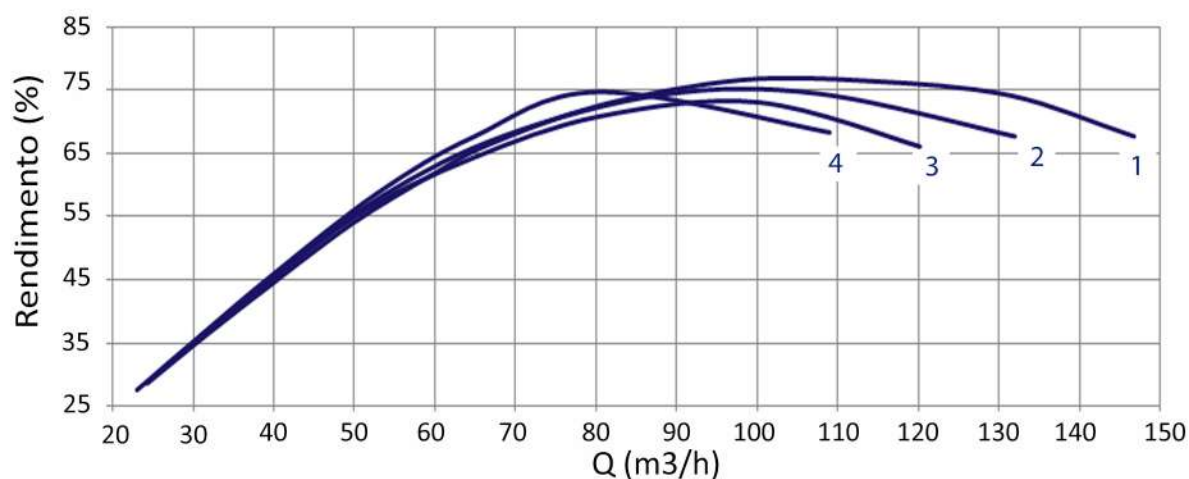
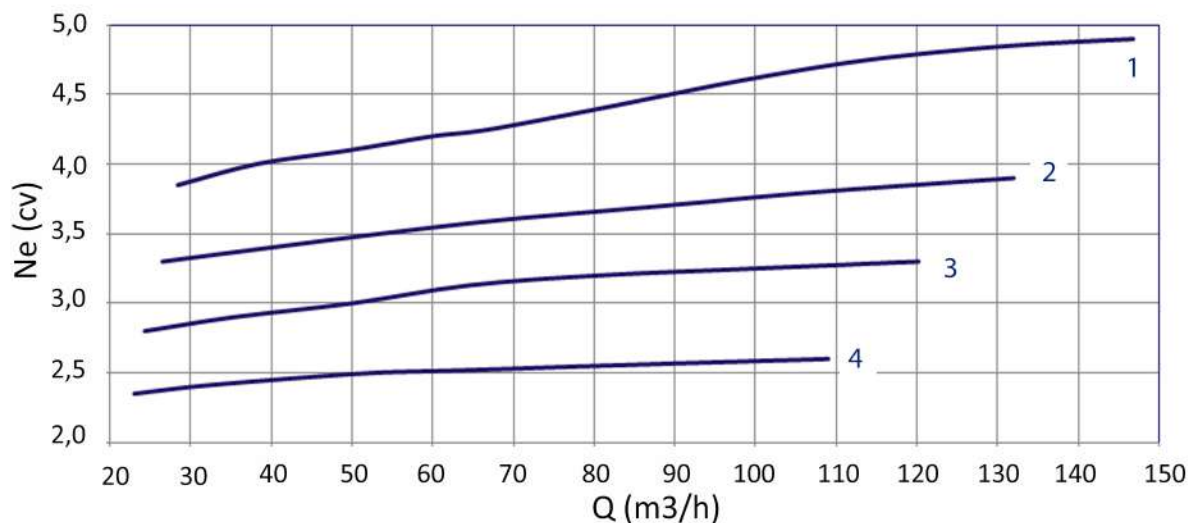
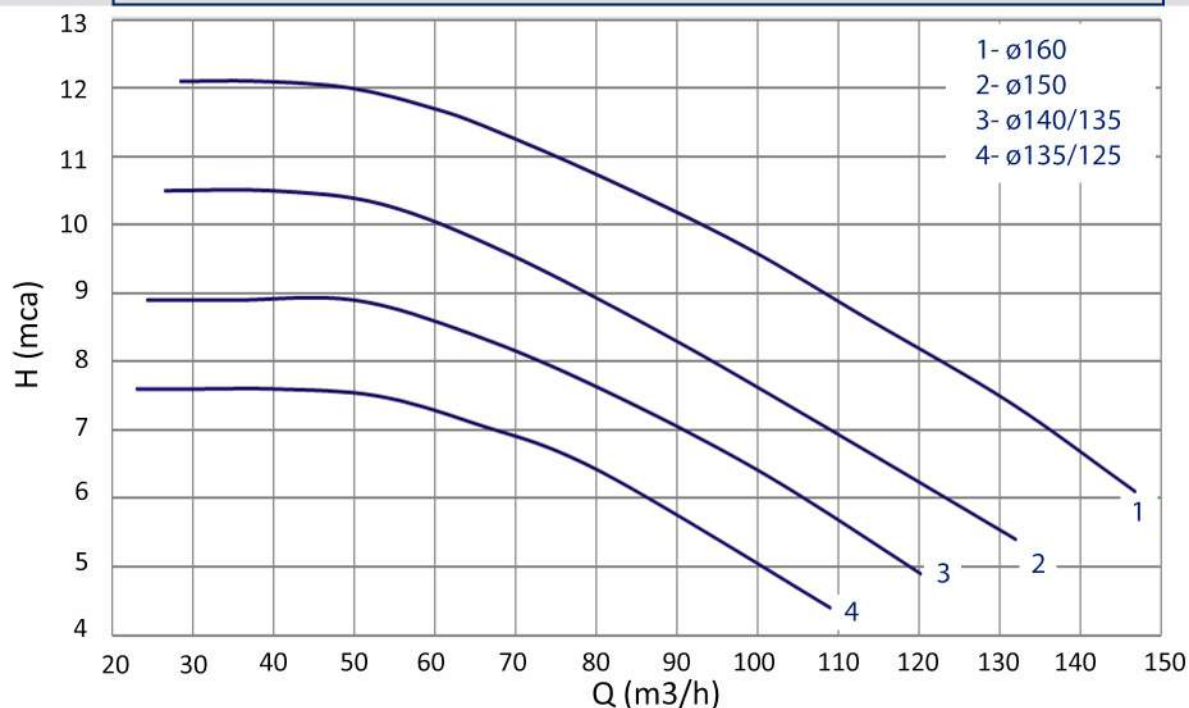
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 80	Nº 10010690	60 Hz 4 P



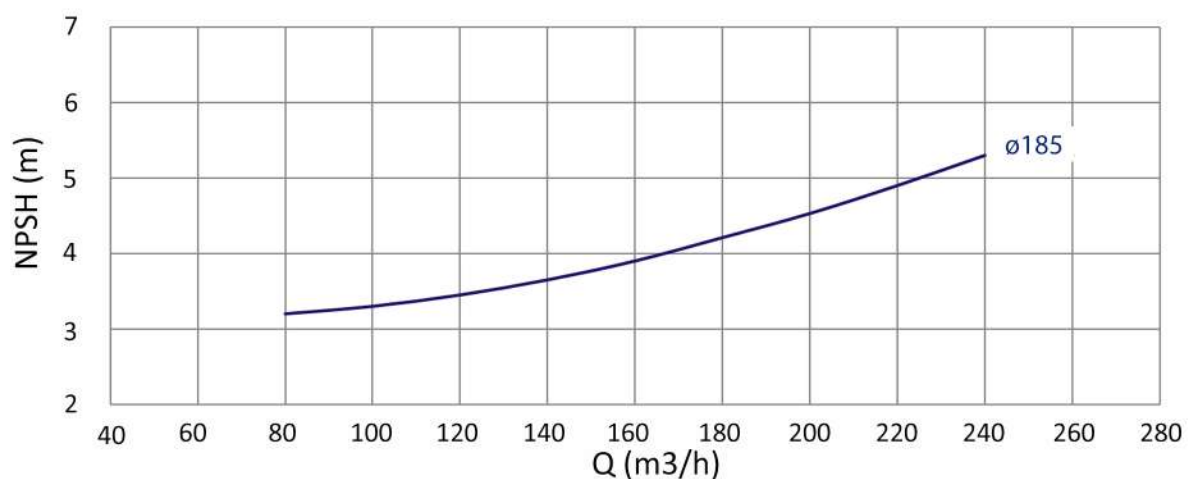
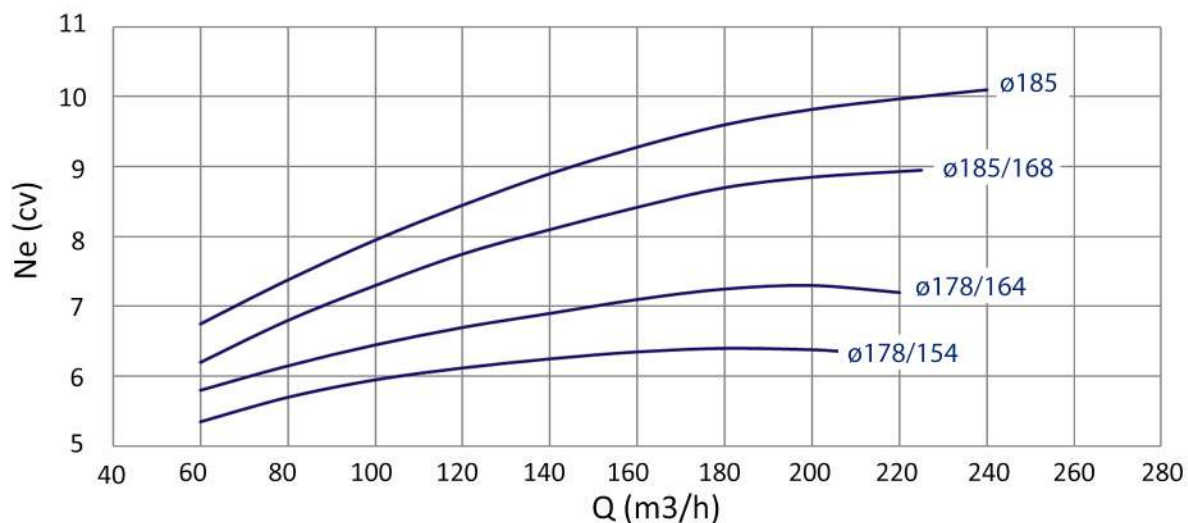
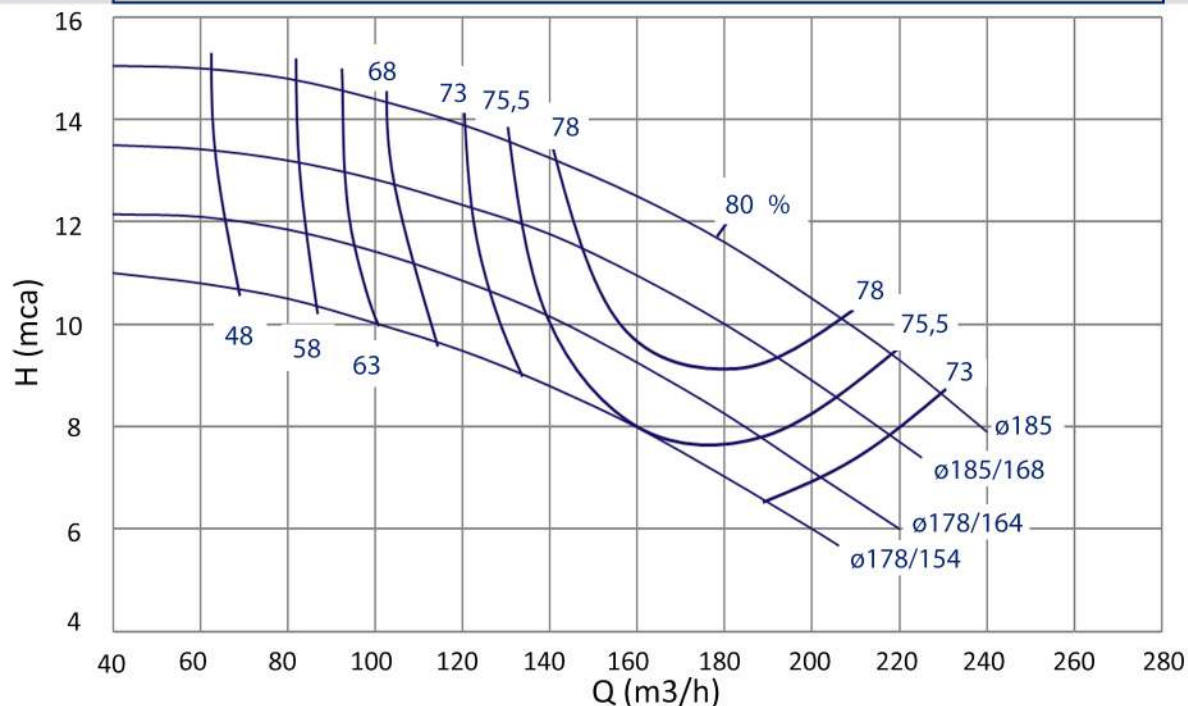
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 100	Nº 10010801	60 Hz 4 P



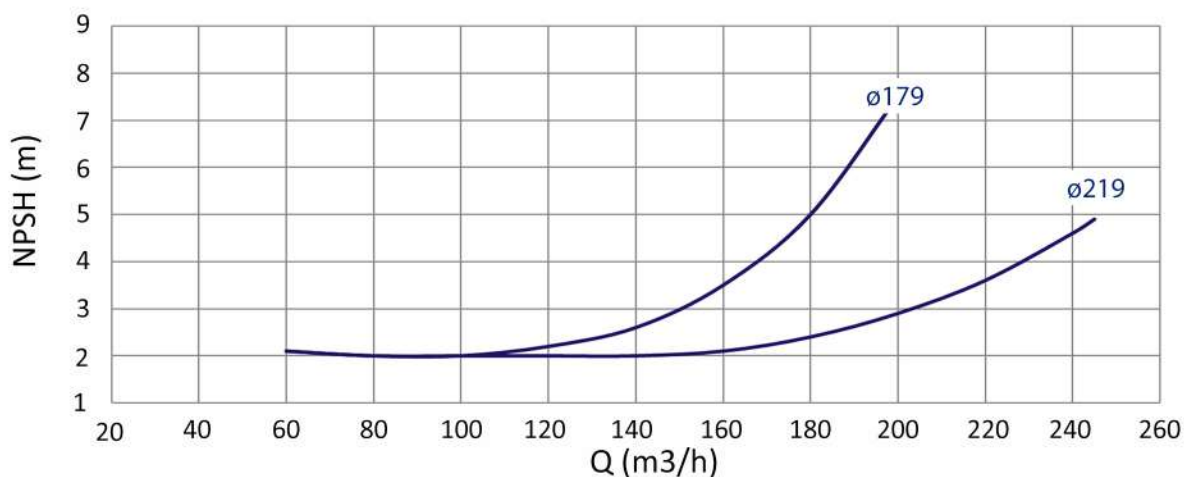
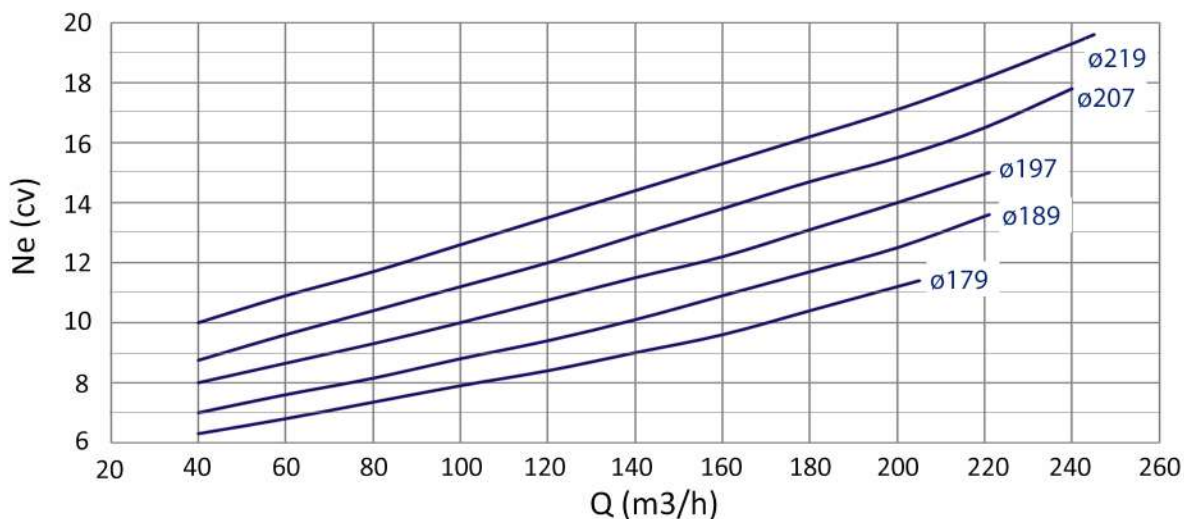
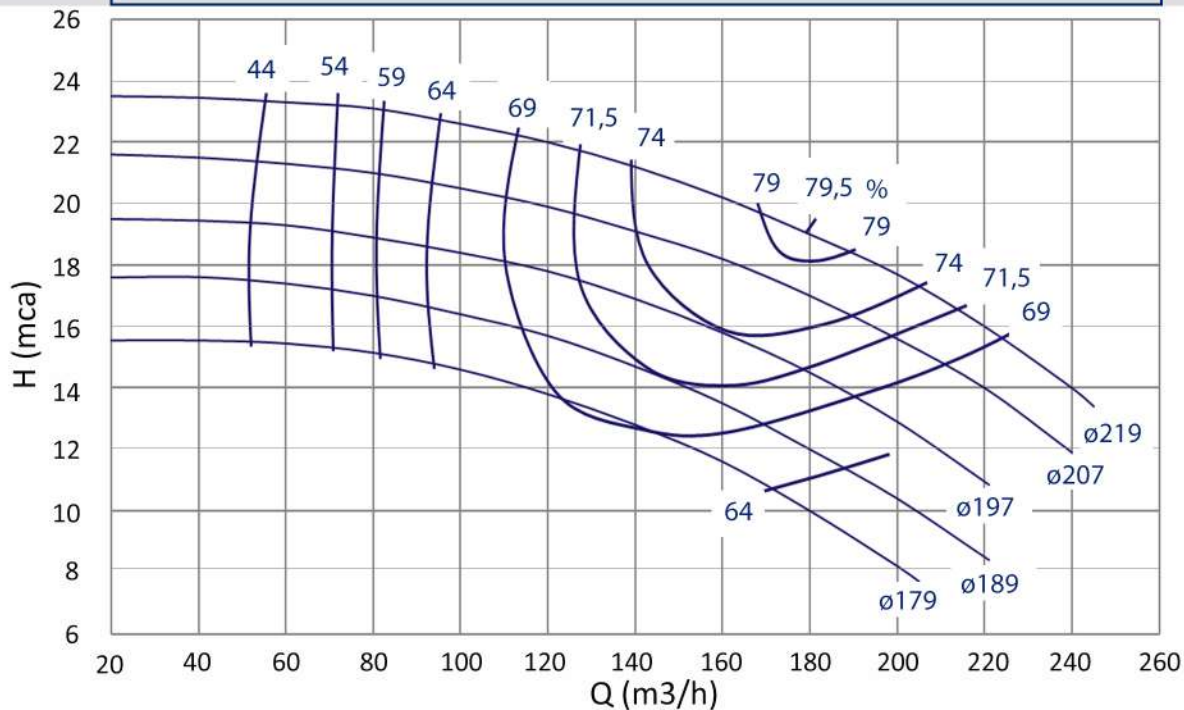
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 100	Nº 10010804	60 Hz 4 P



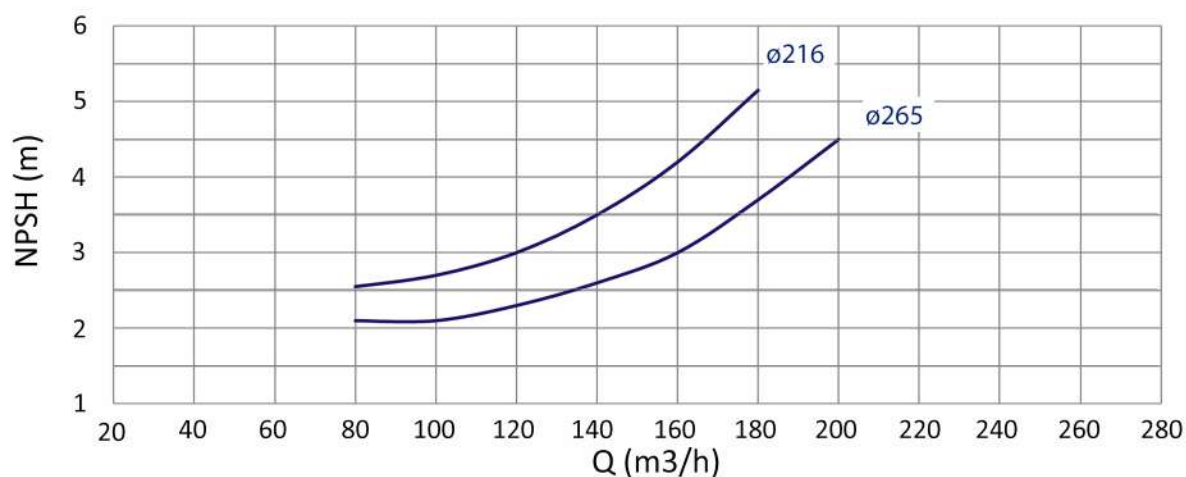
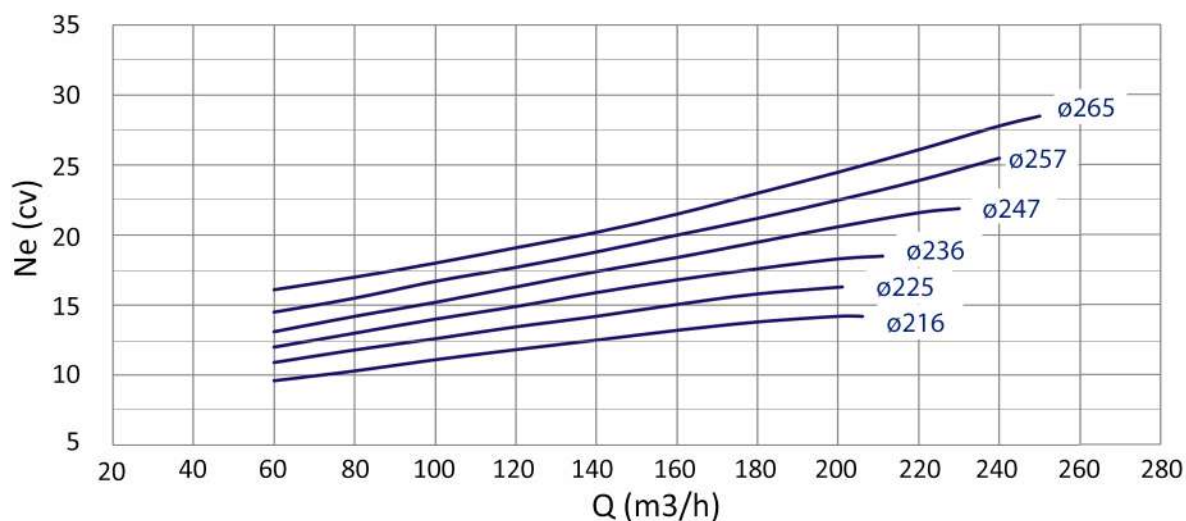
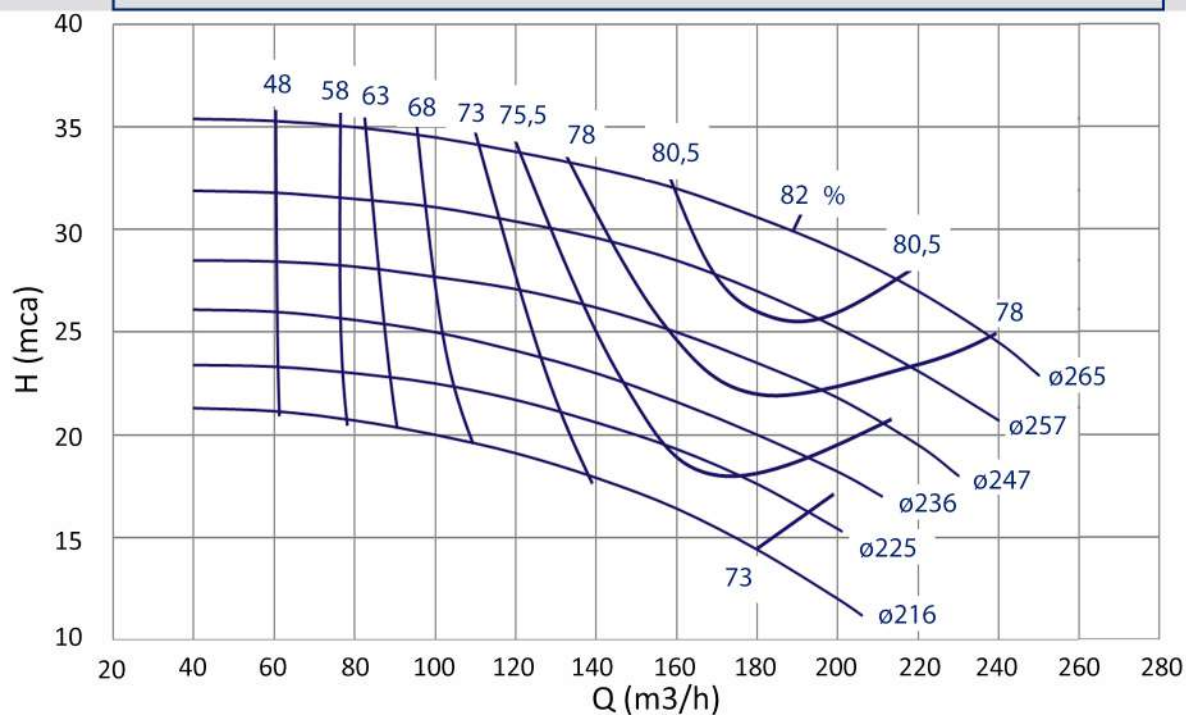
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 100	Nº 10010902	60 Hz 4 P



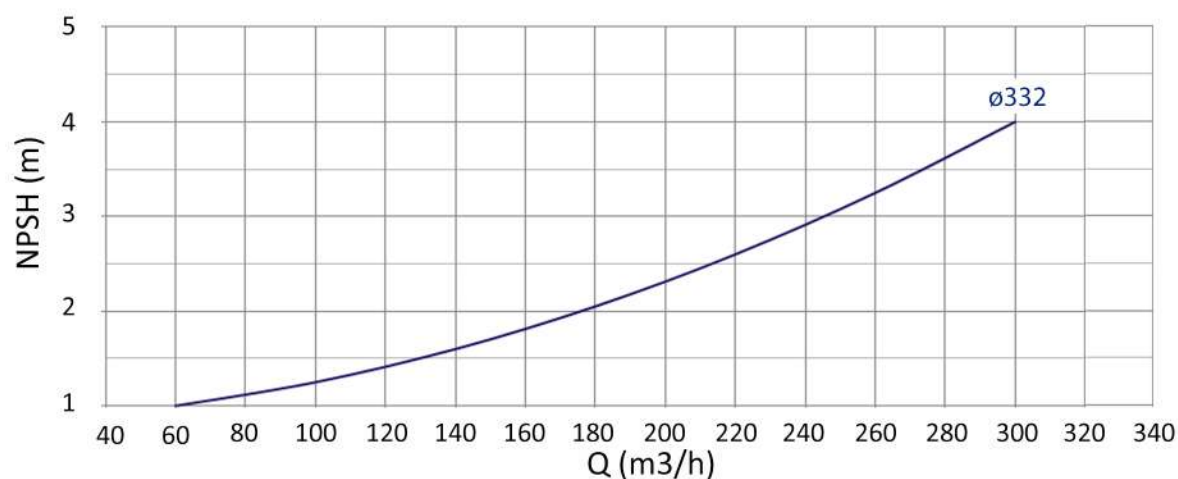
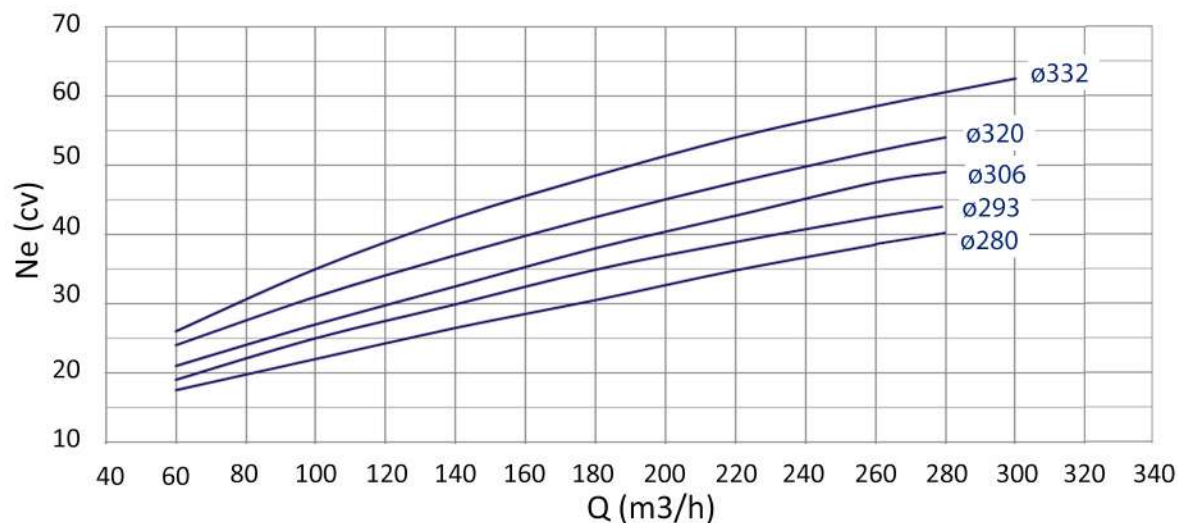
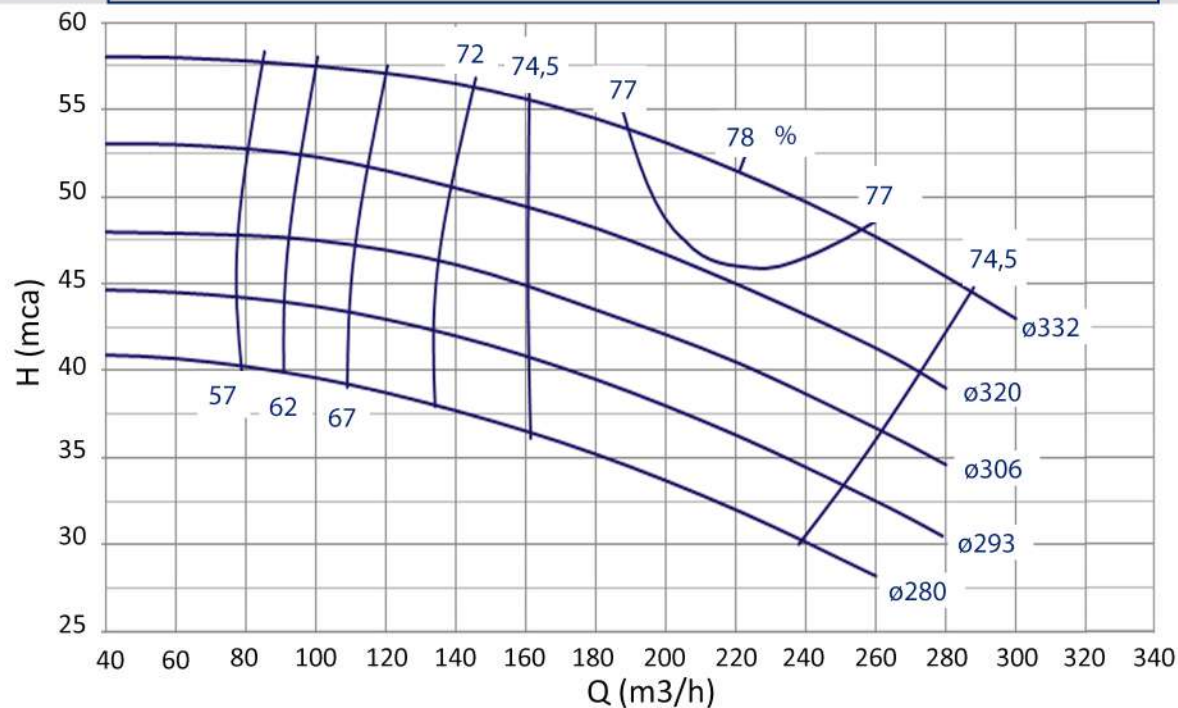
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 100	Nº 10011010	60 Hz 4 P



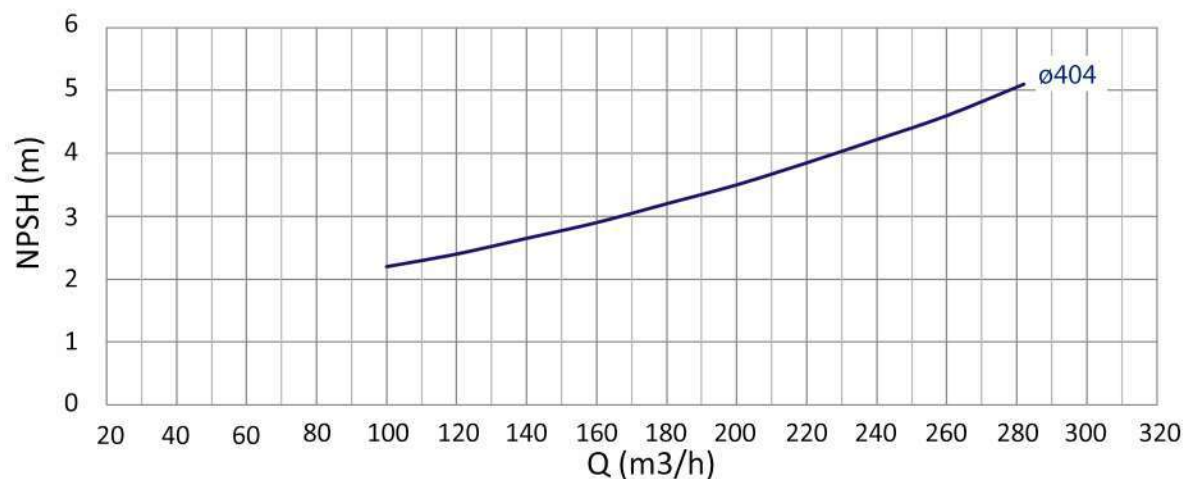
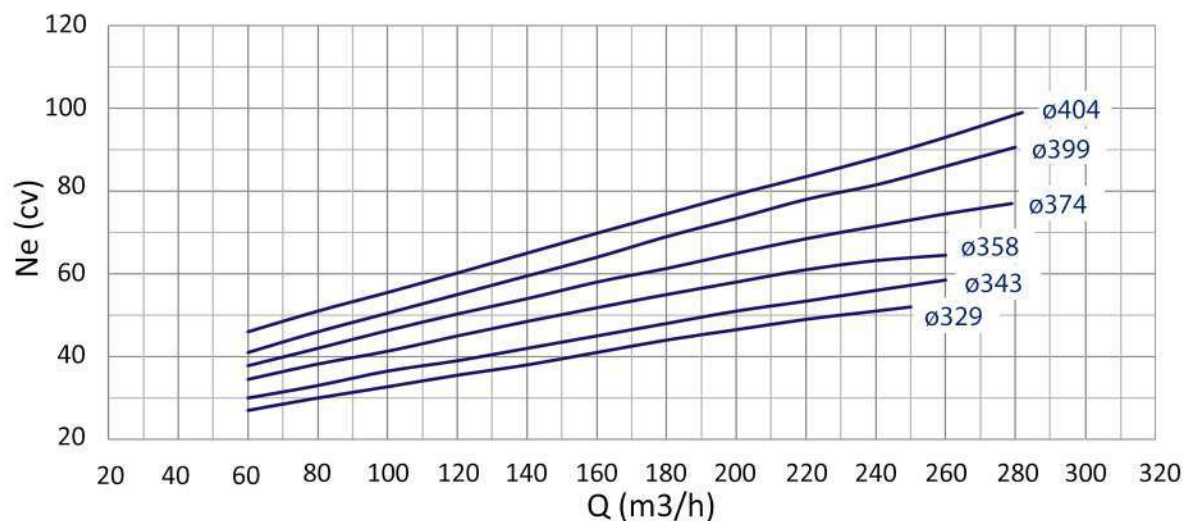
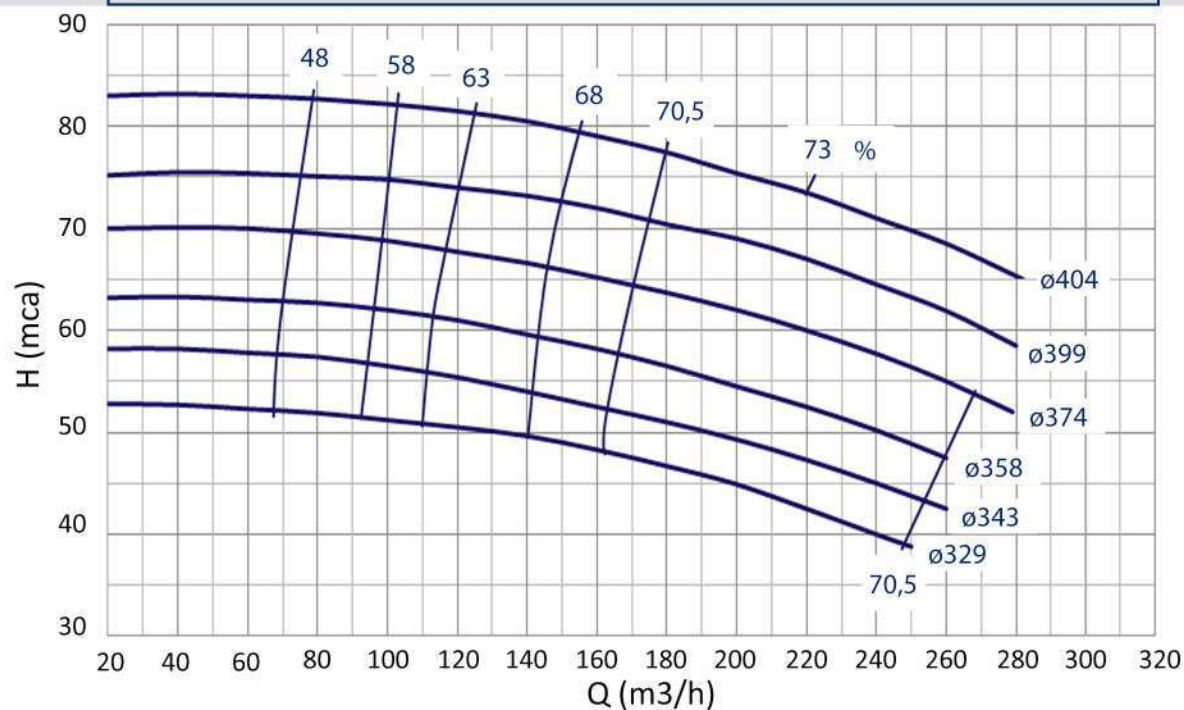
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 100	Nº 10011030	60 Hz 4 P



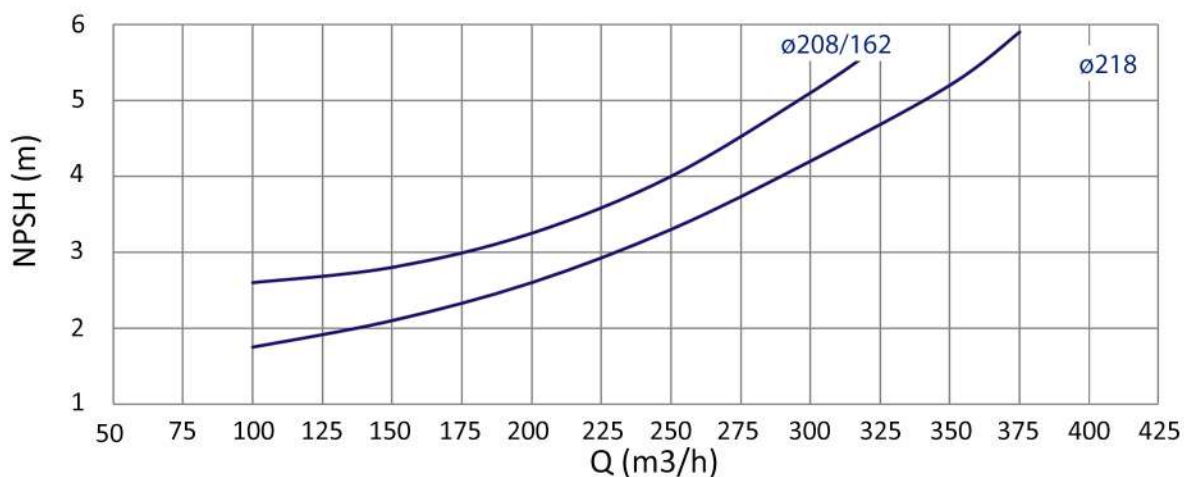
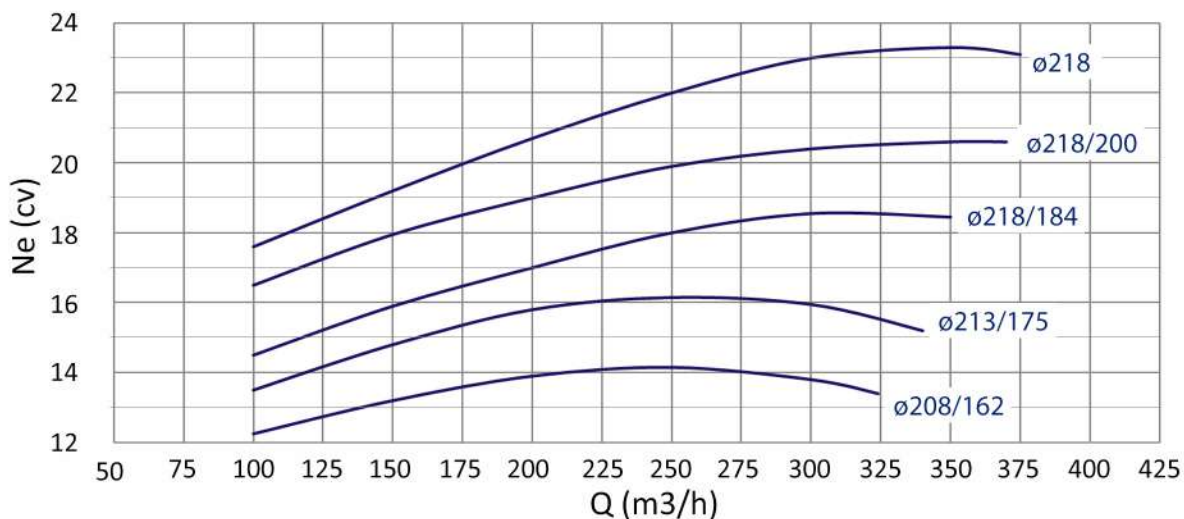
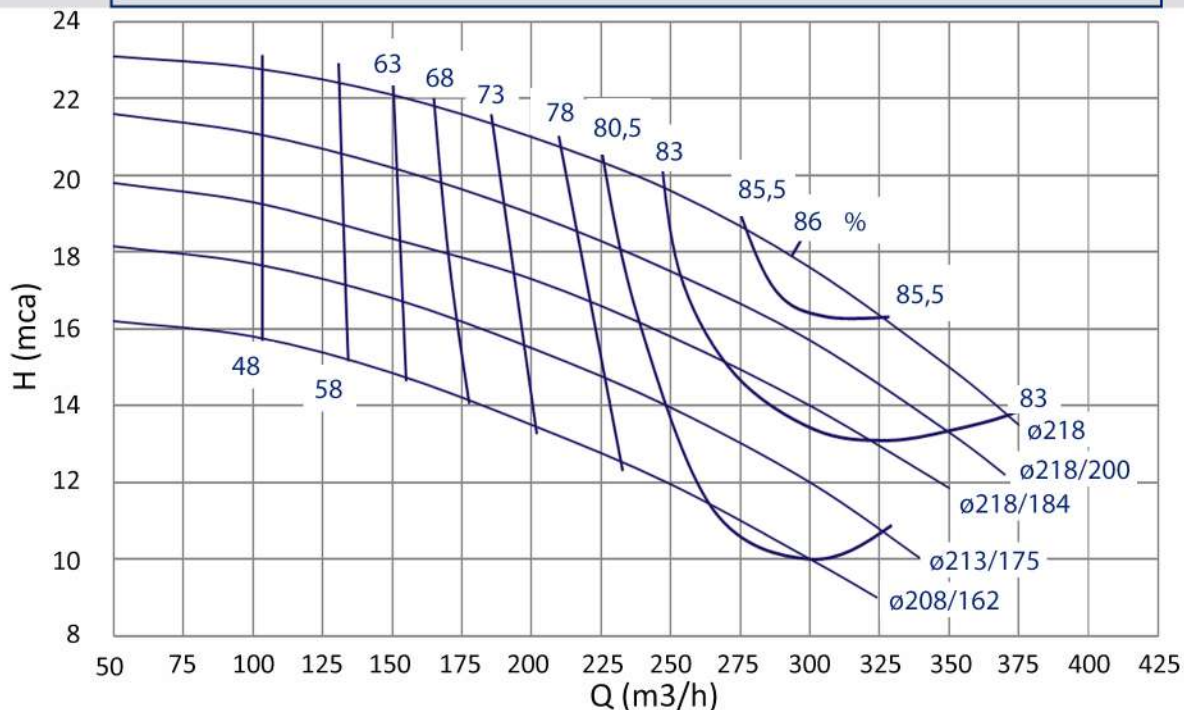
AFG NormBloc Flutuantes Radial

SUCÇÃO 125	CURVA	1800 rpm
RECALQUE 100	Nº 10011050	60 Hz 4 P



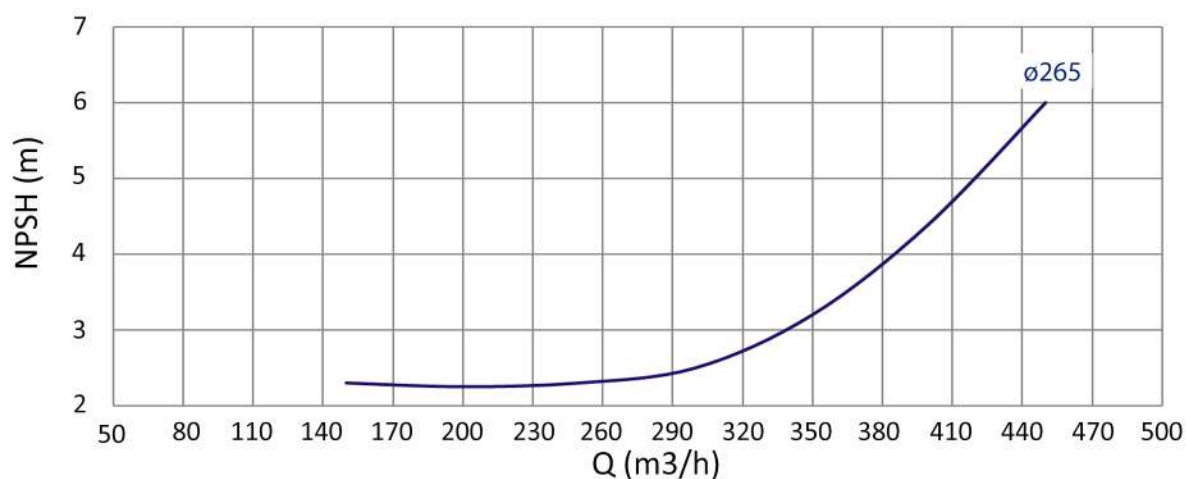
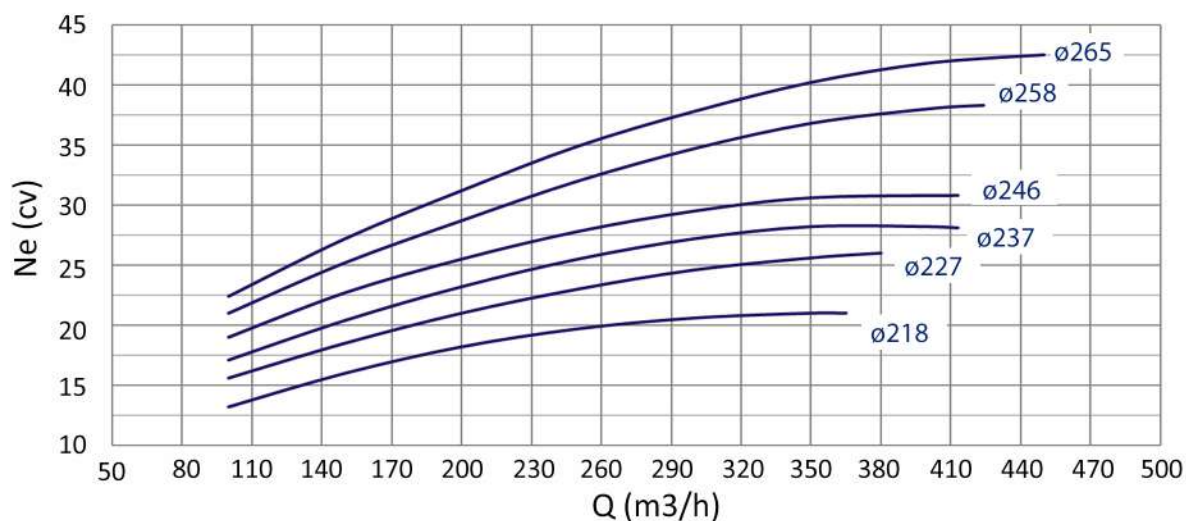
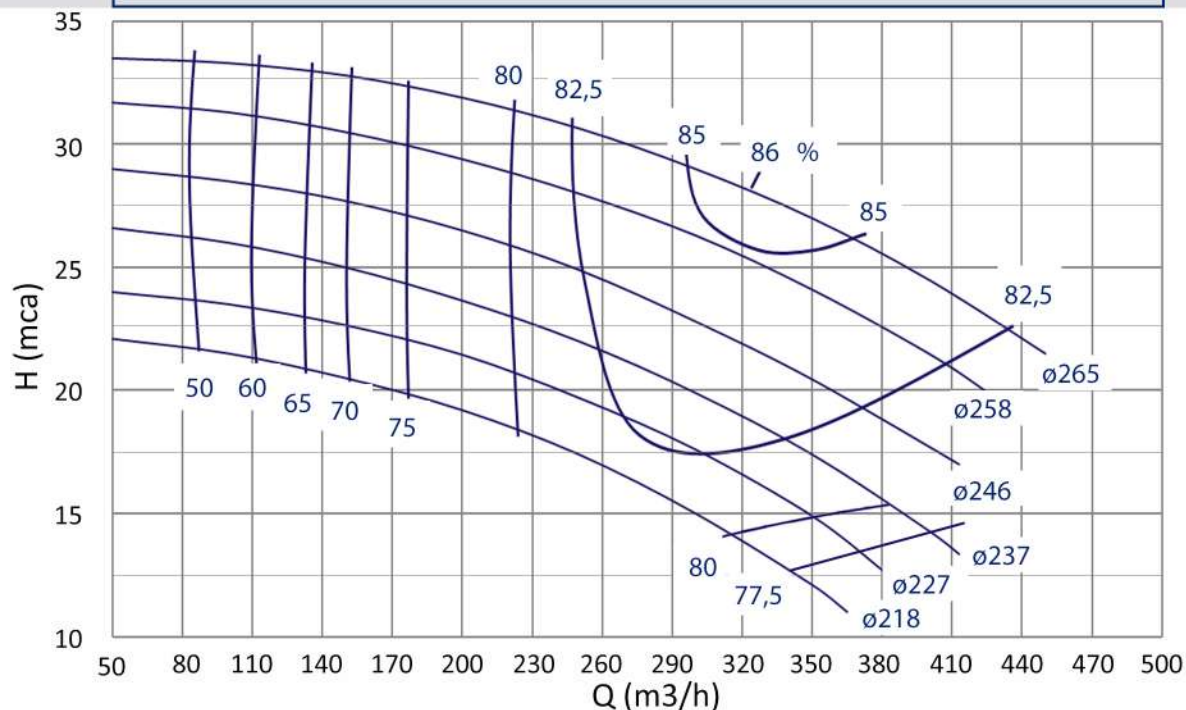
AFG NormBloc Flutuantes Radial

SUCÇÃO 150	CURVA	1800 rpm
RECALQUE 125	Nº 10011201	60 Hz 4 P



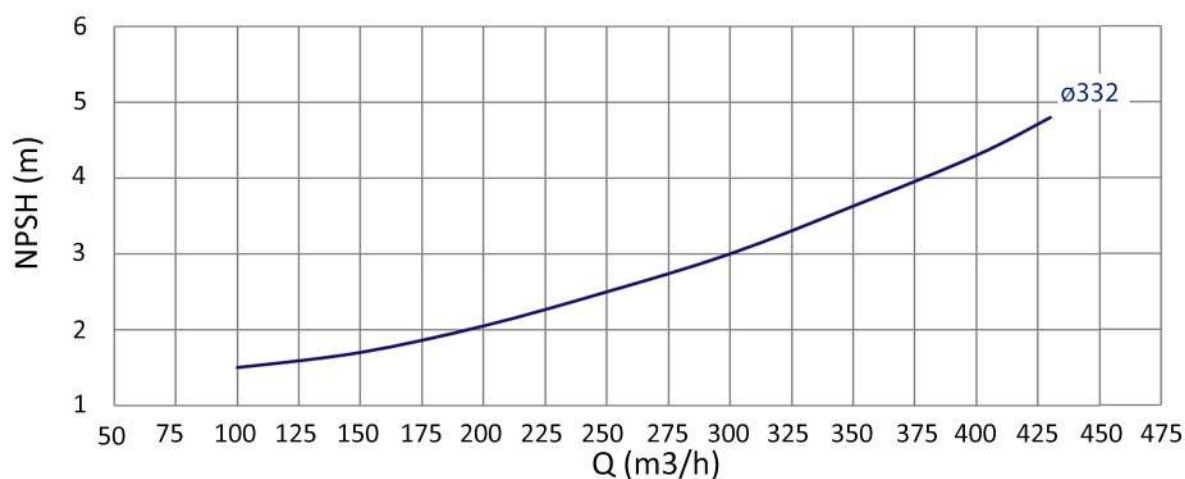
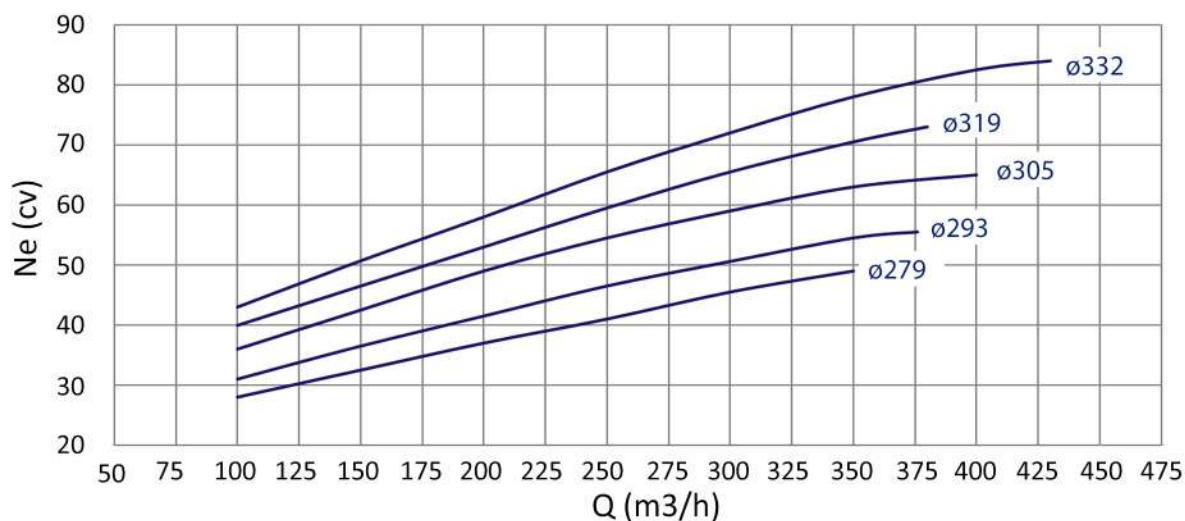
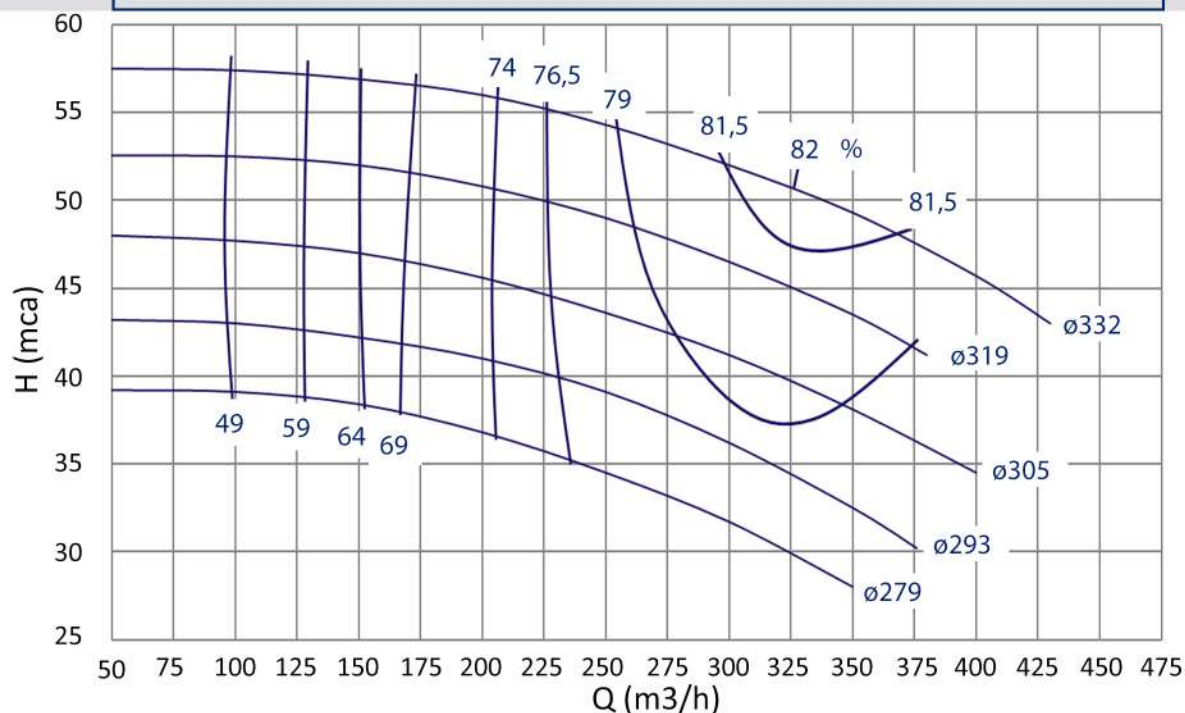
AFG NormBloc Flutuantes Radial

SUCÇÃO 150	CURVA	1800 rpm
RECALQUE 125	Nº 10011301	60 Hz 4 P



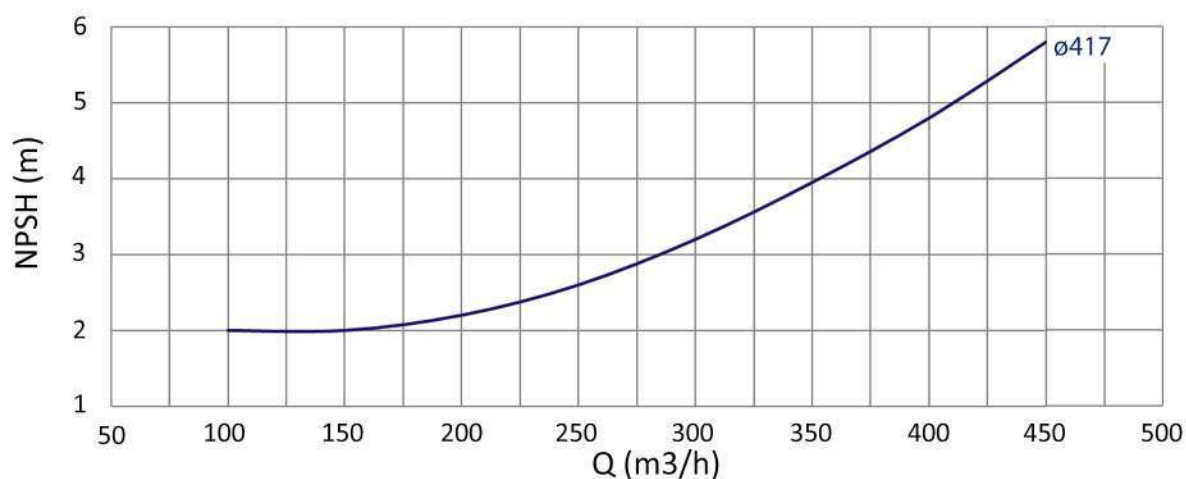
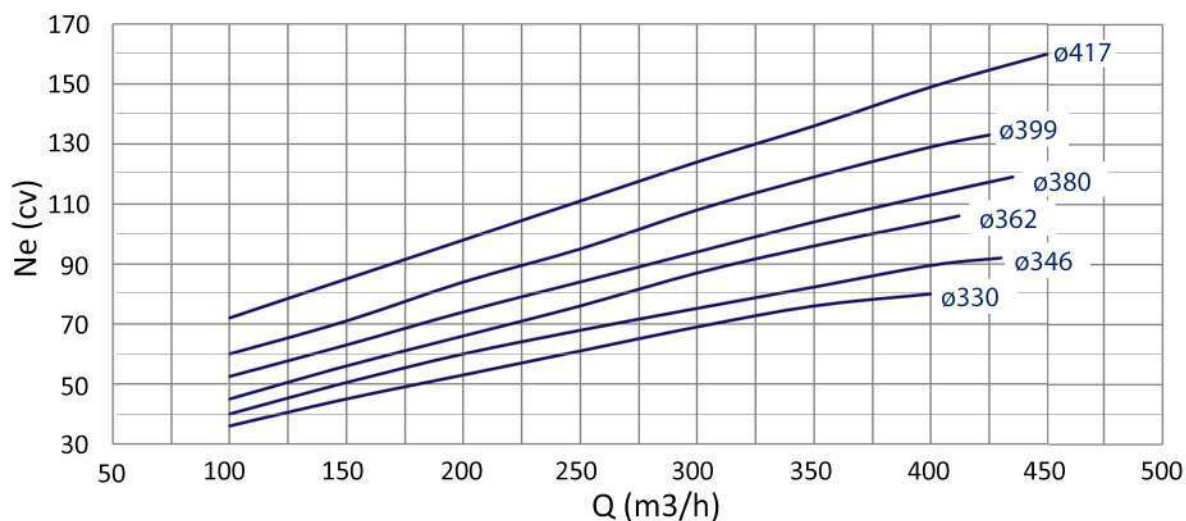
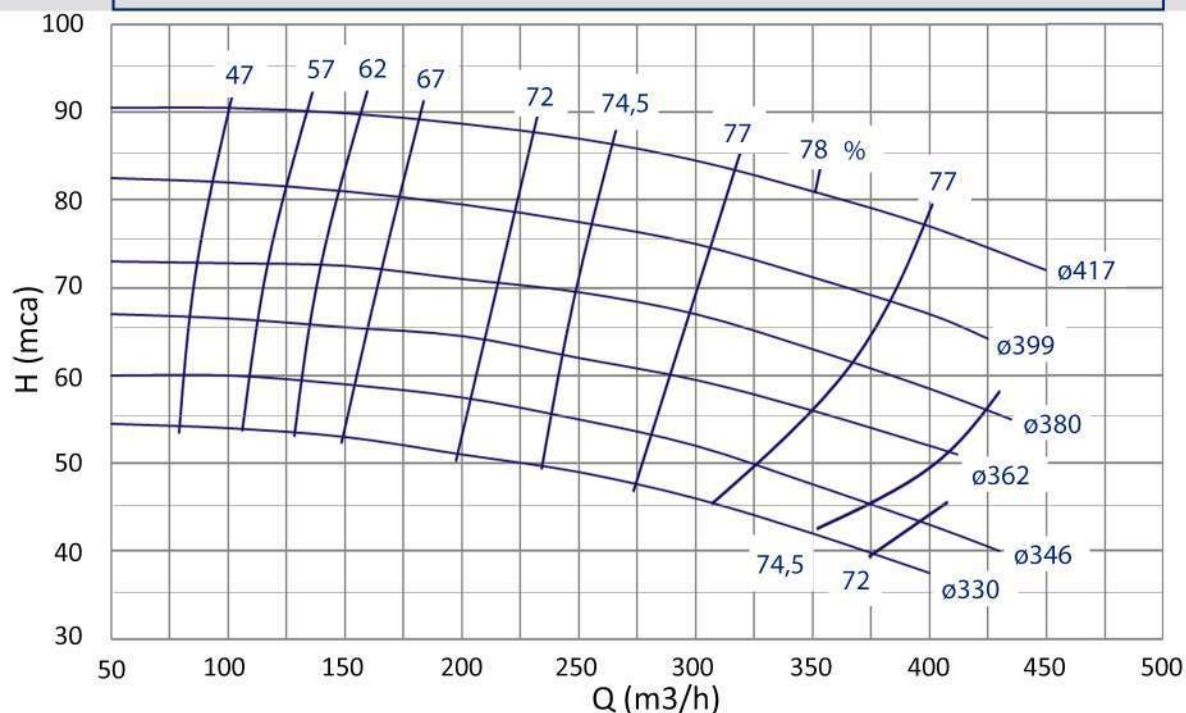
AFG NormBloc Flutuantes Radial

SUCÇÃO 150	CURVA	1800 rpm
RECALQUE 125	Nº 10011403	60 Hz 4 P



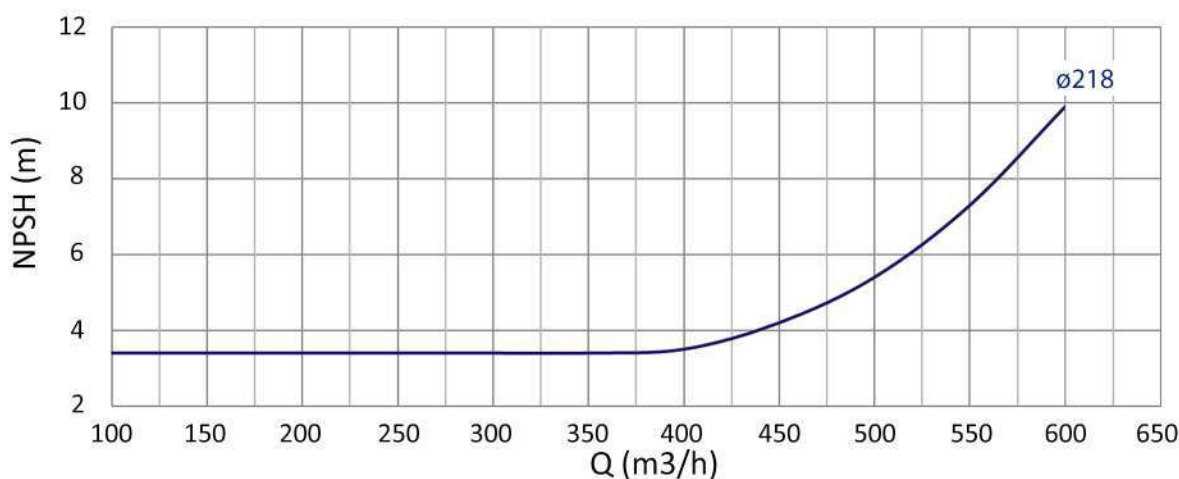
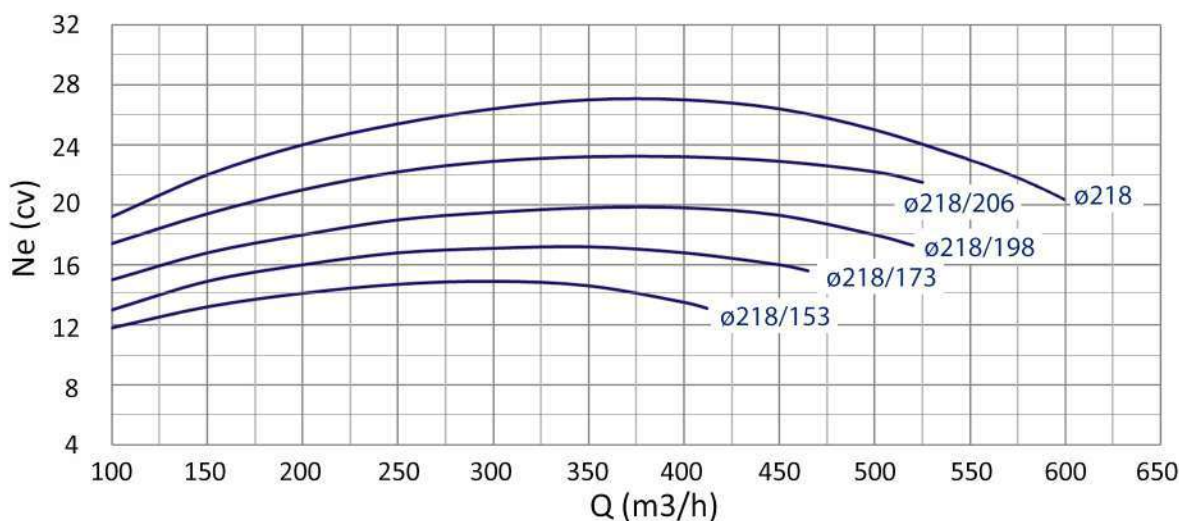
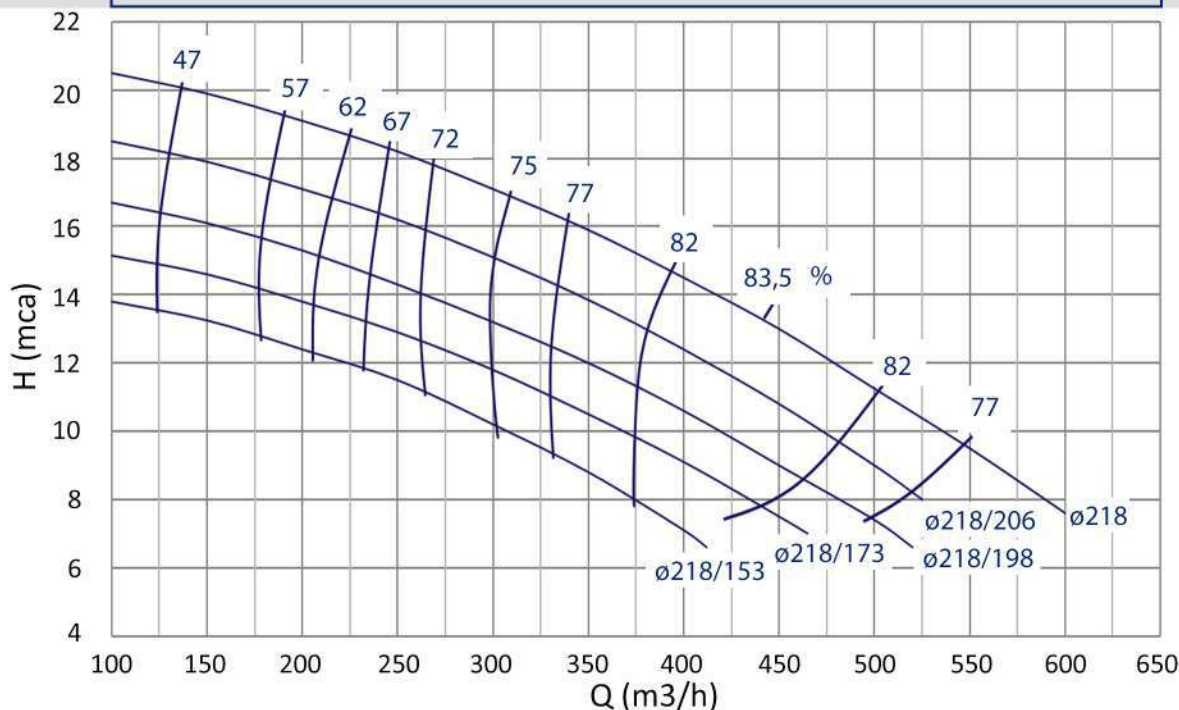
AFG NormBloc Flutuantes Radial

SUCÇÃO 150	CURVA	1800 rpm
RECALQUE 125	Nº 10011452	60 Hz 4 P



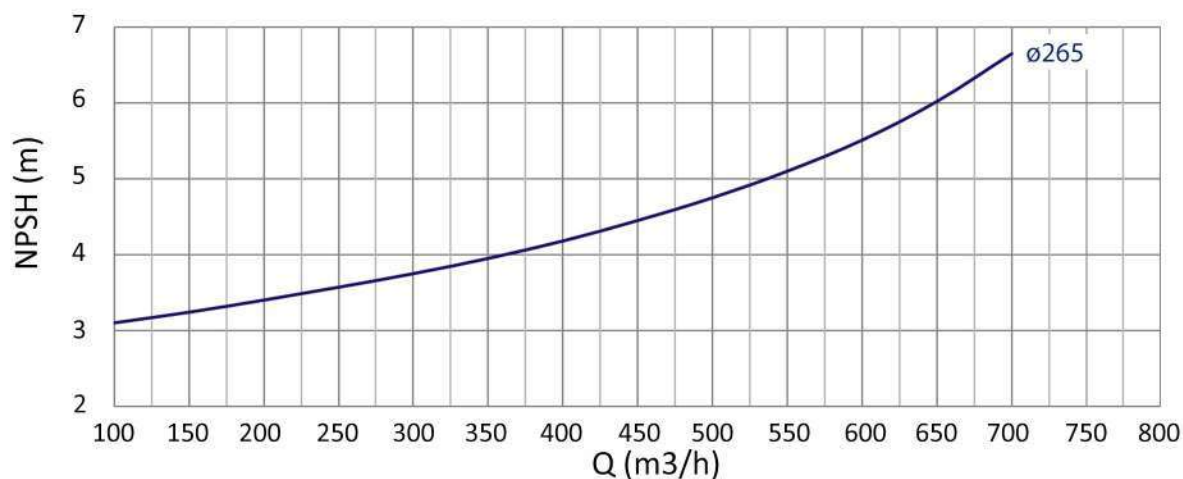
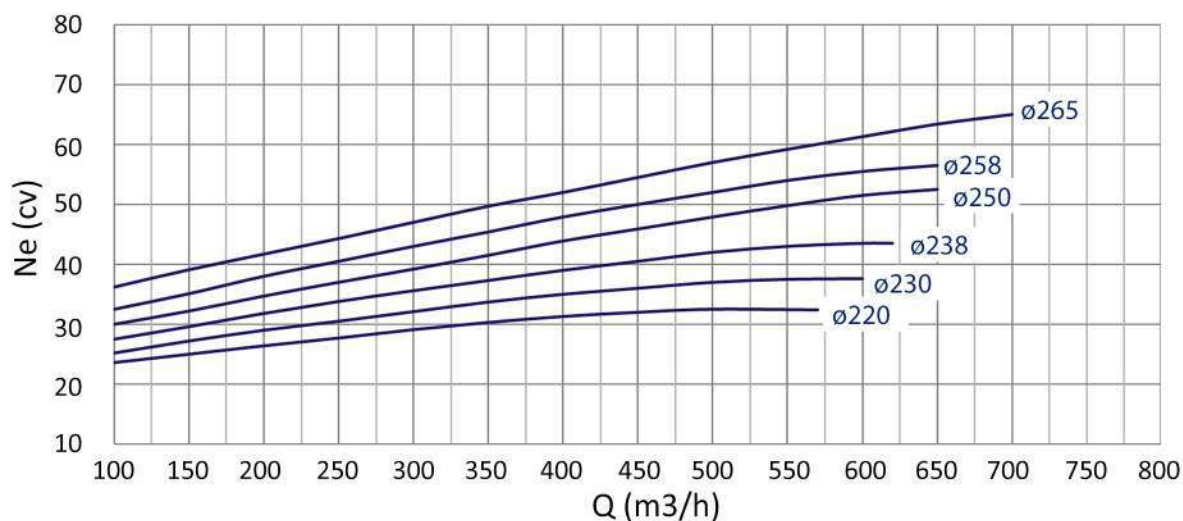
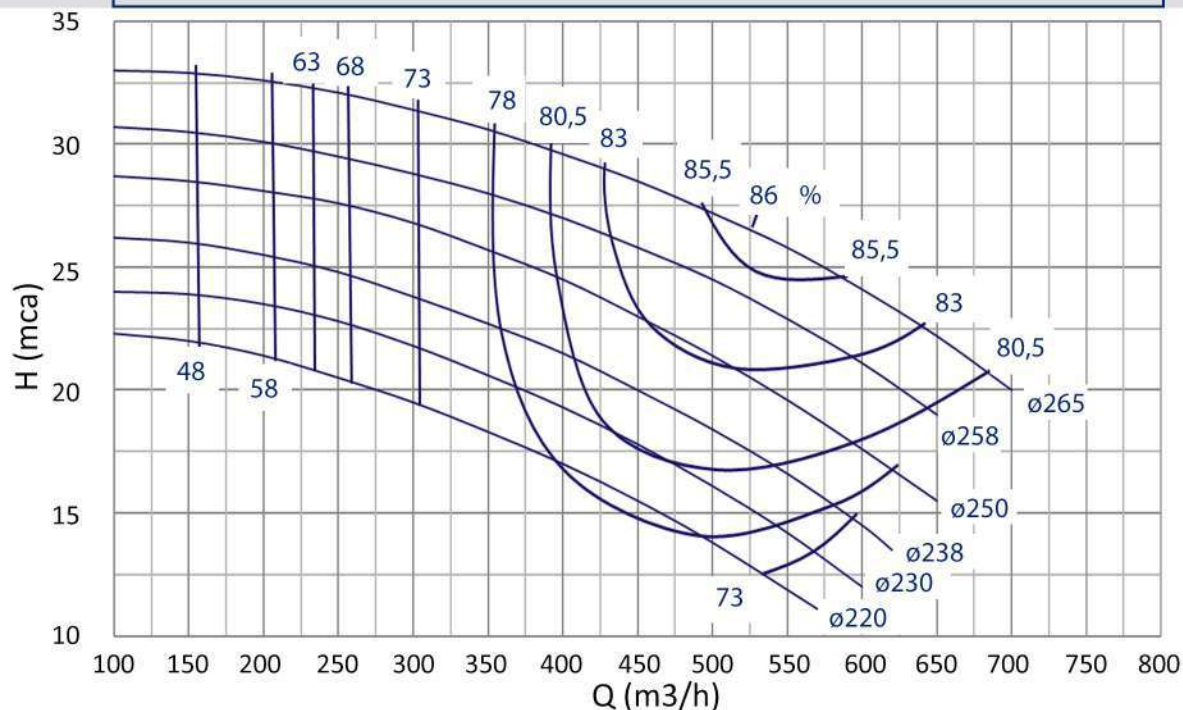
AFG NormBloc Flutuantes Radial

SUCÇÃO 200	CURVA	1800 rpm
RECALQUE 150	Nº 10011480	60 Hz 4 P



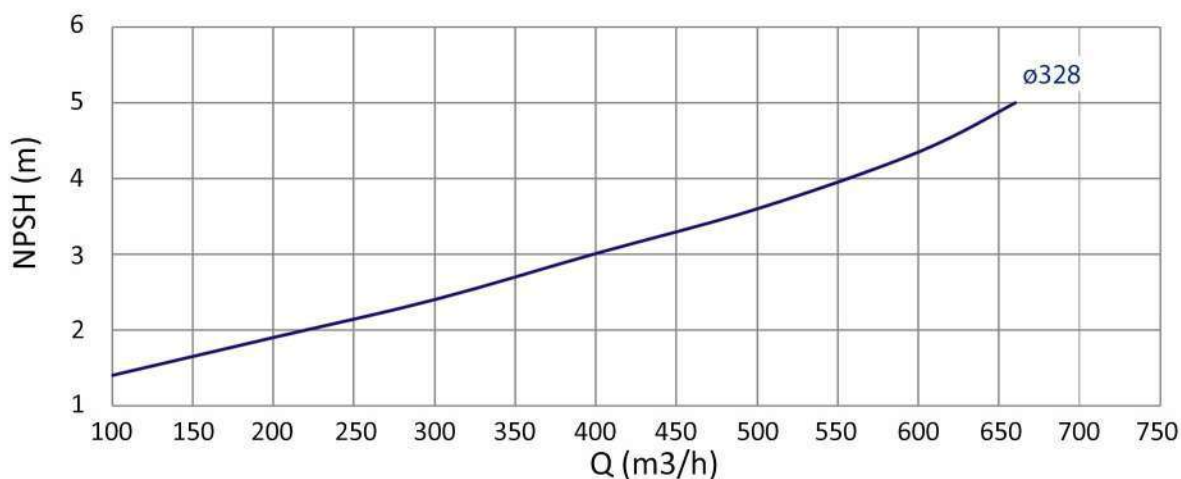
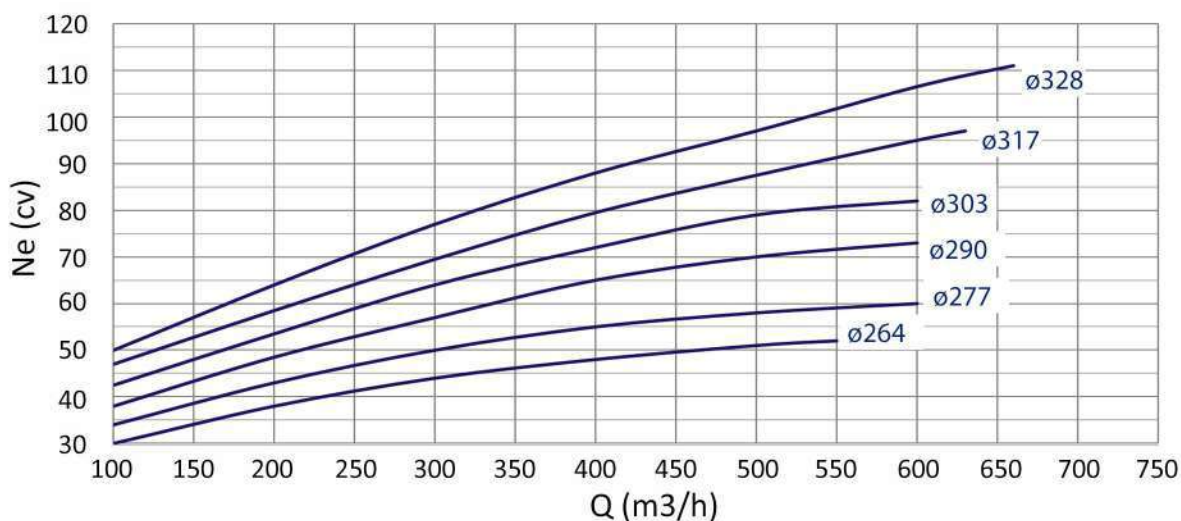
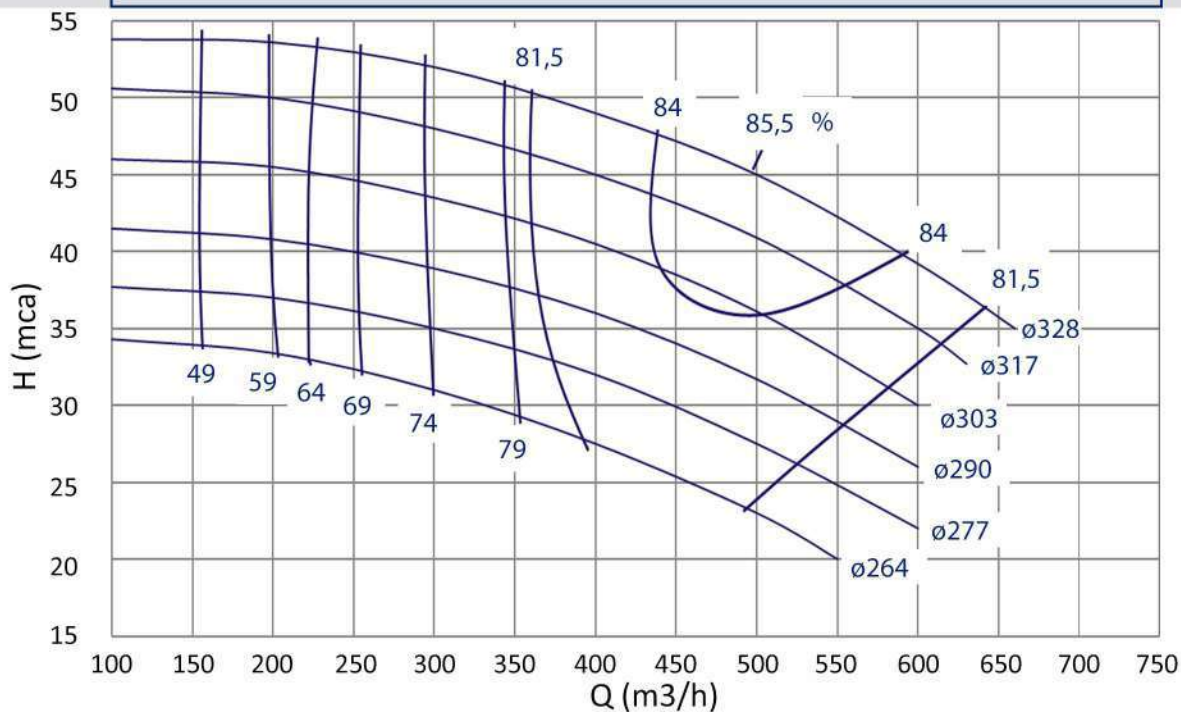
AFG NormBloc Flutuantes Radial

SUCÇÃO 200	CURVA	1800 rpm
RECALQUE 150	Nº 10011602	60 Hz 4 P



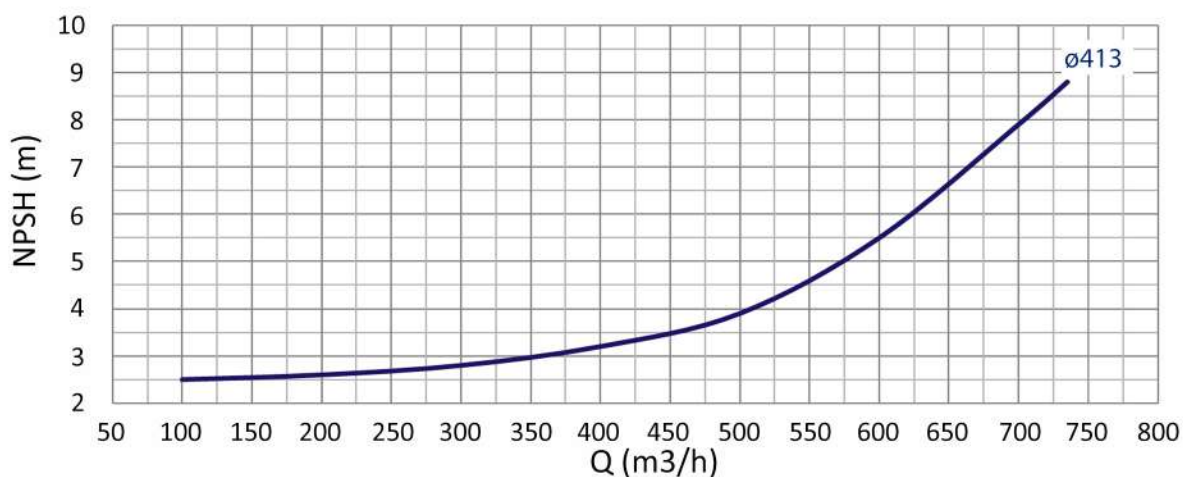
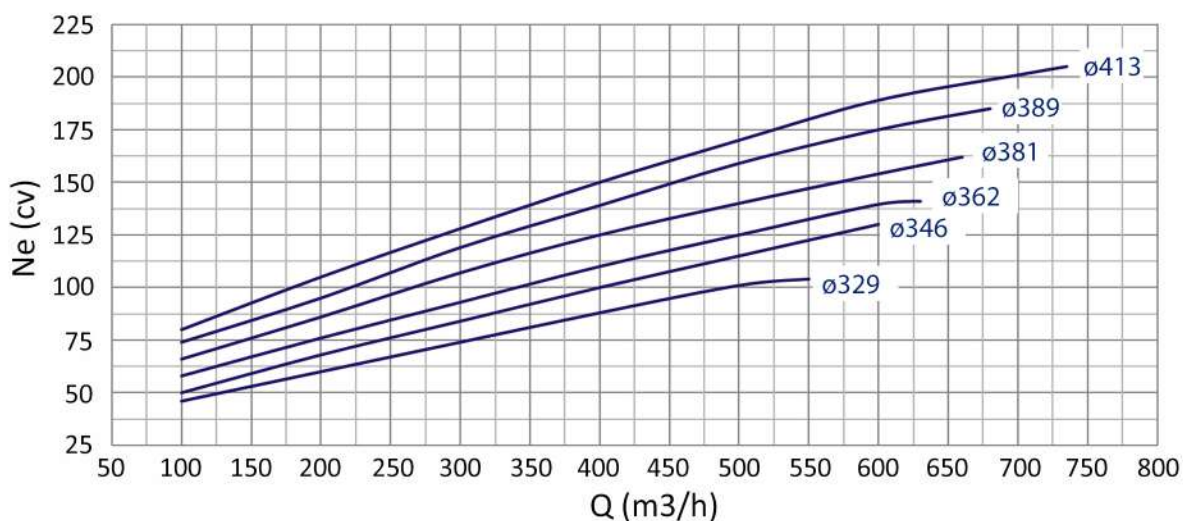
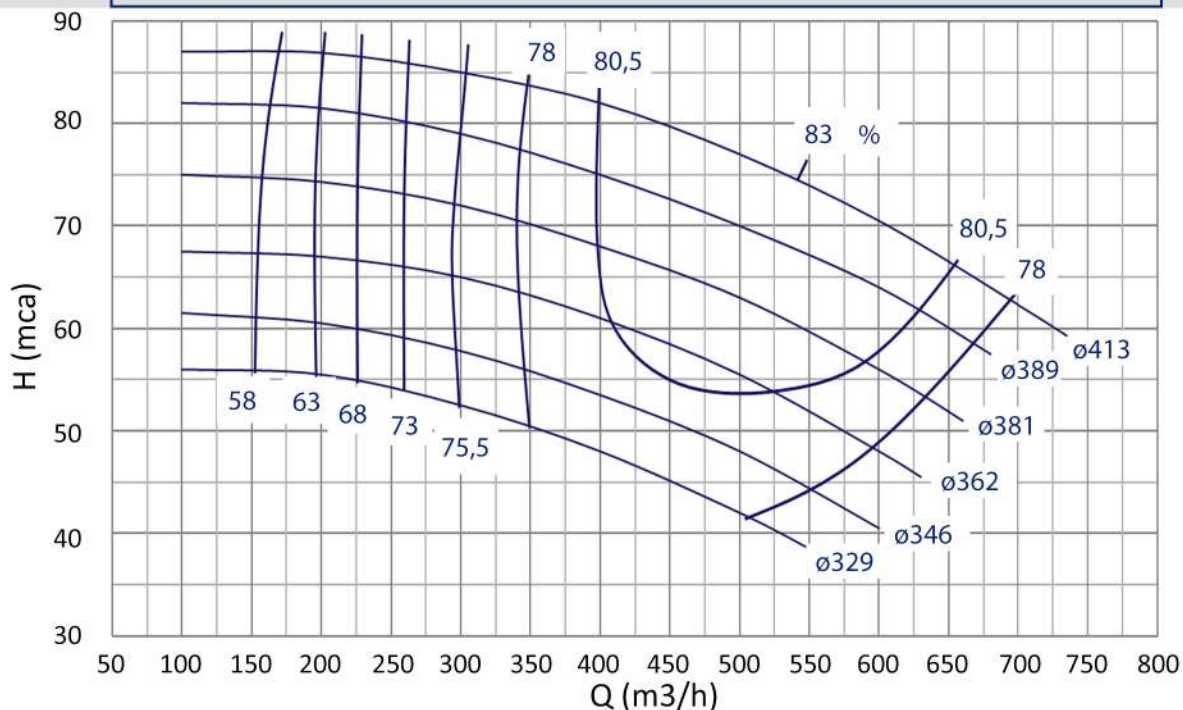
AFG NormBloc Flutuantes Radial

SUCÇÃO 200	CURVA	1800 rpm
RECALQUE 150	Nº 10011652	60 Hz 4 P



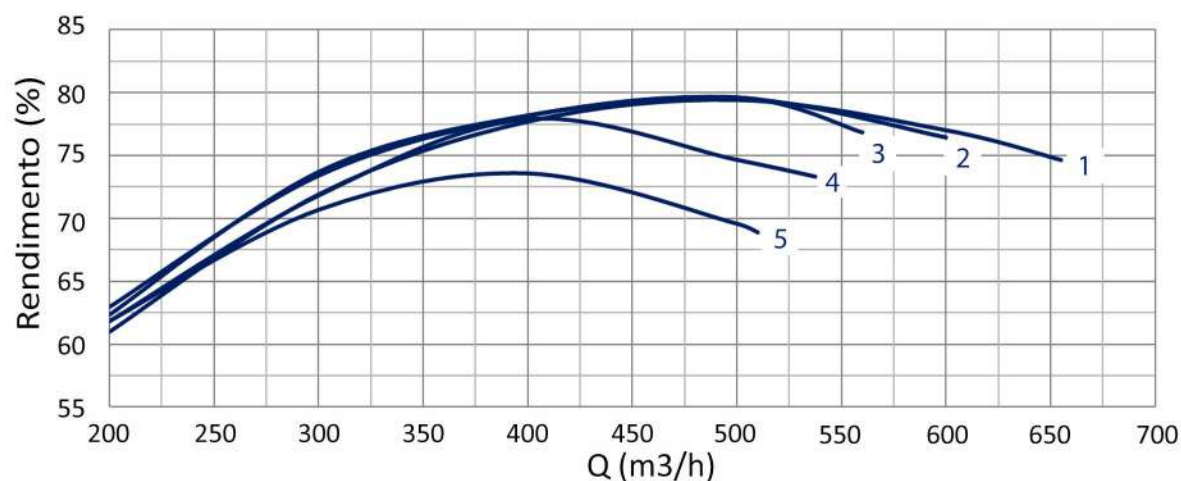
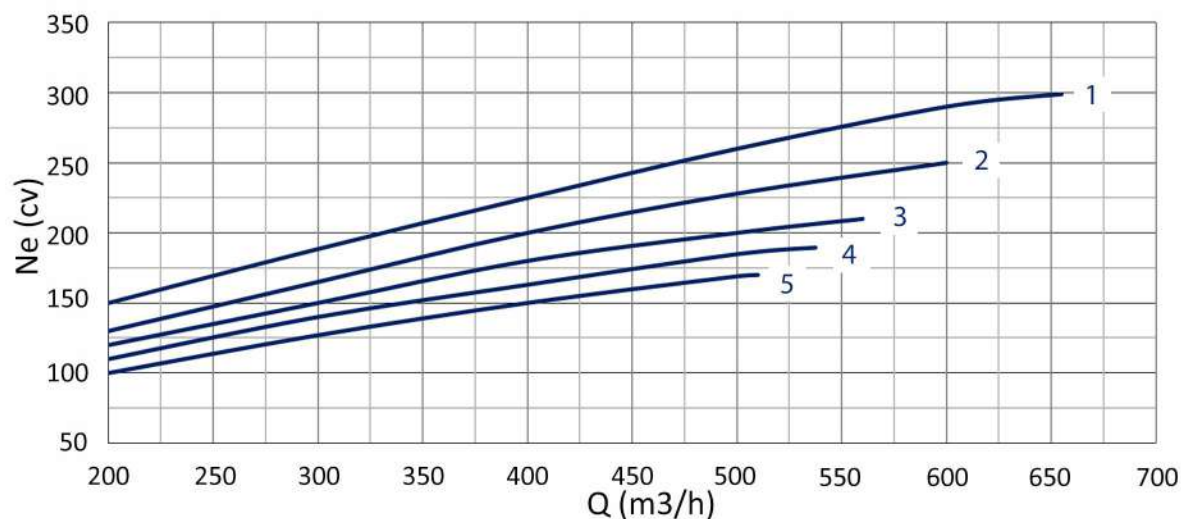
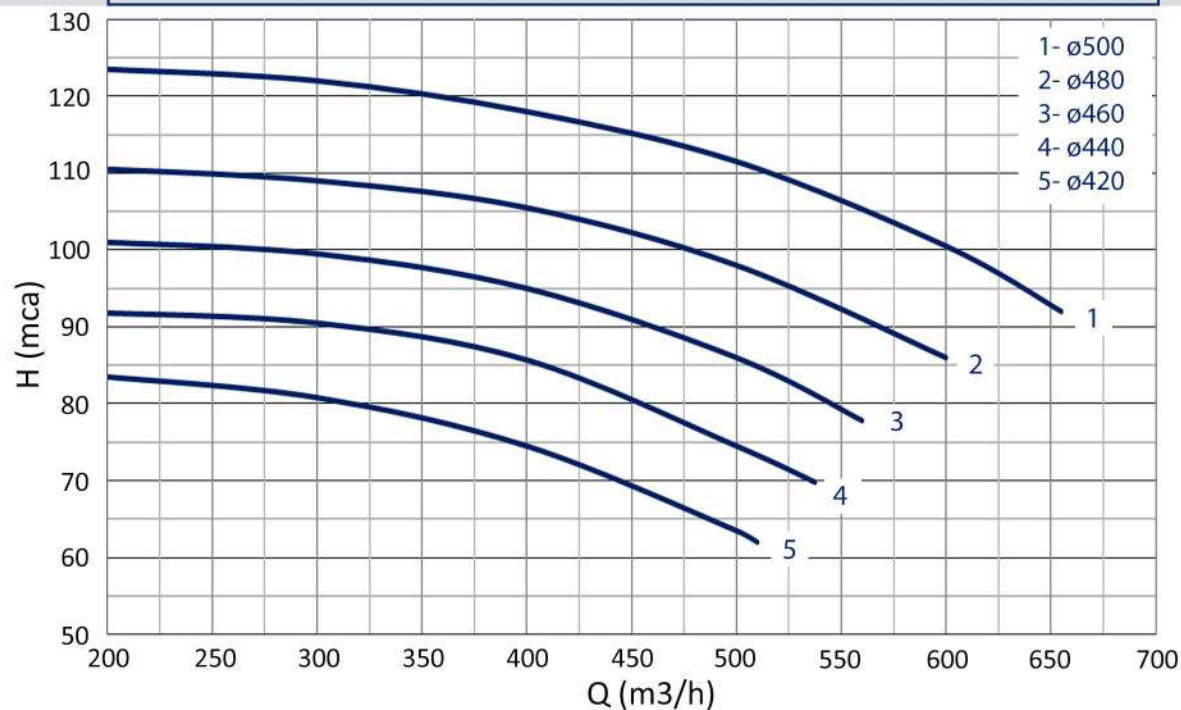
AFG NormBloc Flutuantes Radial

SUCÇÃO 200	CURVA	1800 rpm
RECALQUE 150	Nº 10011661	60 Hz 4 P



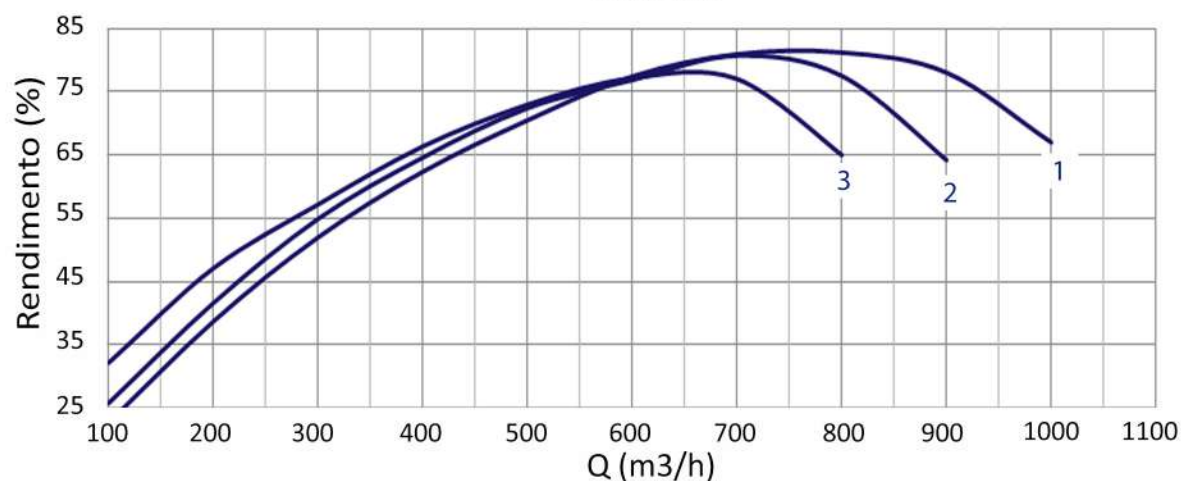
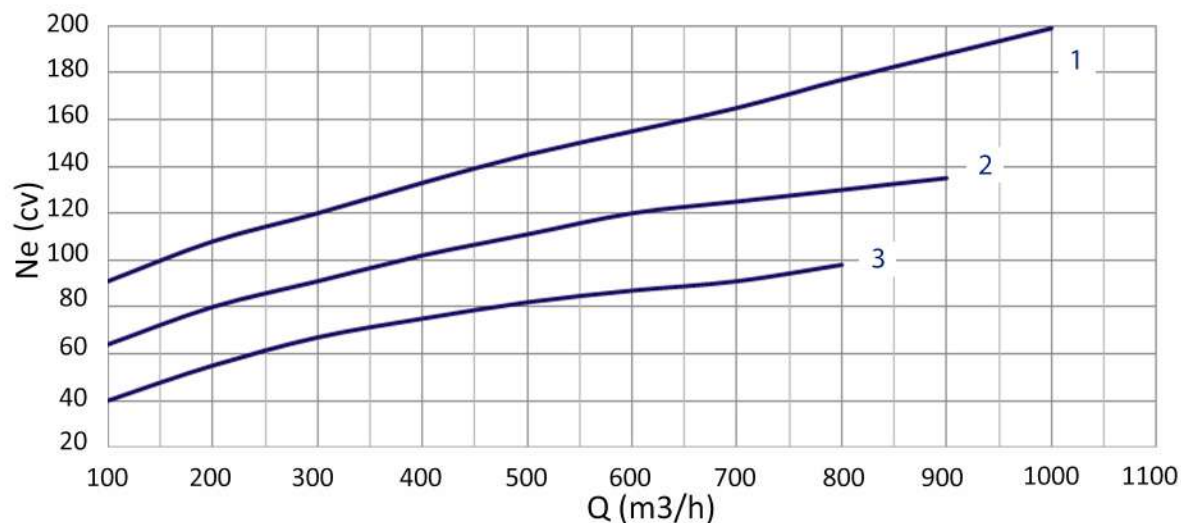
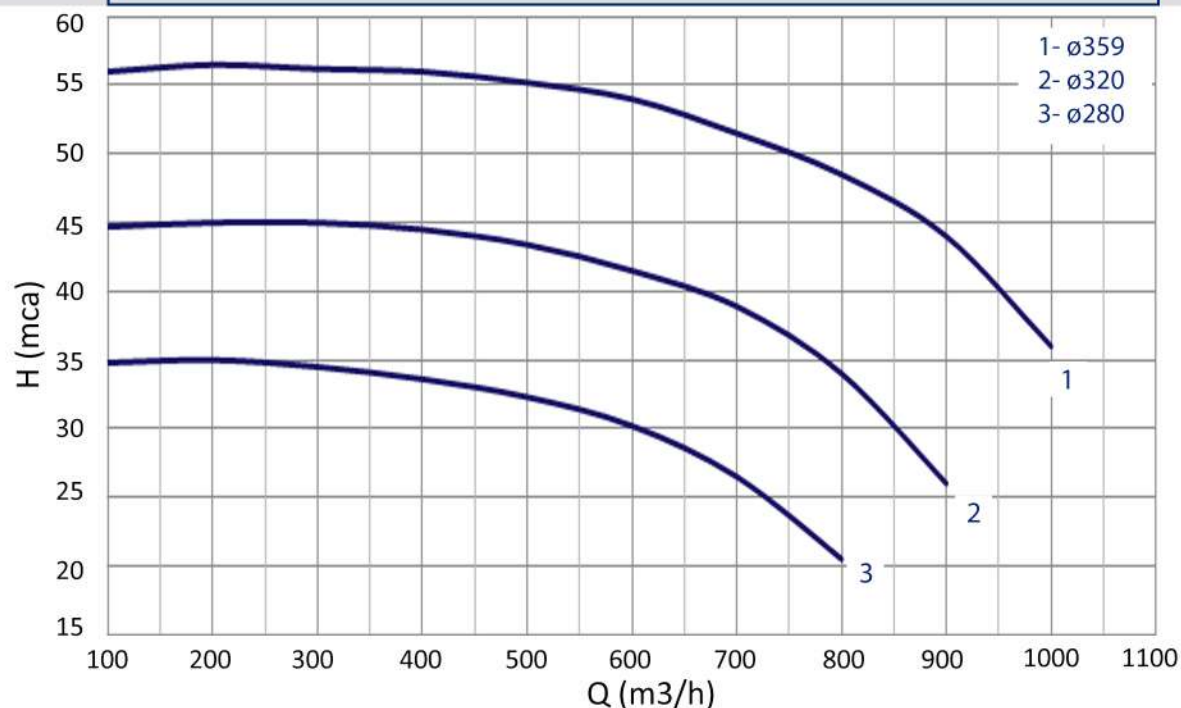
AFG NormBloc Flutuantes Radial

SUCÇÃO 200	CURVA	1800 rpm
RECALQUE 150	Nº 10011671	60 Hz 4 P



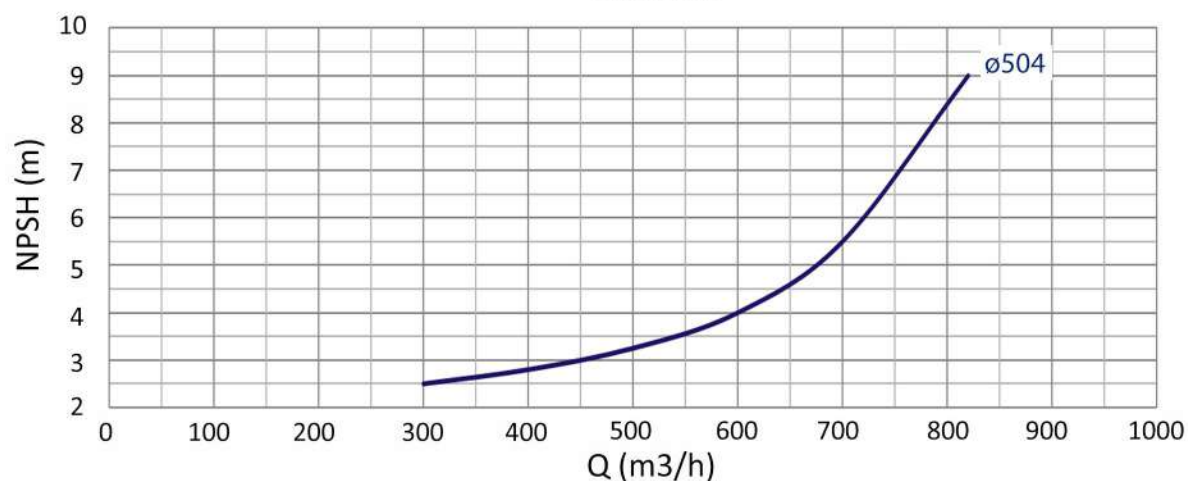
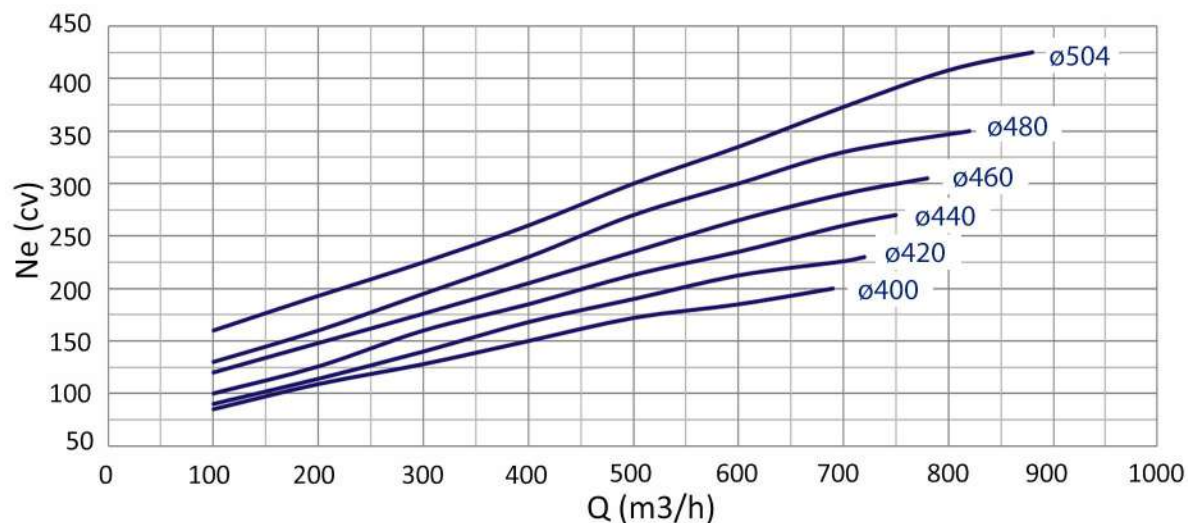
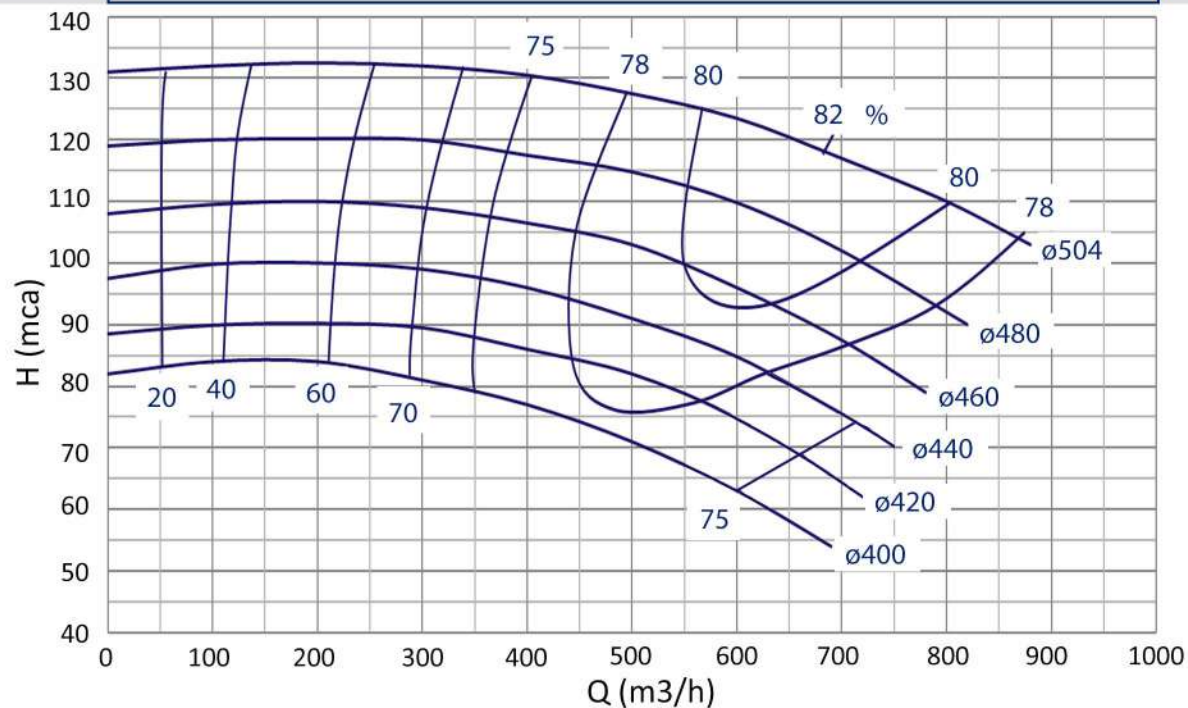
AFG NormBloc Flutuantes Radial

SUCÇÃO 250	CURVA	1800 rpm
RECALQUE 200	Nº 10011901	60 Hz 4 P



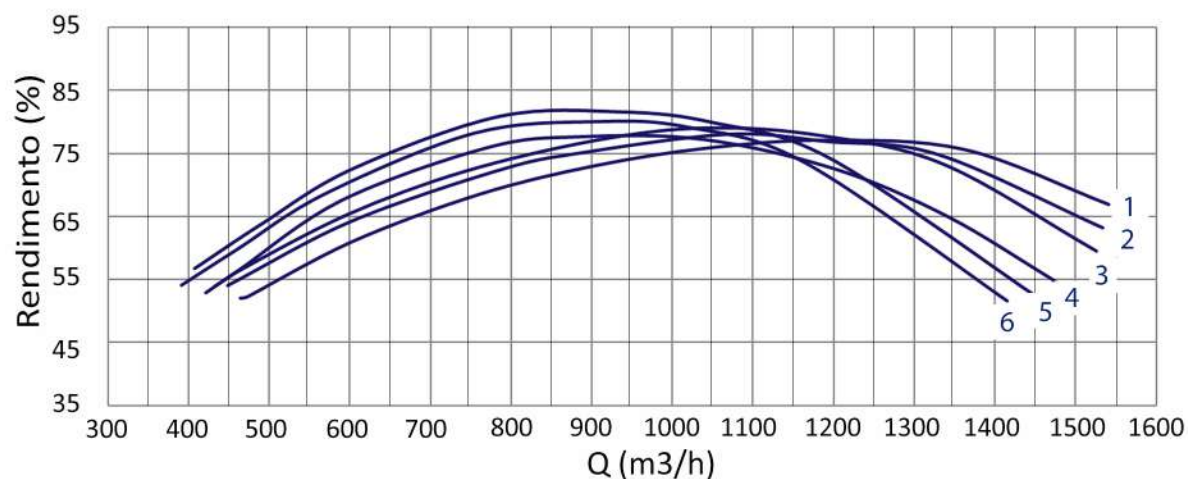
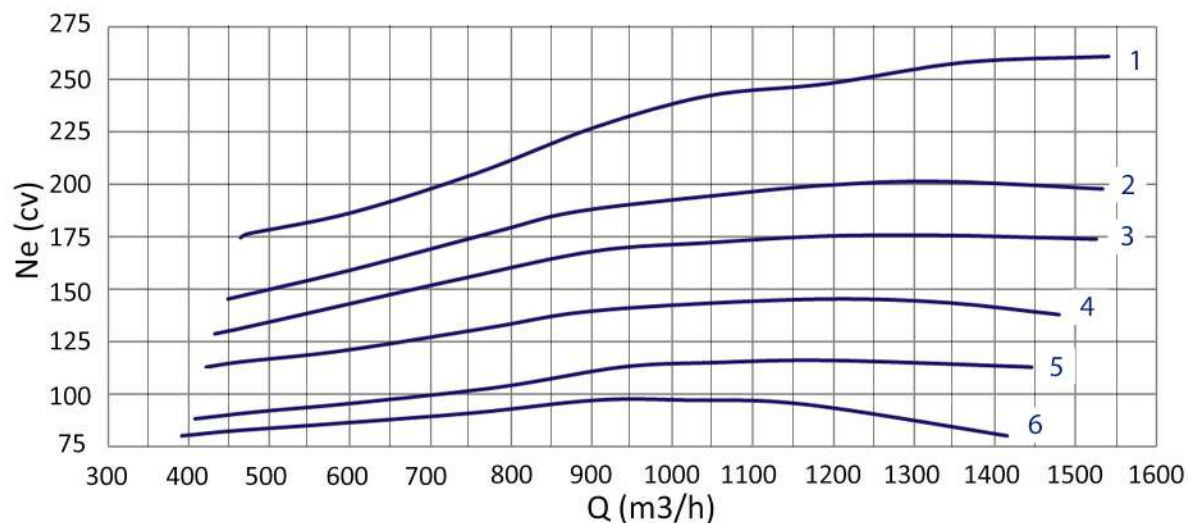
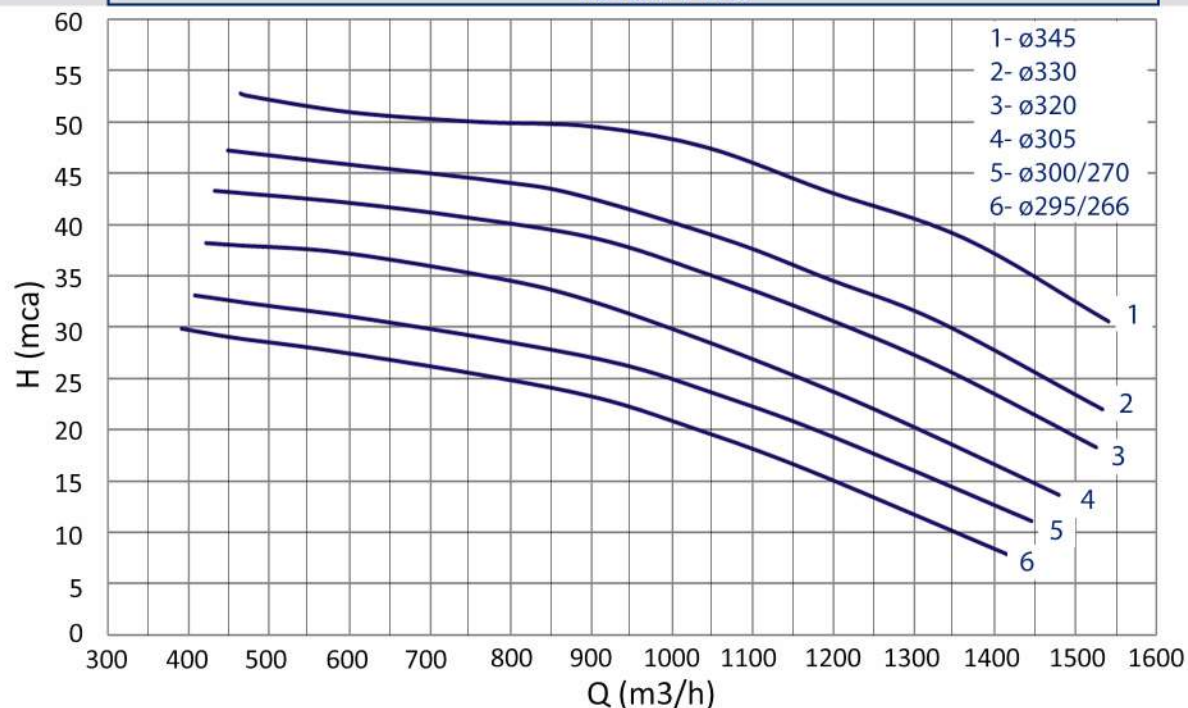
AFG NormBloc Flutuantes Radial

SUCÇÃO 250	CURVA	1800 rpm
RECALQUE 200	Nº 10012051	60 Hz 4 P



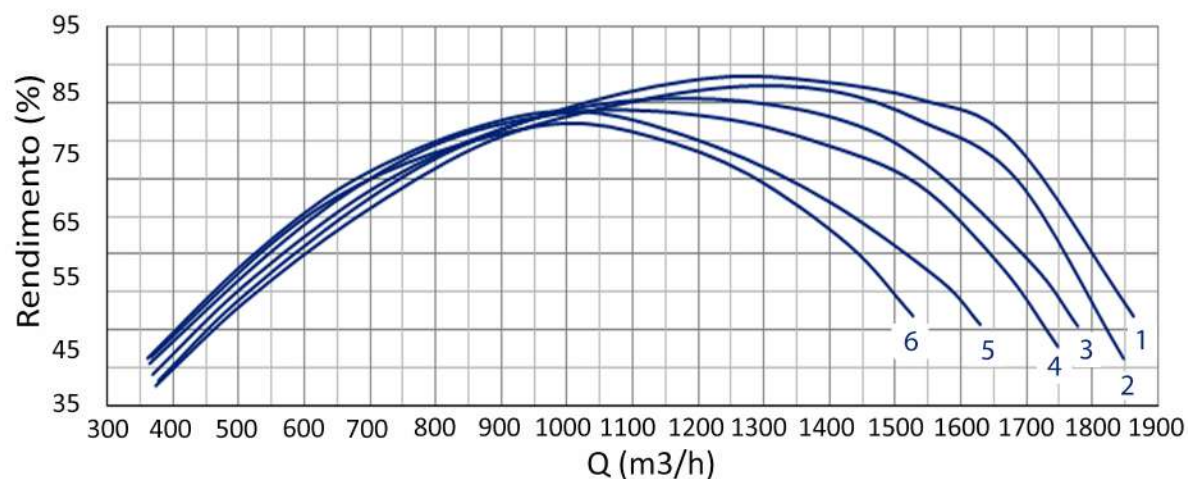
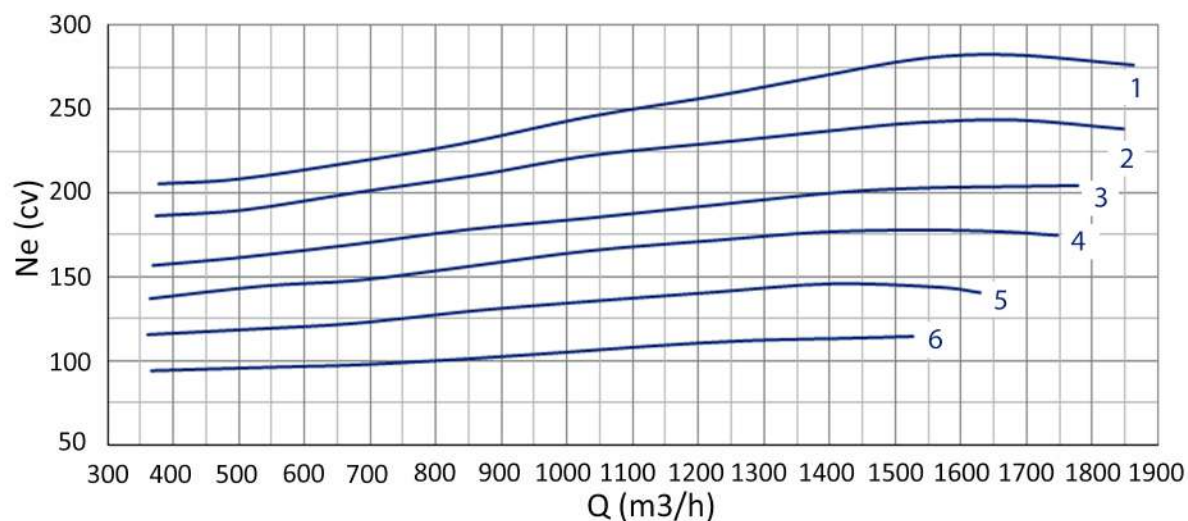
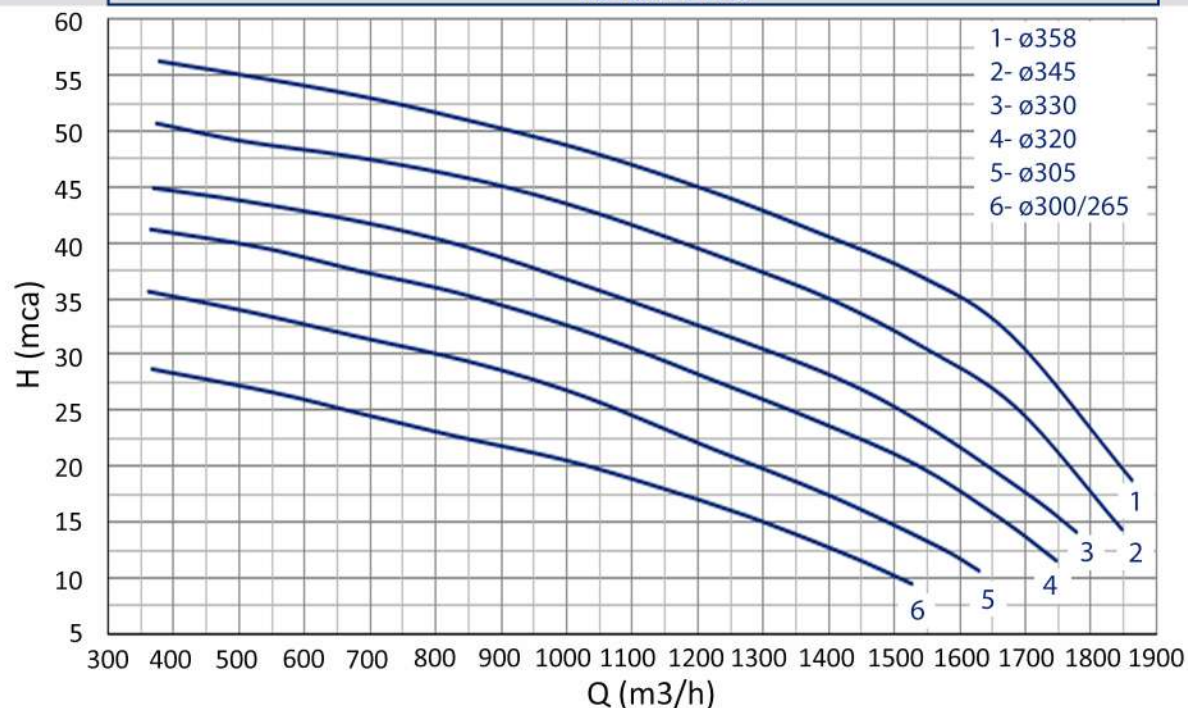
AFG NormBloc Flutuantes Radial

SUCÇÃO 300	CURVA	1800 rpm
RECALQUE 250	Nº 10012208	60 Hz 4 P
ROTOR 7 PÁS		



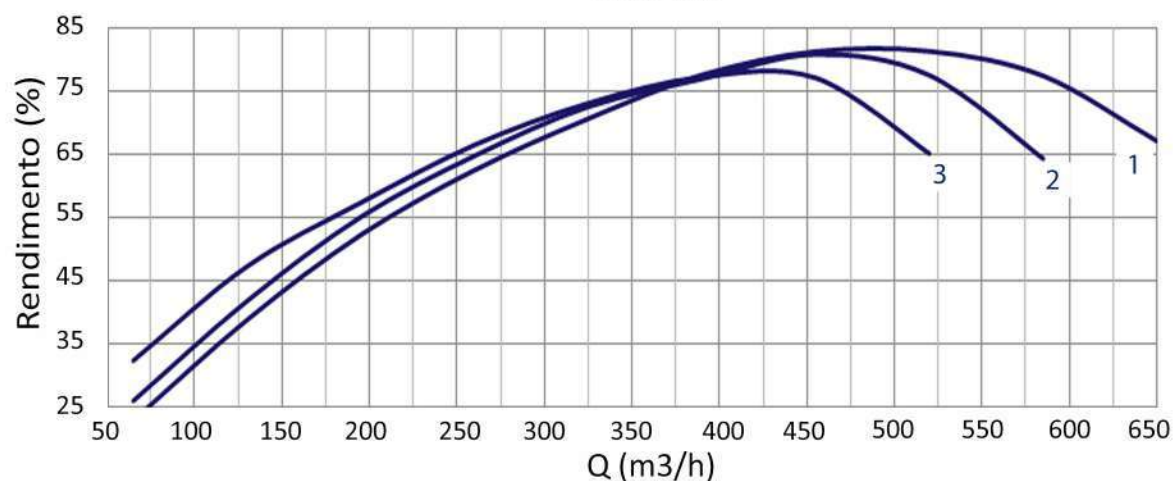
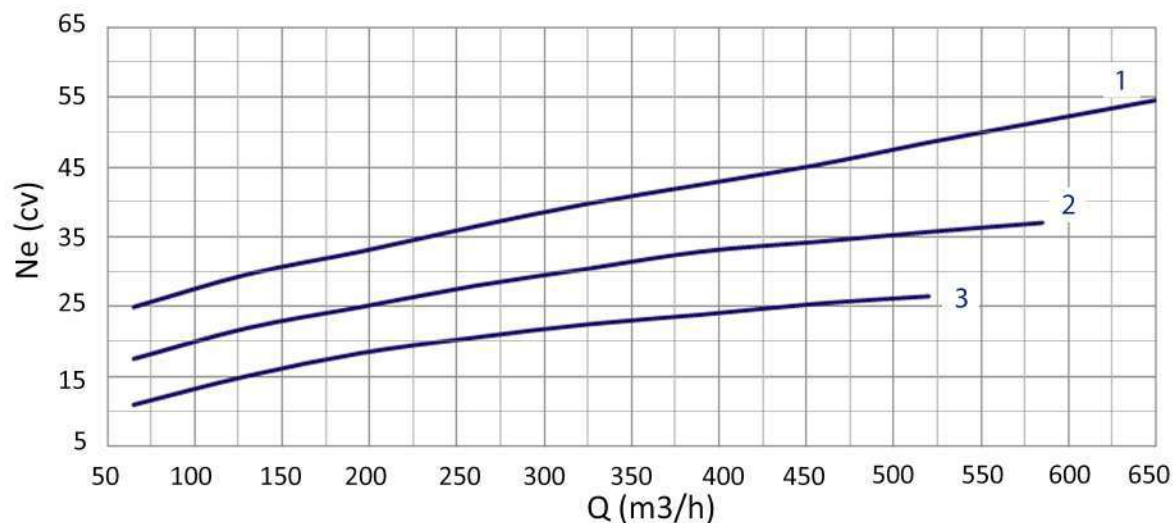
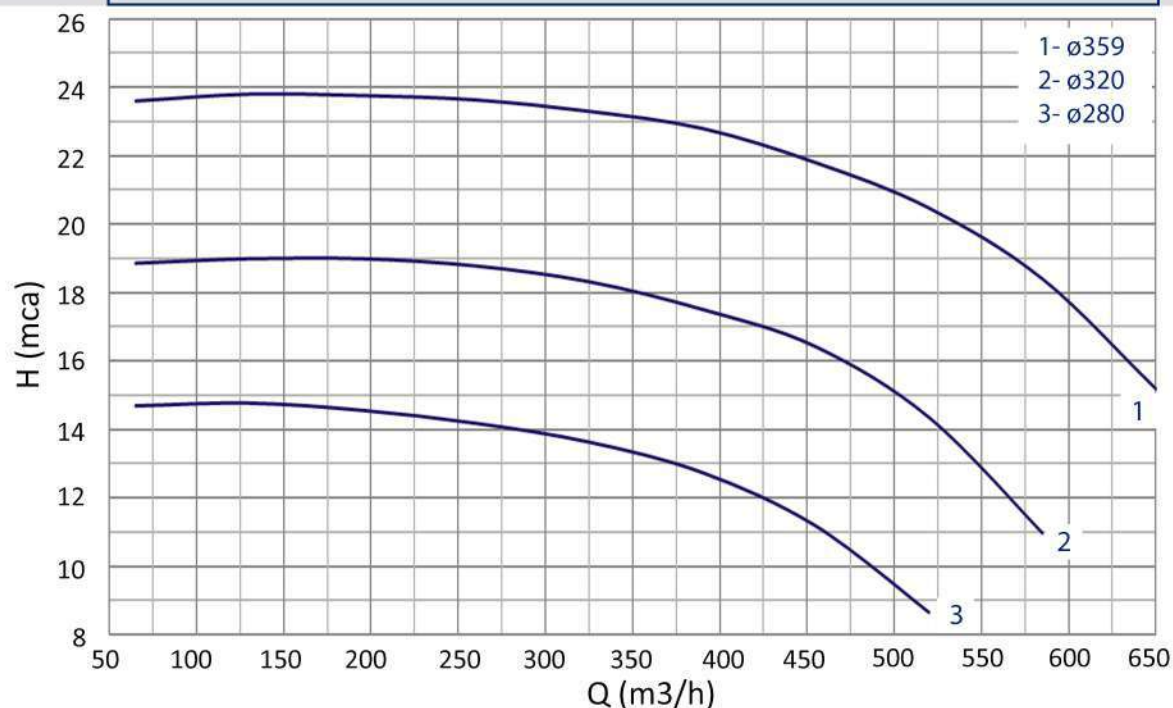
AFG NormBloc Flutuantes Radial

SUCÇÃO 300	CURVA	1800 rpm
RECALQUE 250	Nº 10012213	60 Hz 4 P
ROTOR 4 PÁS		



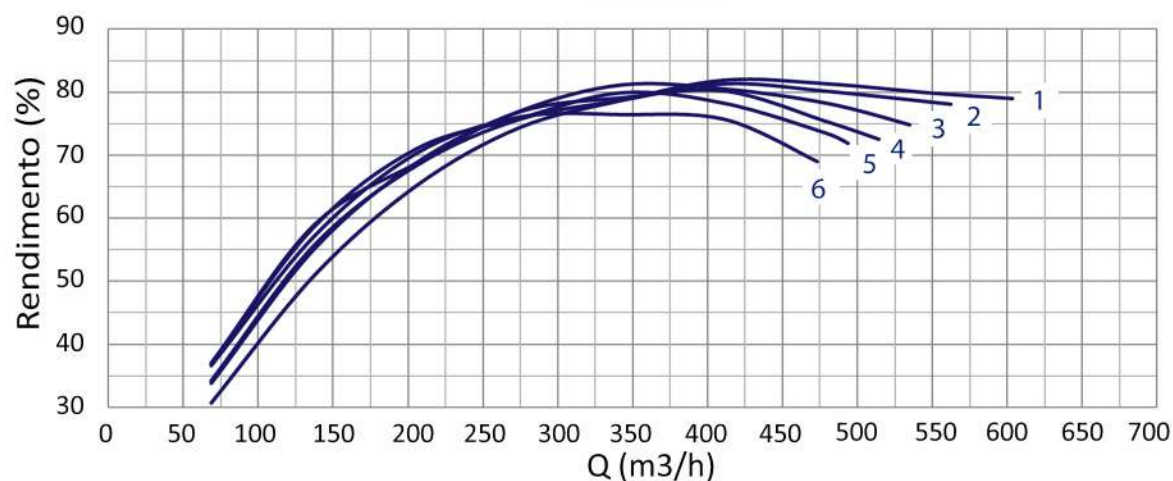
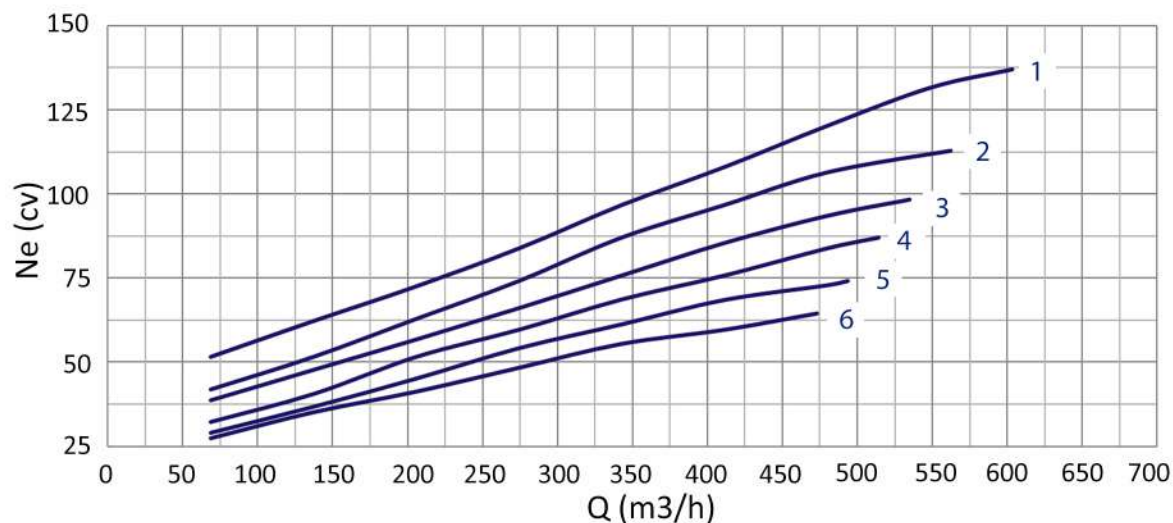
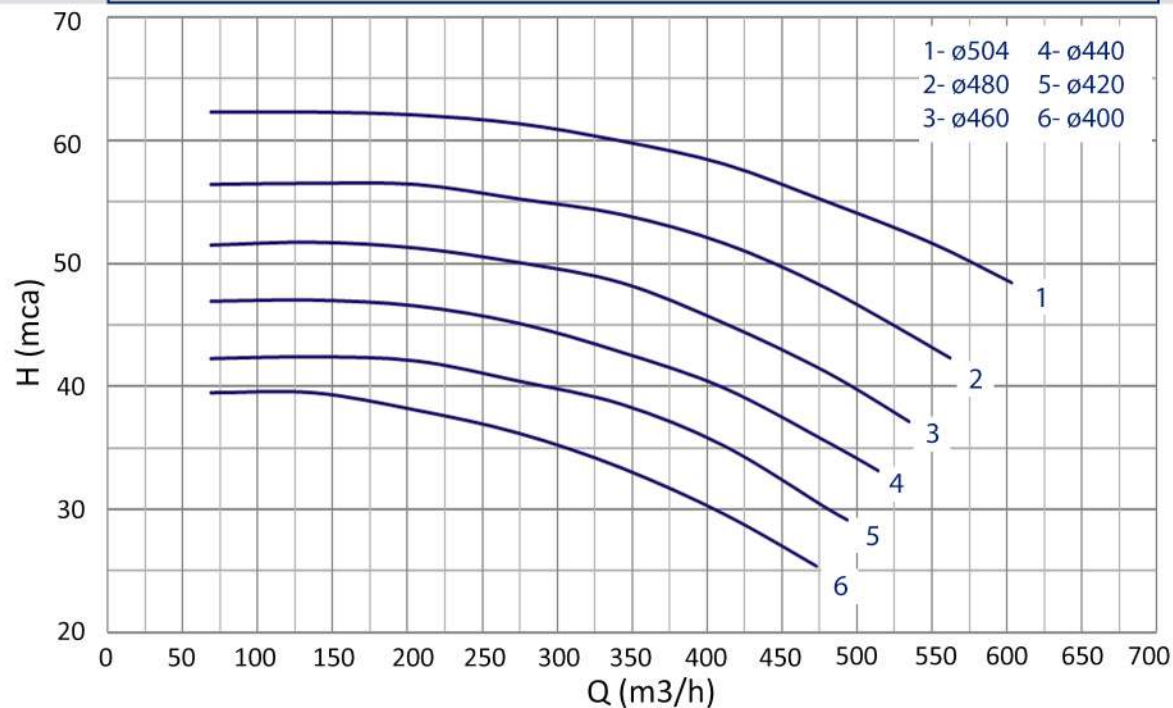
AFG NormBloc Flutuantes Radial

SUCÇÃO 250	CURVA	1200 rpm
RECALQUE 200	Nº 10011902	60 Hz 6 P



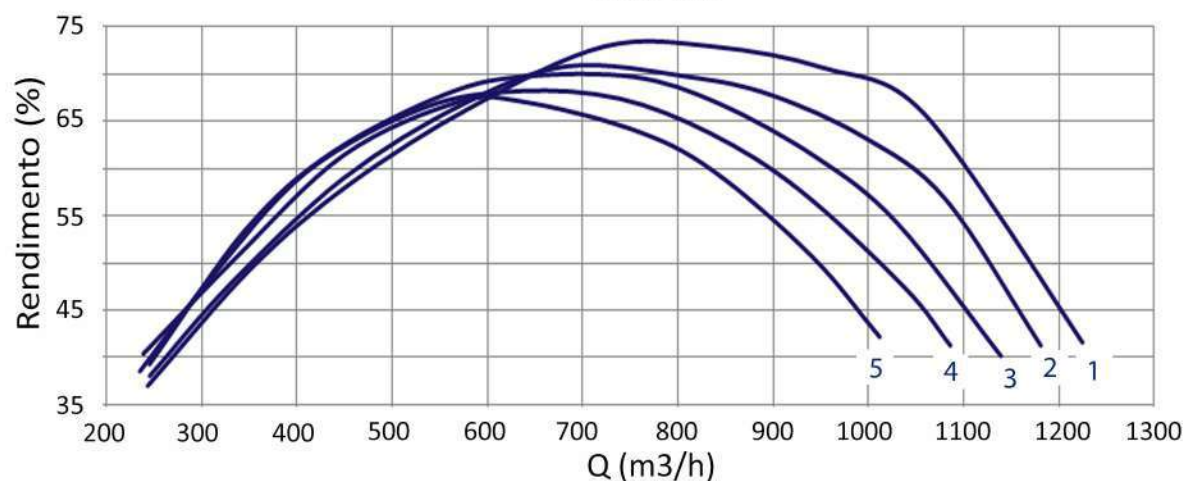
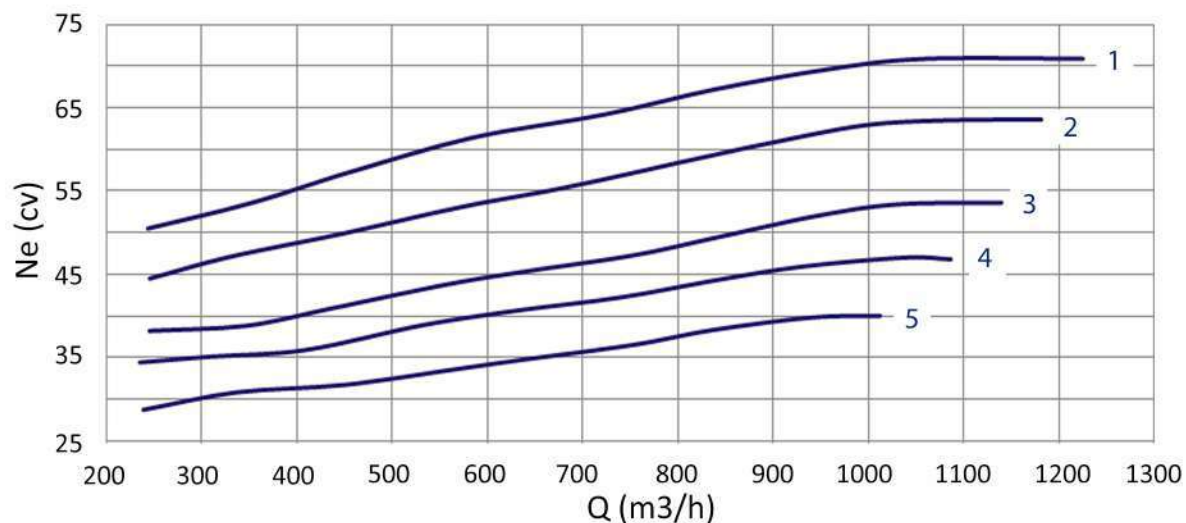
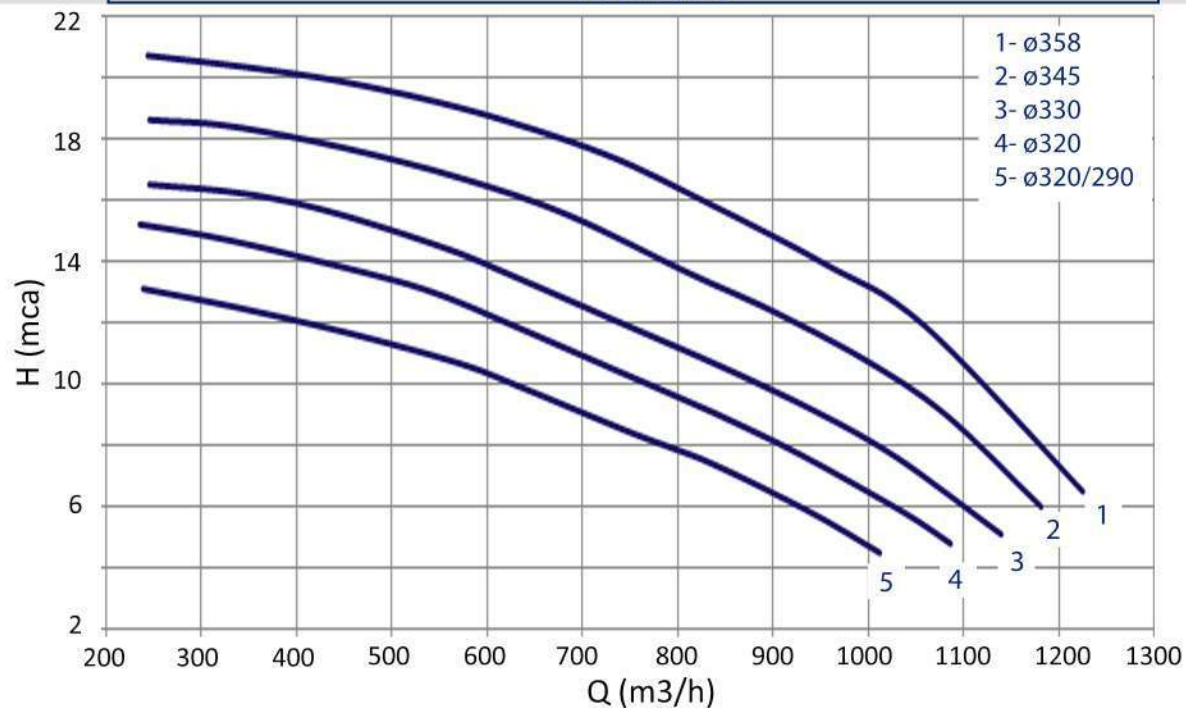
AFG NormBloc Flutuantes Radial

SUCÇÃO 250	CURVA	1200 rpm
RECALQUE 200	Nº 10012052	60 Hz 6 P



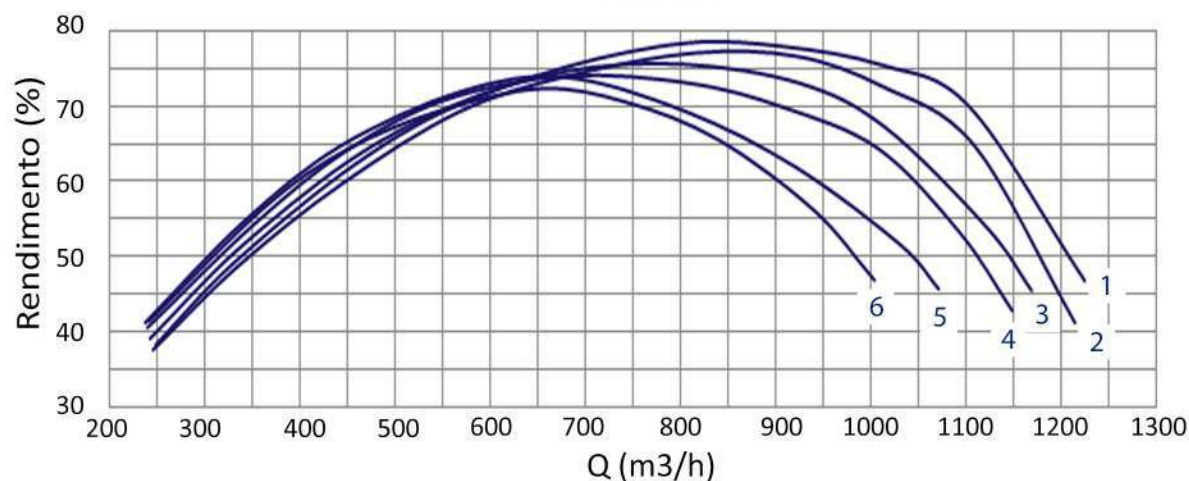
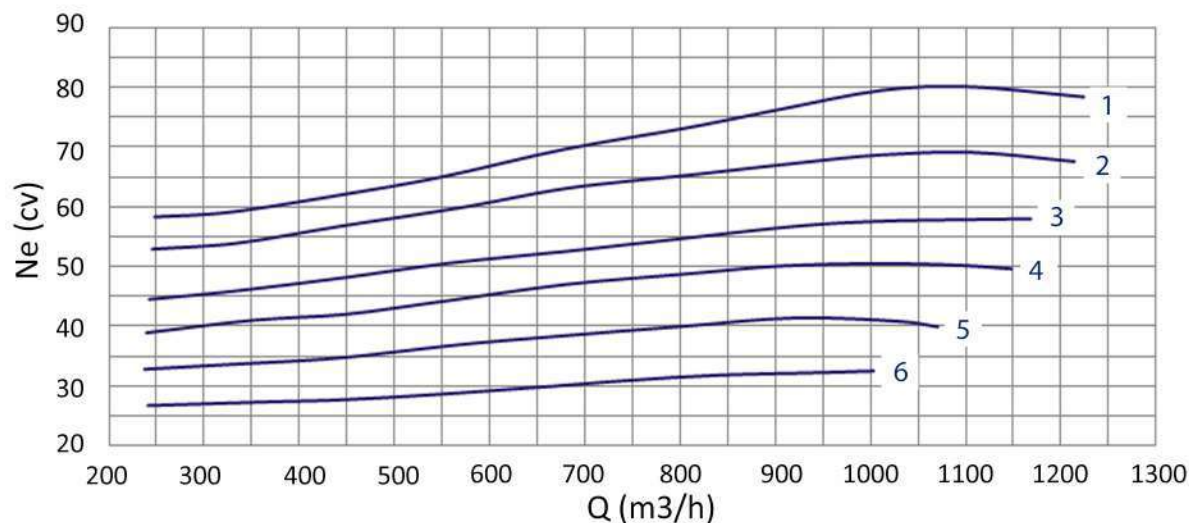
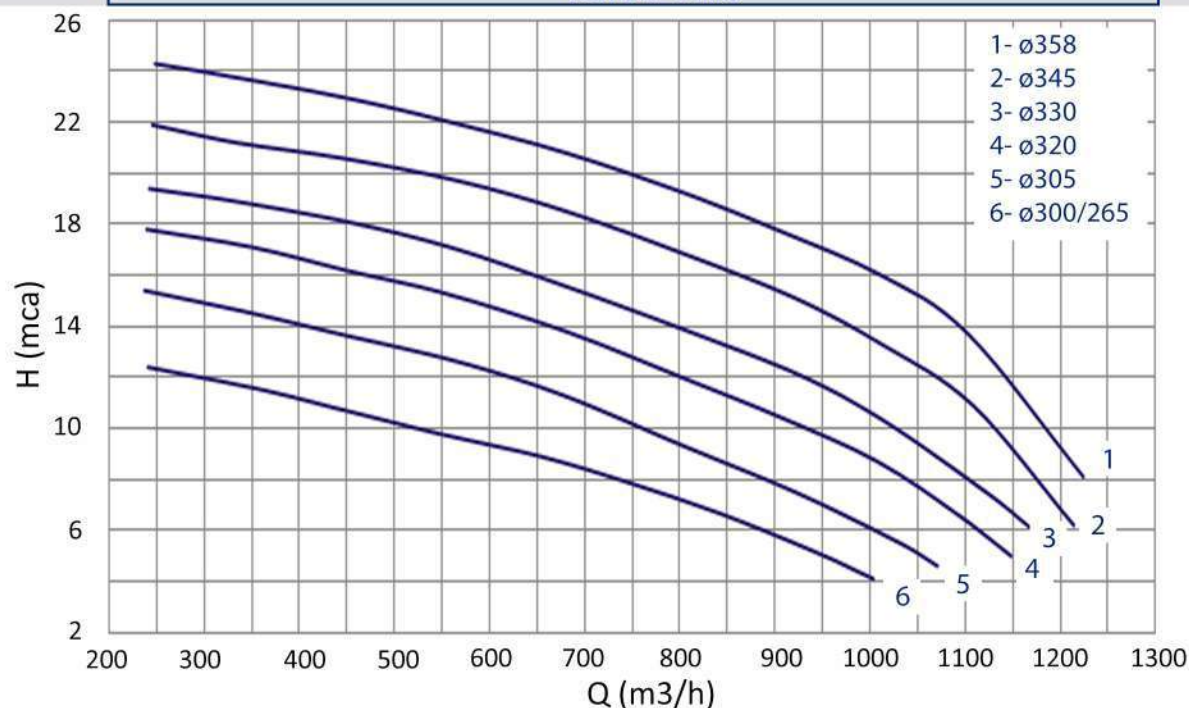
AFG NormBloc Flutuantes Radial

SUCÇÃO 300	CURVA	1200 rpm
RECALQUE 250	Nº 10012202	60 Hz 6 P
ROTOR 3 PÁS		



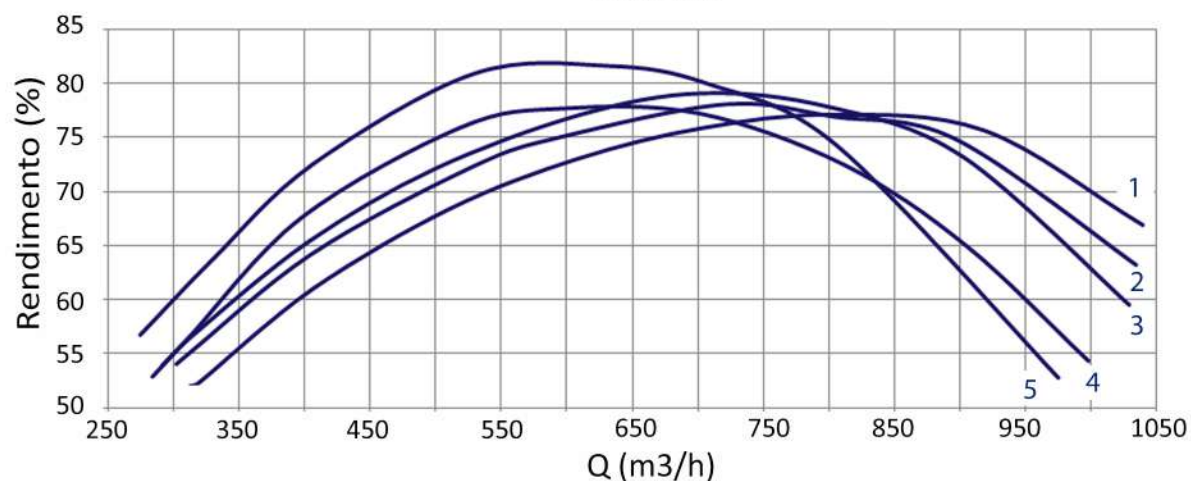
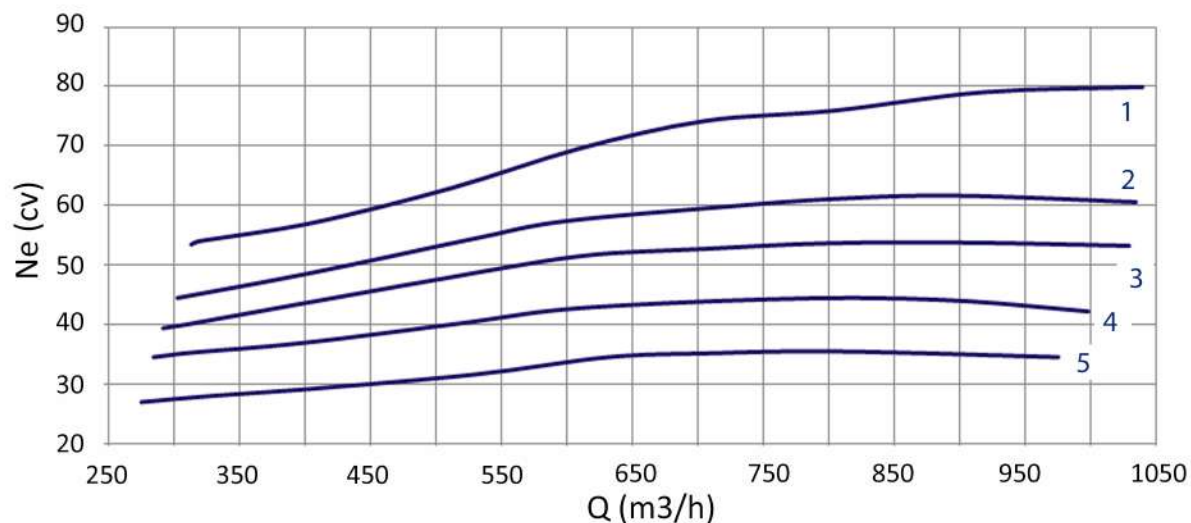
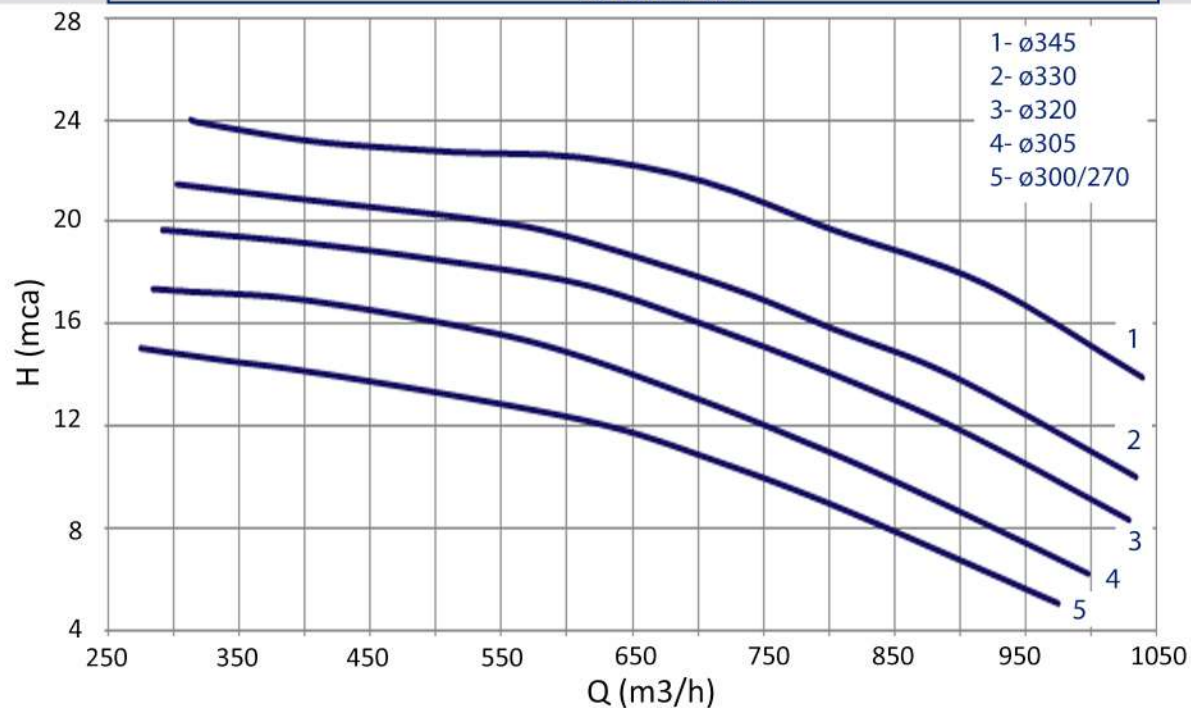
AFG NormBloc Flutuantes Radial

SUCÇÃO 300	CURVA	1200 rpm
RECALQUE 250	Nº 10012203	60 Hz 6 P
ROTOR 4 PÁS		



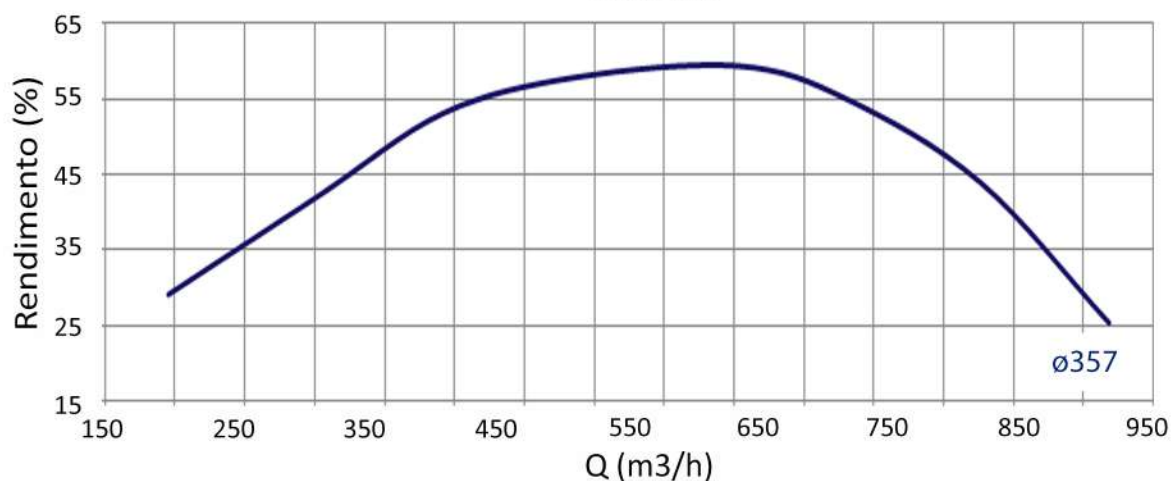
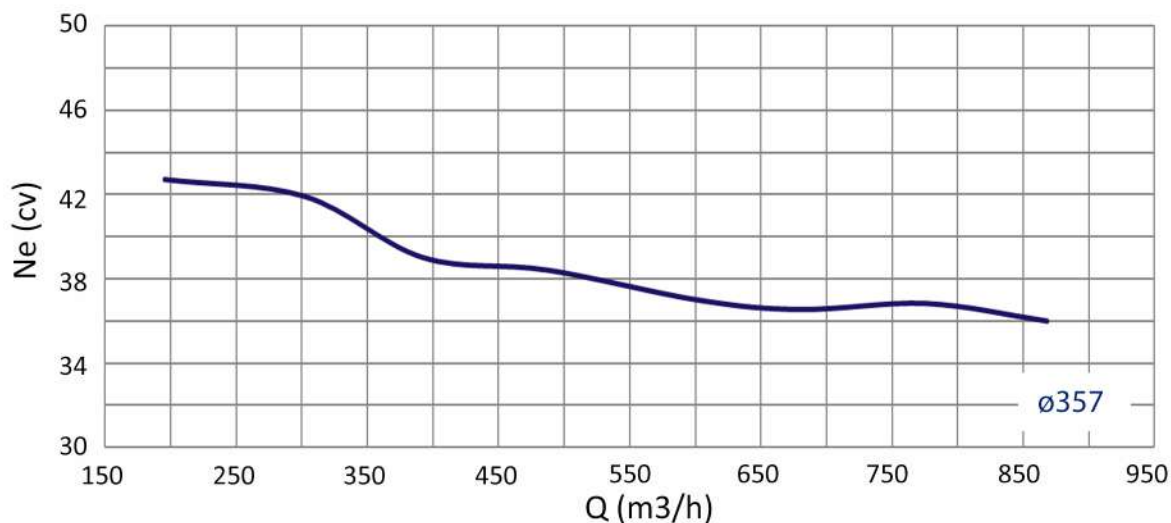
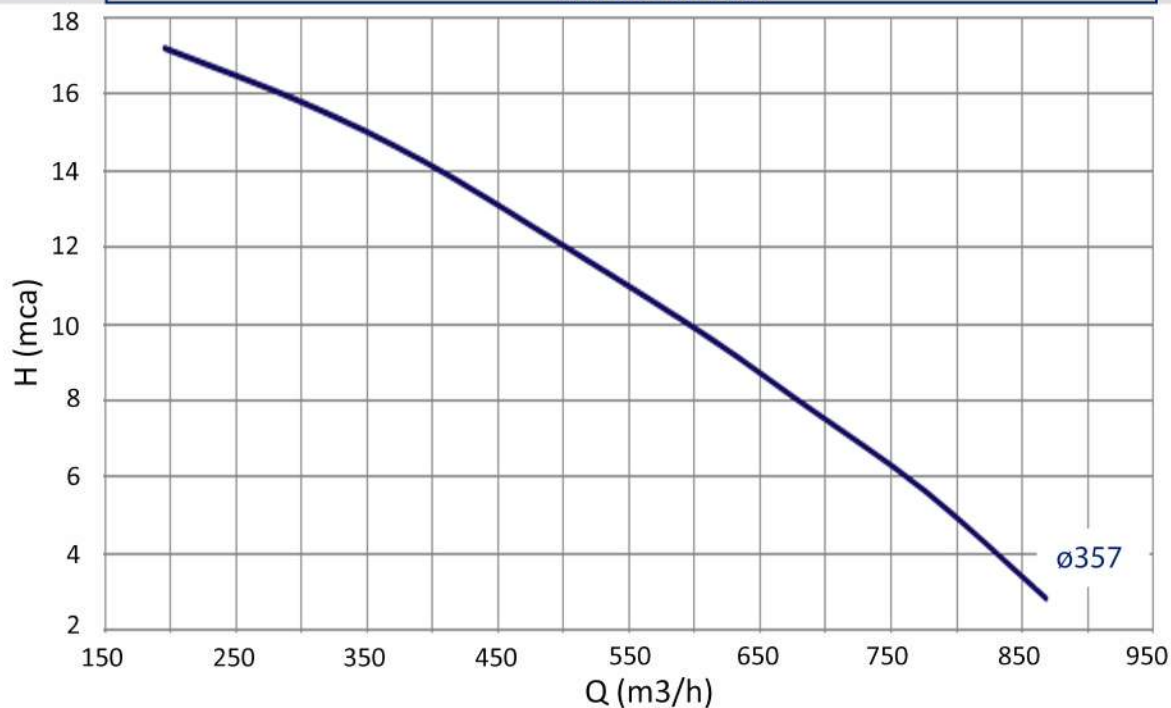
AFG NormBloc Flutuantes Radial

SUCÇÃO 300	CURVA	1200 rpm
RECALQUE 250	Nº 10012205	60 Hz 6 P
ROTOR 7 PÁS		



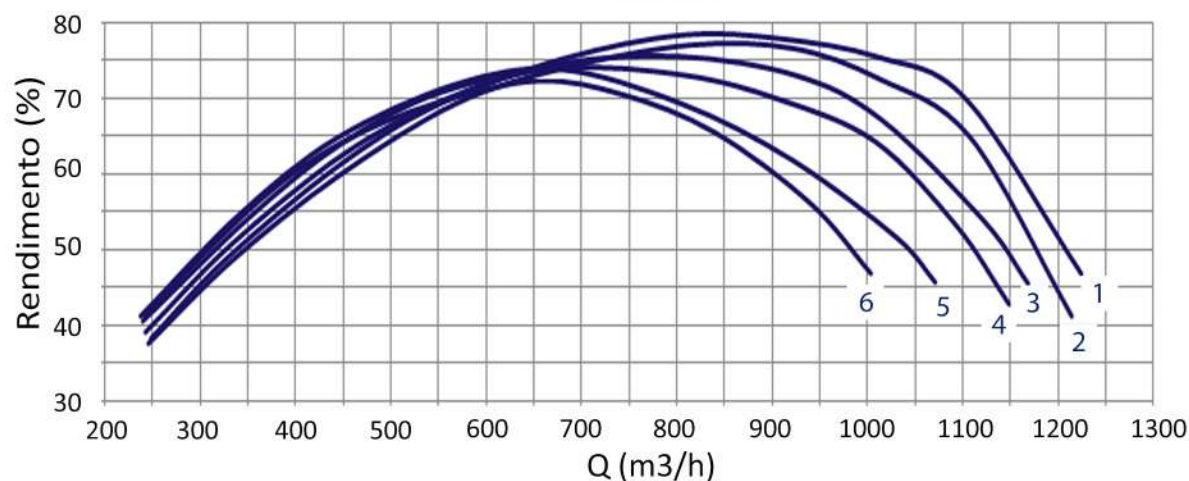
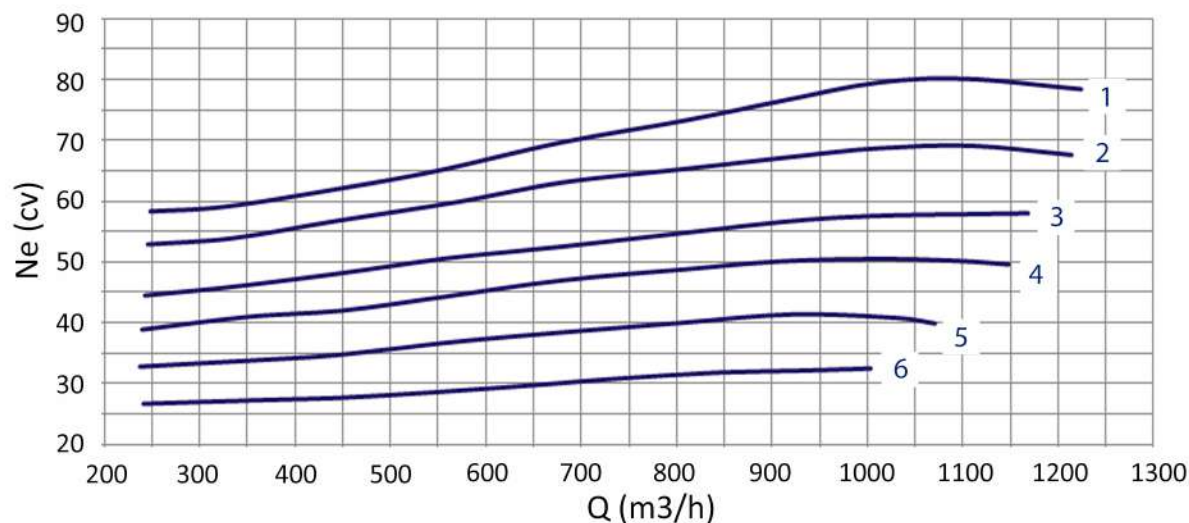
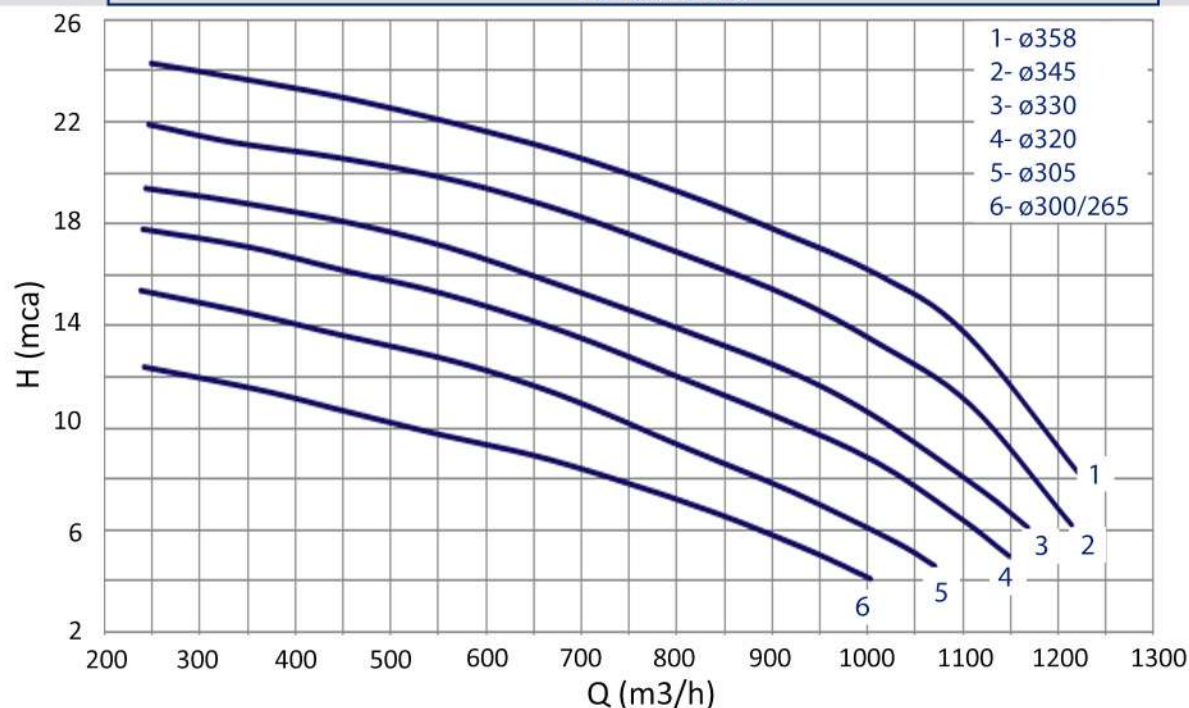
AFG NormBloc Flutuantes Radial

SUCÇÃO 300	CURVA	1200 rpm
RECALQUE 250	Nº 10012209	60 Hz 6 P
ROTOR TUBULAR		



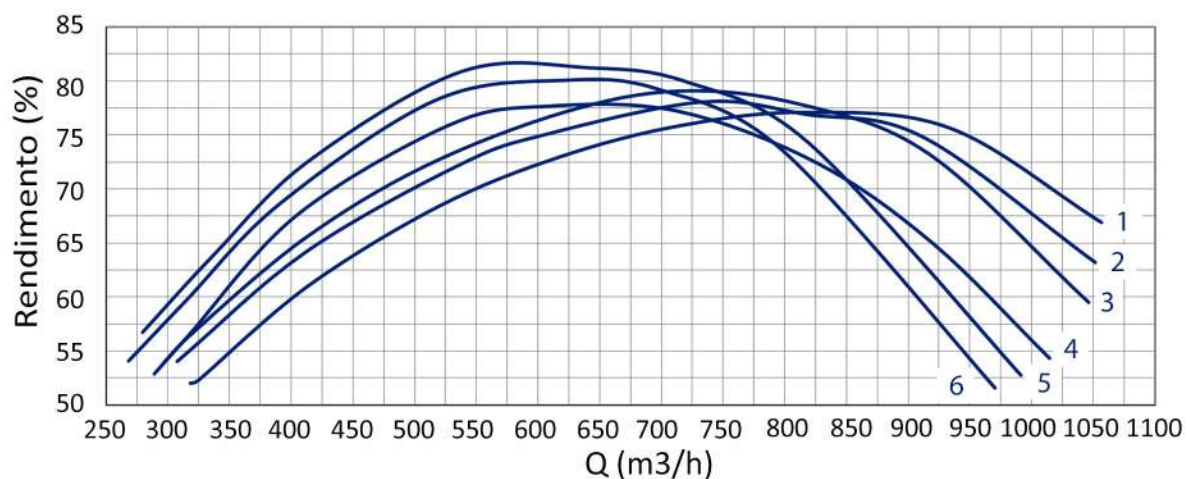
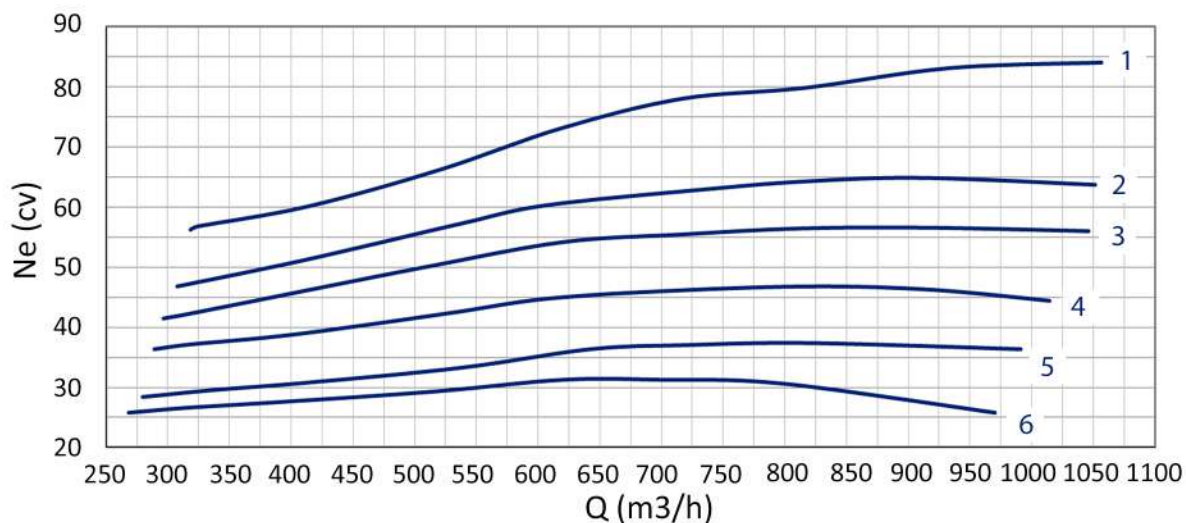
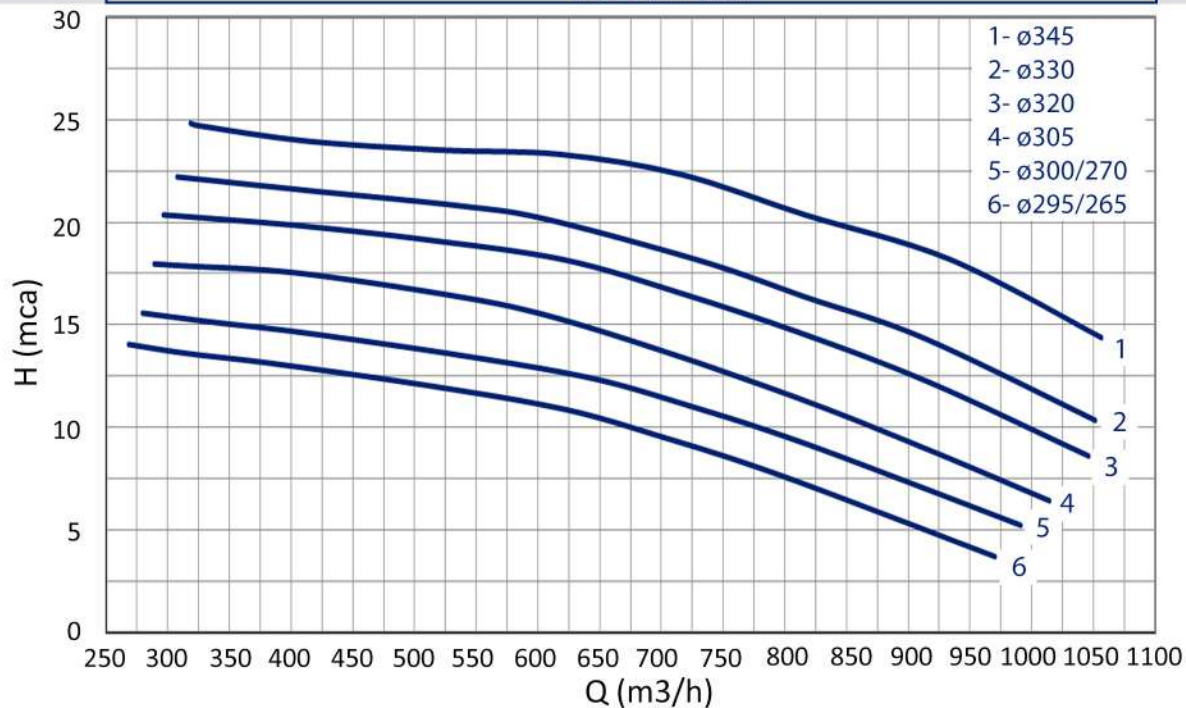
AFG NormBloc Flutuantes Radial

SUCÇÃO 300	CURVA	1200 rpm
RECALQUE 250	Nº 10012211	60 Hz 6 P
ROTOR 4 PÁS		



AFG NormBloc Flutuantes Radial

SUCÇÃO 300	CURVA	1200 rpm
RECALQUE 250	Nº 10012212	60 Hz 6 P
ROTOR 7 PÁS		





Um novo conceito em
Bombeamento

LINHA SEMI AXIAL

www.motobombasflutuantes.com.br

SIMPLES

A **Motobomba Flutuante** com patente nº 7901776, foi desenvolvida para recalque de água, seja limpa, bruta ou salgada, utilizadas no saneamento, indústria, mineração e agricultura.

MOTOBOMBAS

RIO DO SUL

MOTOBOMBAS

RIO DO SUL

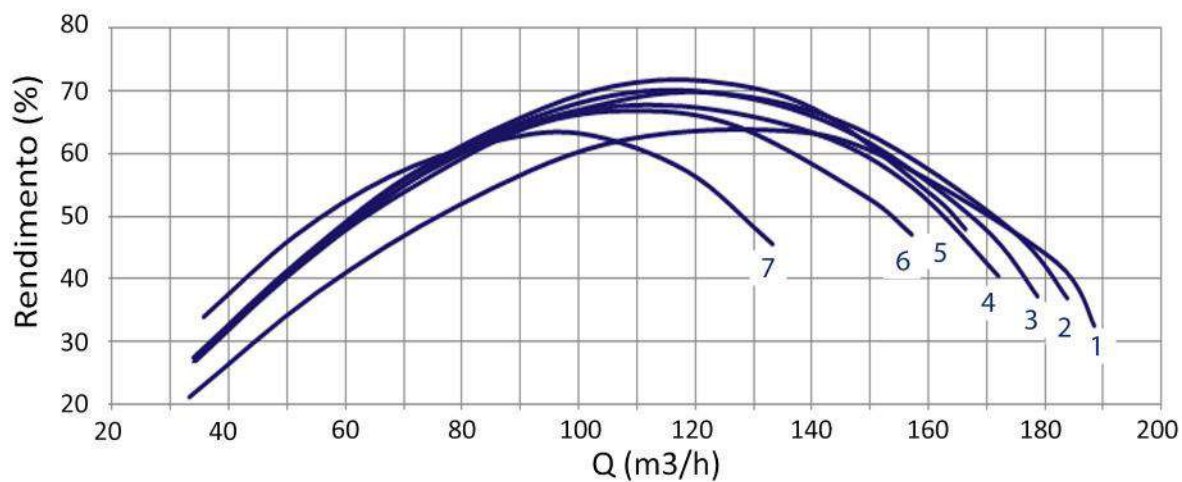
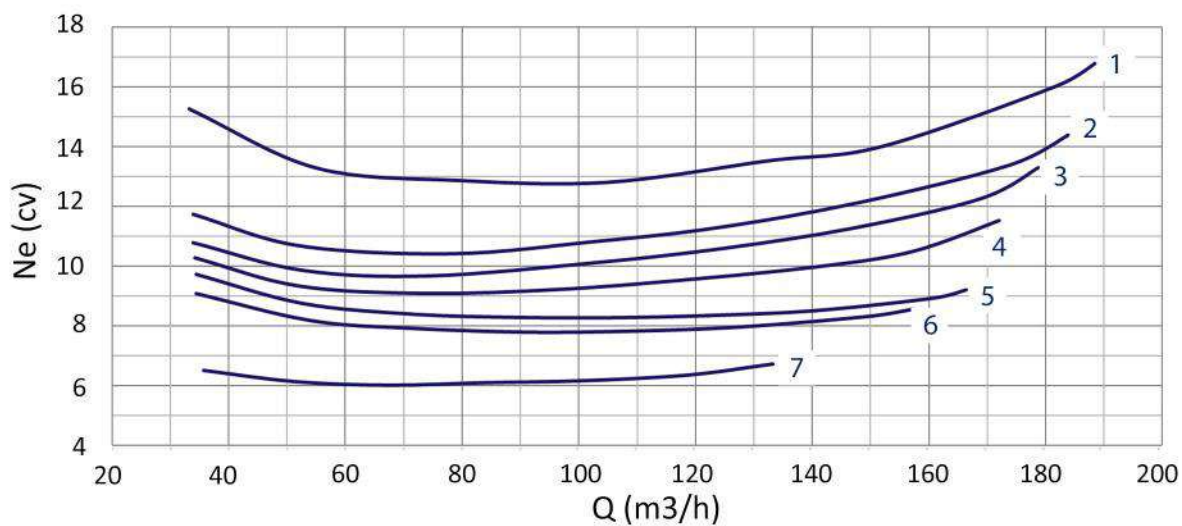
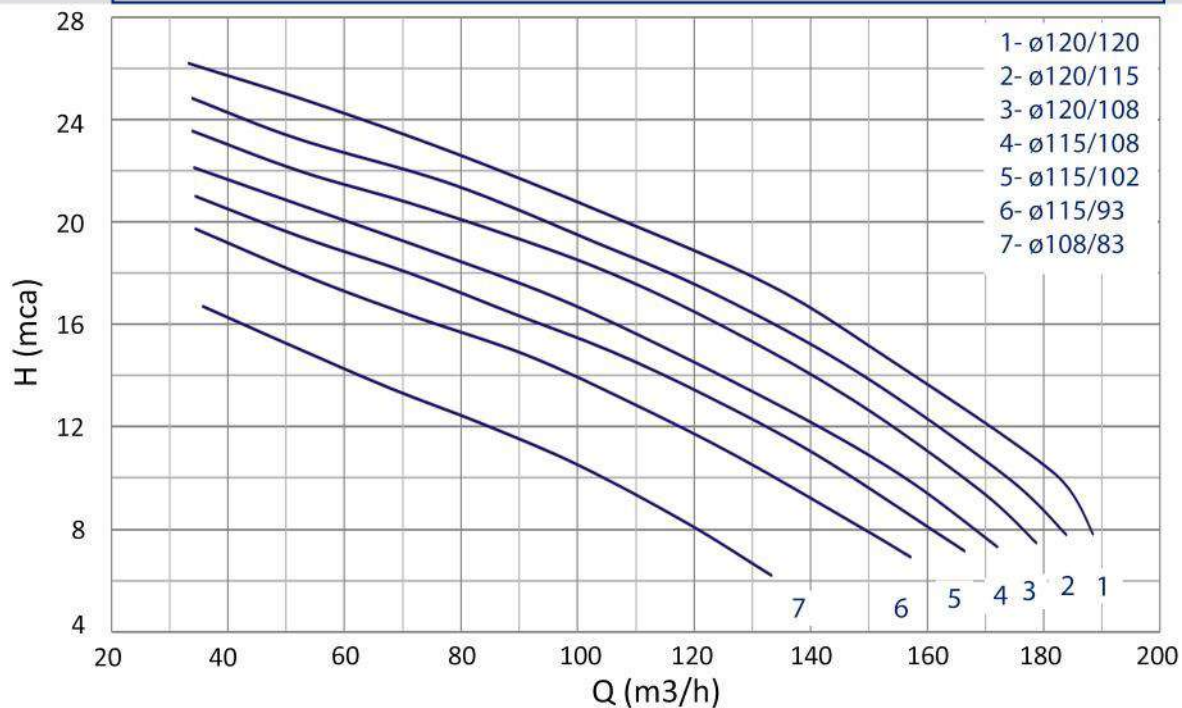


Conjunto Motobomba flutuante.
Bomba em ferro fundido, bronze ou inox.
Flutuador em "fiberglass" totalmente vedado.
Acoplamento monobloco sistema "back pull out".
Eixo do motor especial, aço SAE1045 ou SAE4140.
Vedação do eixo: Selo mecânico
Motor Elétrico

Potência de 2 a 500 CV.
Vazão de 5,5 a 1.111 L/s ou
vazão de 40m³/h a 7.200m³/h.
Altura manométrica de 2 a 37 mca.



SUCÇÃO 100	CURVA	3600 rpm
RECALQUE 100	Nº 10010701	60 Hz 2 P



SUCÇÃO 100

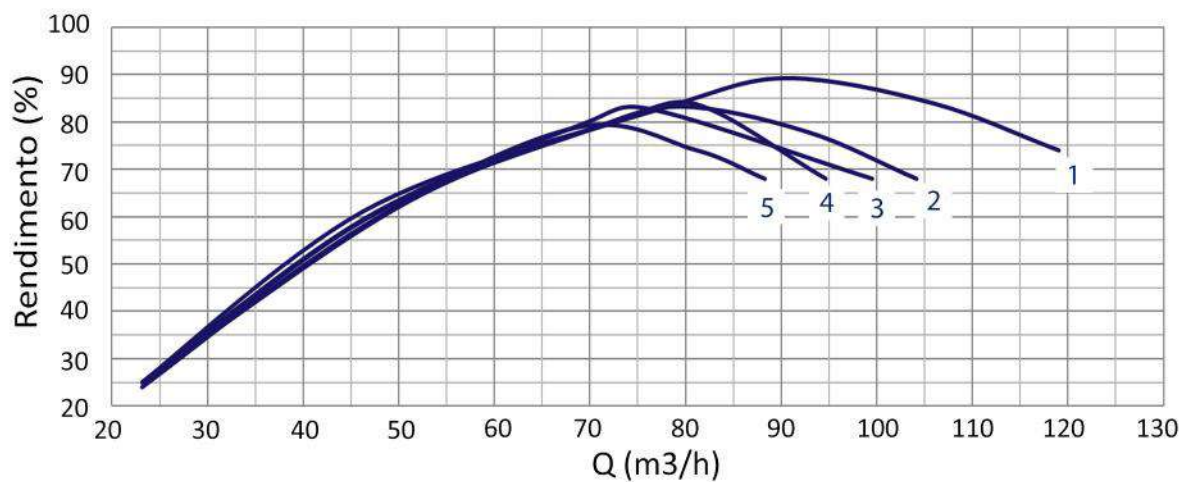
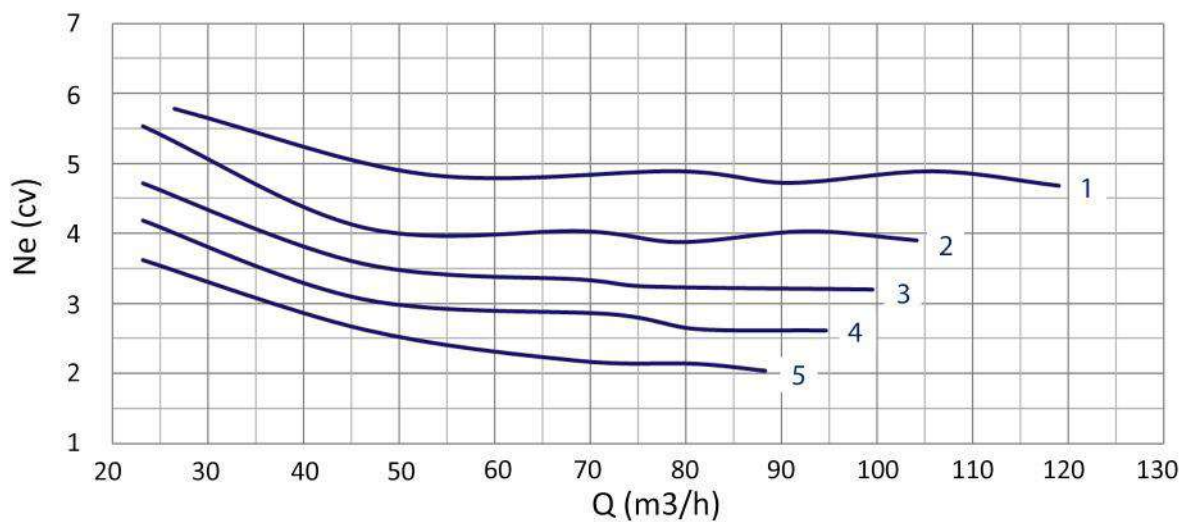
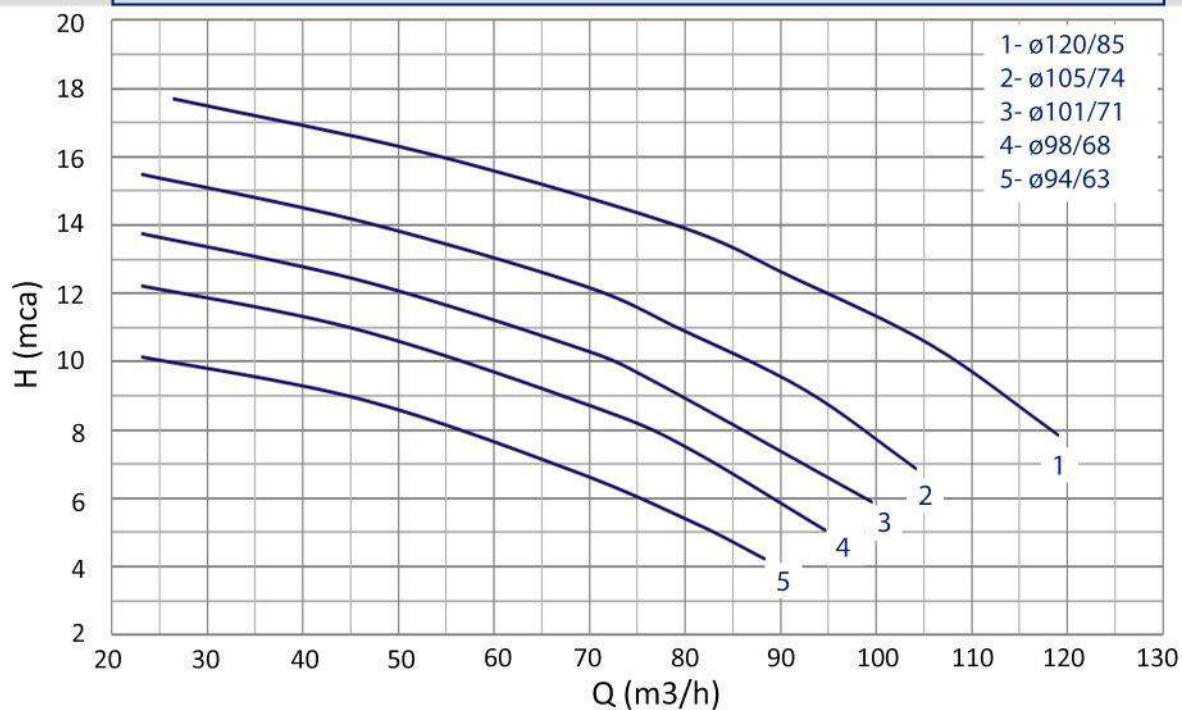
CURVA

3600 rpm

RECALQUE 100

Nº 10010704

60 Hz 2 P



SUCÇÃO 125

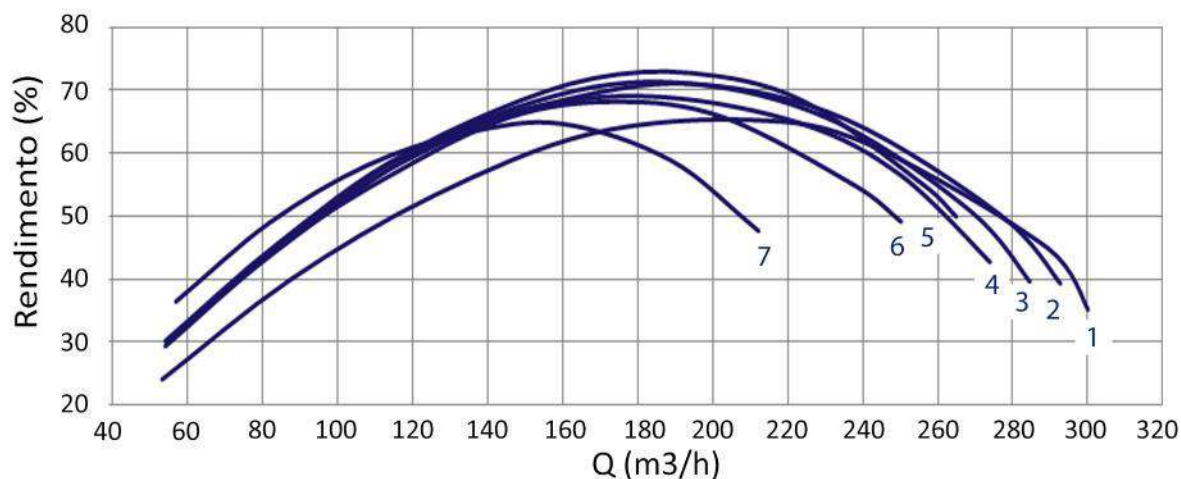
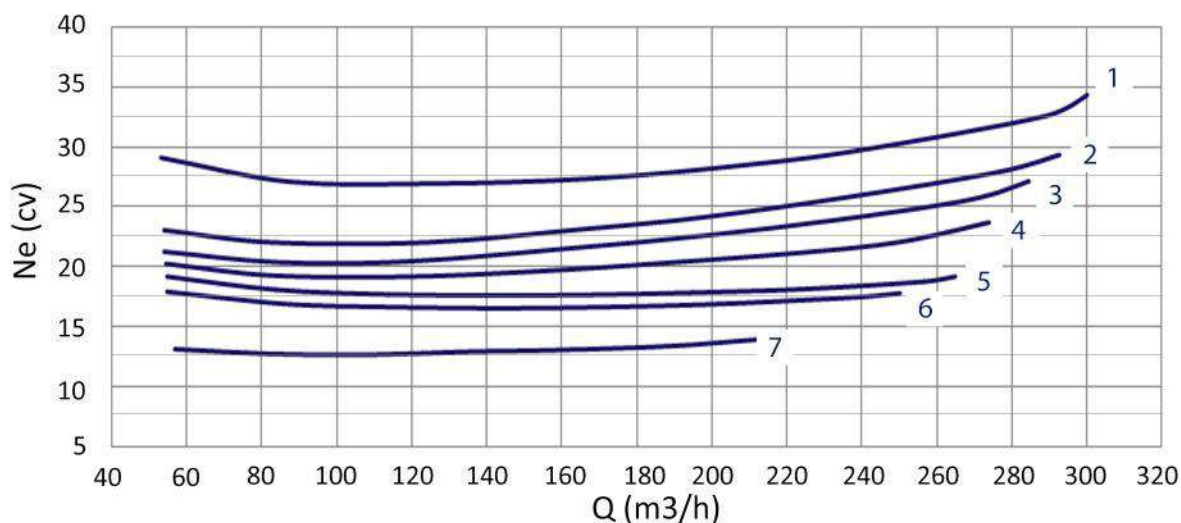
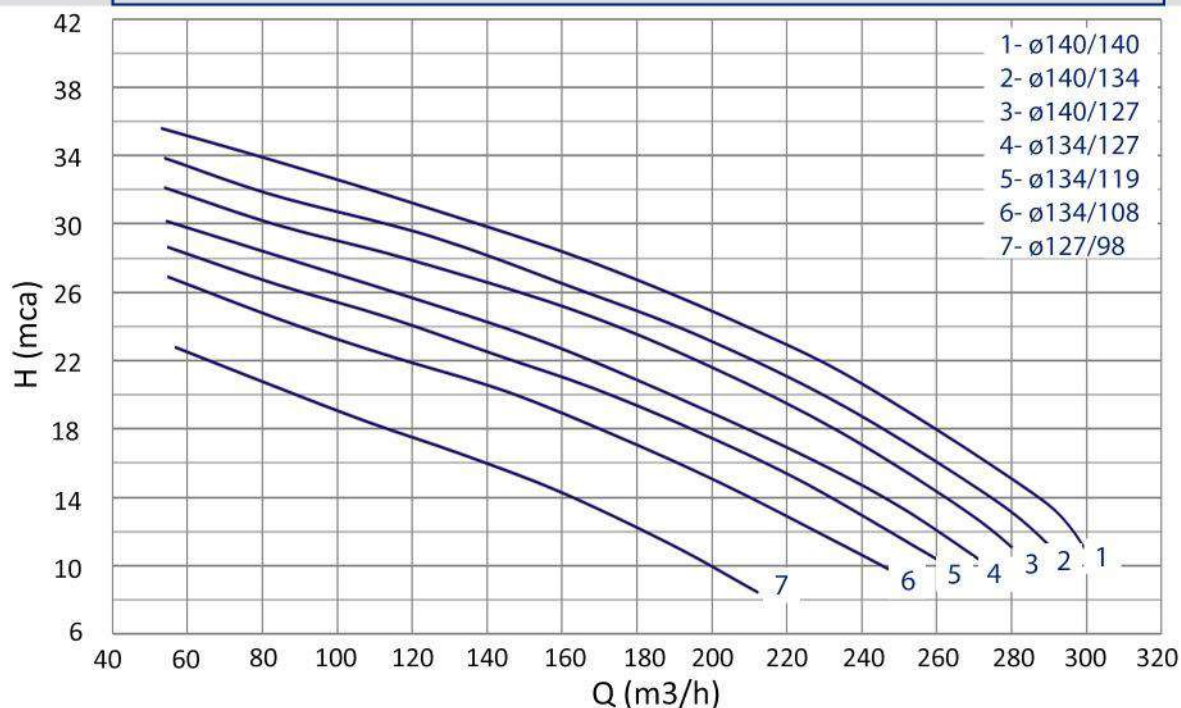
CURVA

3600 rpm

RECALQUE 125

Nº 10011101

60 Hz 2 P



SUCÇÃO 125

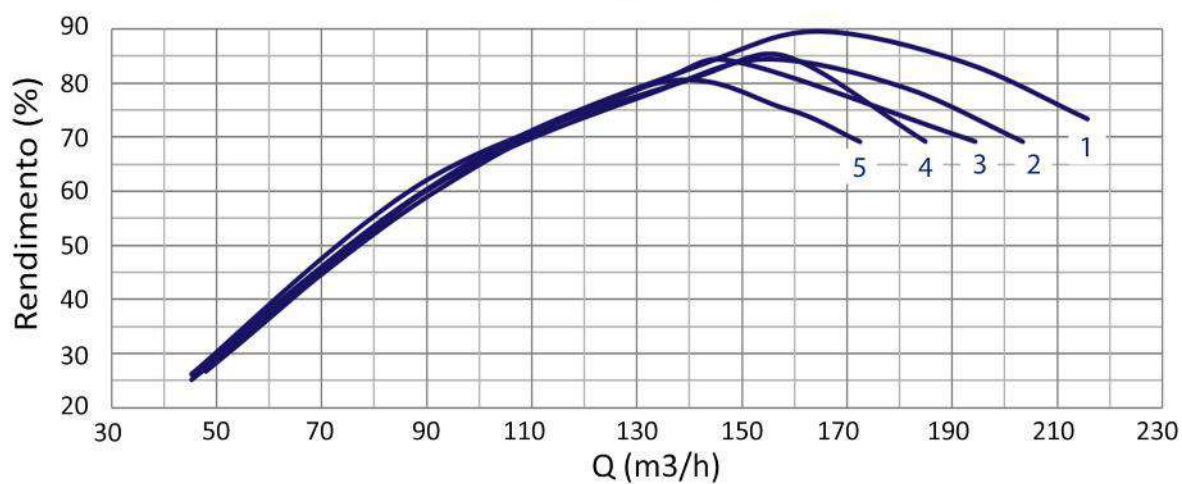
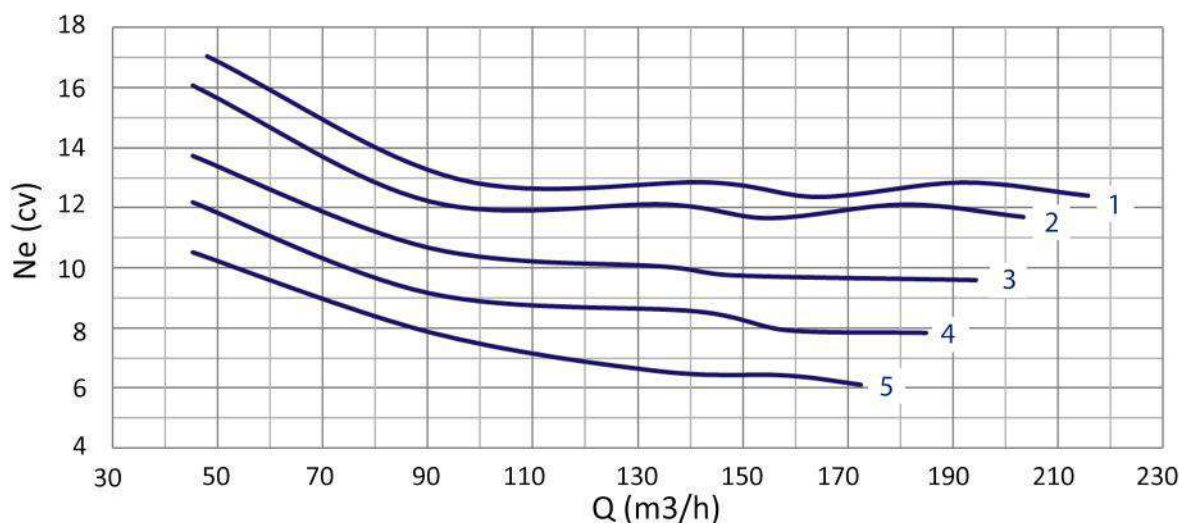
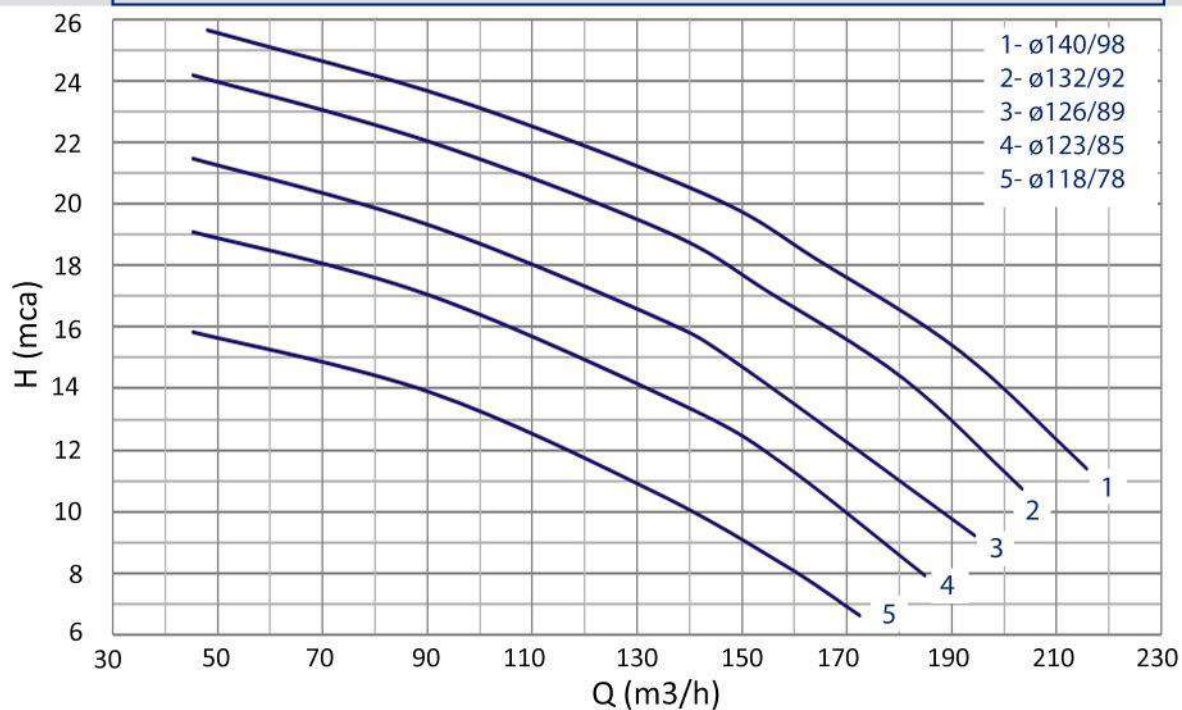
CURVA

3600 rpm

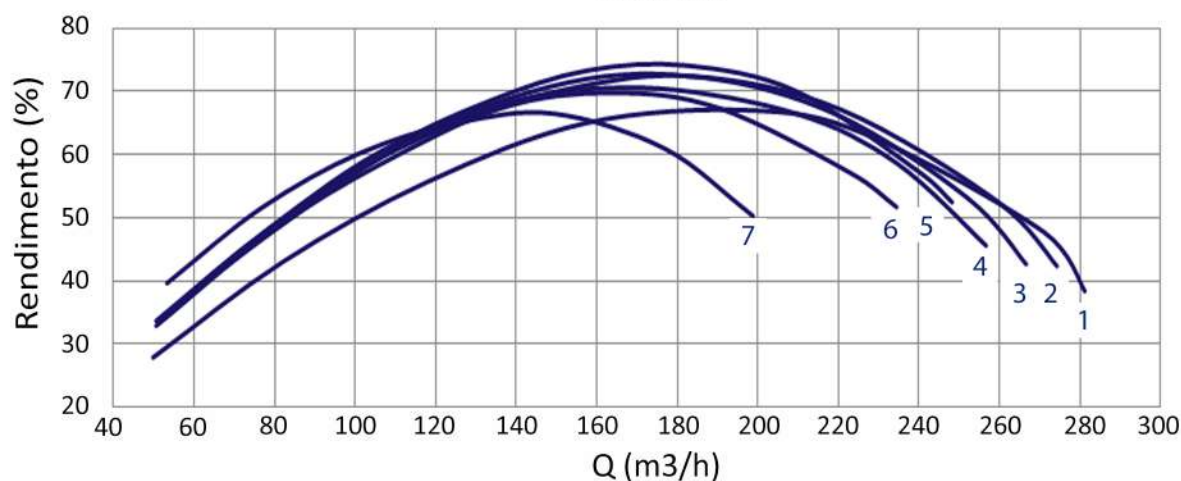
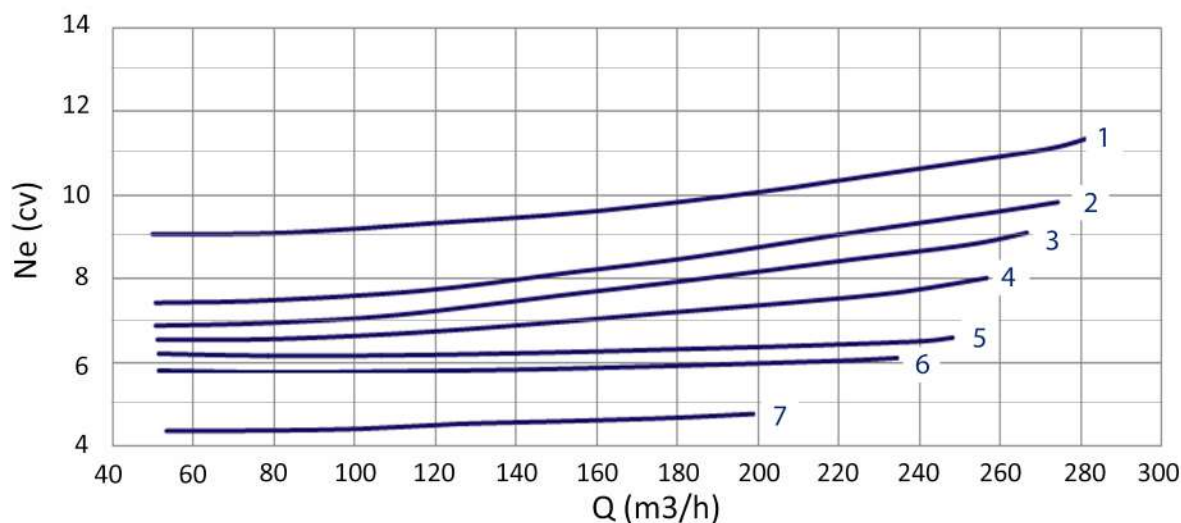
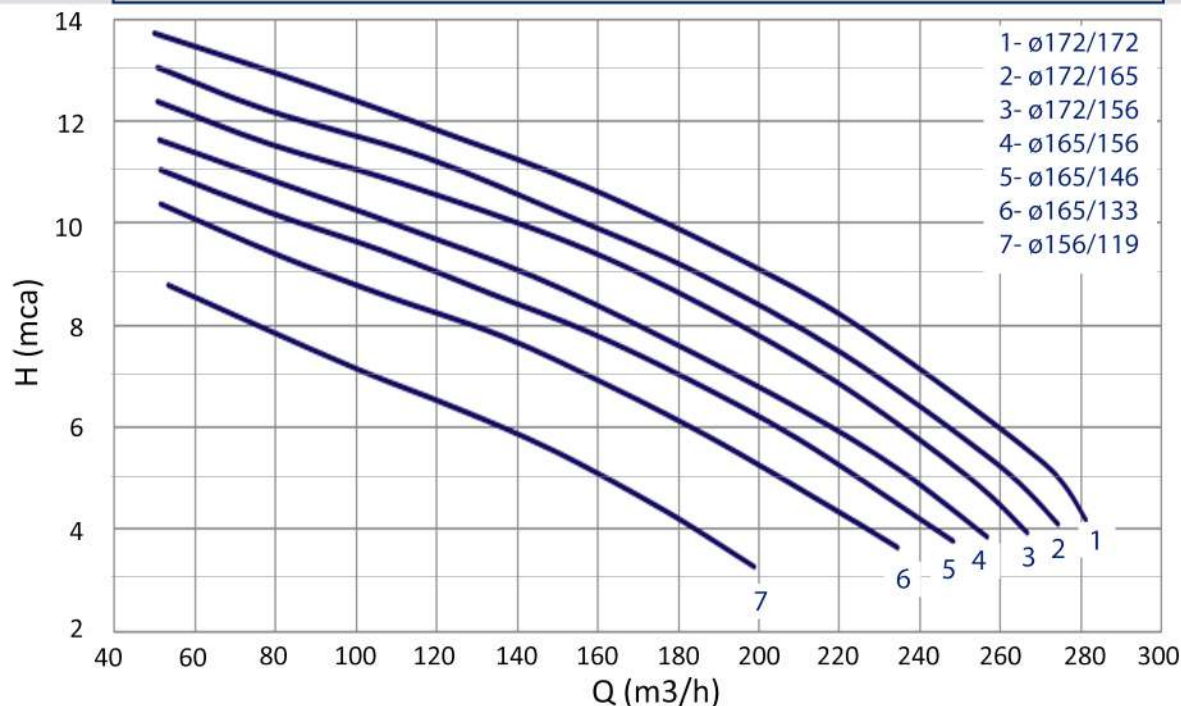
RECALQUE 125

Nº 10011105

60 Hz 2 P



SUCÇÃO 150	CURVA	1800 rpm
RECALQUE 150	Nº 10011502	60 Hz 4 P



SUCÇÃO 150

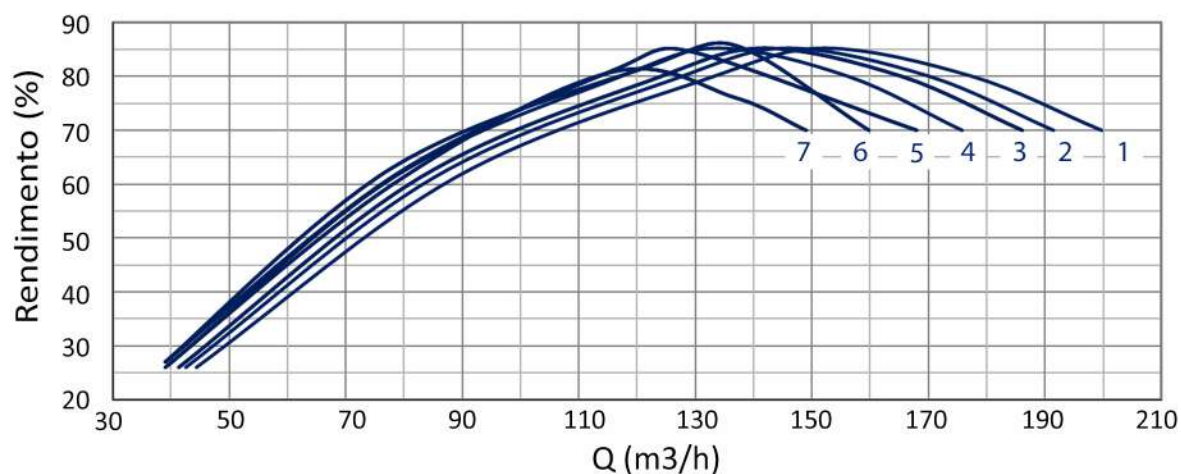
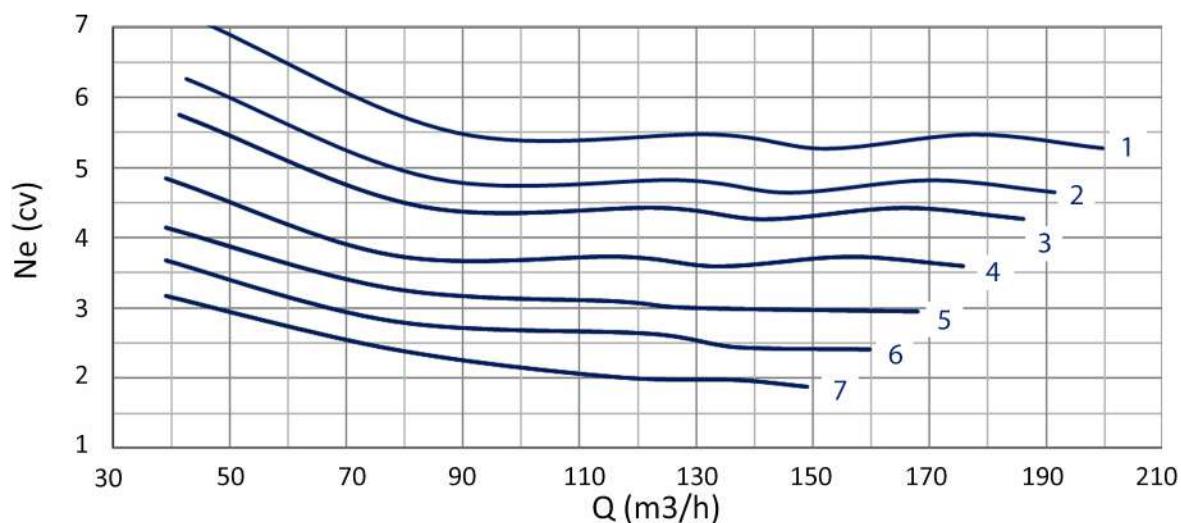
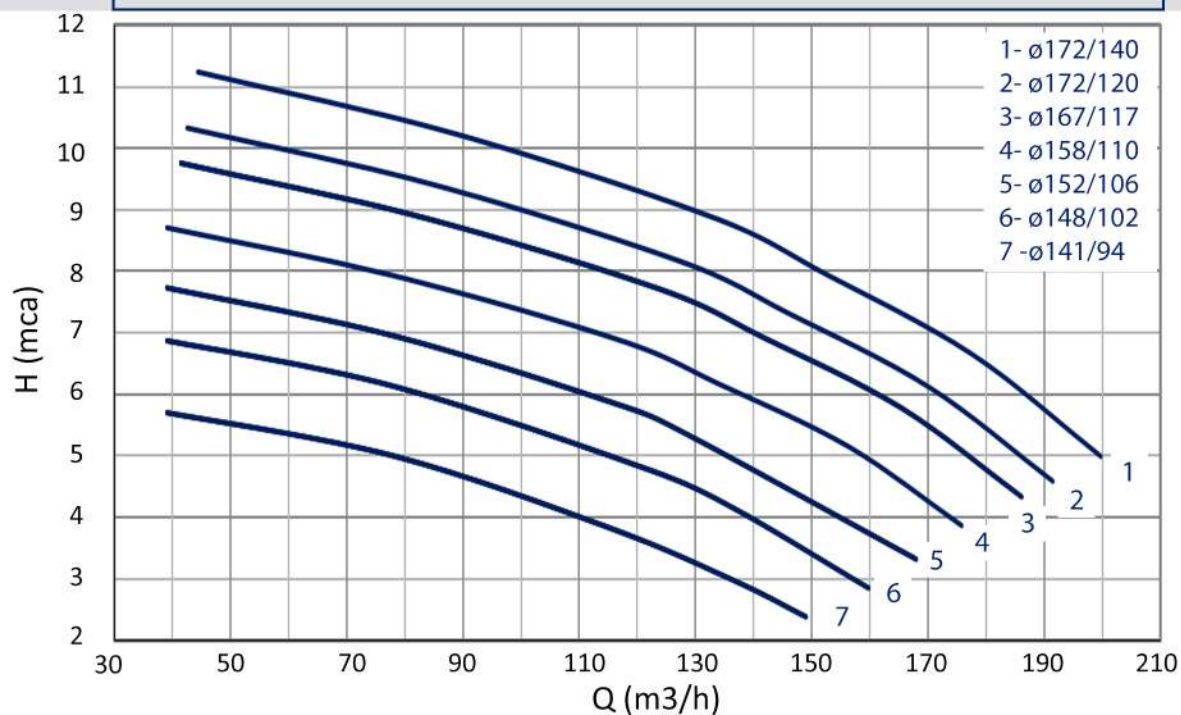
CURVA

1800 rpm

RECALQUE 150

Nº 10011505

60 Hz 4 P



SUCÇÃO 175

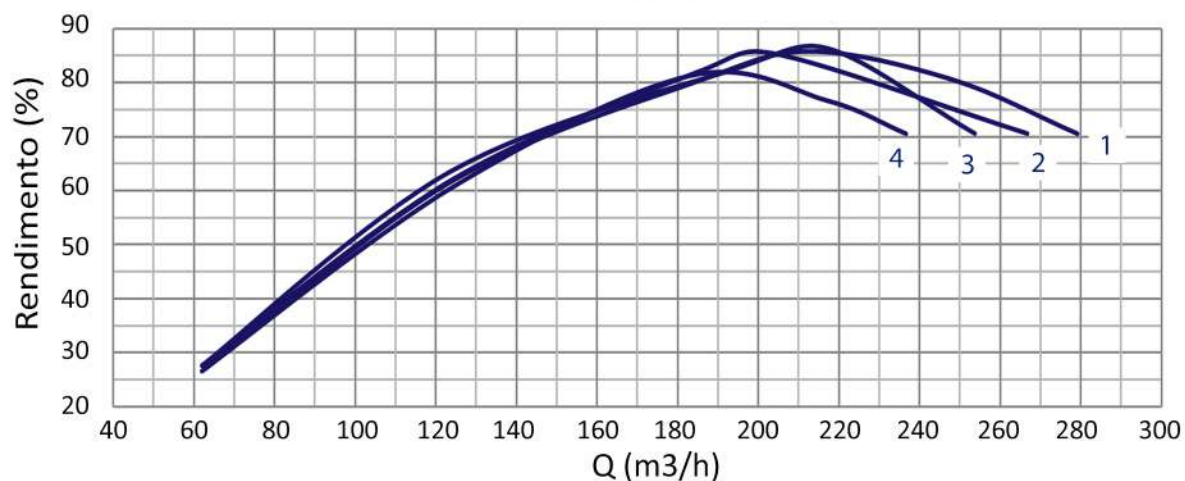
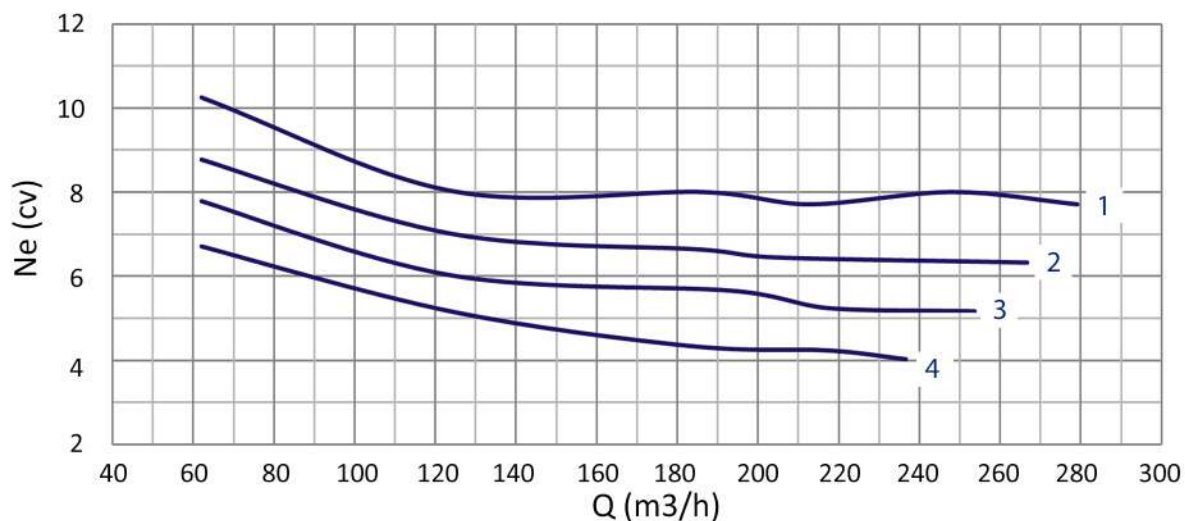
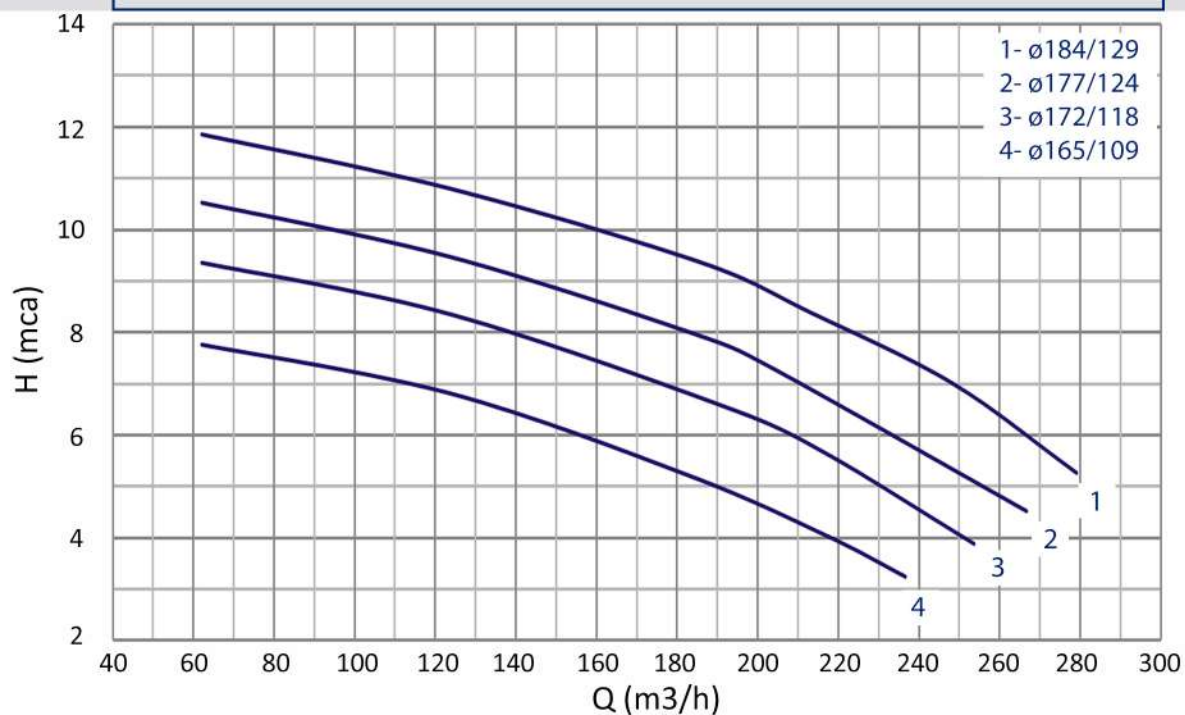
CURVA

1800 rpm

RECALQUE 175

Nº 10011704

60 Hz 4 P



SUCÇÃO 175

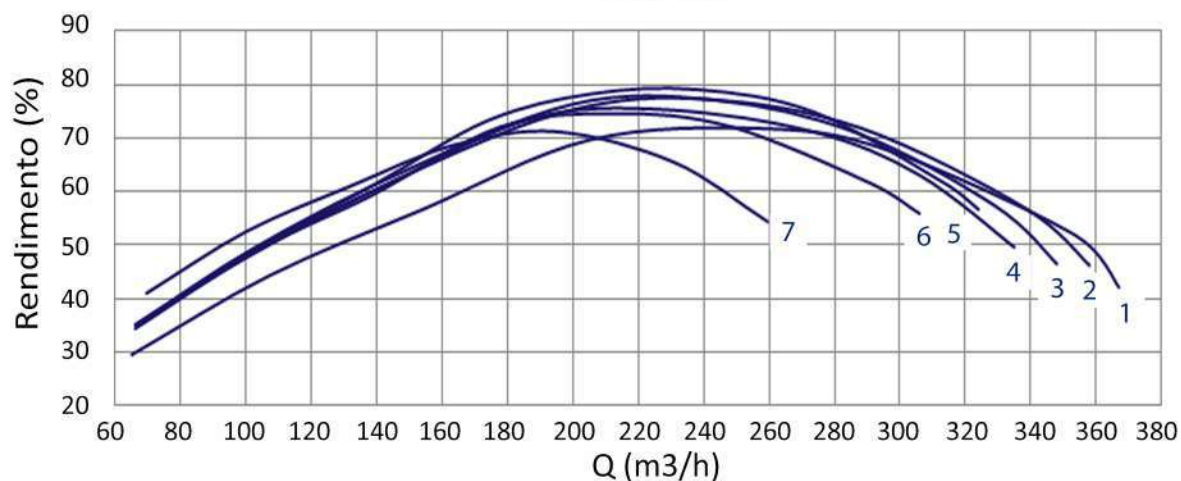
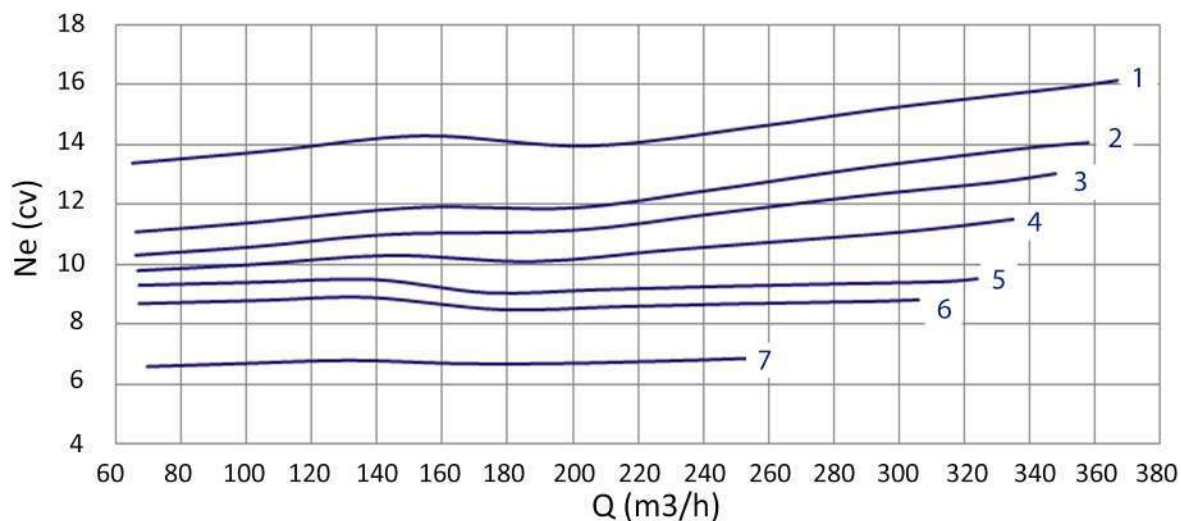
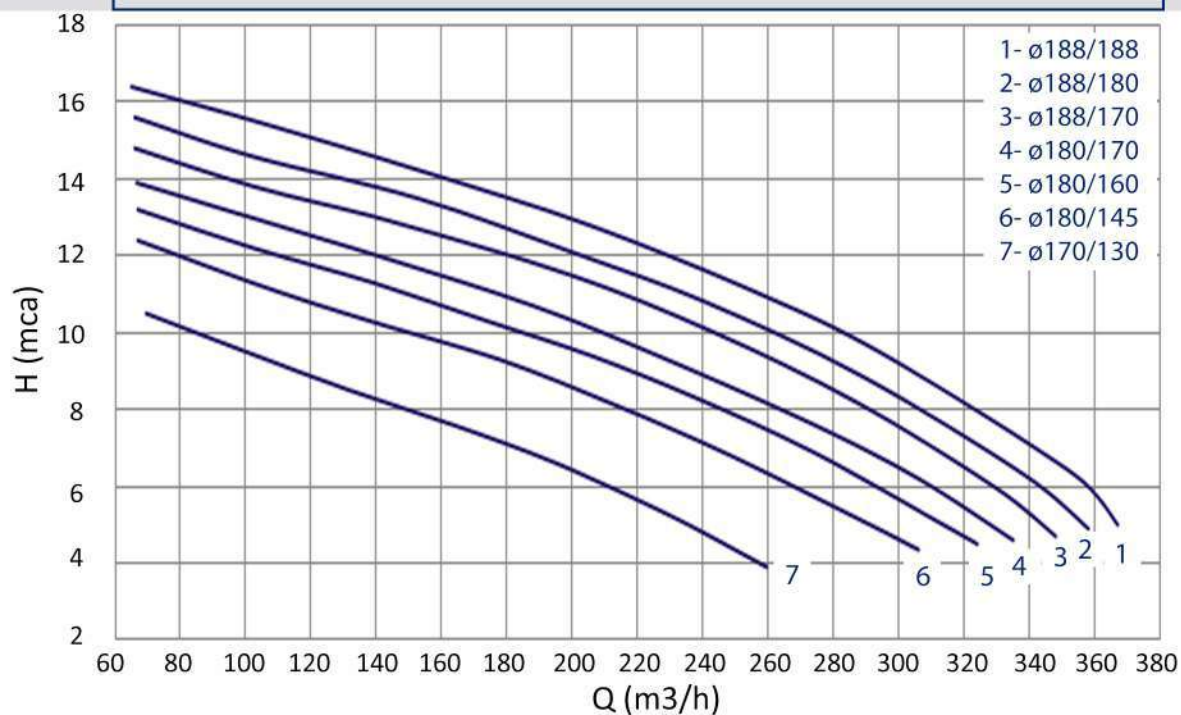
CURVA

1800 rpm

RECALQUE 175

Nº 10011705

60 Hz 4 P



SUCÇÃO 200

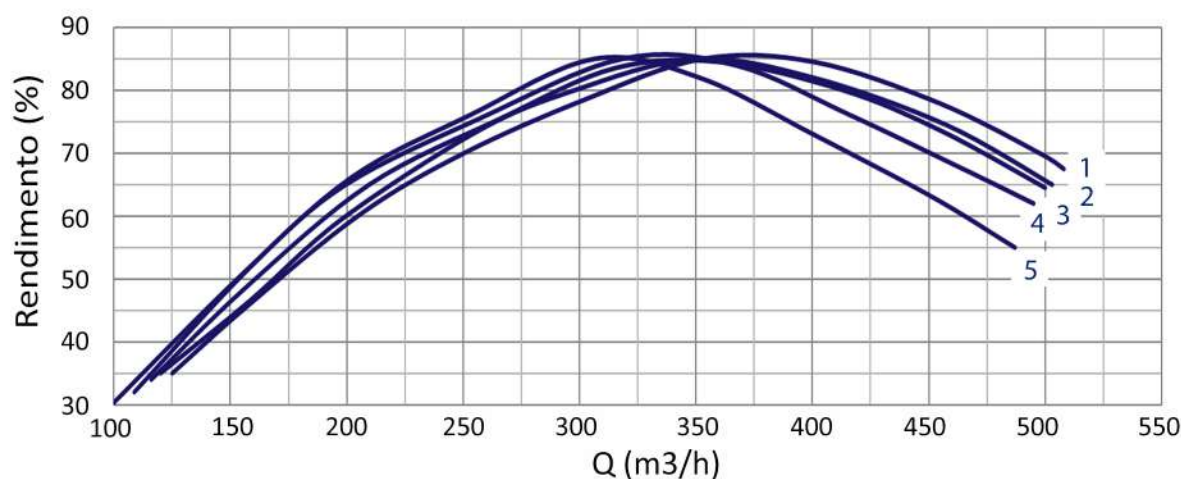
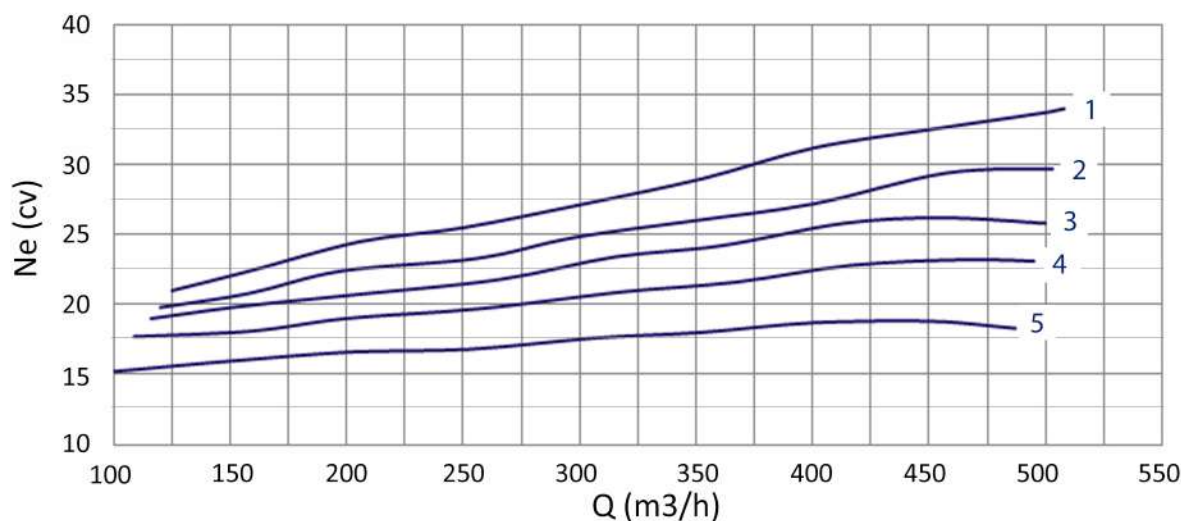
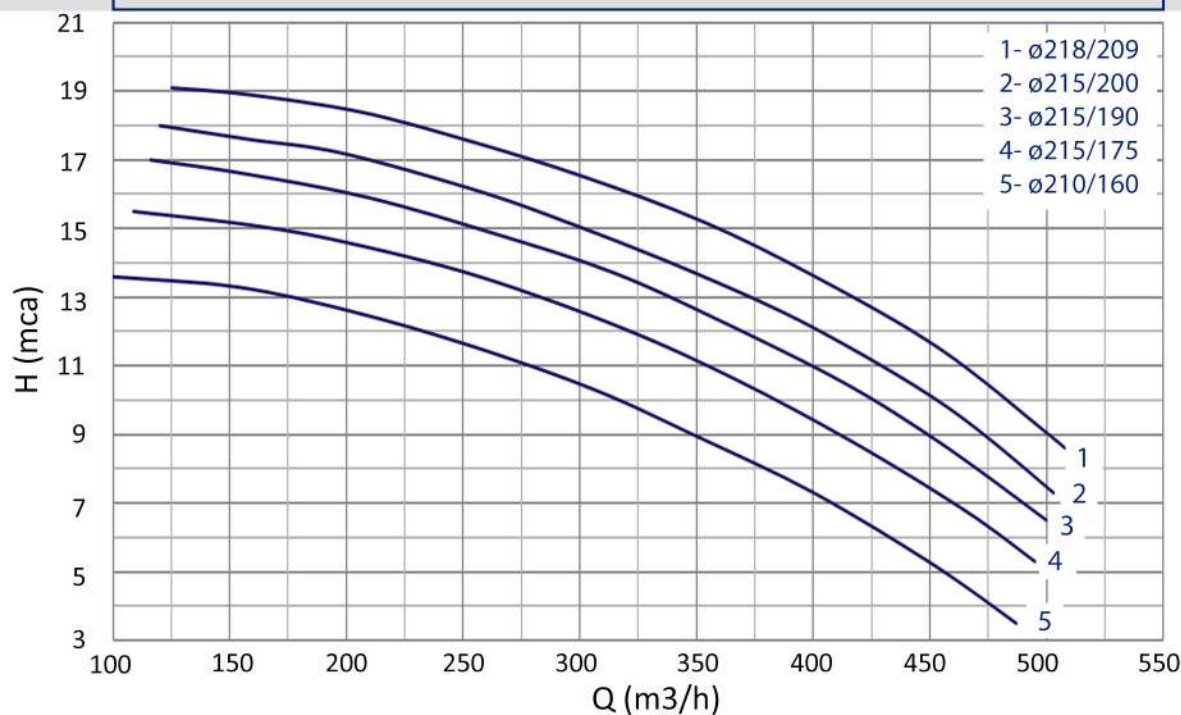
RECALQUE 200

CURVA

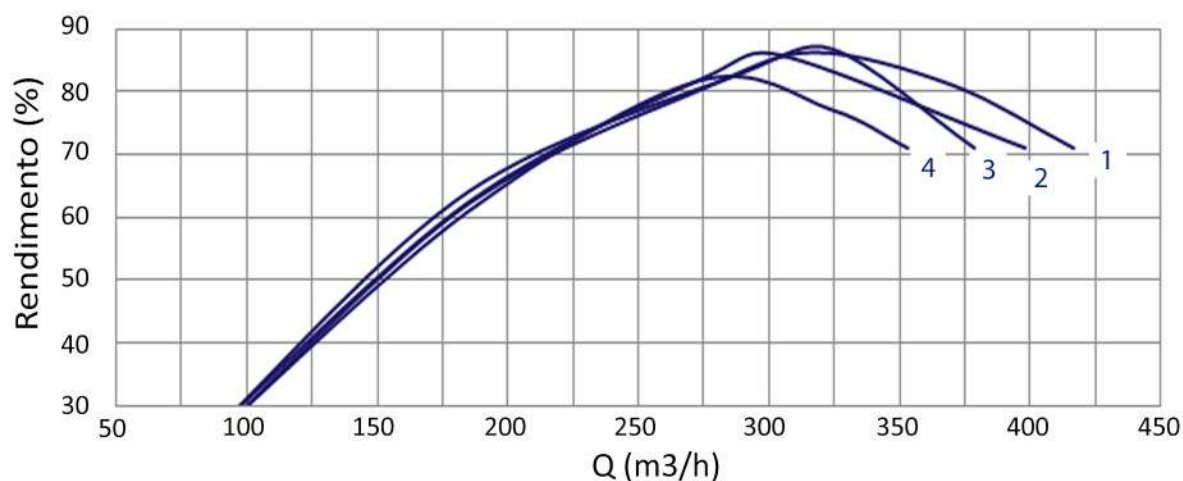
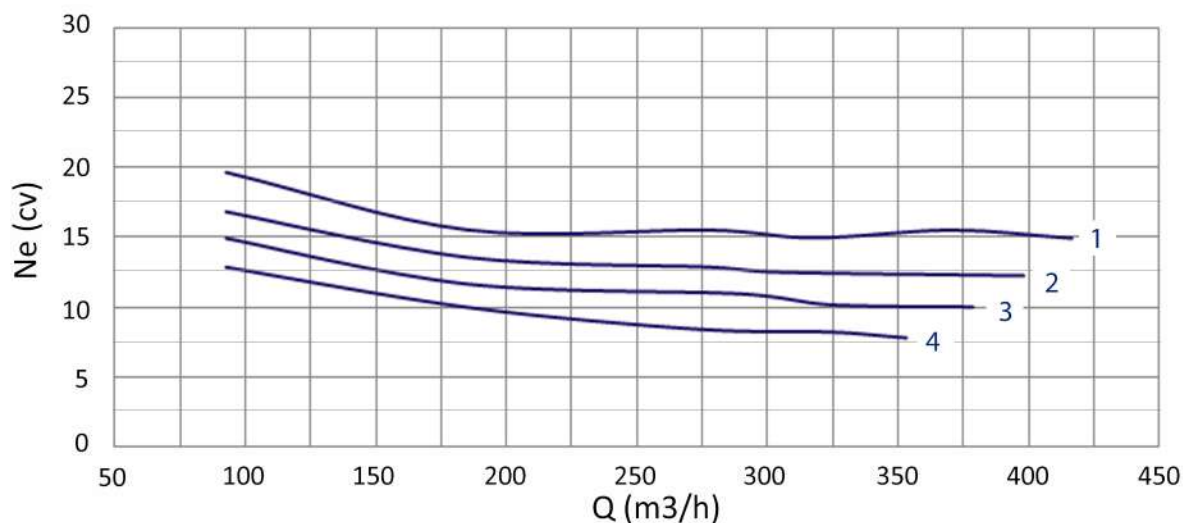
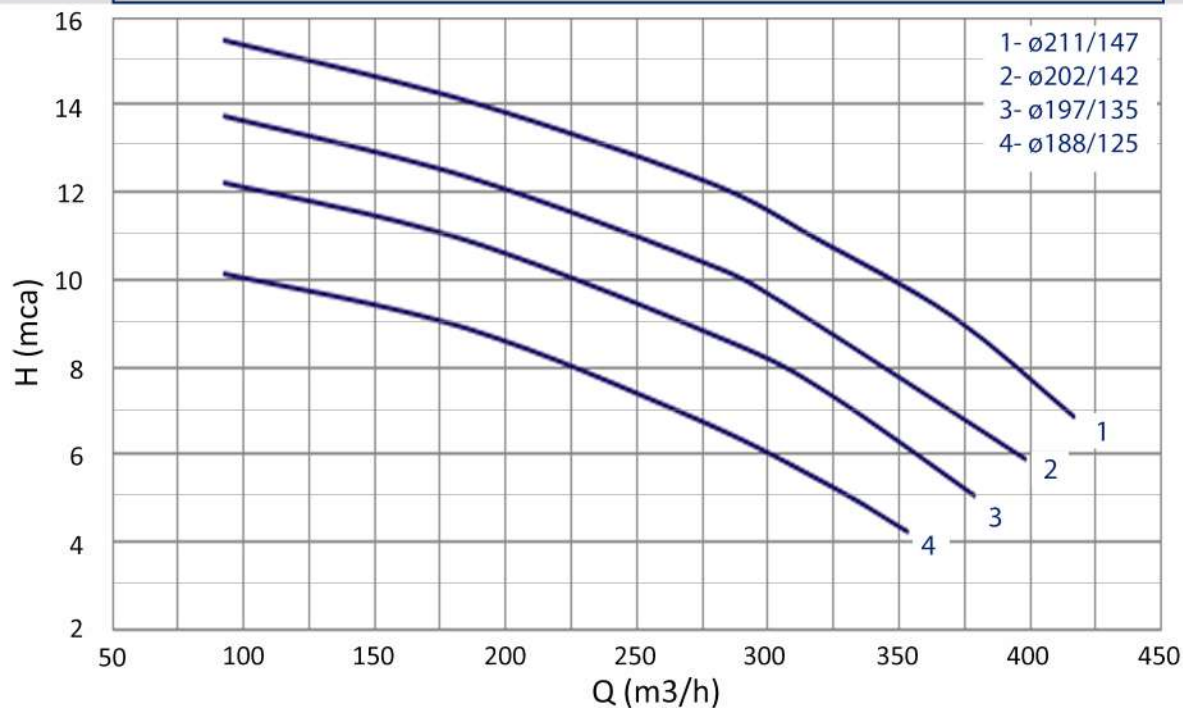
Nº 10011803

1800 rpm

60 Hz 4 P



SUCÇÃO 200	CURVA	1800 rpm
RECALQUE 200	Nº 10011805	60 Hz 4 P



SUCÇÃO 200

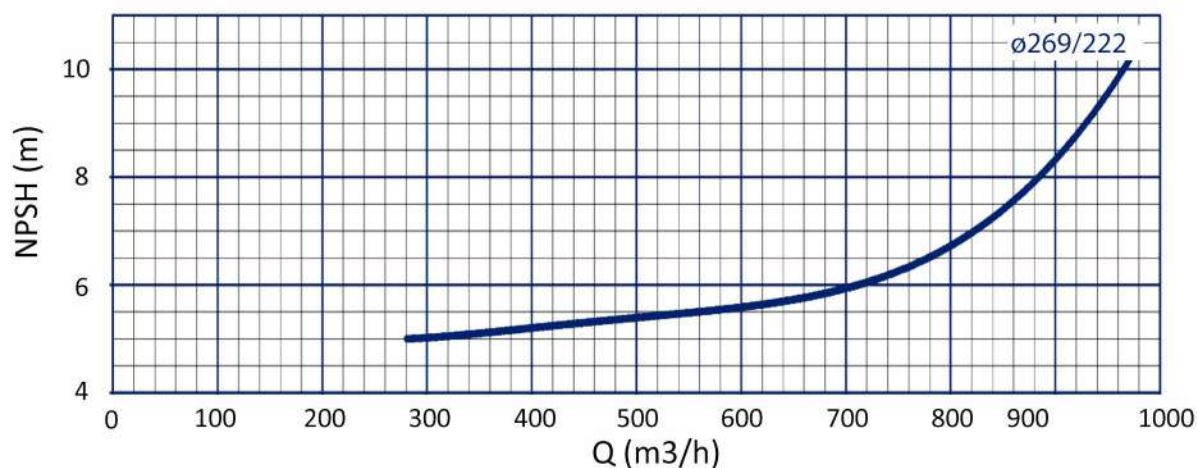
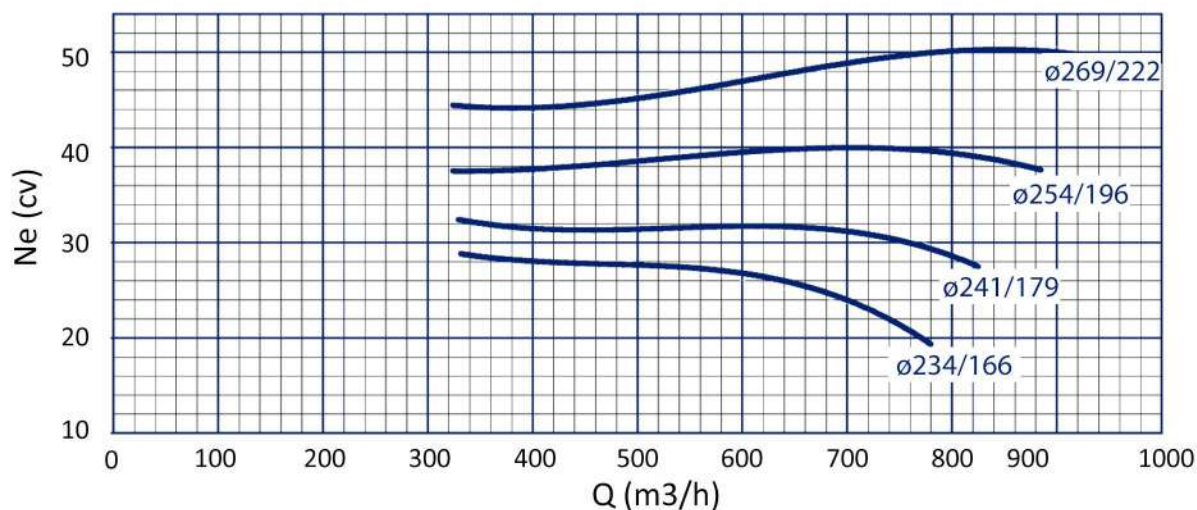
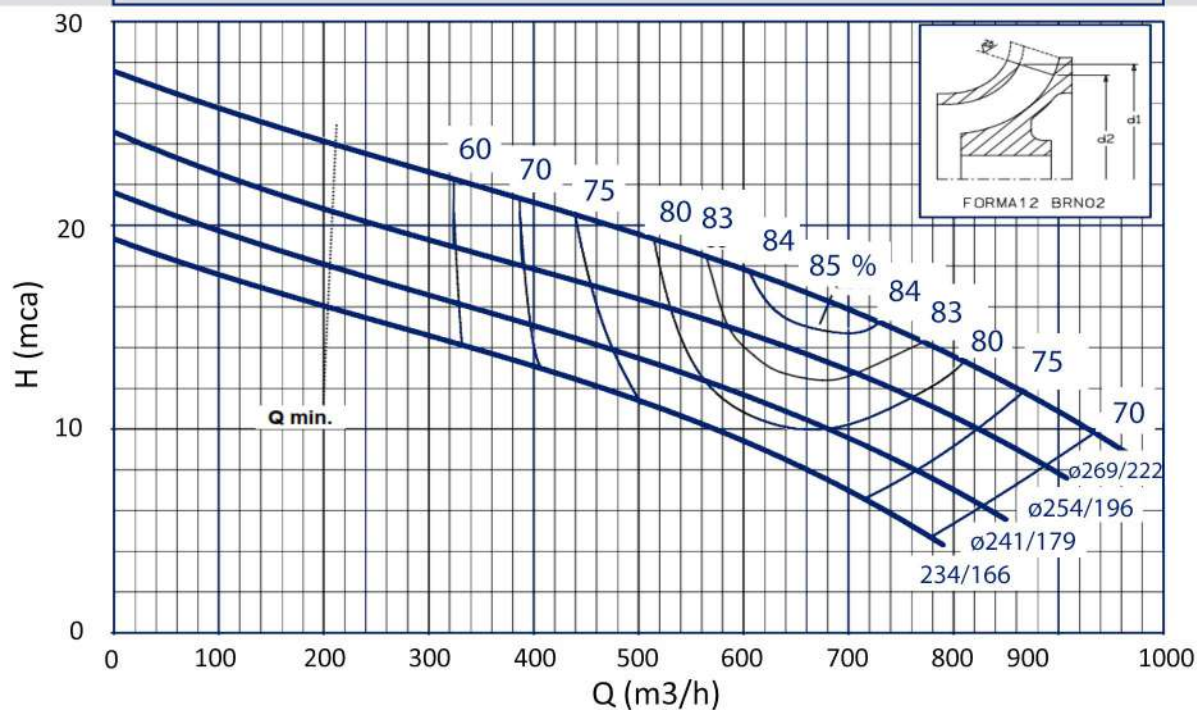
CURVA

1800 rpm

RECALQUE 200

Nº 10011811

60 Hz 4 P



SUCÇÃO 200

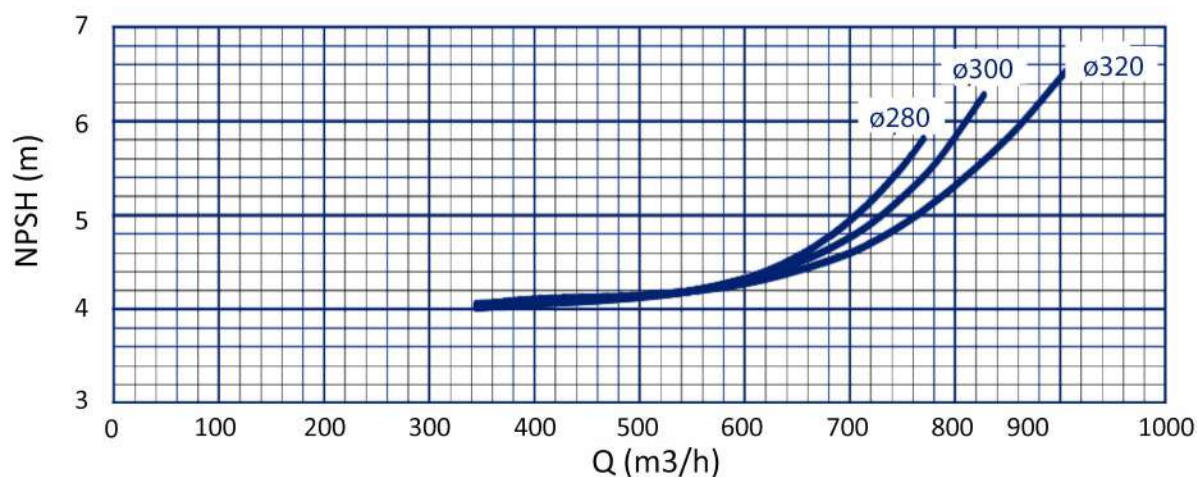
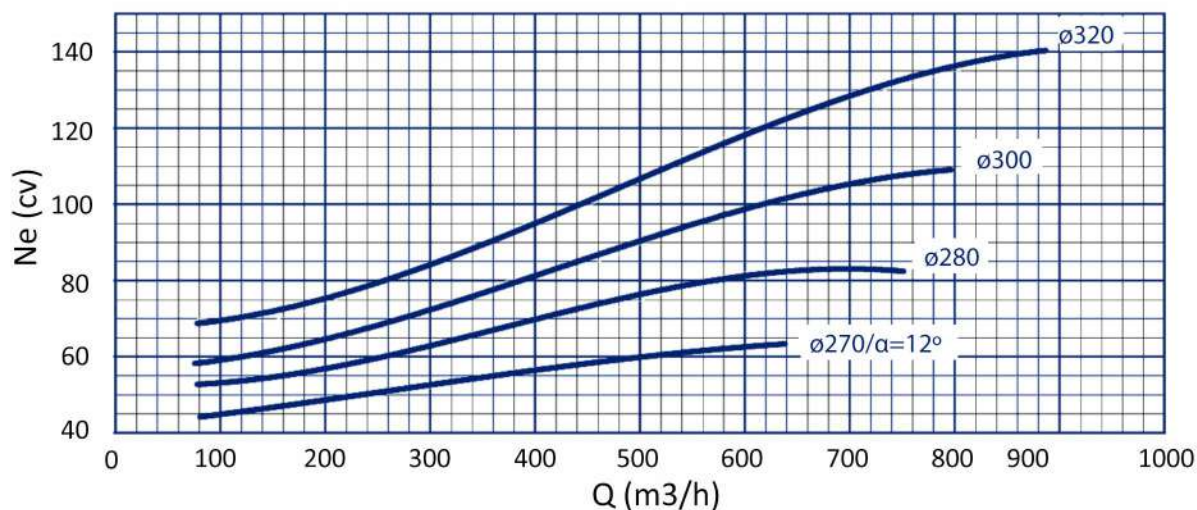
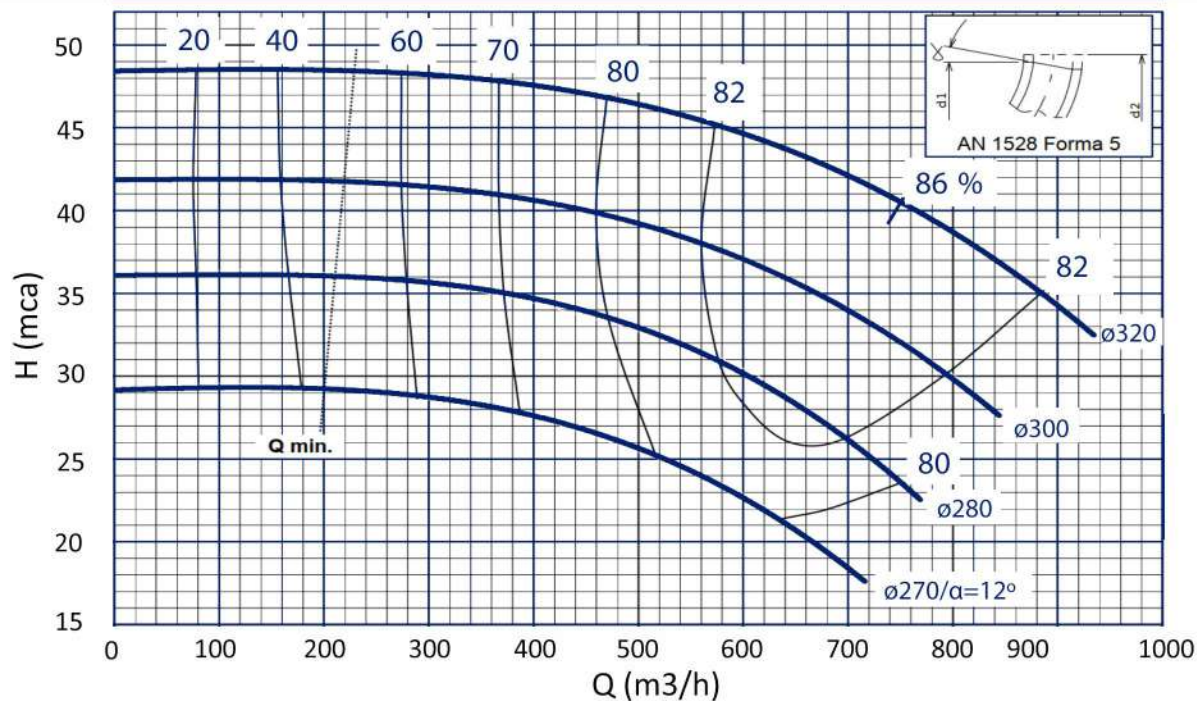
CURVA

1800 rpm

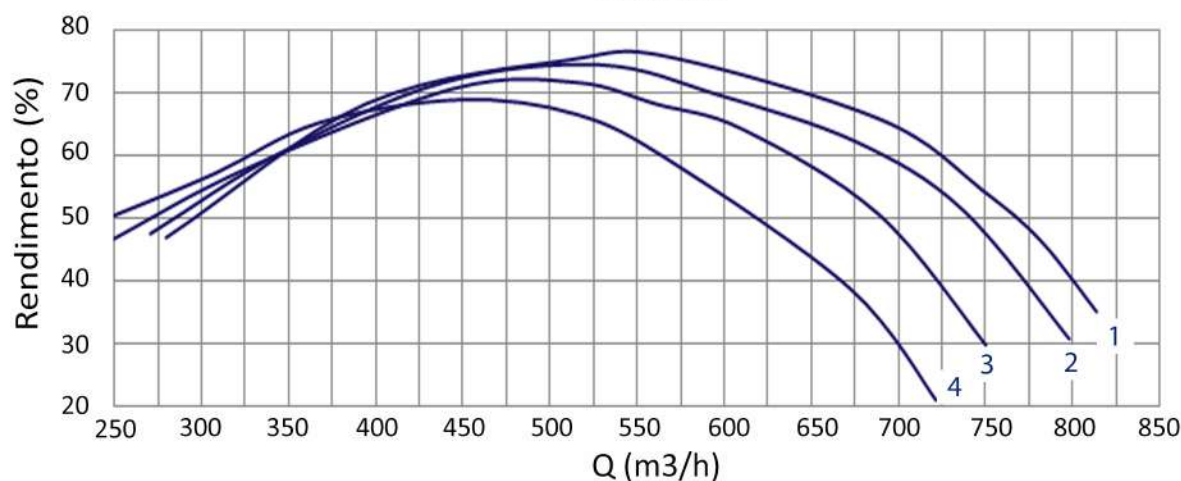
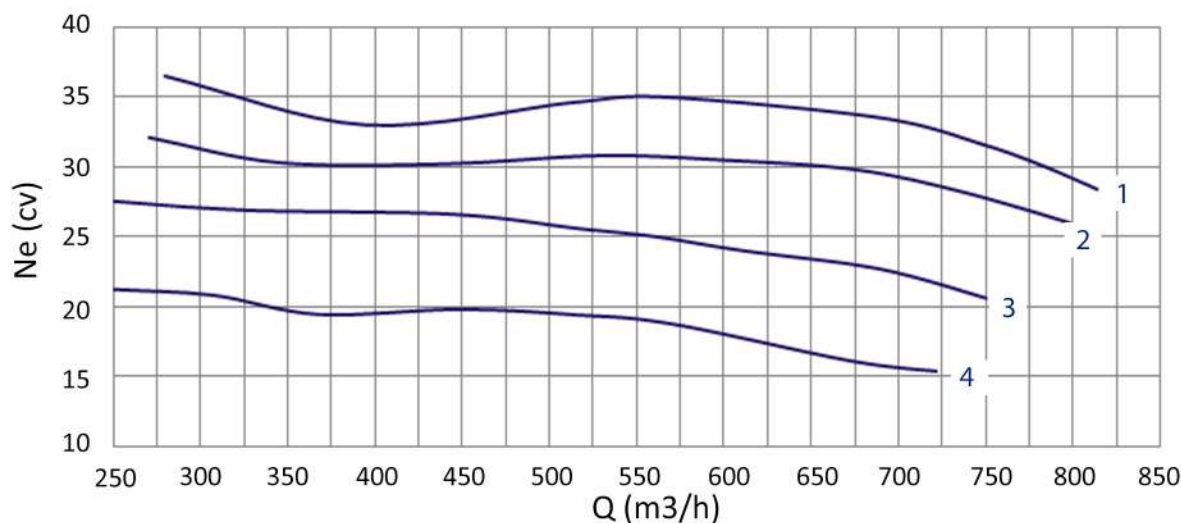
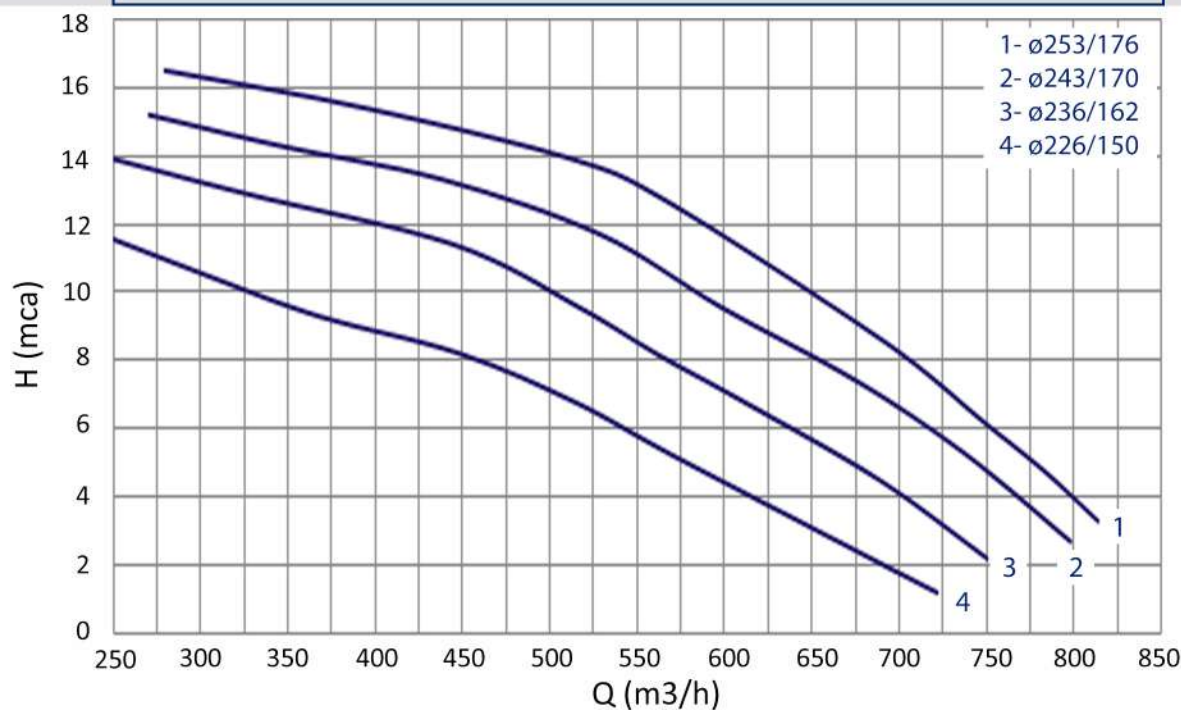
RECALQUE 200

Nº 10011831

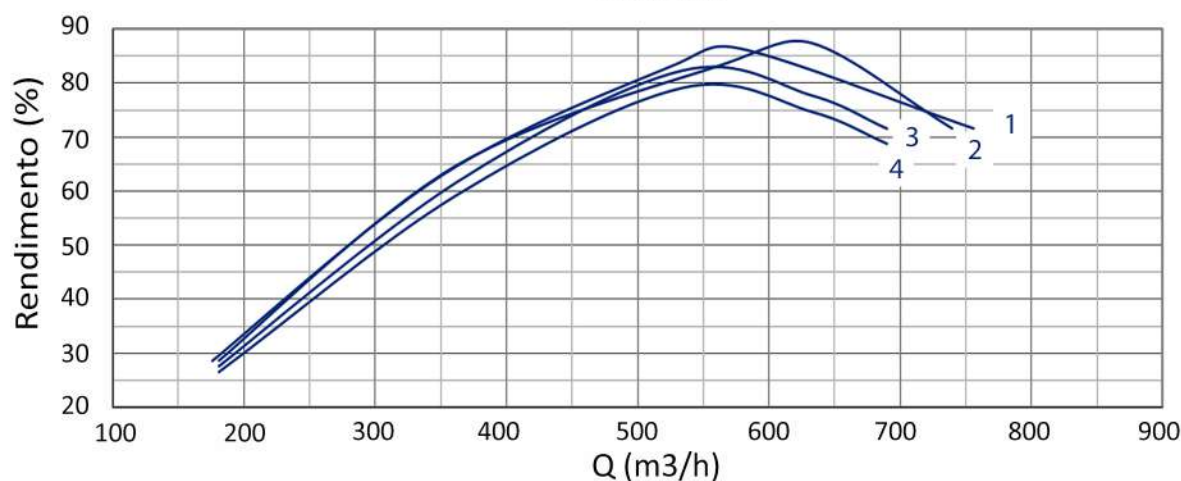
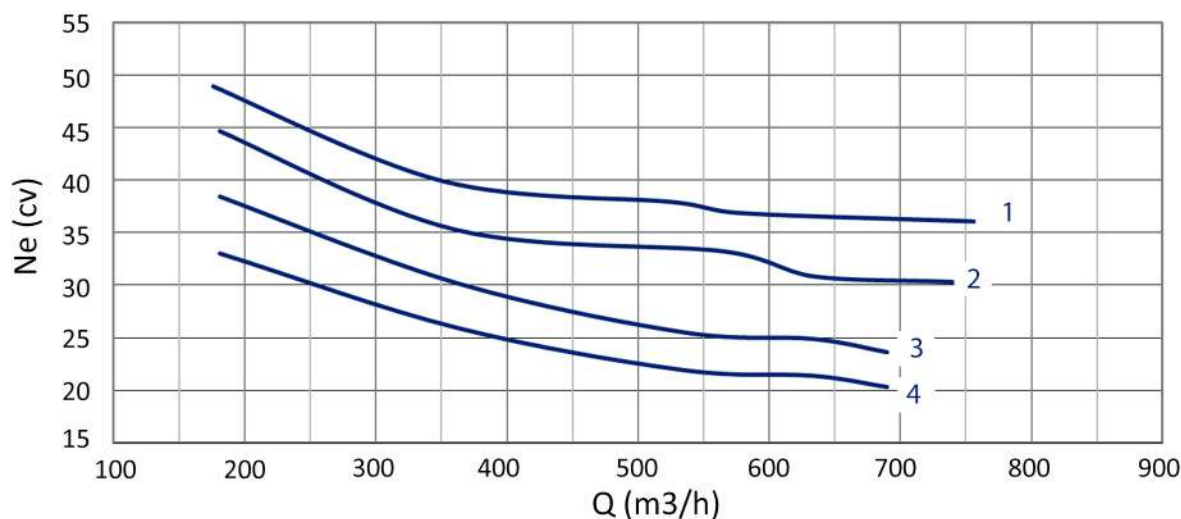
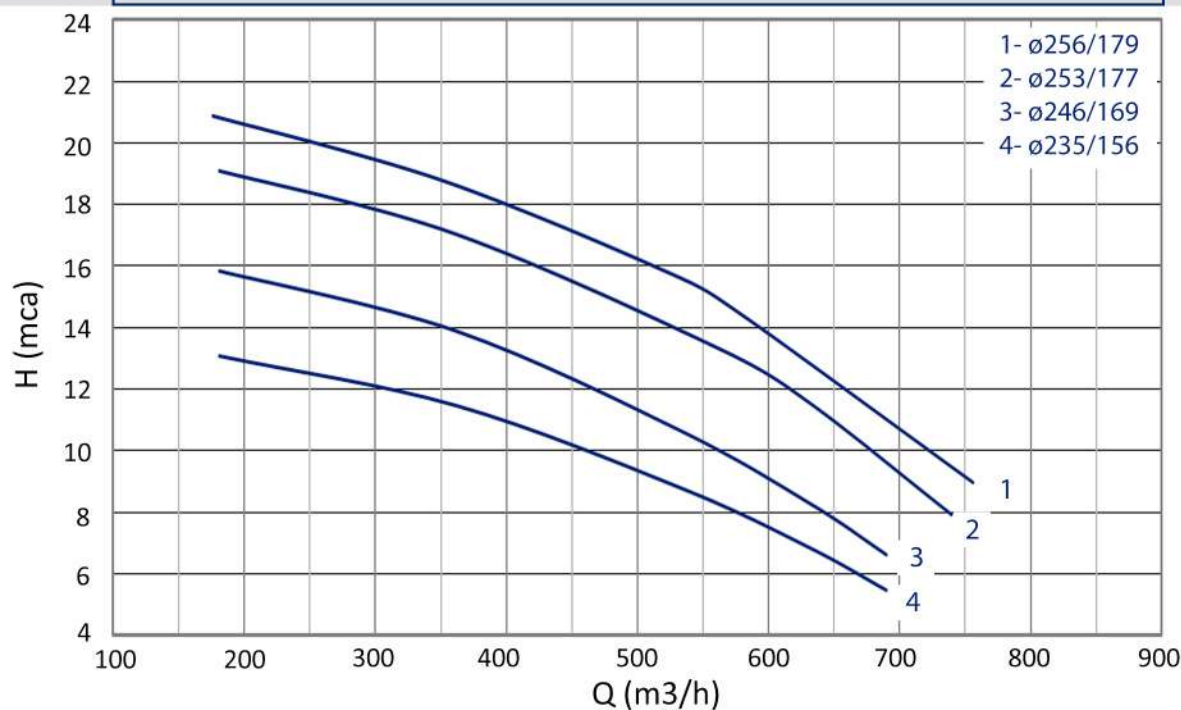
60 Hz 4 P



SUCÇÃO 250	CURVA	1800 rpm
RECALQUE 250	Nº 10012101	60 Hz 4 P



SUCÇÃO 250	CURVA	1800 rpm
RECALQUE 250	Nº 10012104	60 Hz 4 P



SUCÇÃO 300

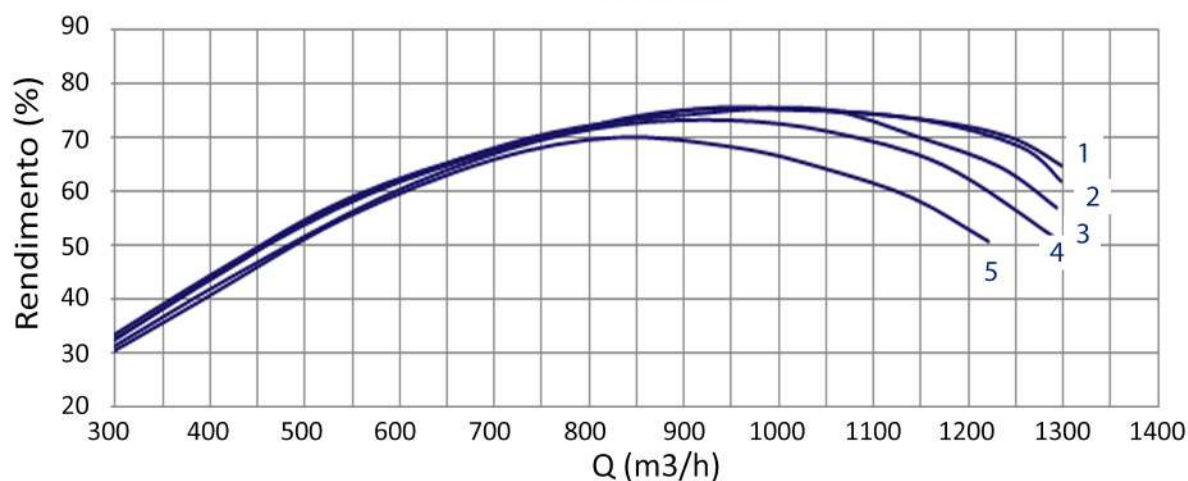
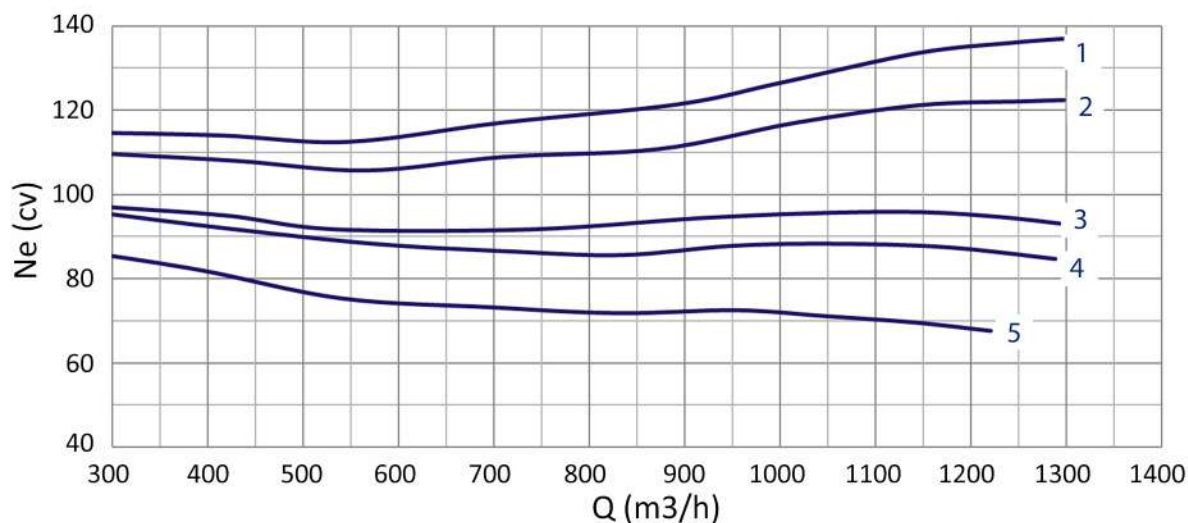
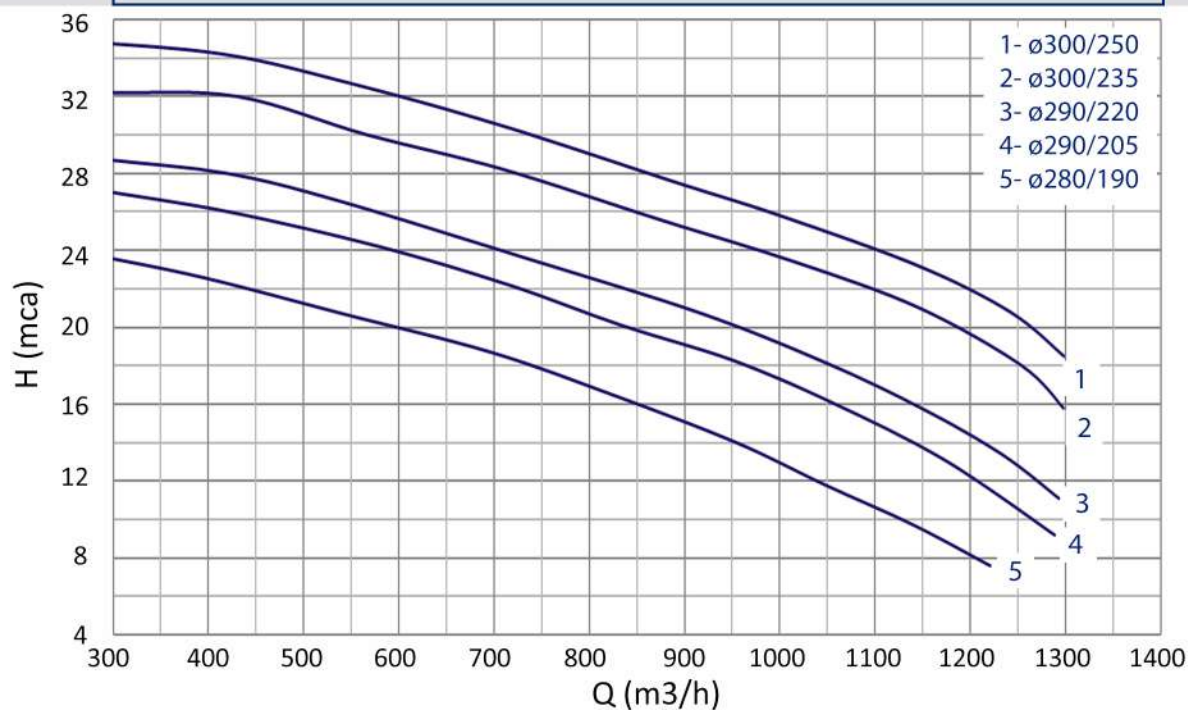
CURVA

1800 rpm

RECALQUE 300

Nº 10012301

60 Hz 4 P



SUCÇÃO 300

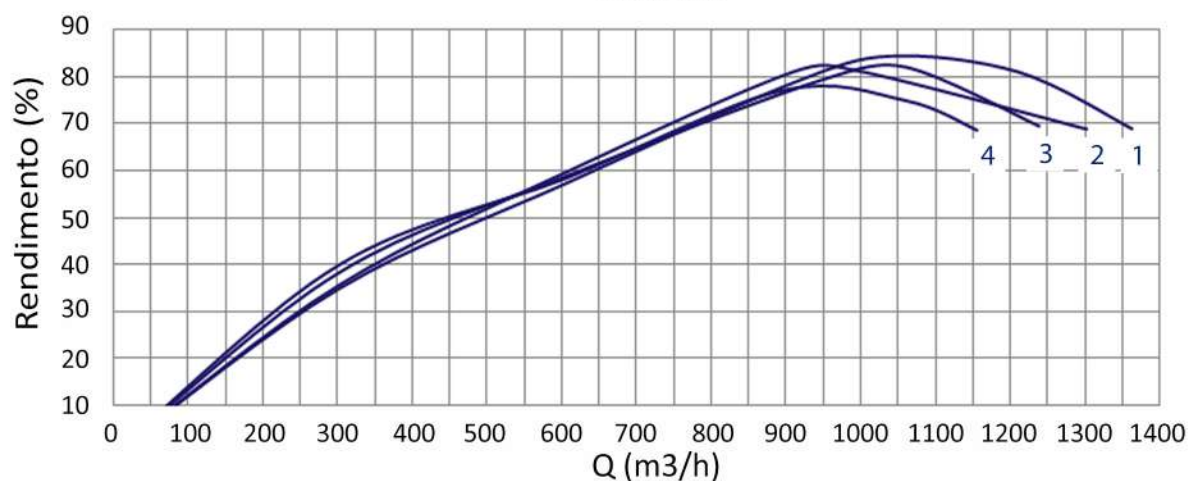
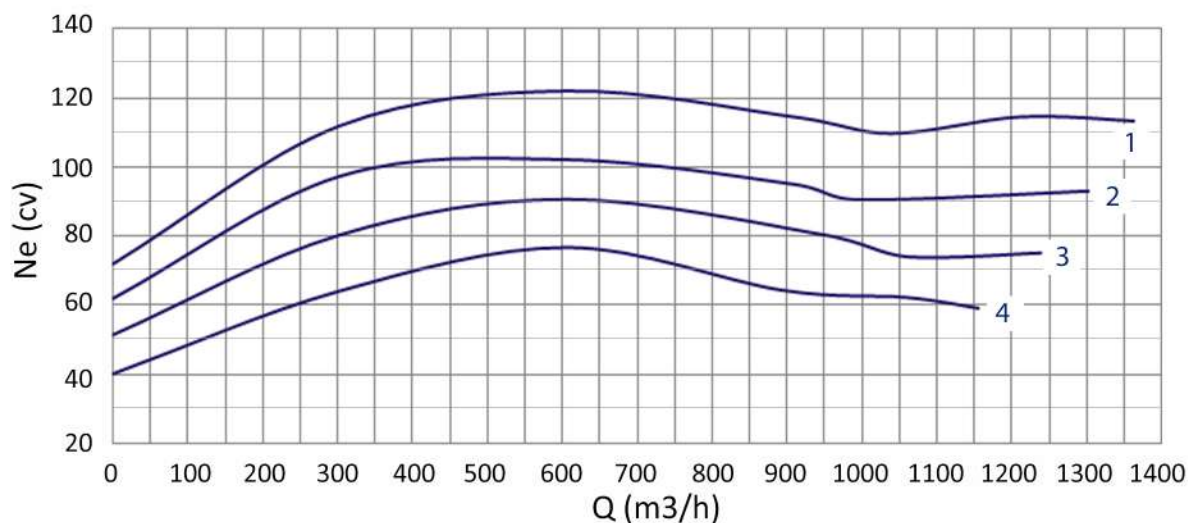
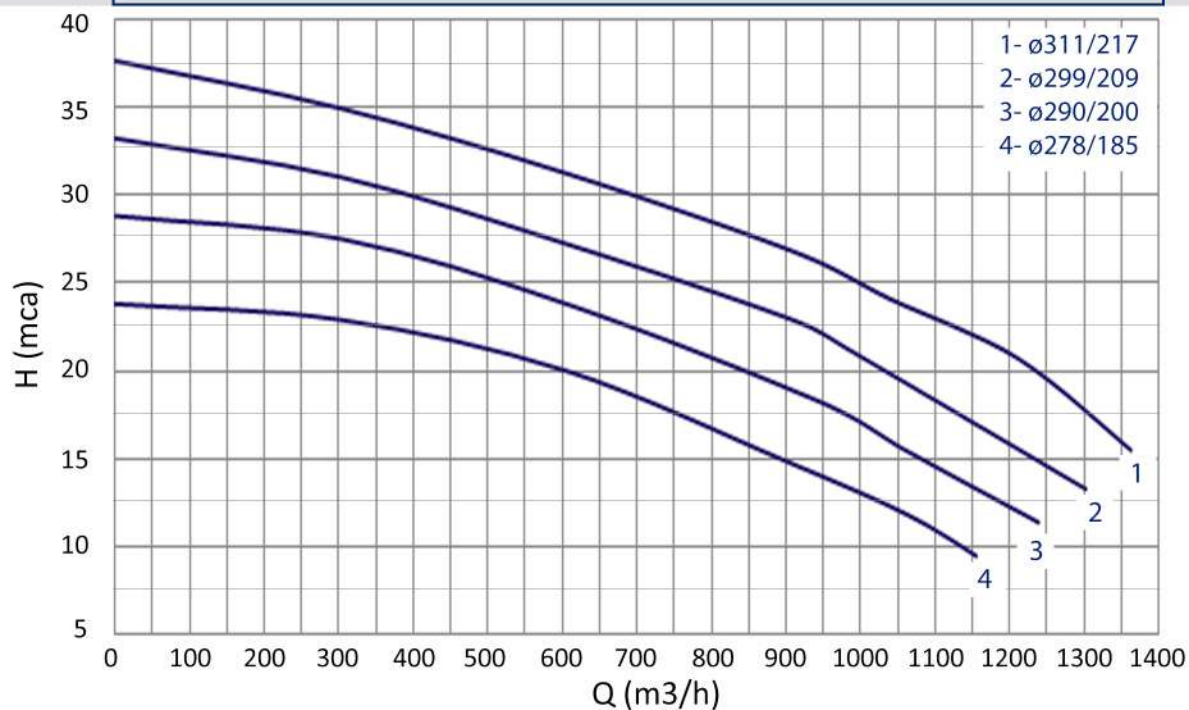
CURVA

1800 rpm

RECALQUE 300

Nº 10012308

60 Hz 4 P



SUCÇÃO 300

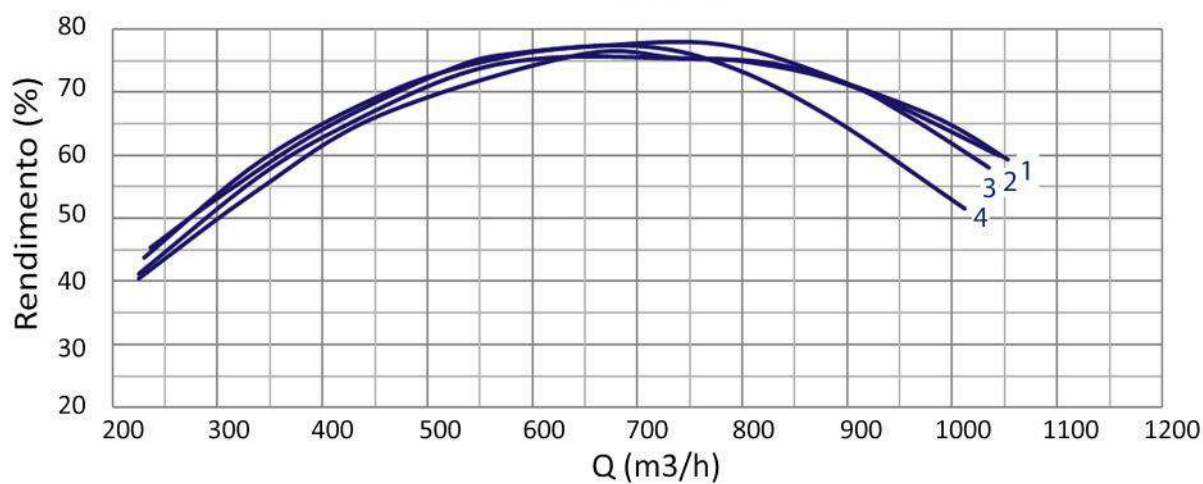
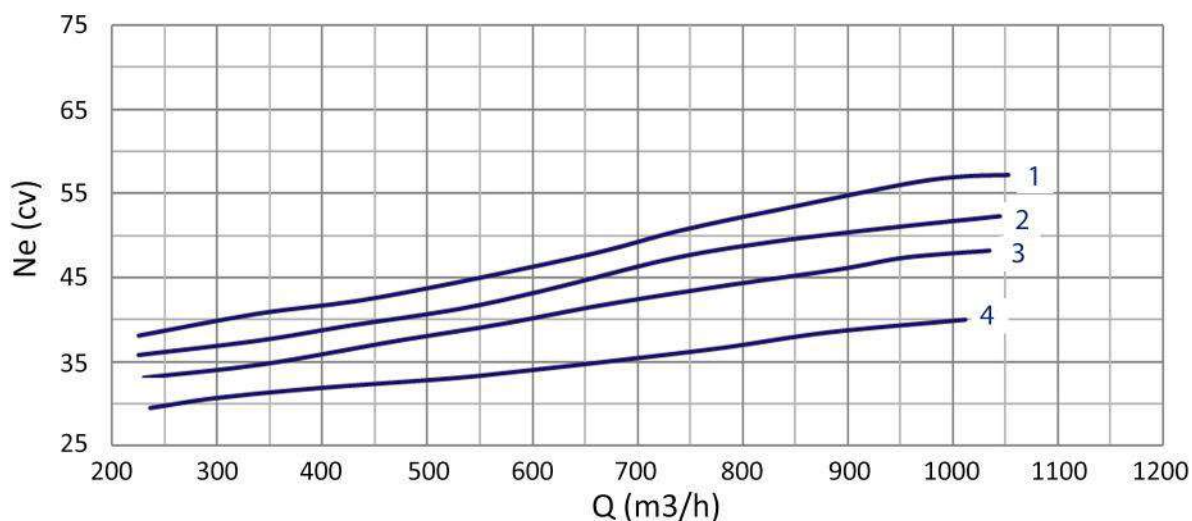
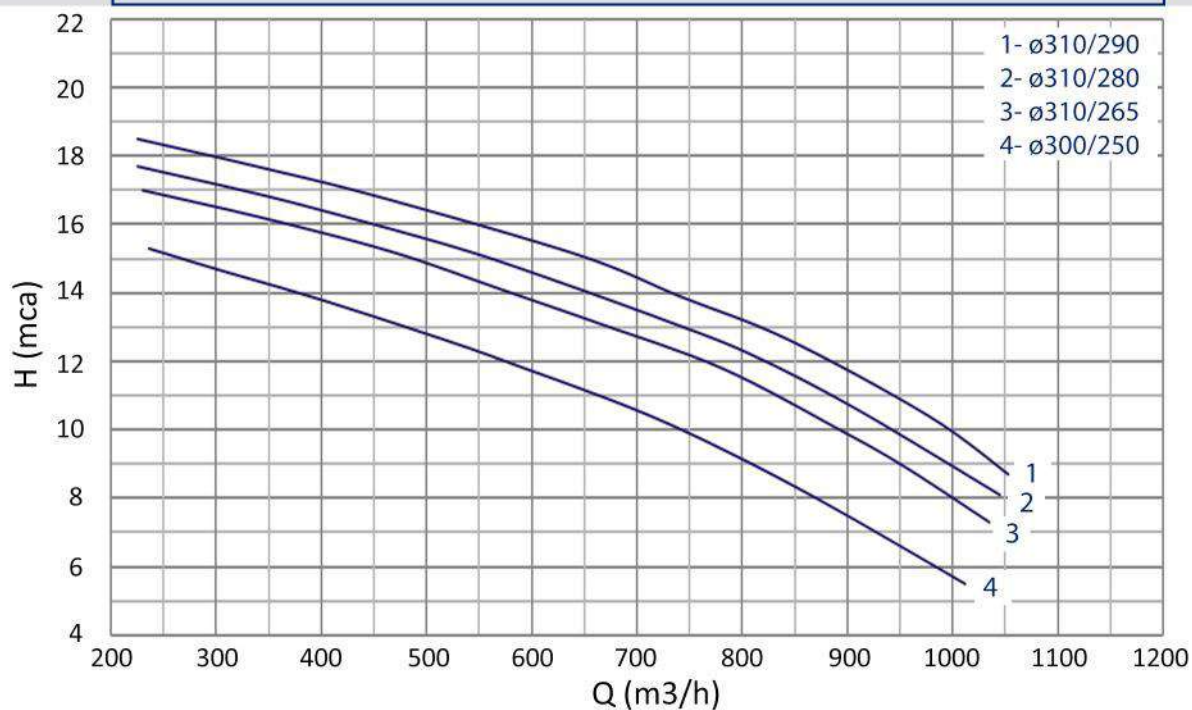
CURVA

1200 rpm

RECALQUE 300

Nº 10012307

60 Hz 6 P



SUCÇÃO 300

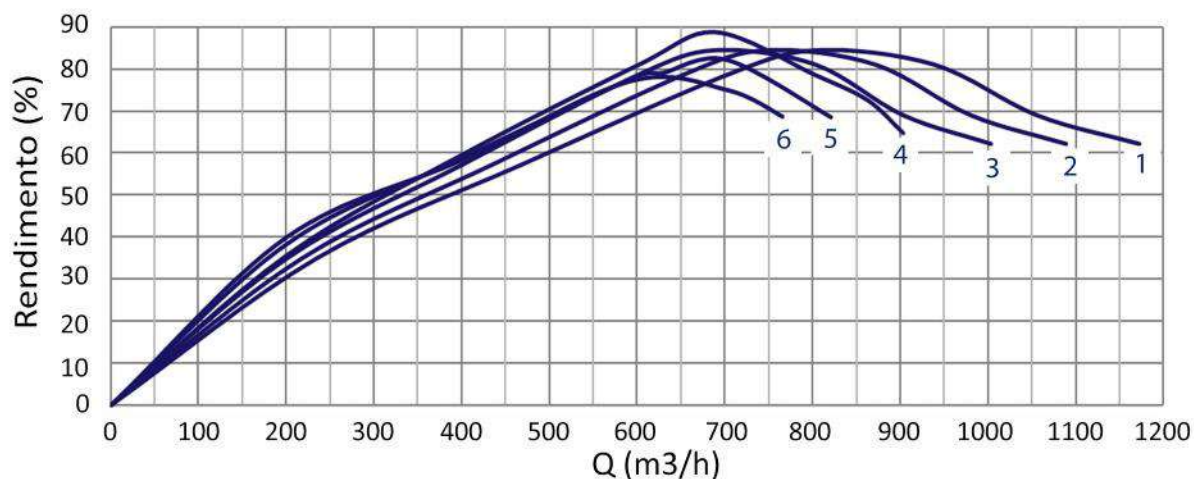
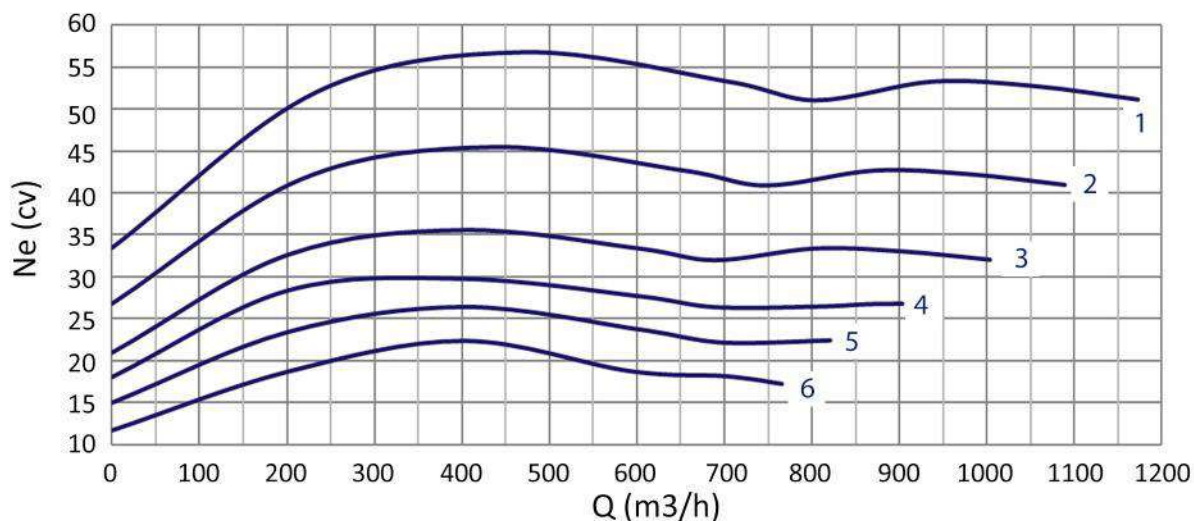
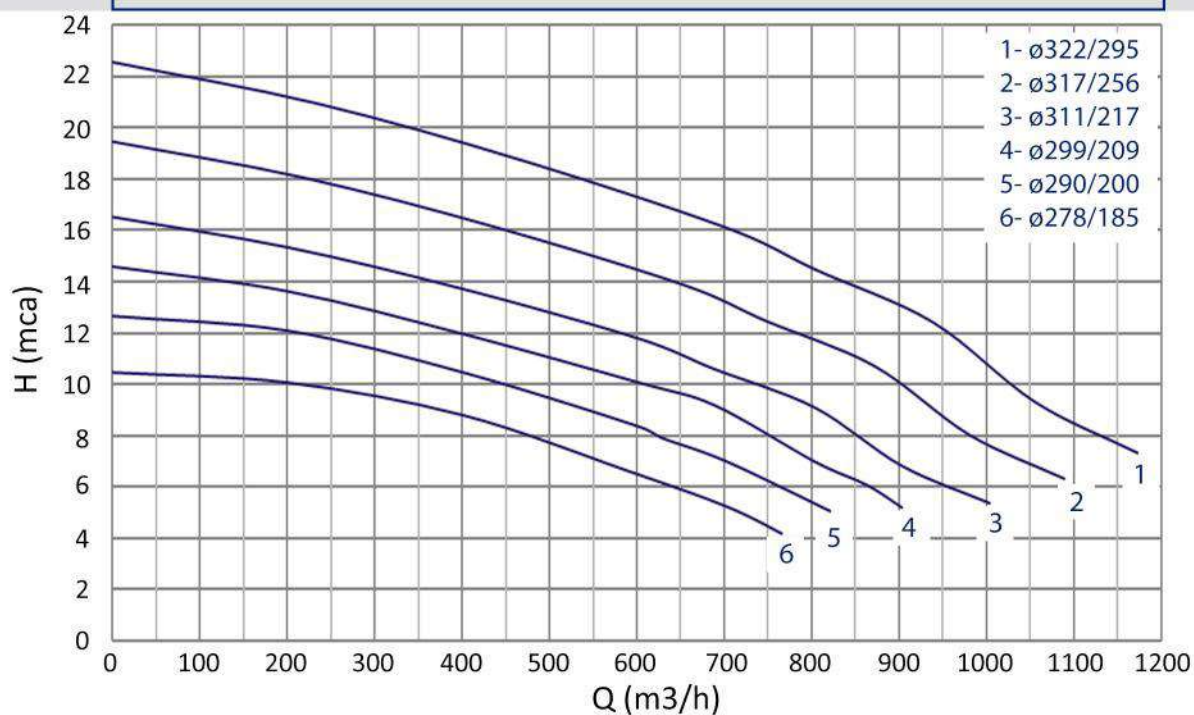
CURVA

1200 rpm

RECALQUE 300

Nº 10012310

60 Hz 6 P



SUCÇÃO 350

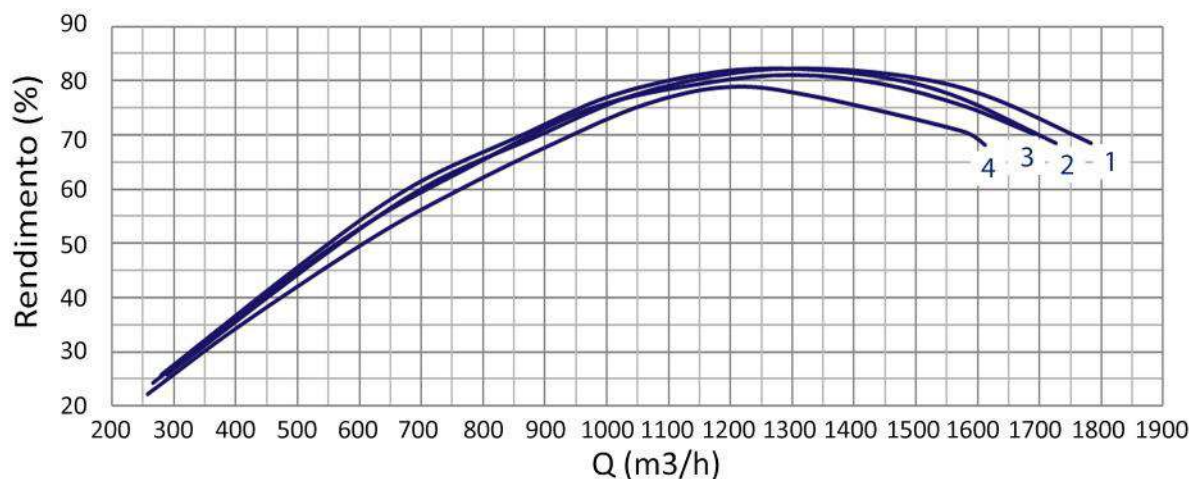
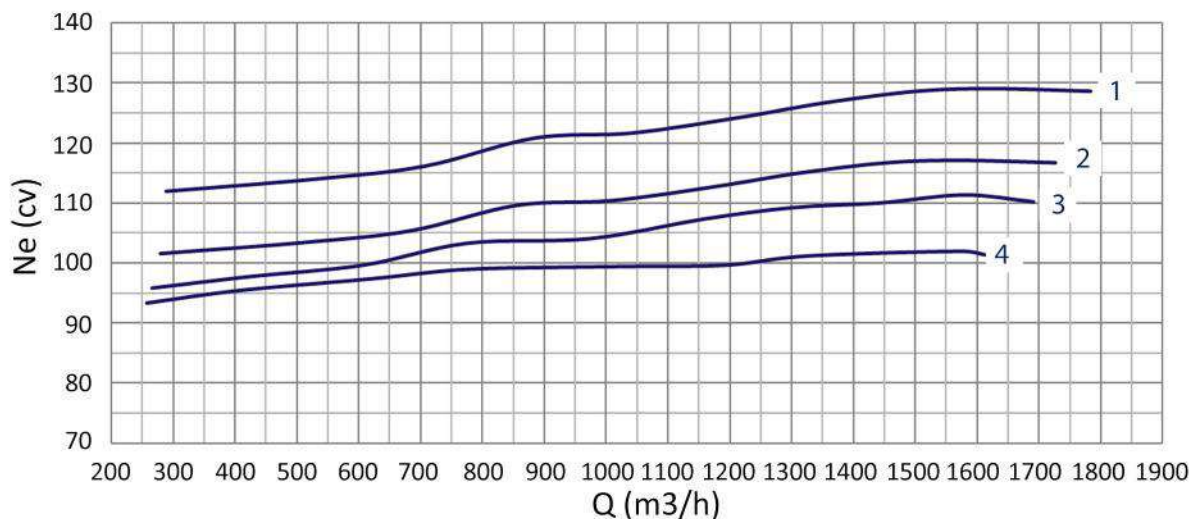
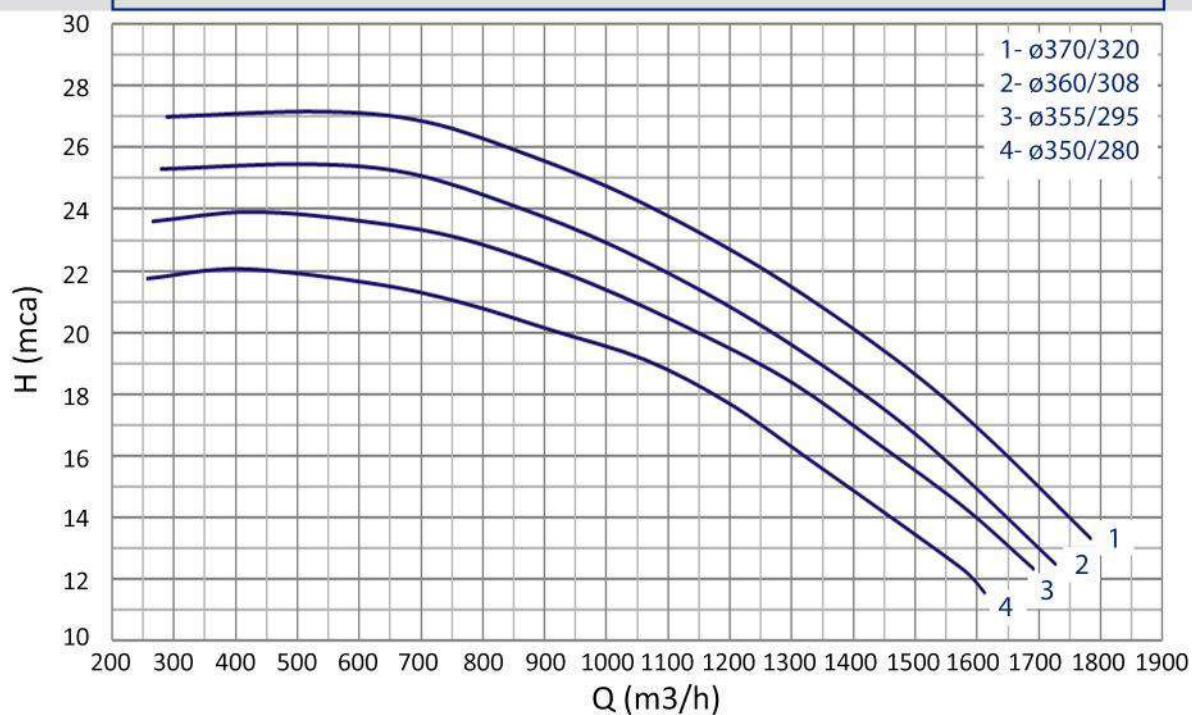
CURVA

1200 rpm

RECALQUE 350

Nº 10012402

60 Hz 6 P



SUCÇÃO 350

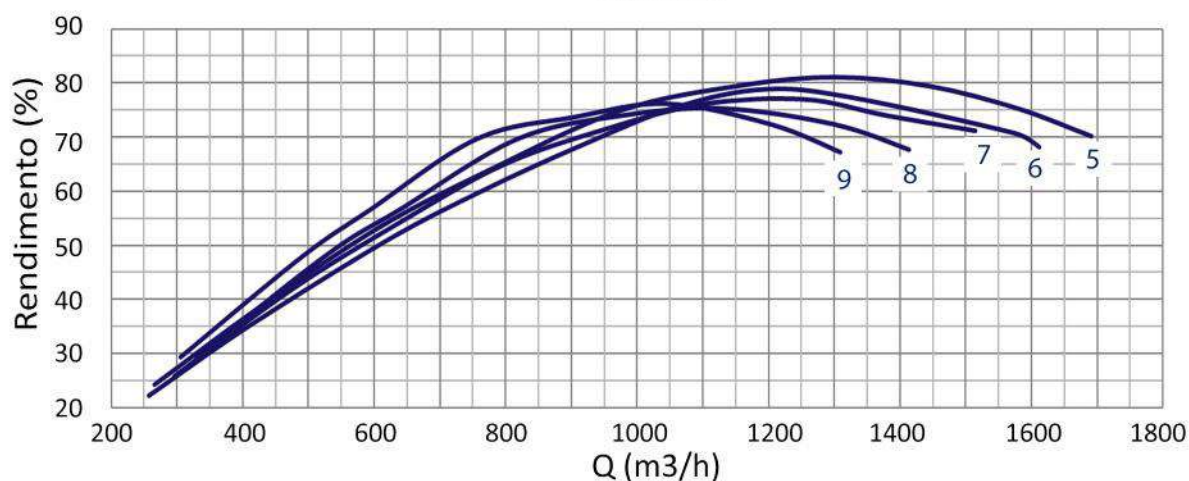
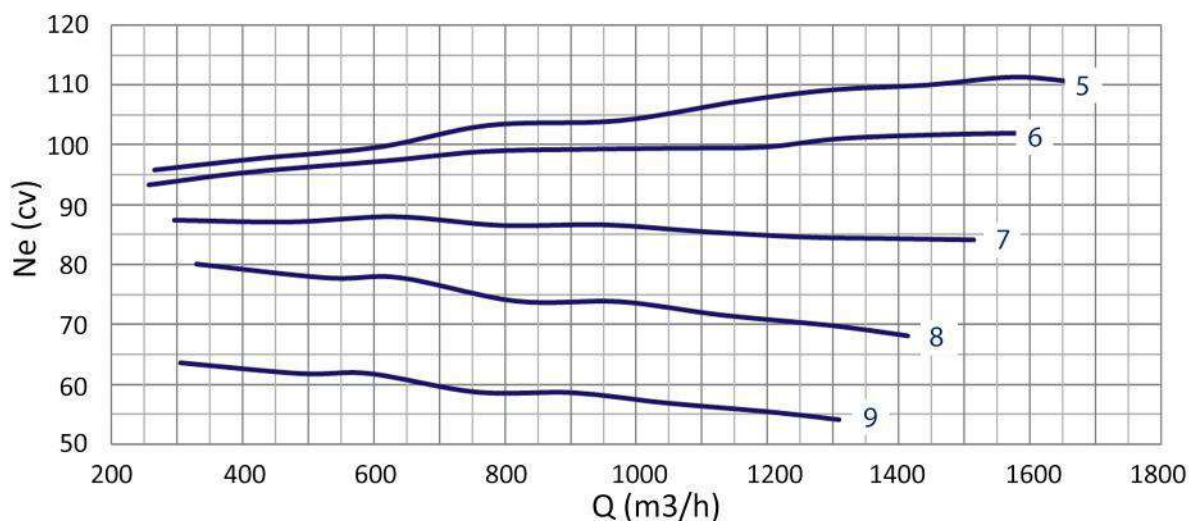
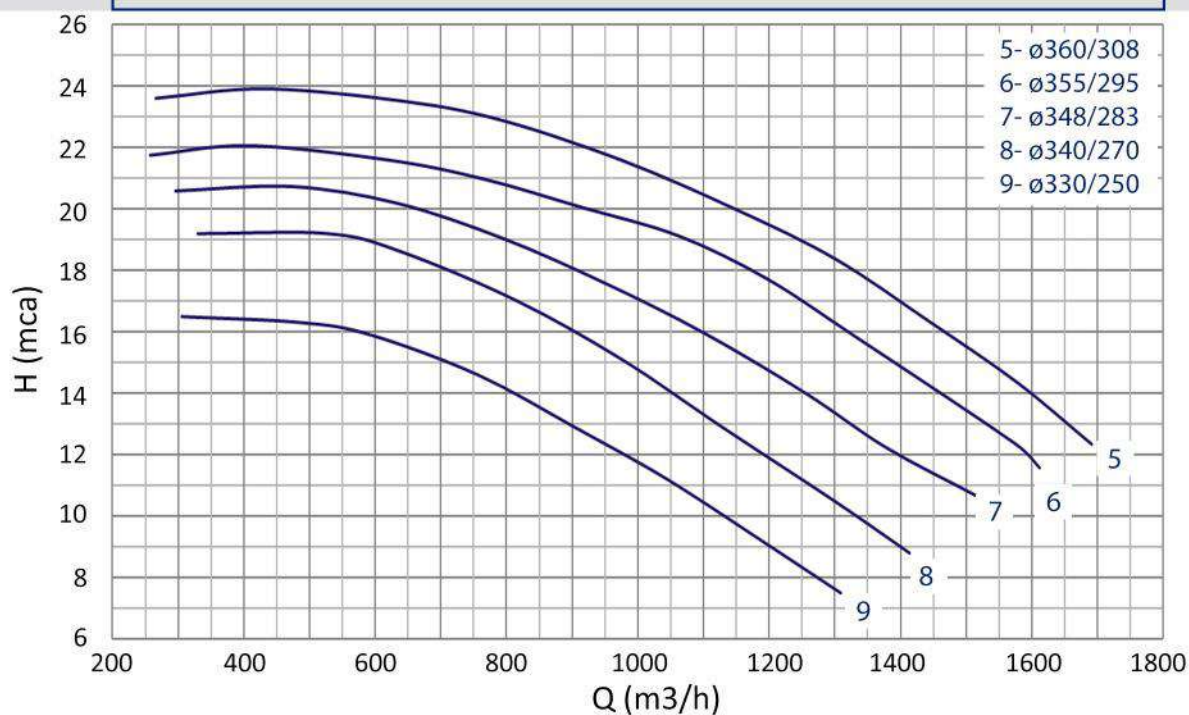
CURVA

1200 rpm

RECALQUE 350

Nº 10012404

60 Hz 6 P



SUCÇÃO 400

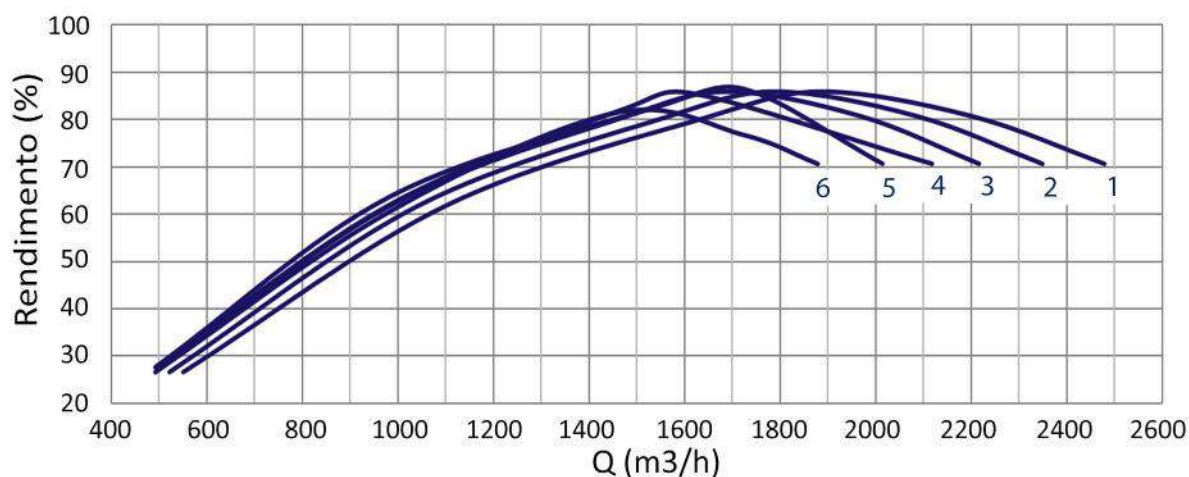
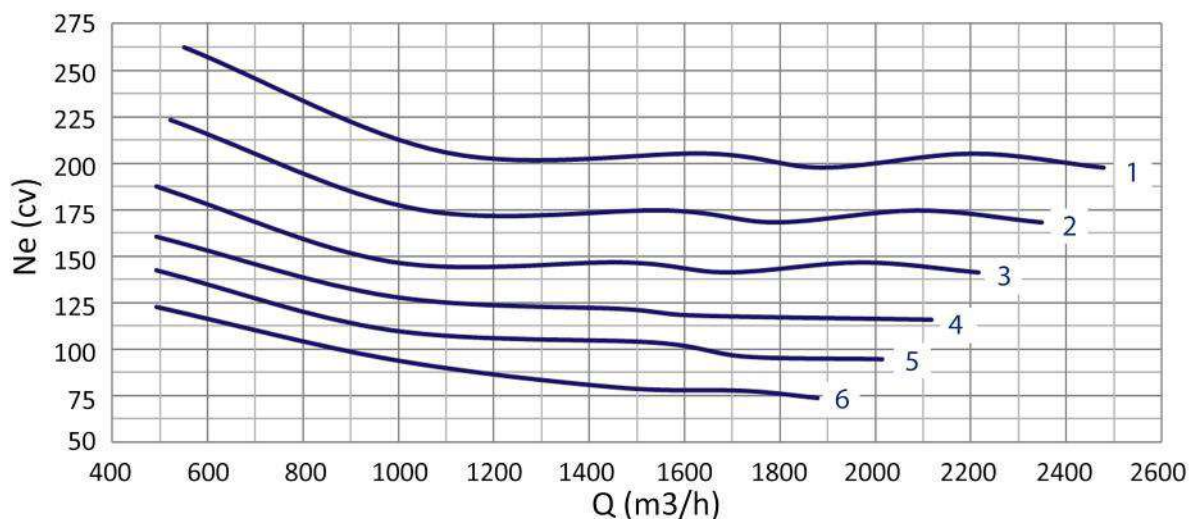
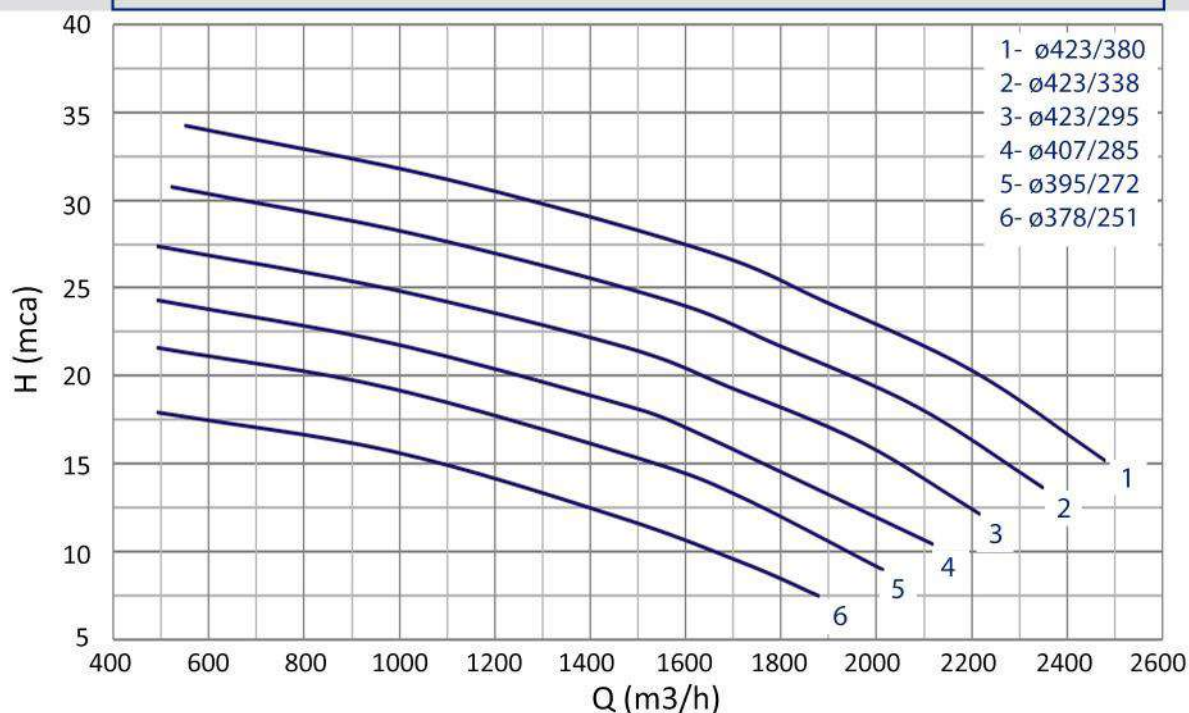
CURVA

1200 rpm

RECALQUE 400

Nº 10012501

60 Hz 6 P



SUCÇÃO 400

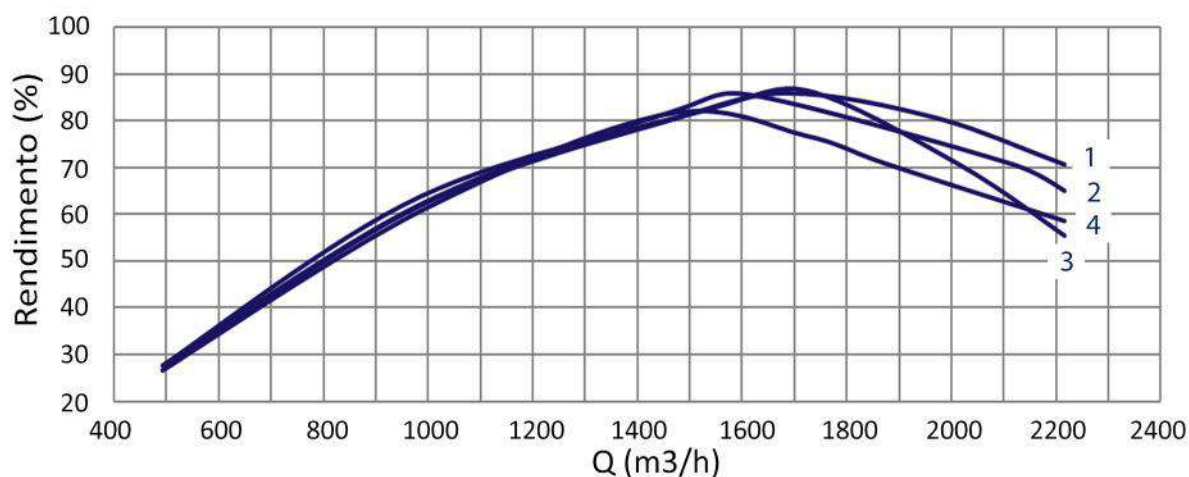
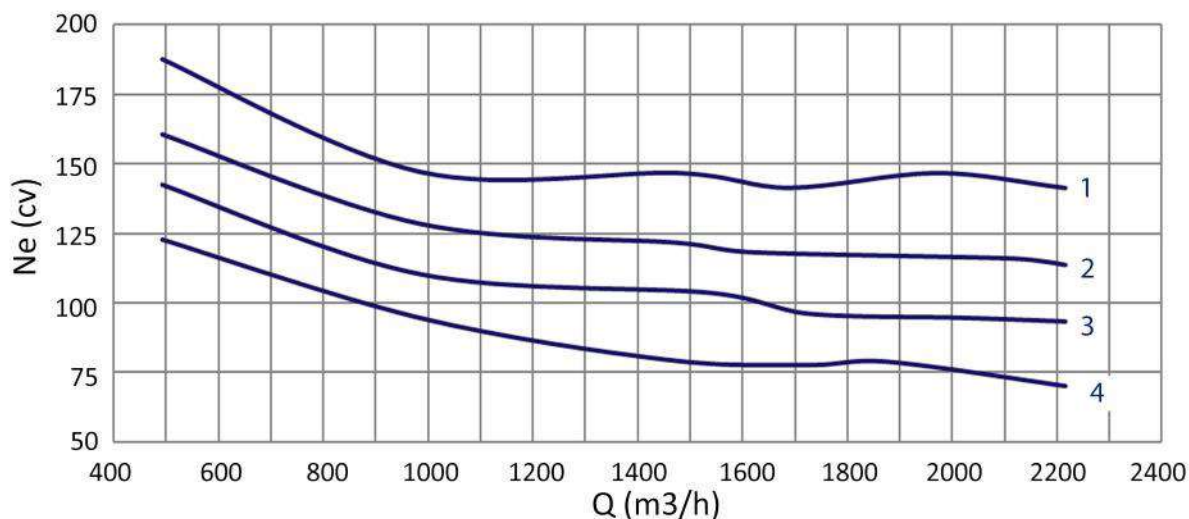
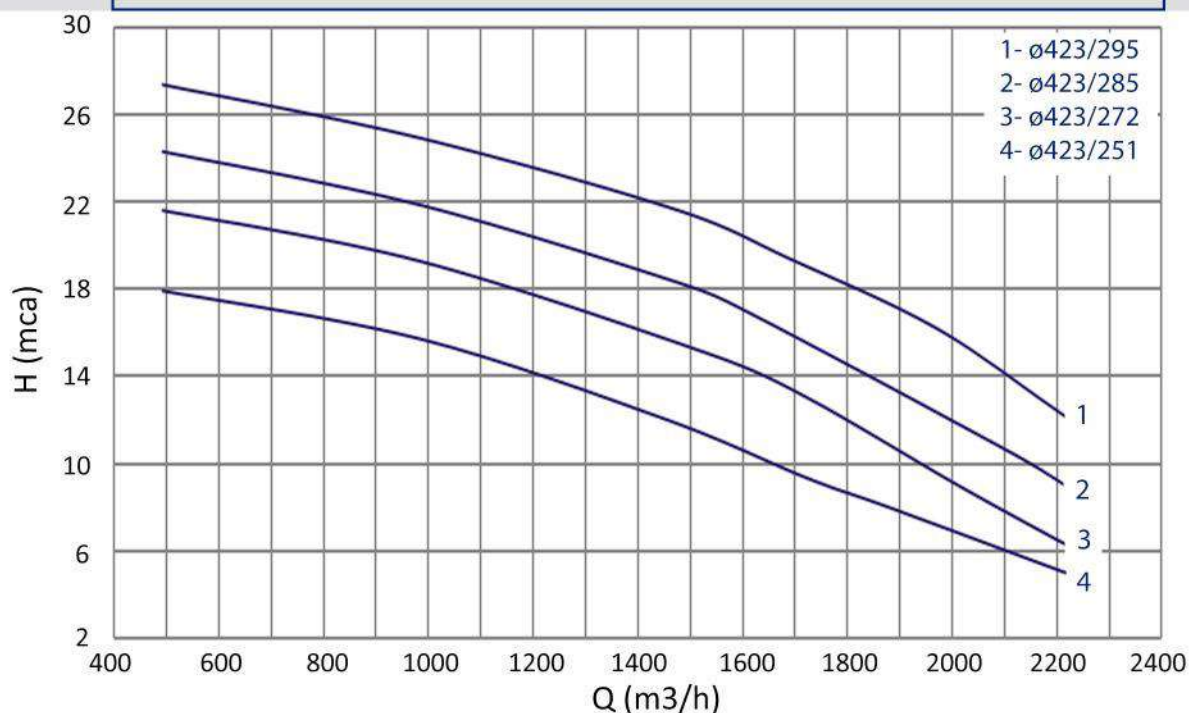
CURVA

1200 rpm

RECALQUE 400

Nº 10012505

60 Hz 6 P



SUCÇÃO 500

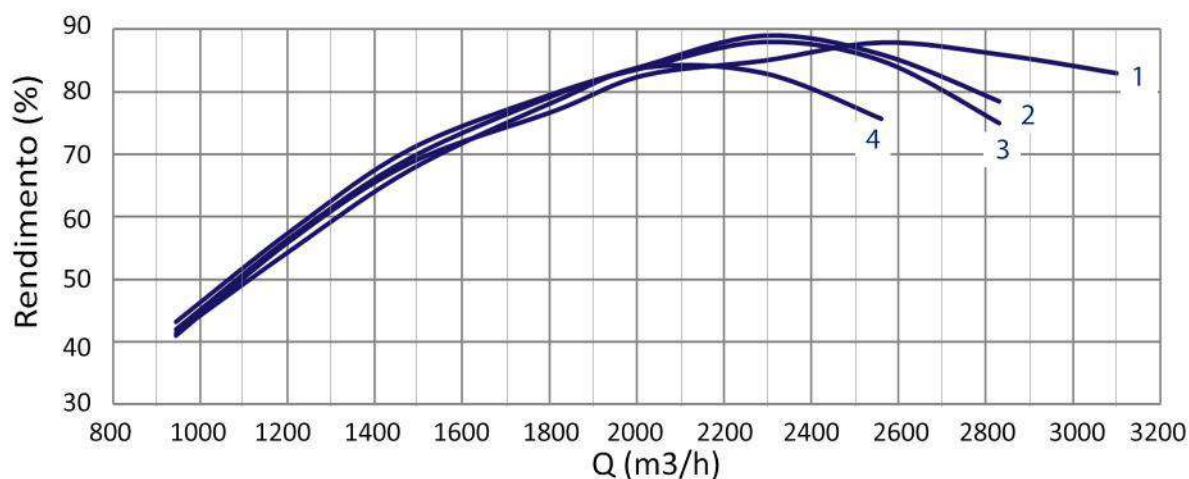
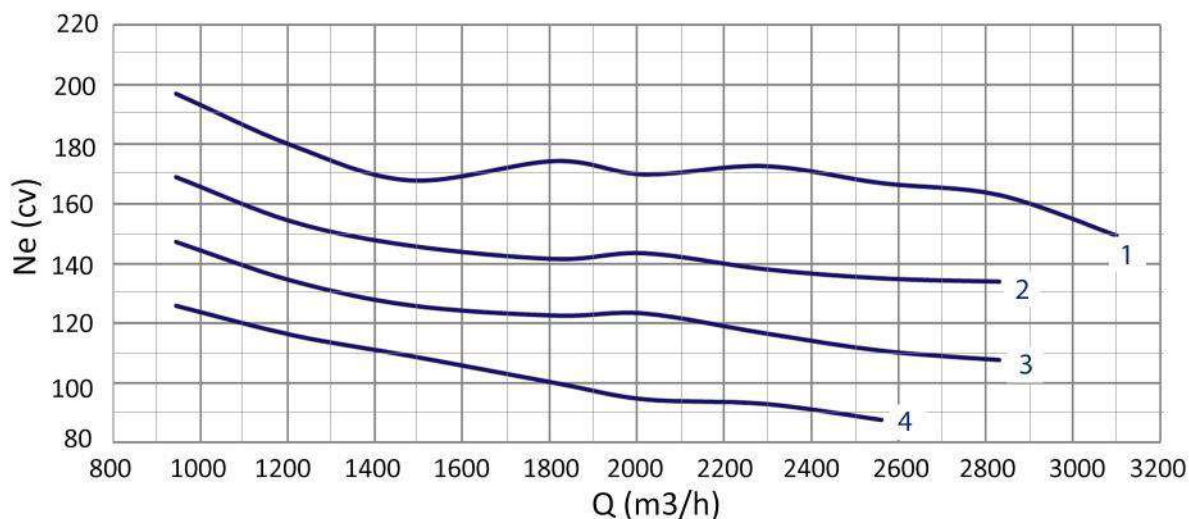
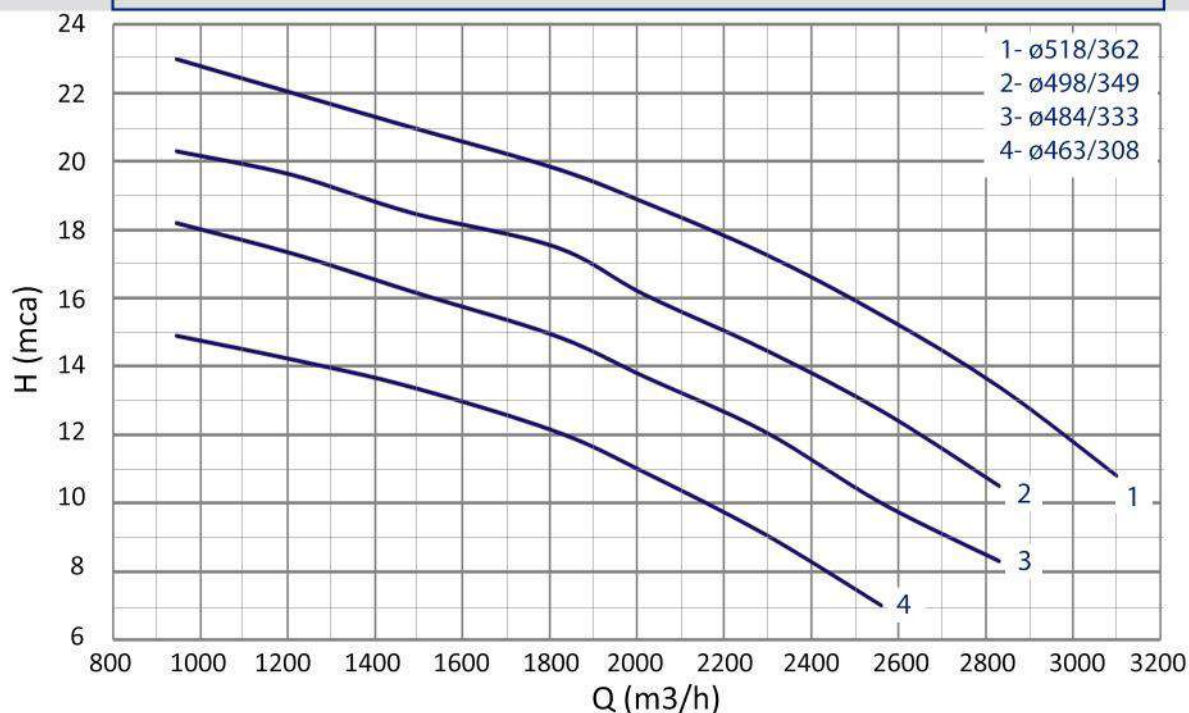
CURVA

900 rpm

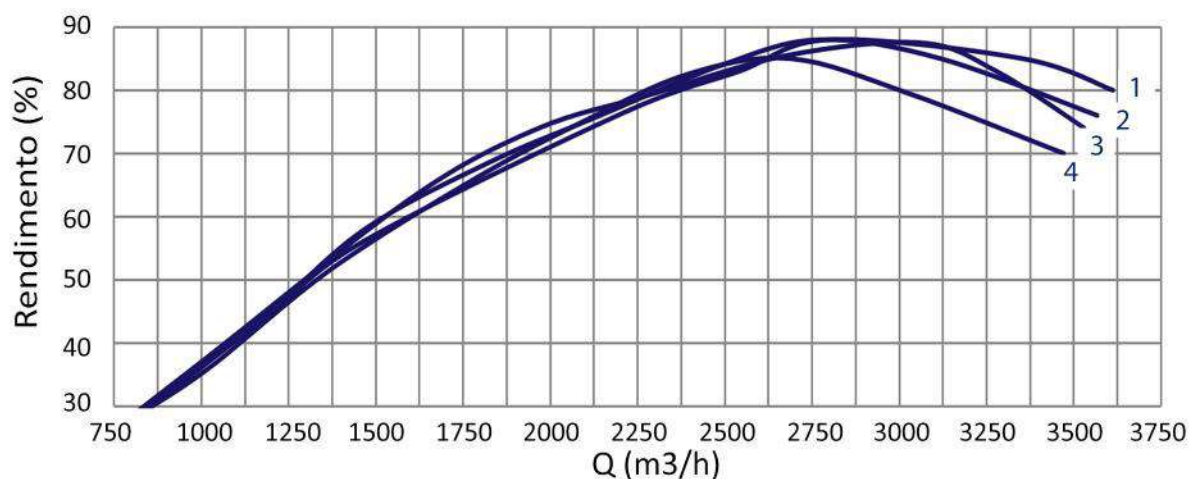
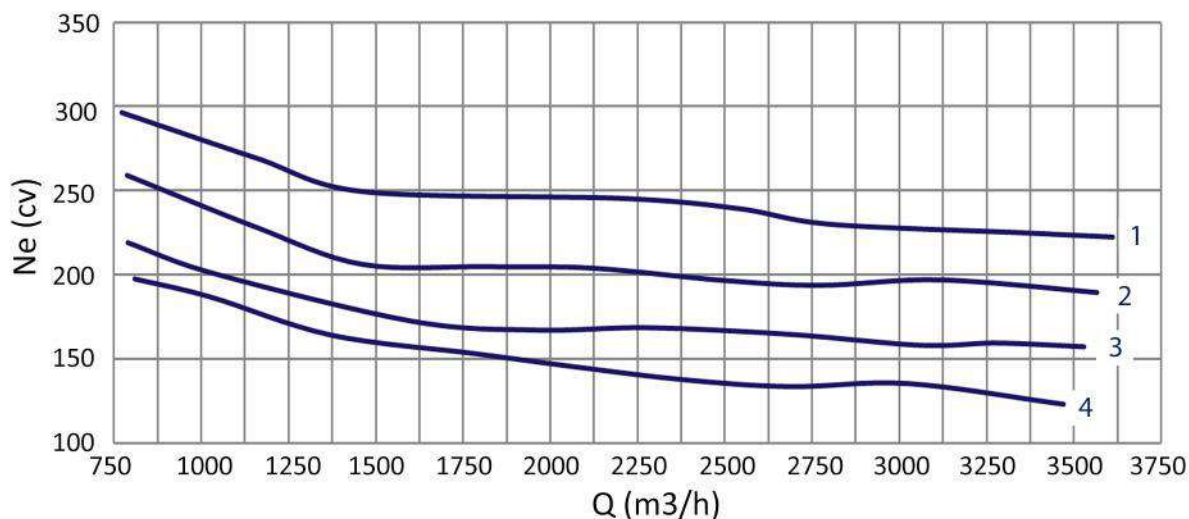
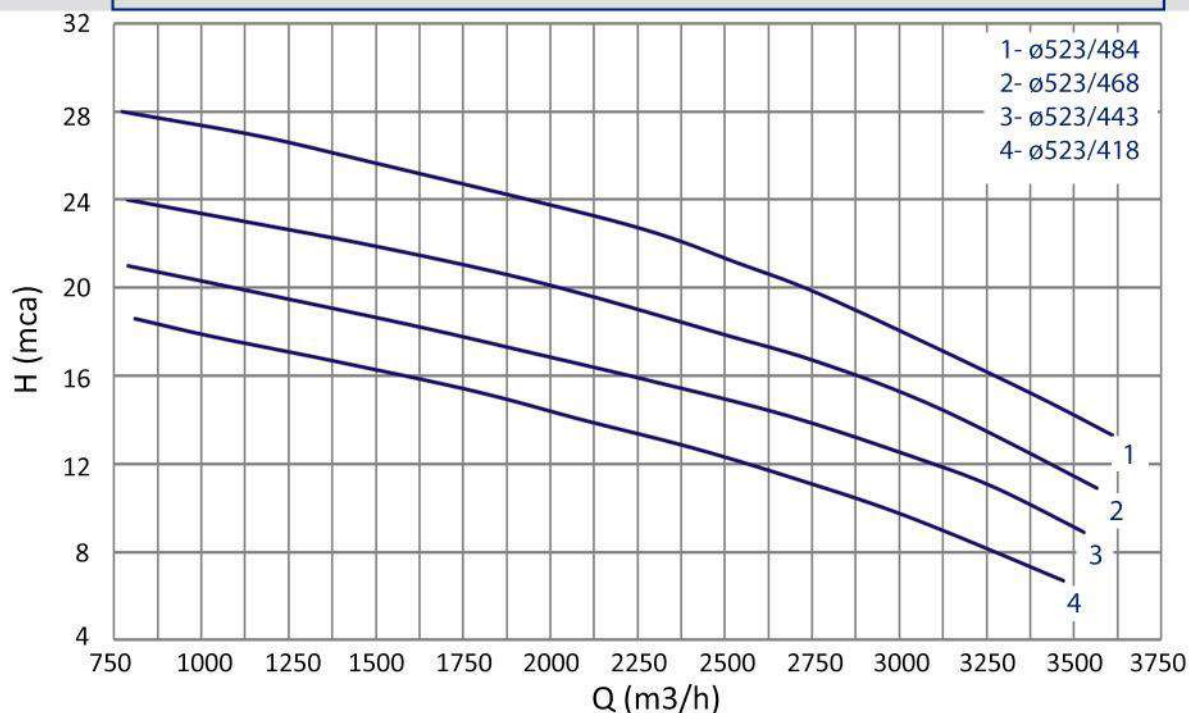
RECALQUE 500

Nº 10012605

60 Hz 8 P



SUCÇÃO 500	CURVA	900 rpm
RECALQUE 500	Nº 10012606	60 Hz 8 P



SUCÇÃO 500

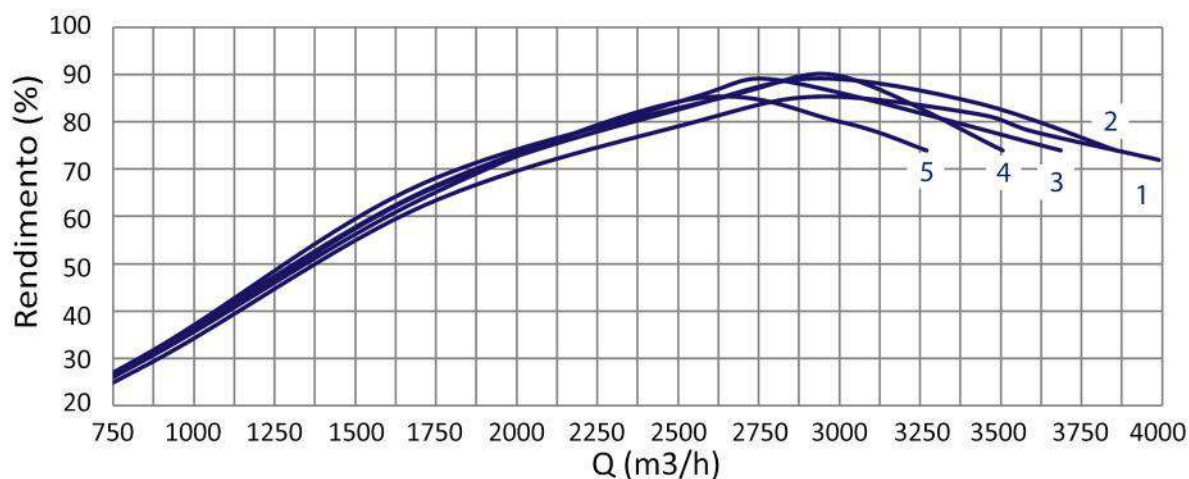
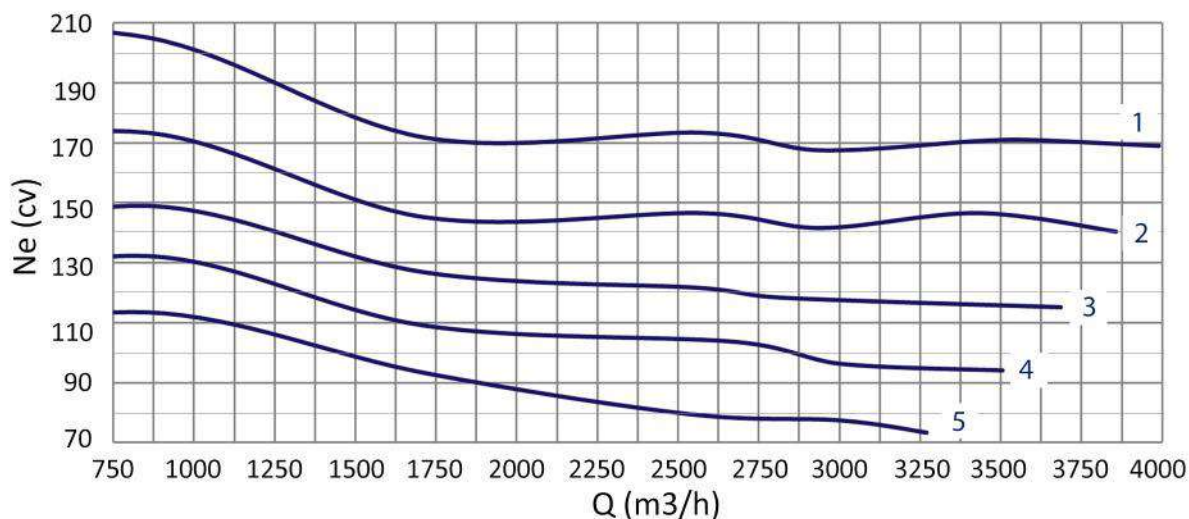
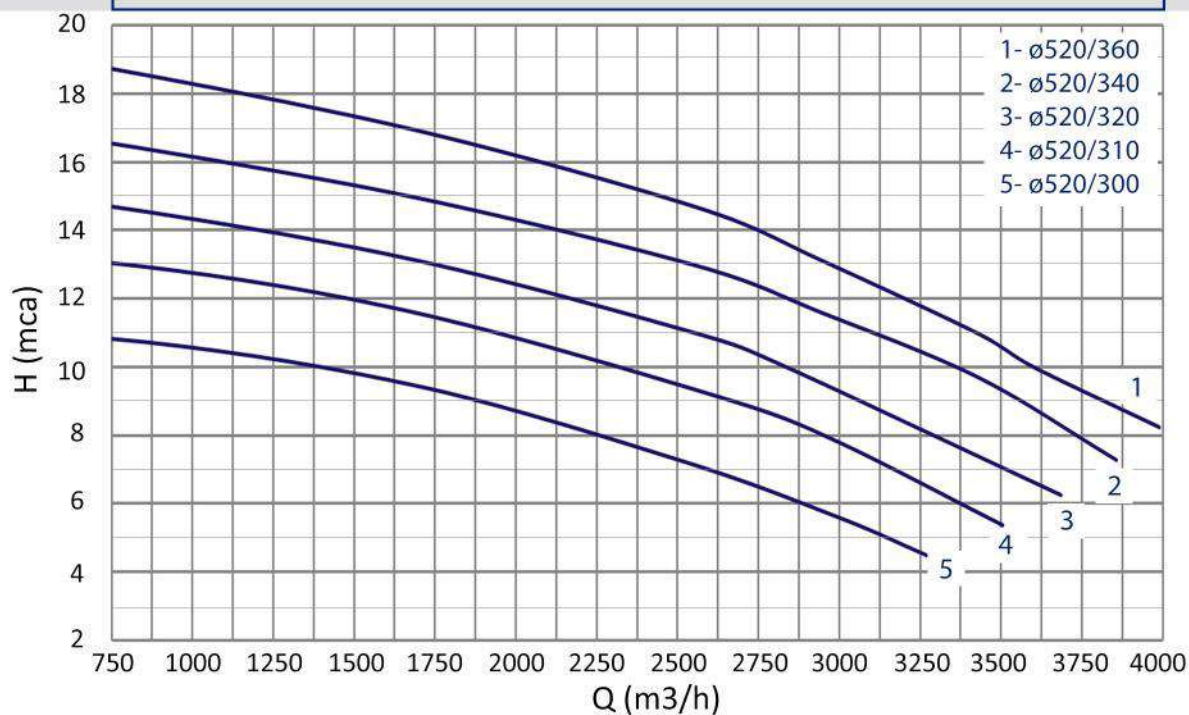
CURVA

900 rpm

RECALQUE 500

Nº 10012609

60 Hz 8 P



Um novo conceito em
Bombeamento



LINHA SEMI-AXIAL

www.motobombasflutuantes.com.br

DUPLA

ÚNICA COM DOIS MOTORES

A **Motobomba Flutuante** com carta patente nº BR 202013029970-2, foi desenvolvida para recalque de água, seja limpa, bruta ou salgada, utilizadas no saneamento, indústria, mineração e agricultura.



MOTOBOMBAS

RIO DO SUL

MOTOBOMBAS

RIO DO SUL

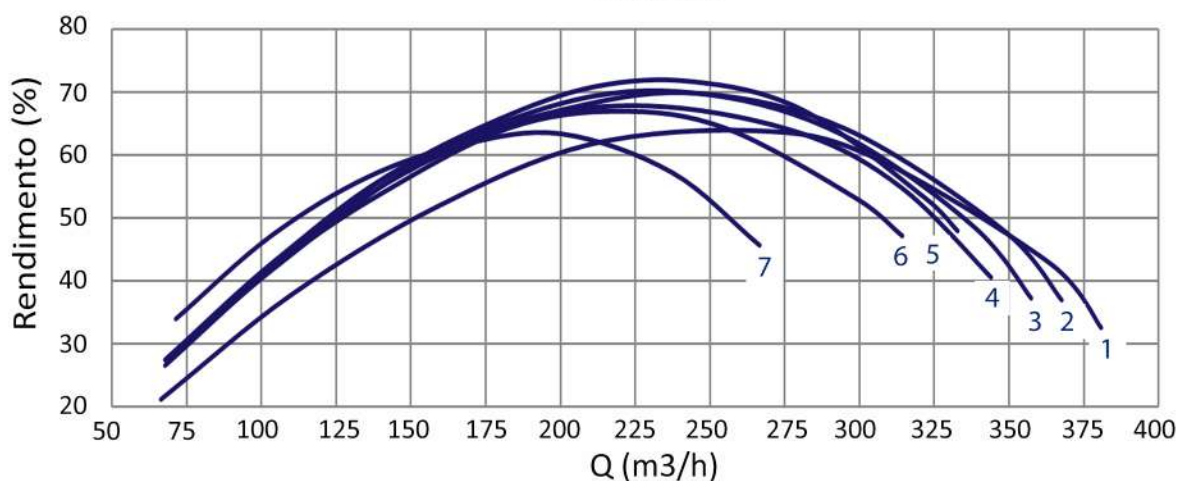
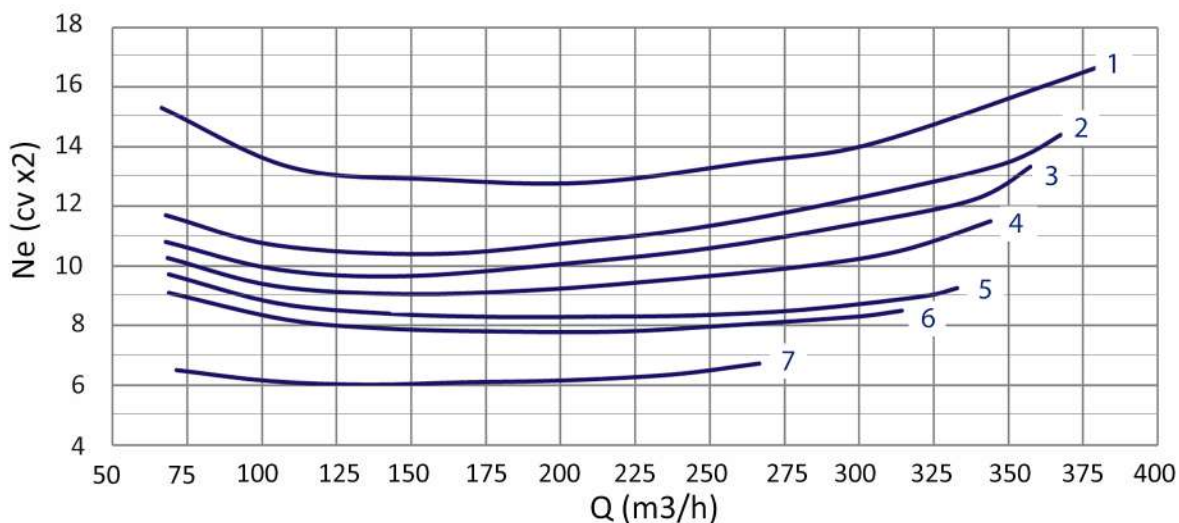
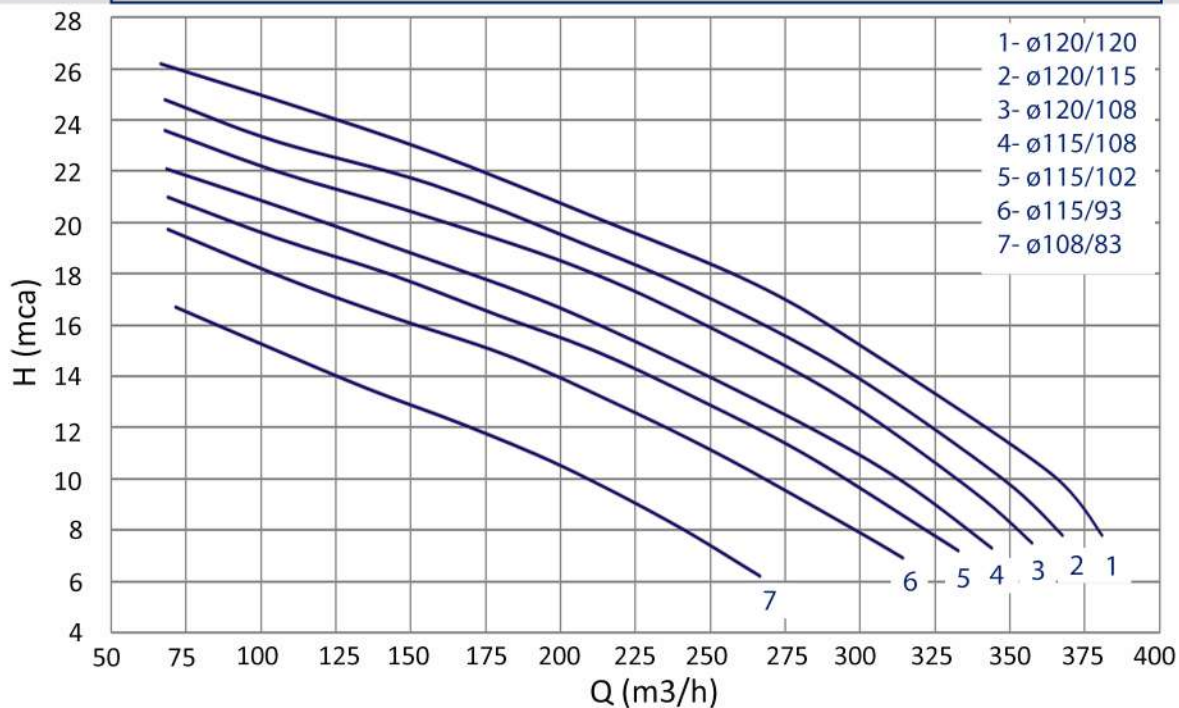


Instalação muito rápida e prática.
Com baixo impacto ambiental.
Operação imediata sem escorvamento.
Leve, compacta e fácil de transportar.
Elimina casa de bomba e base para motor.
Economia de até 50% de energia.

*Potência de 2 a 500 CV.
Vazão de 139 a 2.222 L/s ou
vazão de 100m³/h a 8.000m³/h.
Altura manométrica de 2 a 35 mca.*



SUCÇÃO 2x 100	CURVA	3600 rpm
RECALQUE 150	Nº 10012801	60 Hz 2 P



SUCÇÃO 2x 125

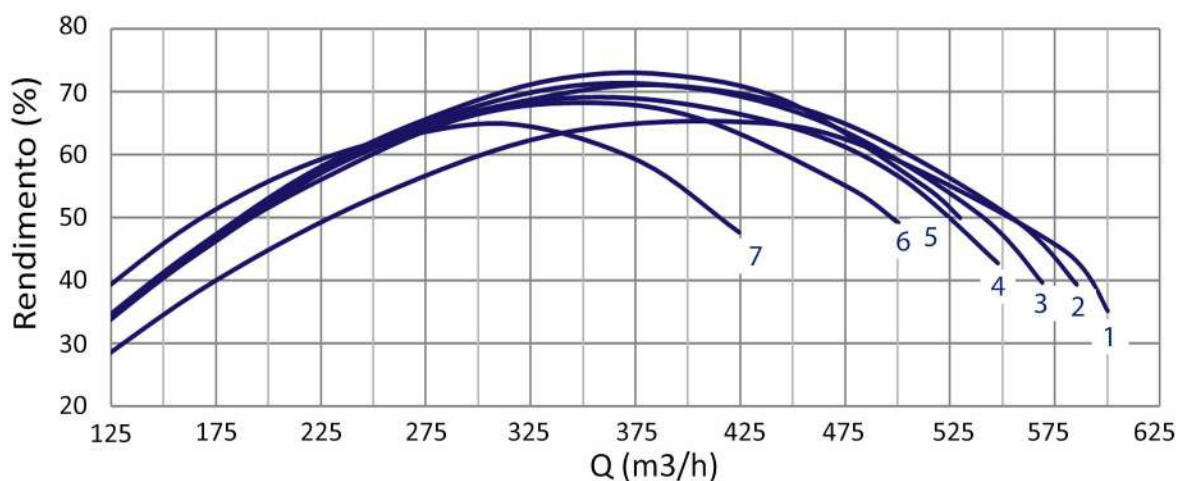
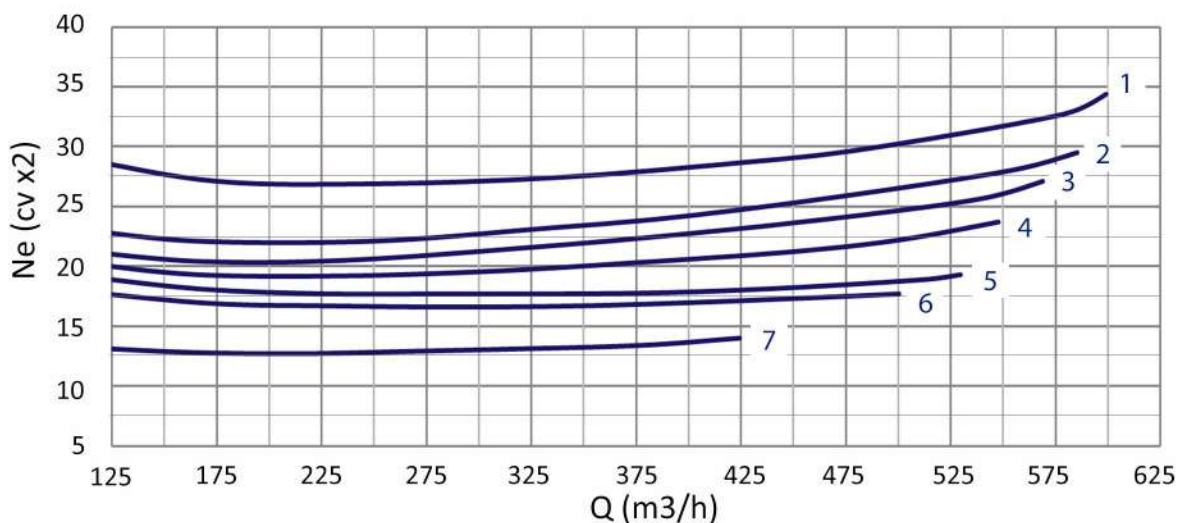
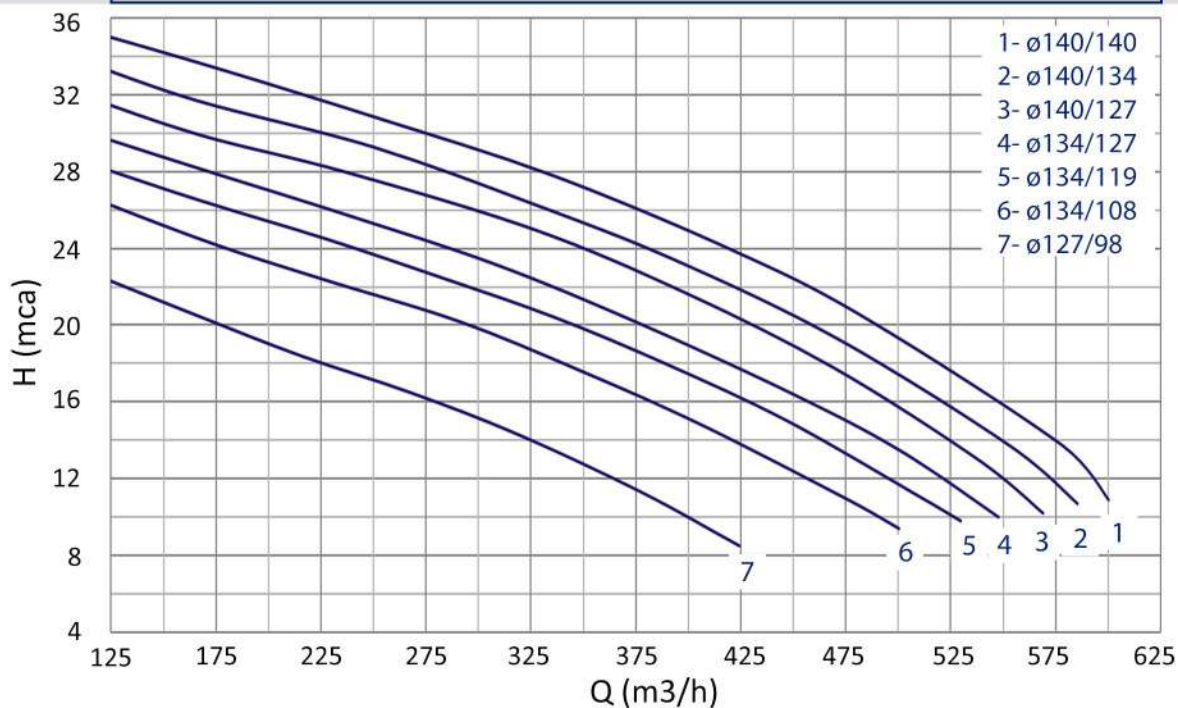
CURVA

3600 rpm

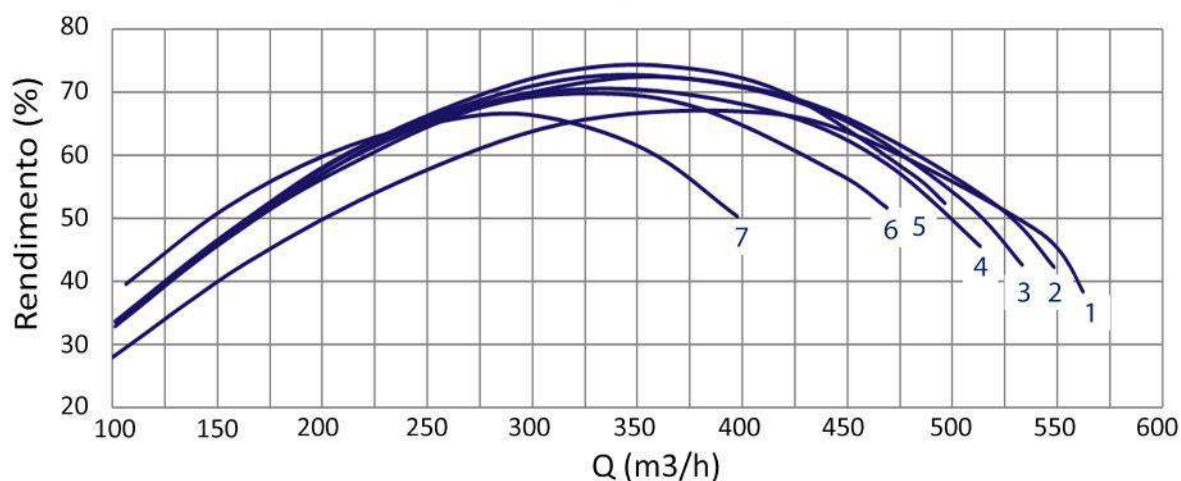
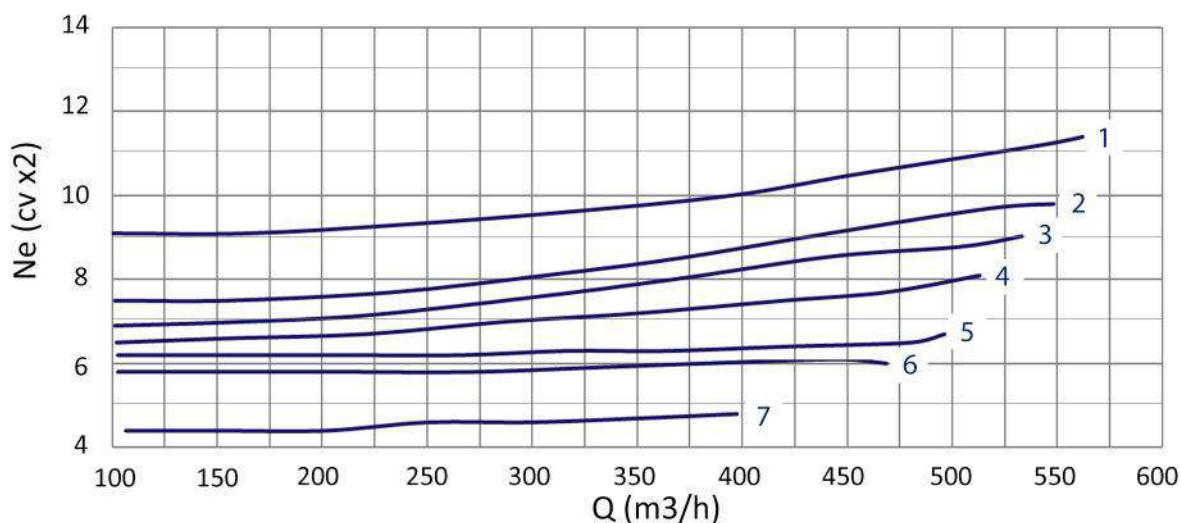
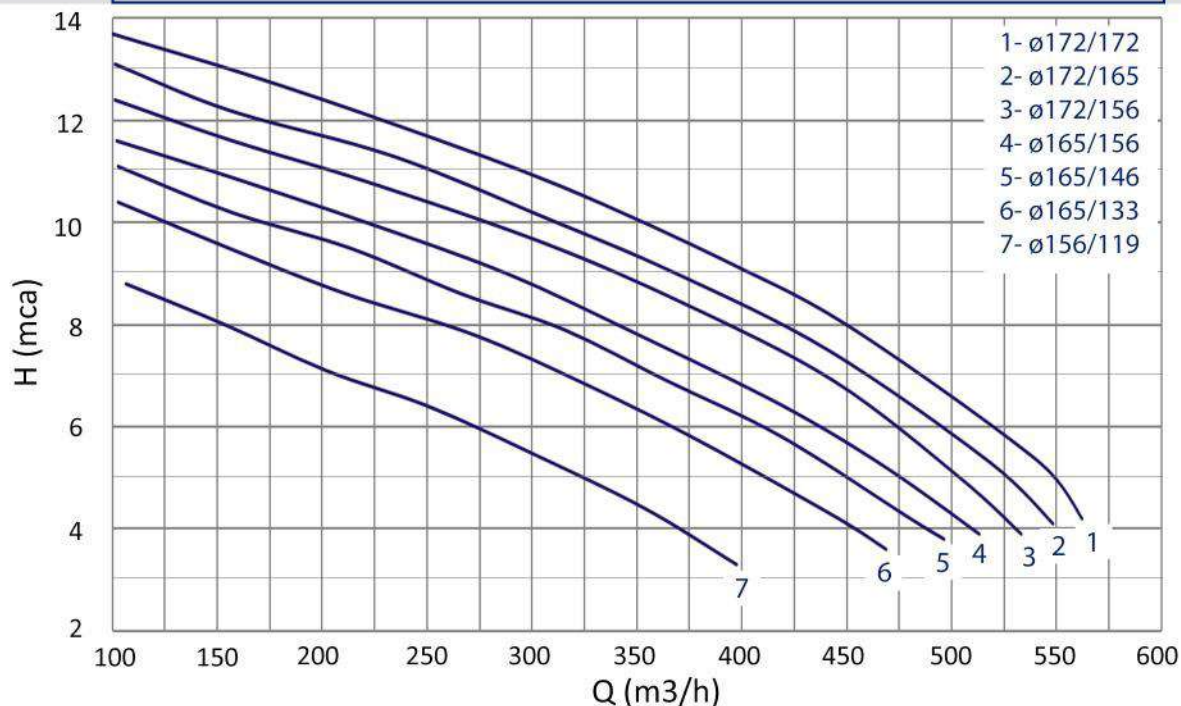
RECALQUE 175

Nº 10012901

60 Hz 2 P



SUCÇÃO 2x 150	CURVA	1800 rpm
RECALQUE 200	Nº 10013002	60 Hz 4 P



SUCÇÃO 2x 175

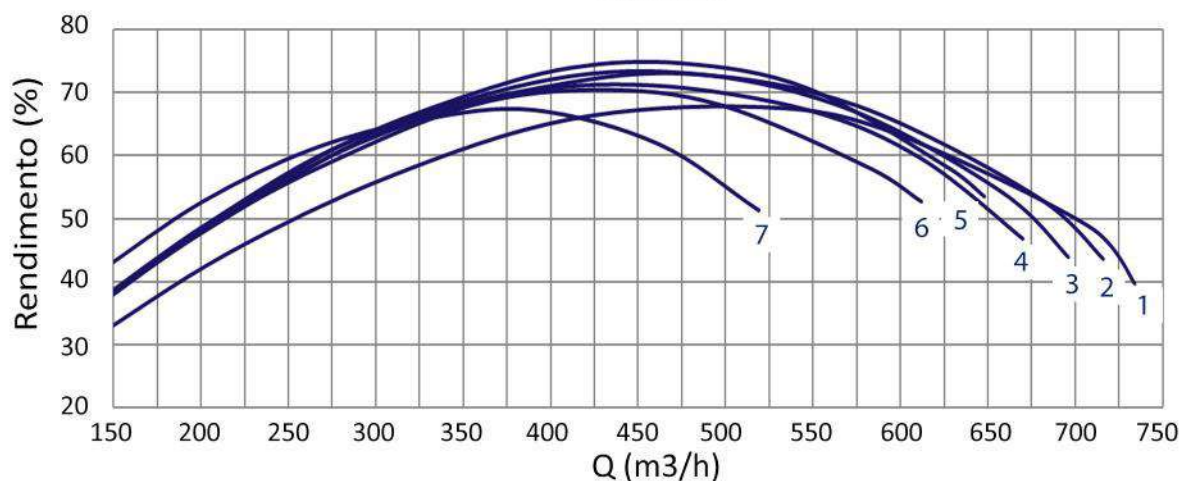
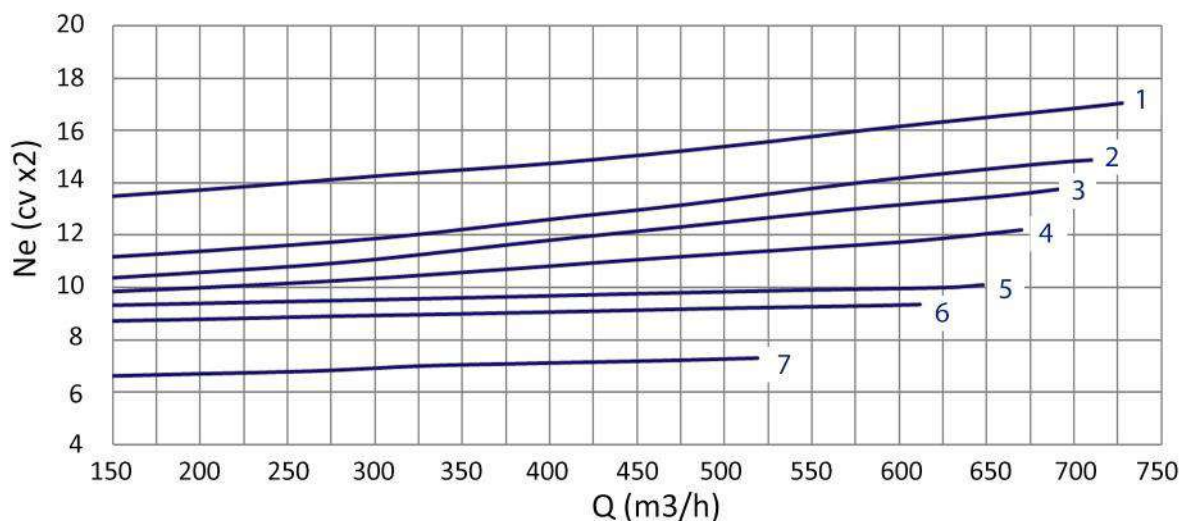
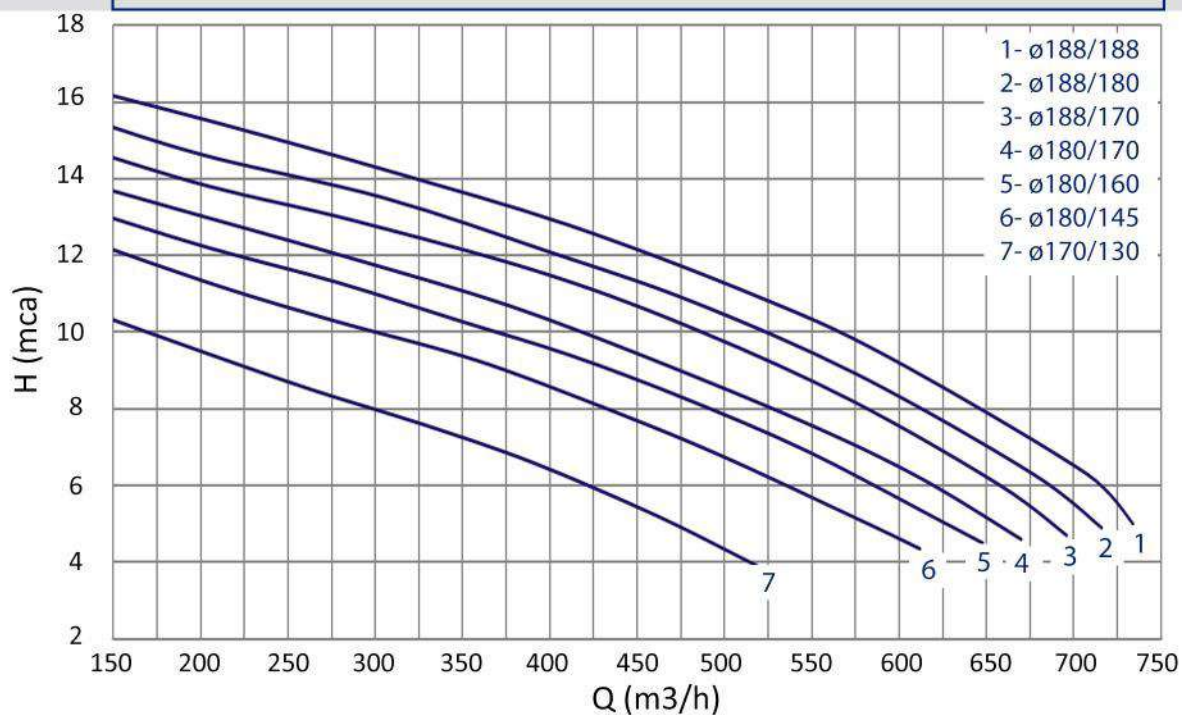
CURVA

1800 rpm

RECALQUE 250

Nº 10013101

60 Hz 4 P



SUCÇÃO 2x 200

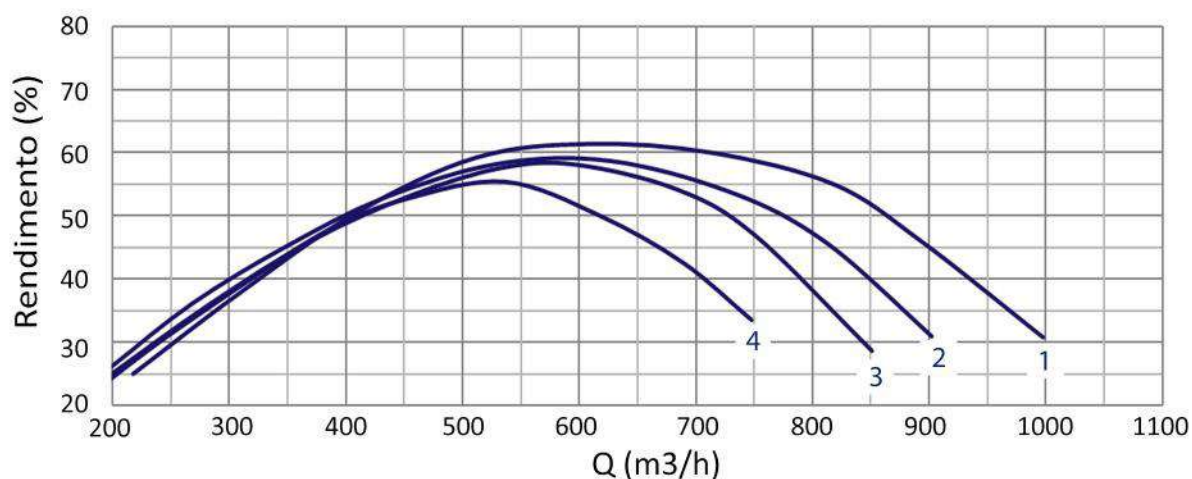
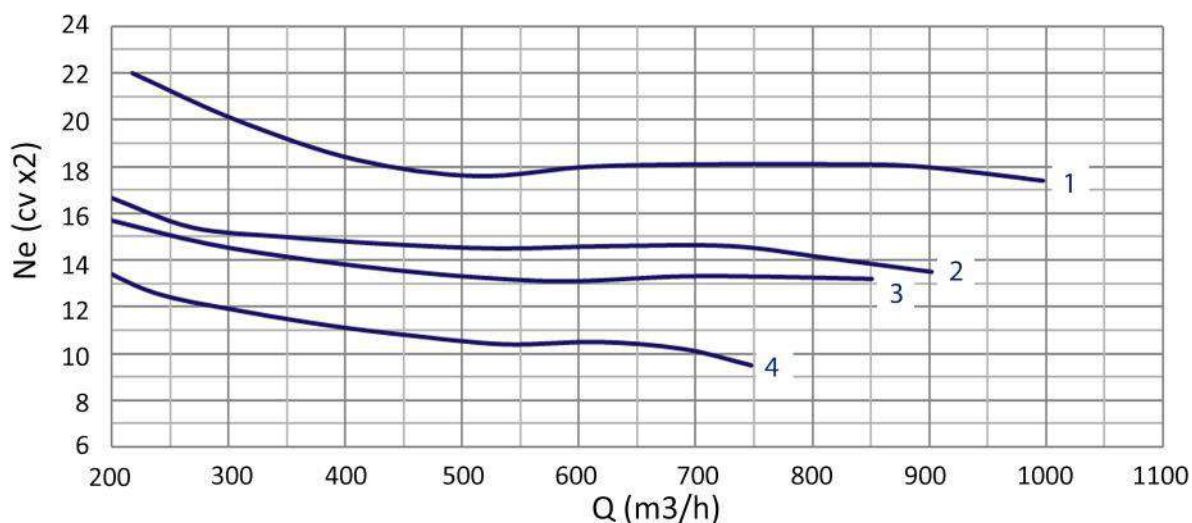
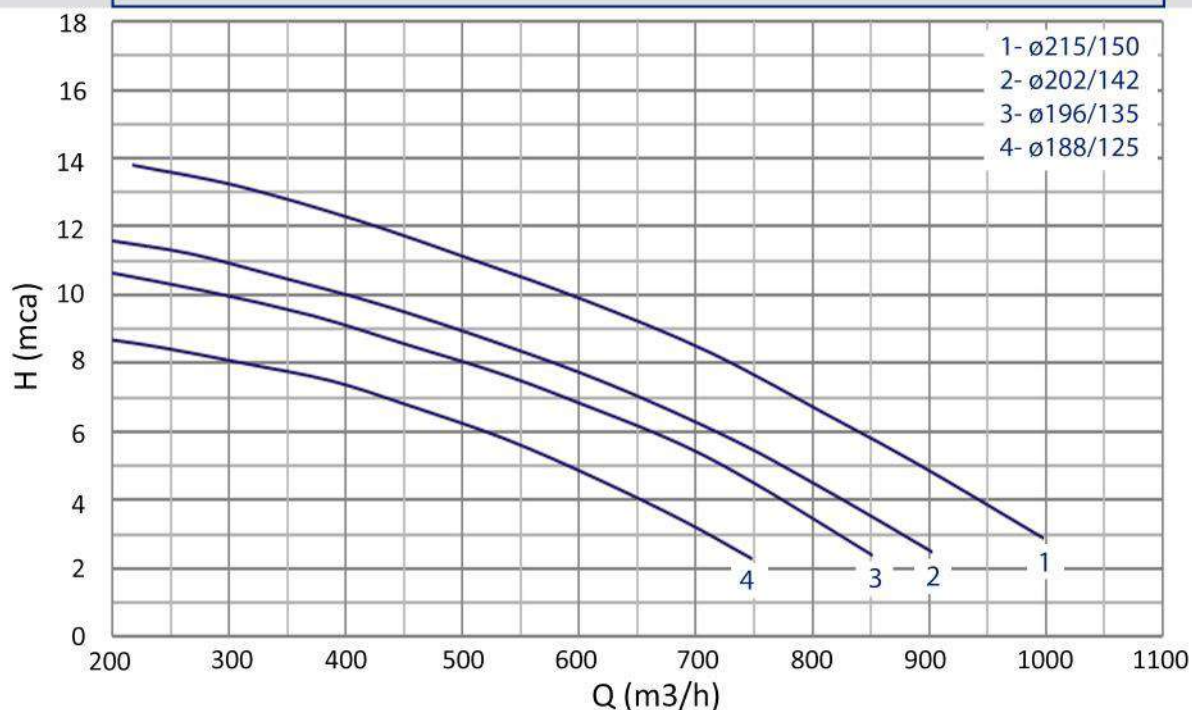
CURVA

1800 rpm

RECALQUE 300

Nº 10013202

60 Hz 4 P



SUCÇÃO 2x 200

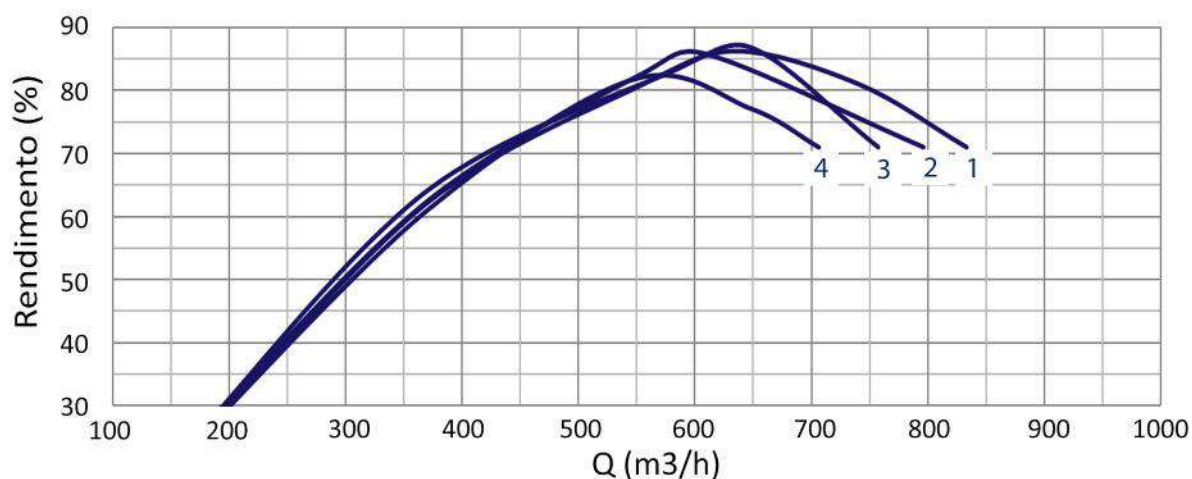
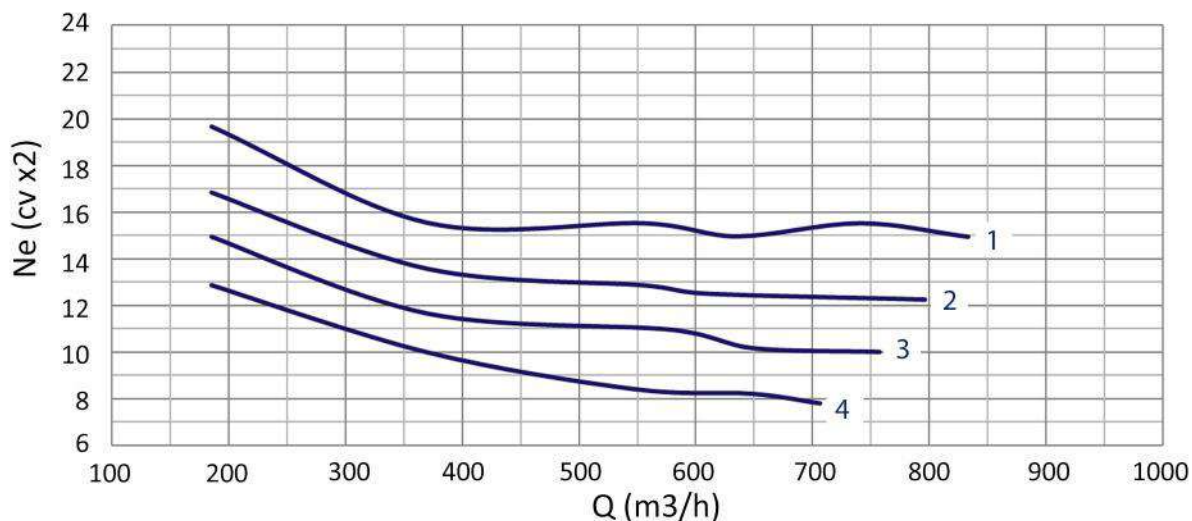
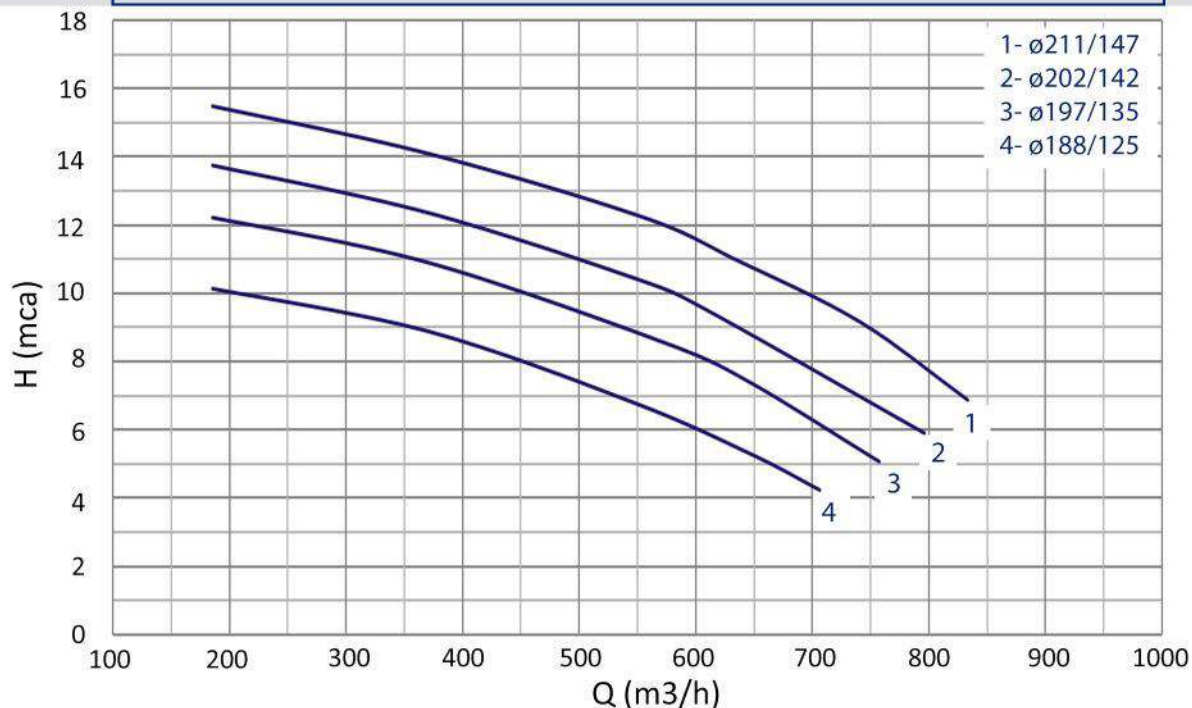
CURVA

1800 rpm

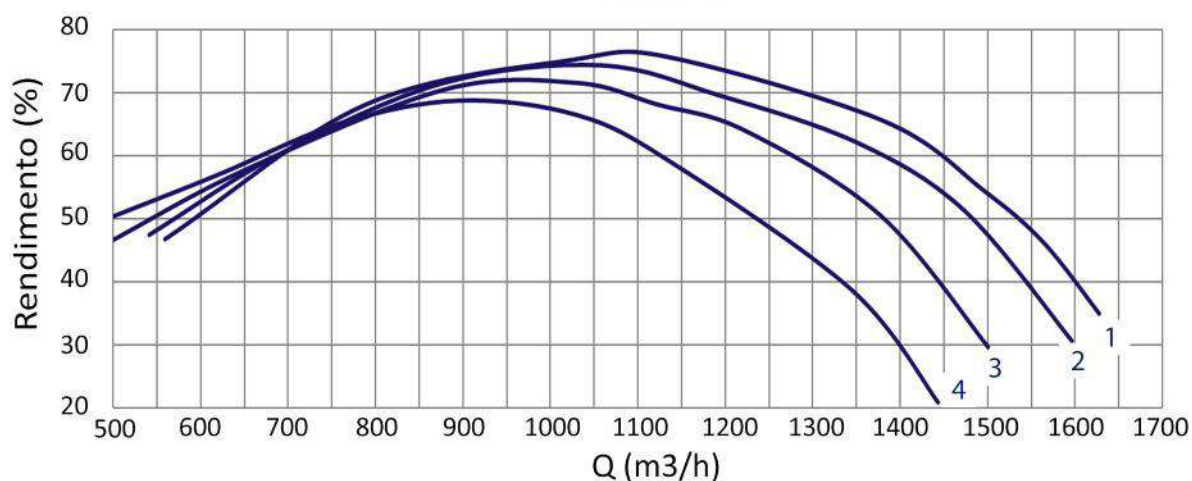
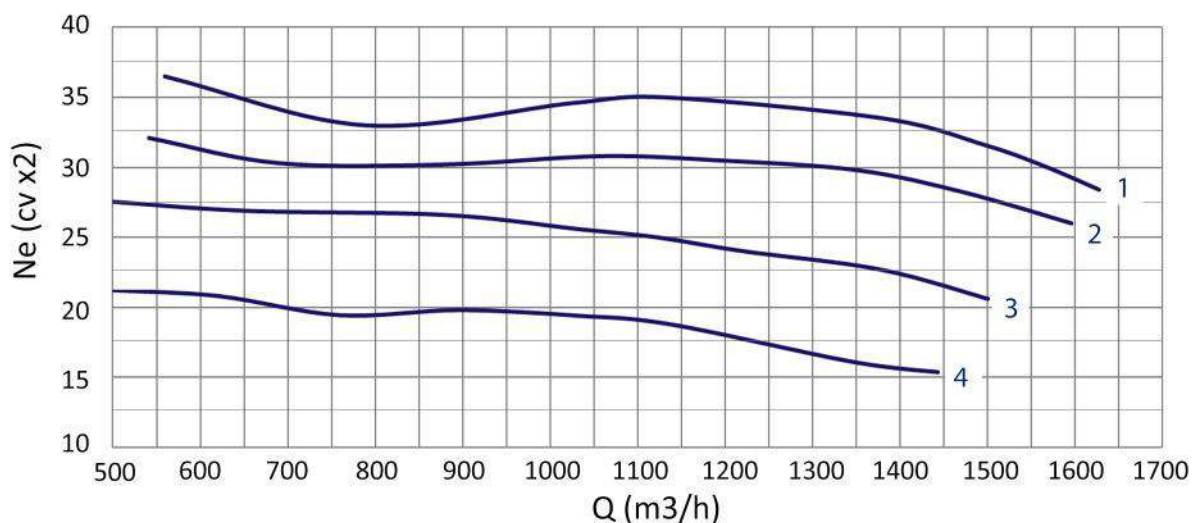
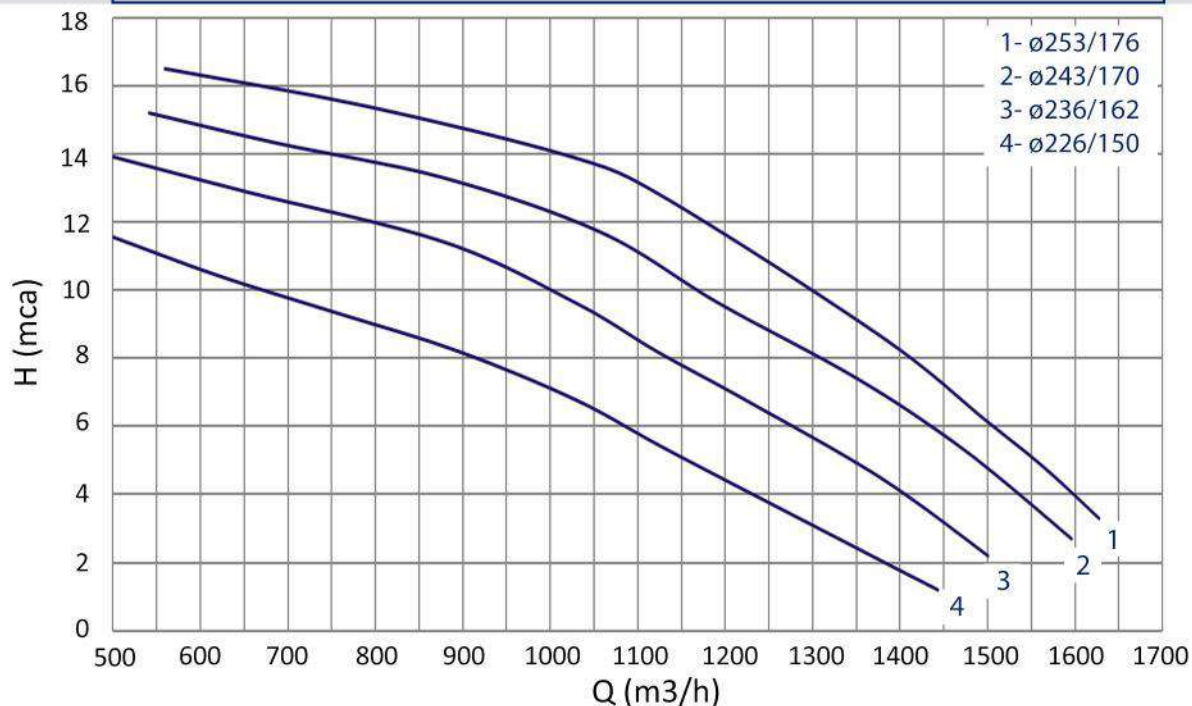
RECALQUE 300

Nº 10013203

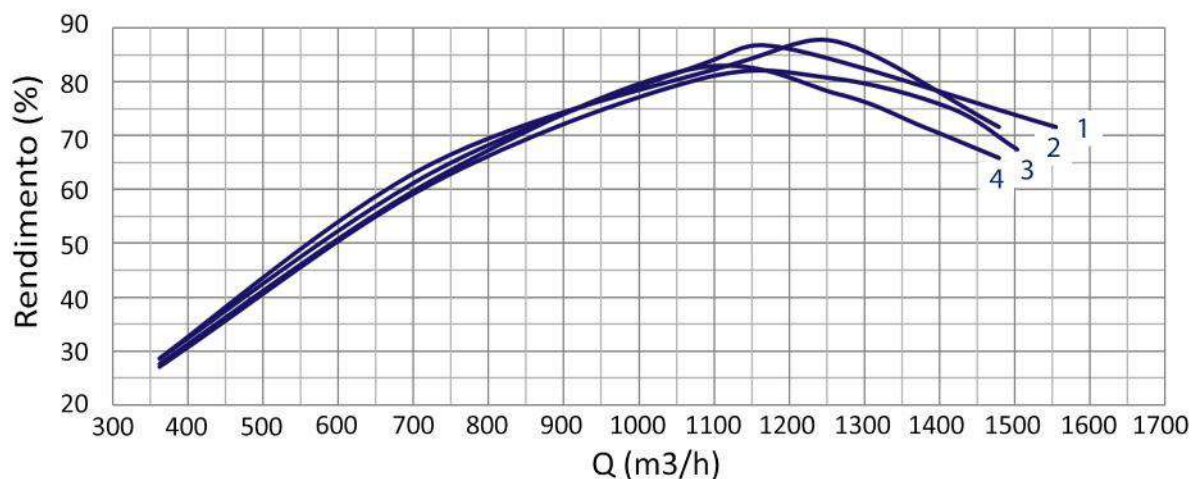
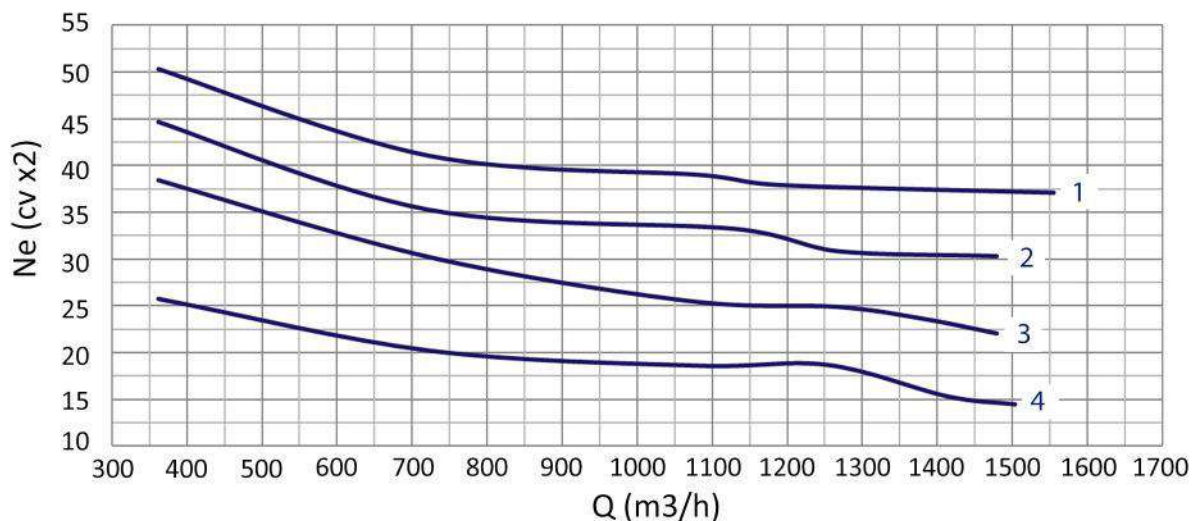
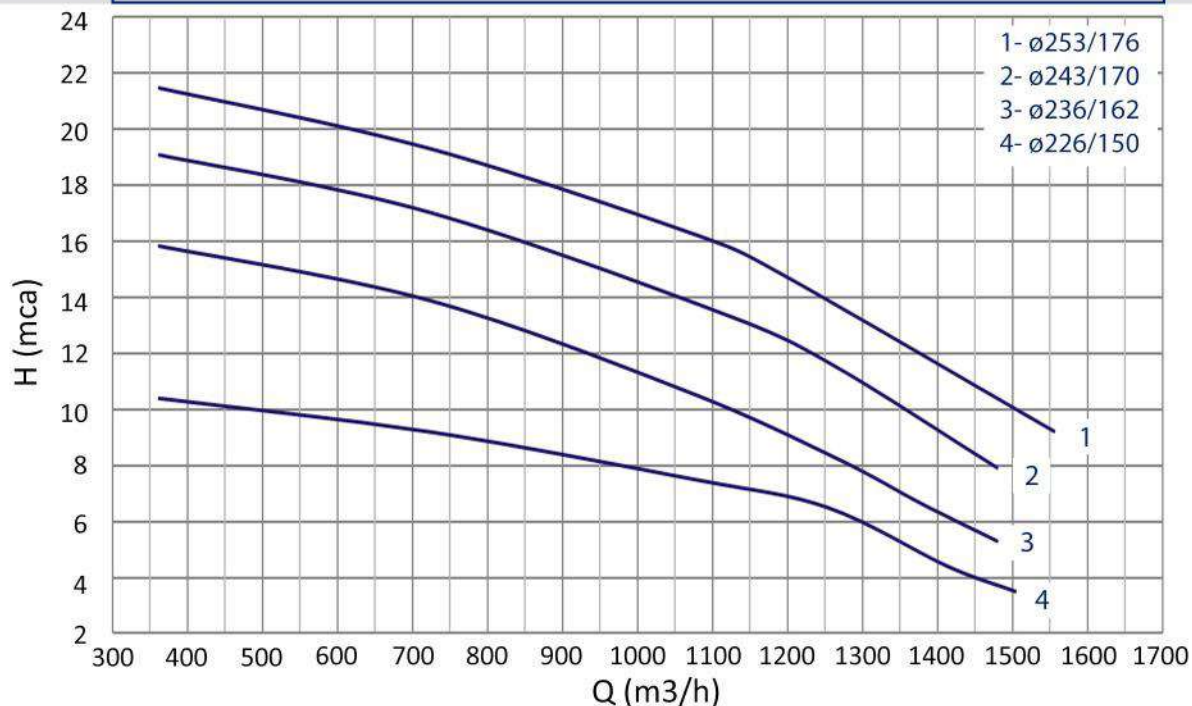
60 Hz 4 P



SUCÇÃO 2x 250	CURVA	1800 rpm
RECALQUE 350	Nº 10013301	60 Hz 4 P



SUCÇÃO 2x 250	CURVA	1800 rpm
RECALQUE 350	Nº 10013303	60 Hz 4 P



SUCÇÃO 2x 300

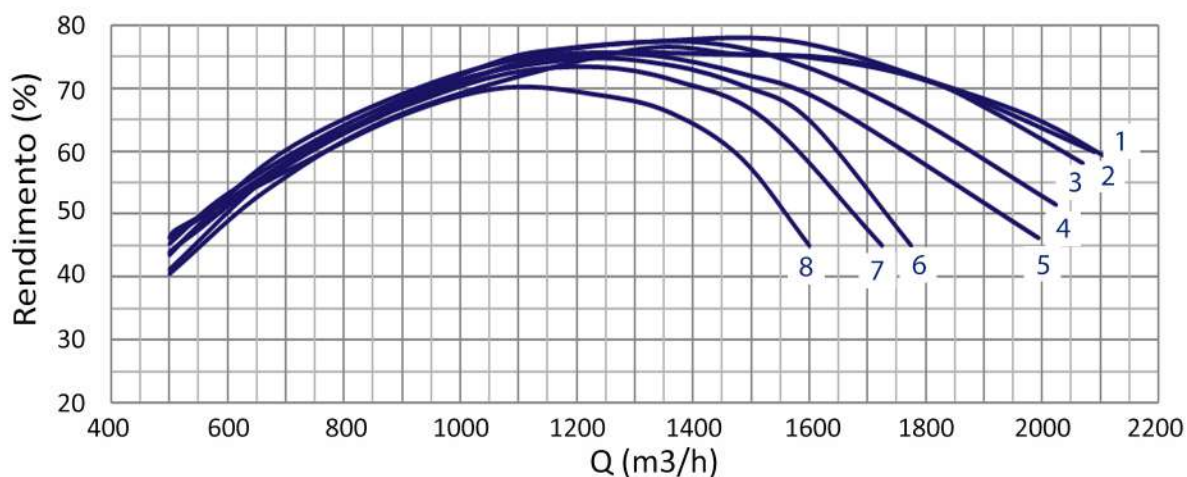
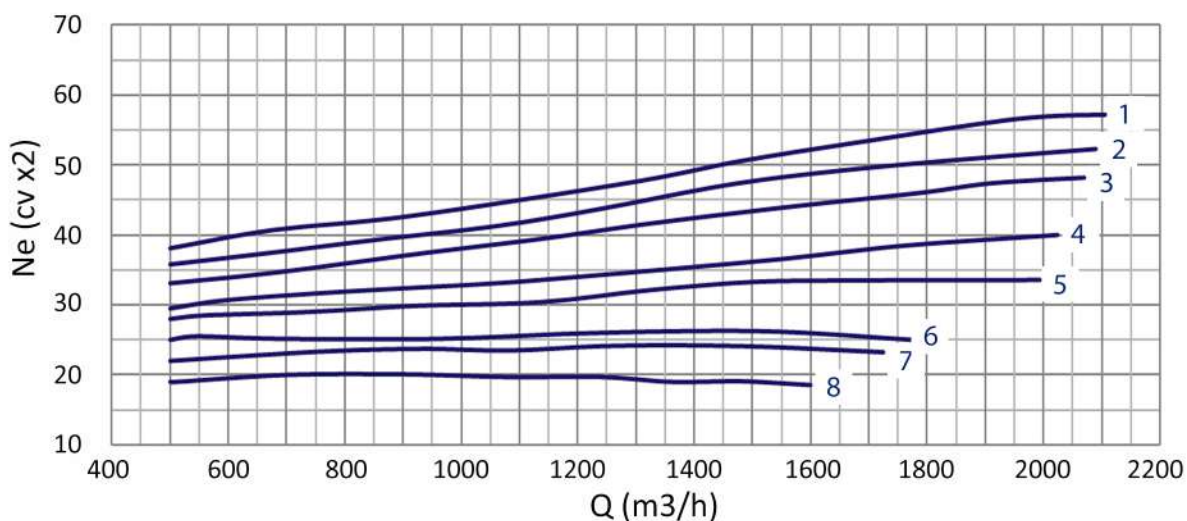
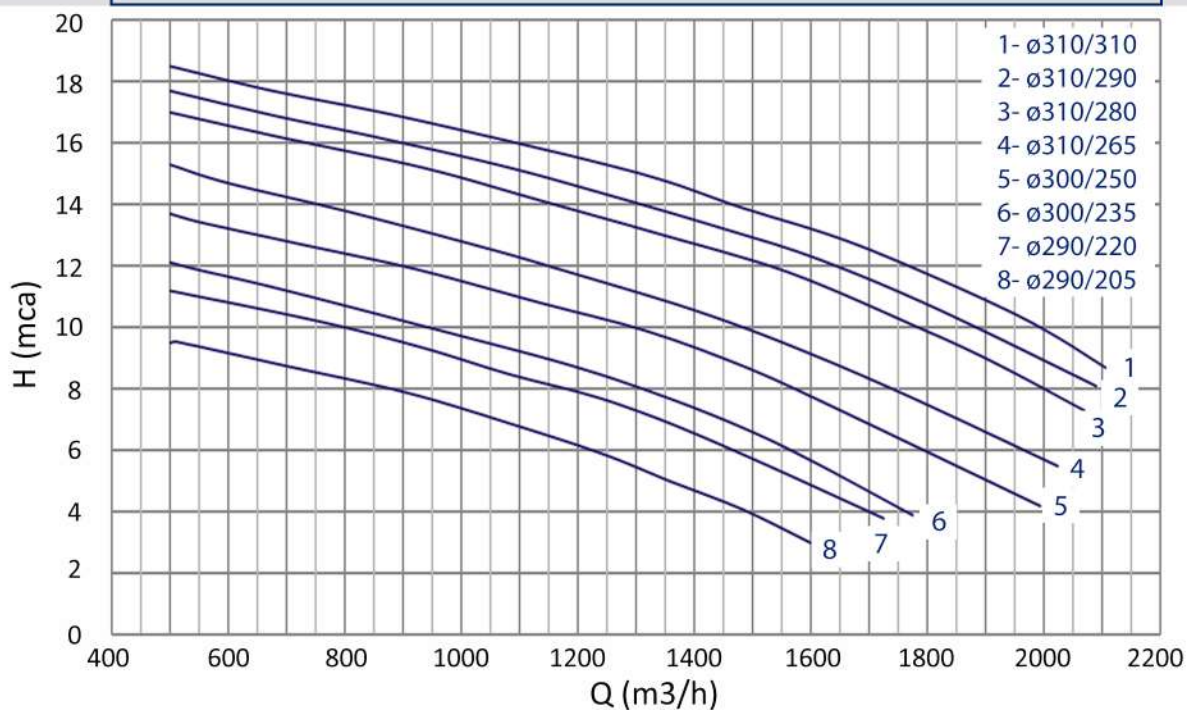
CURVA

1200 rpm

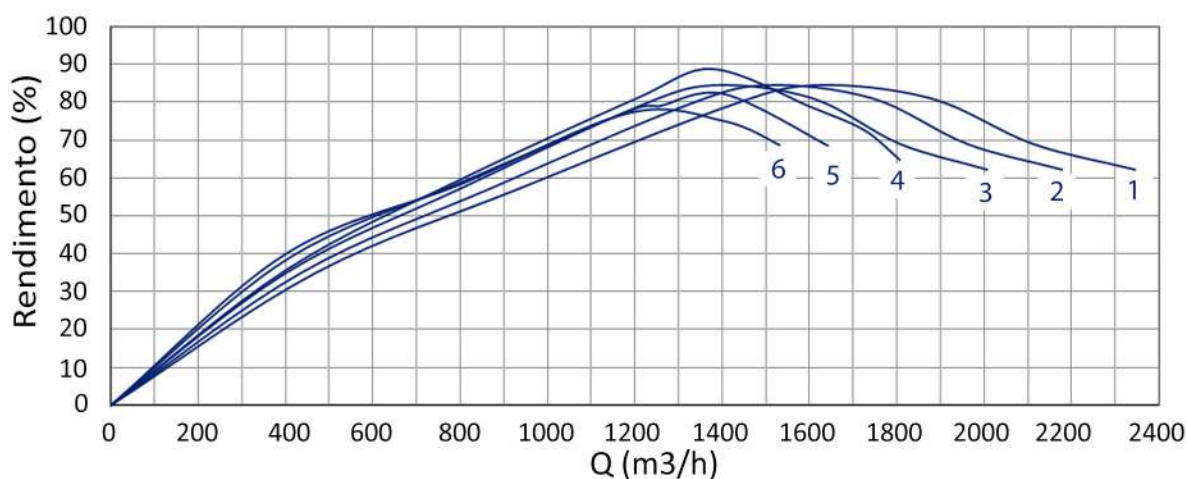
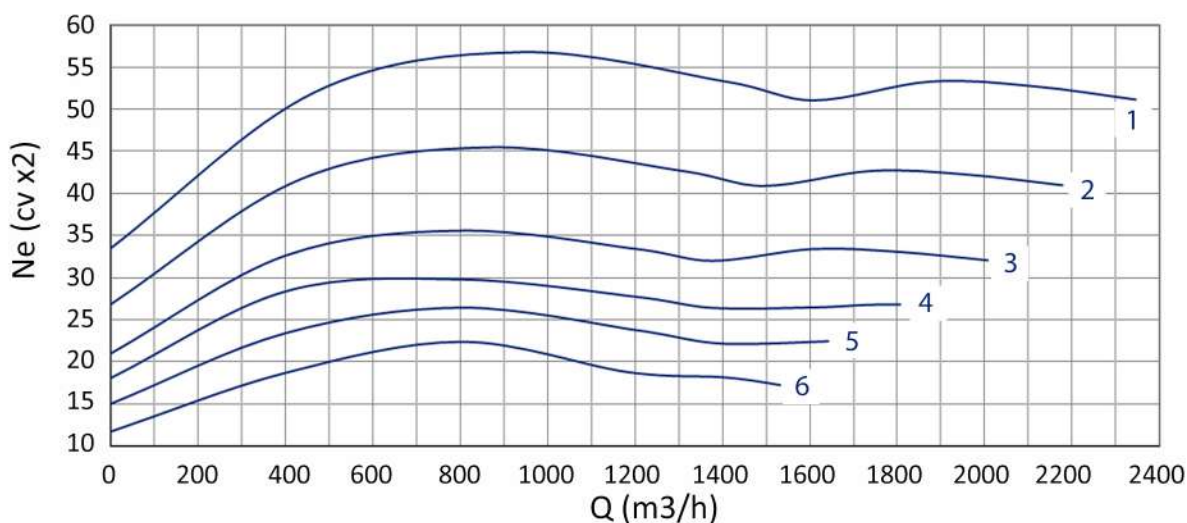
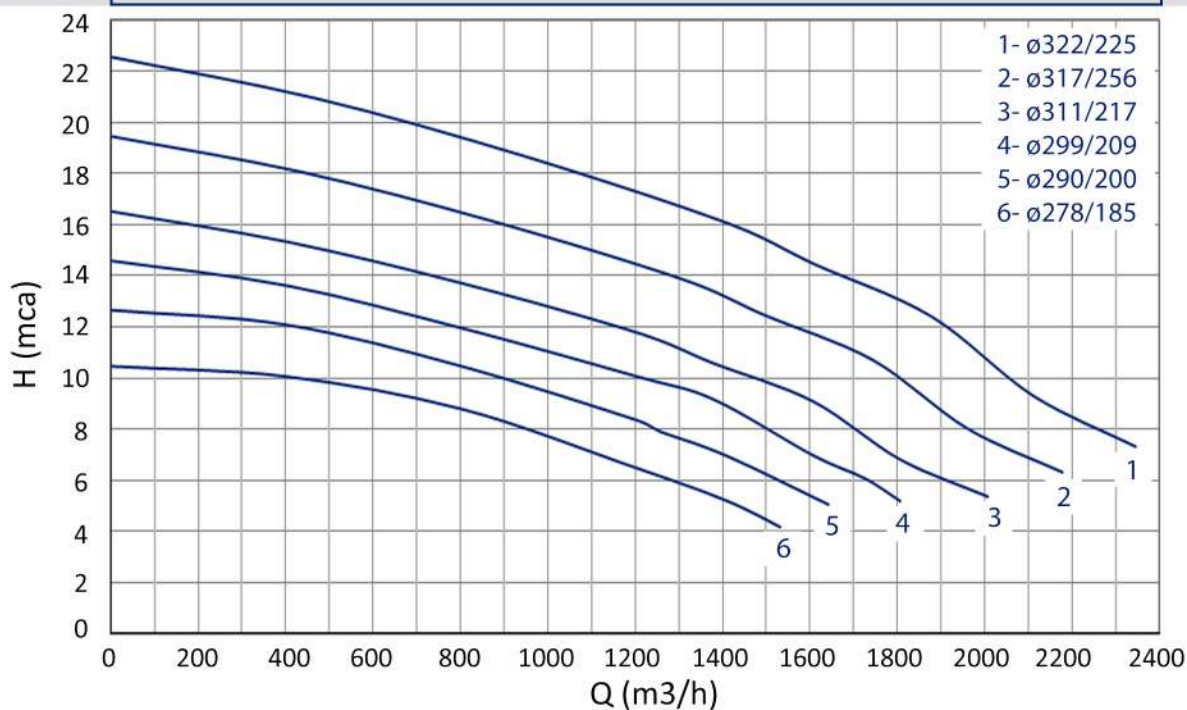
RECALQUE 400

Nº 10013403

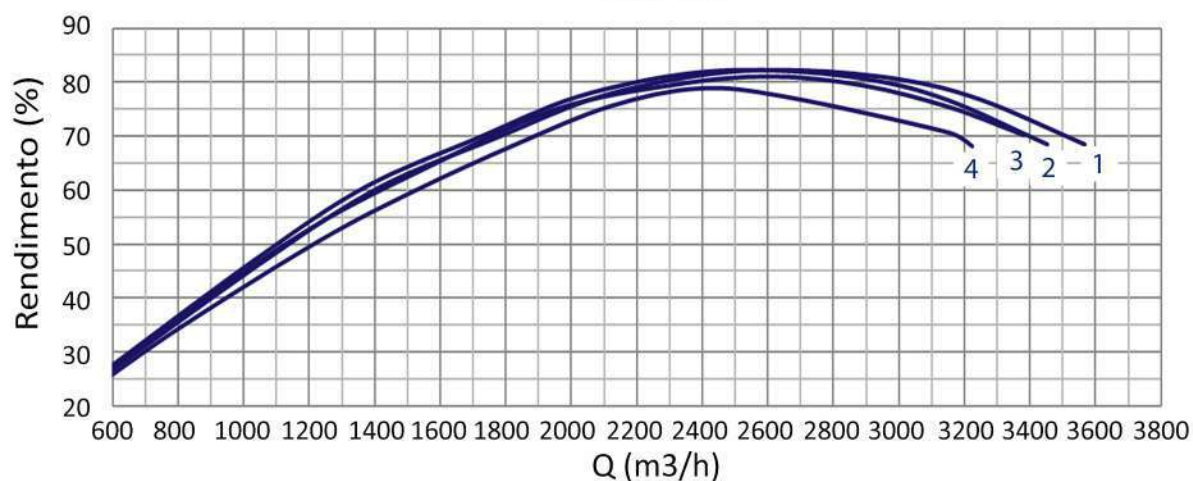
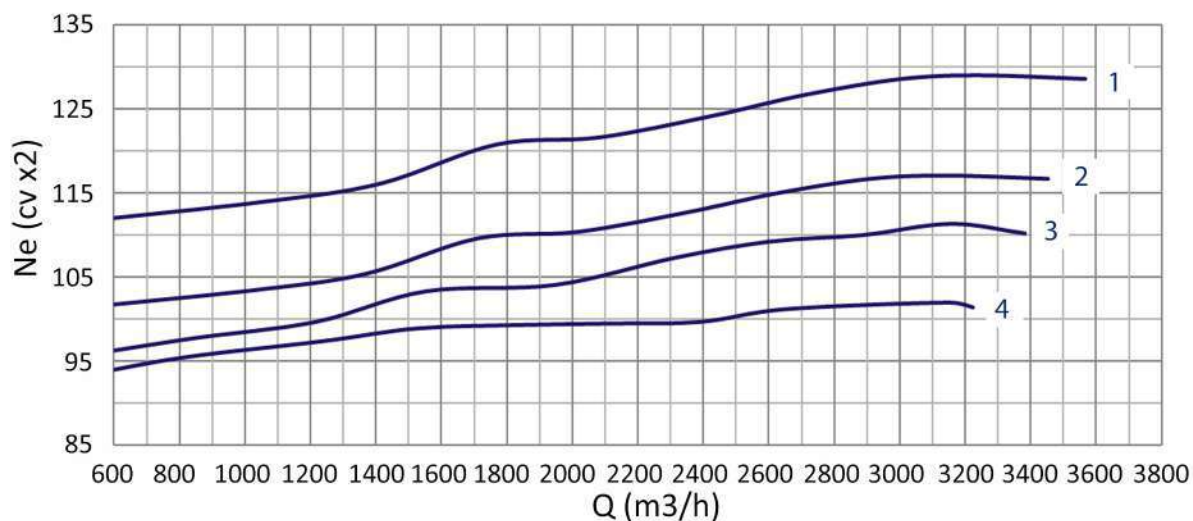
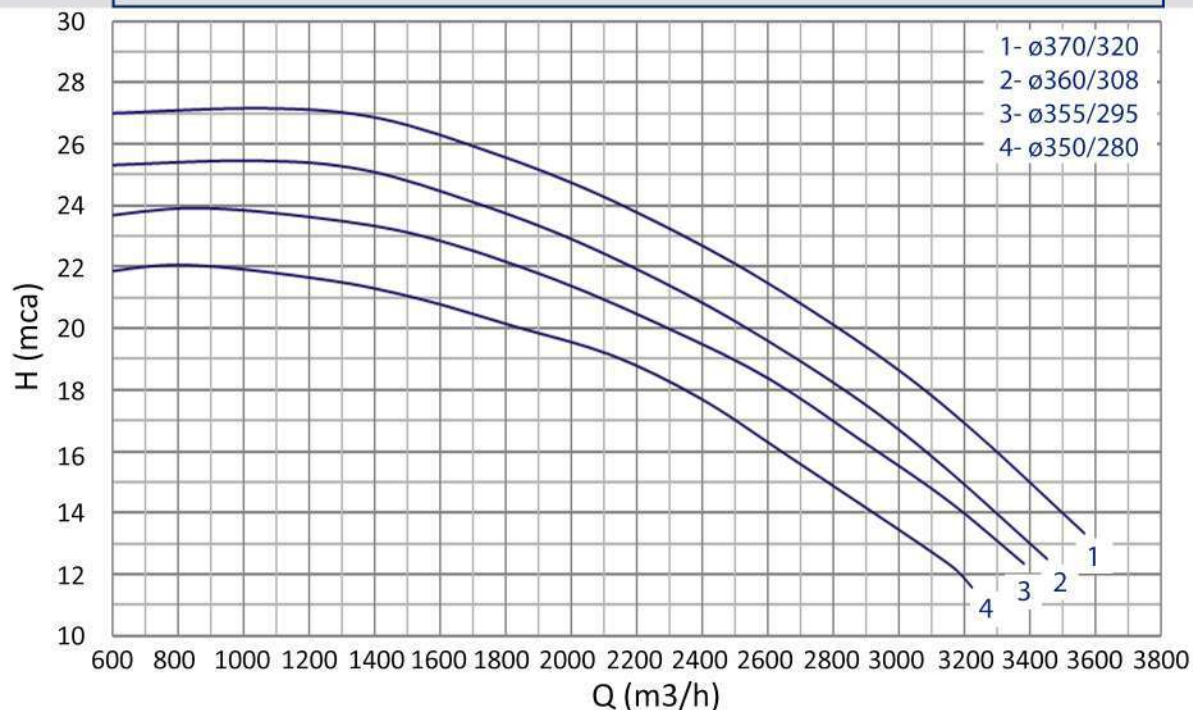
60 Hz 6 P



SUCÇÃO 2x 300	CURVA	1200 rpm
RECALQUE 300	Nº 10013406	60 Hz 6 P



SUCÇÃO 2x 350	CURVA	1200 rpm
RECALQUE 500	Nº 10013501	60 Hz 6 P



SUCÇÃO 2x 350

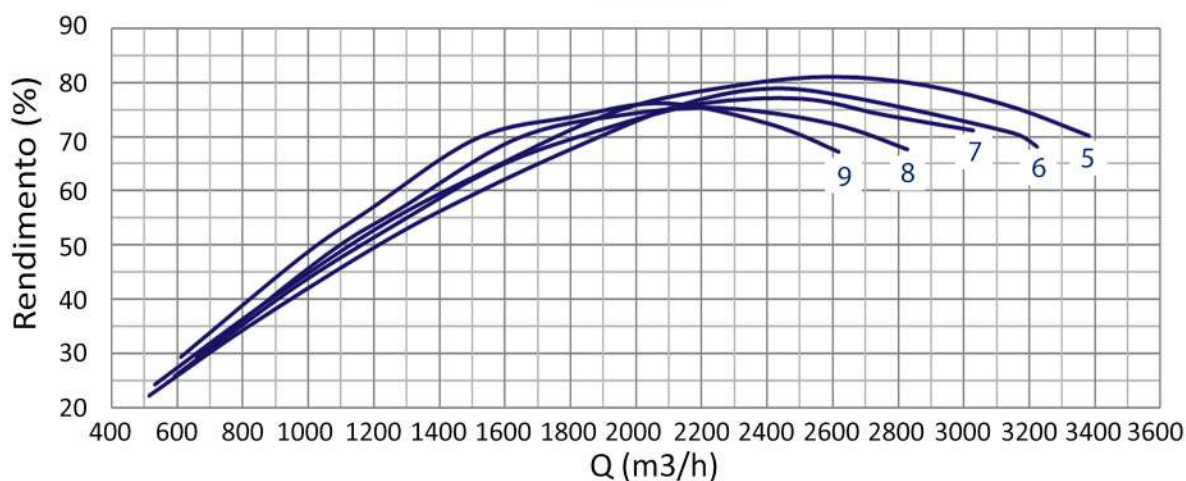
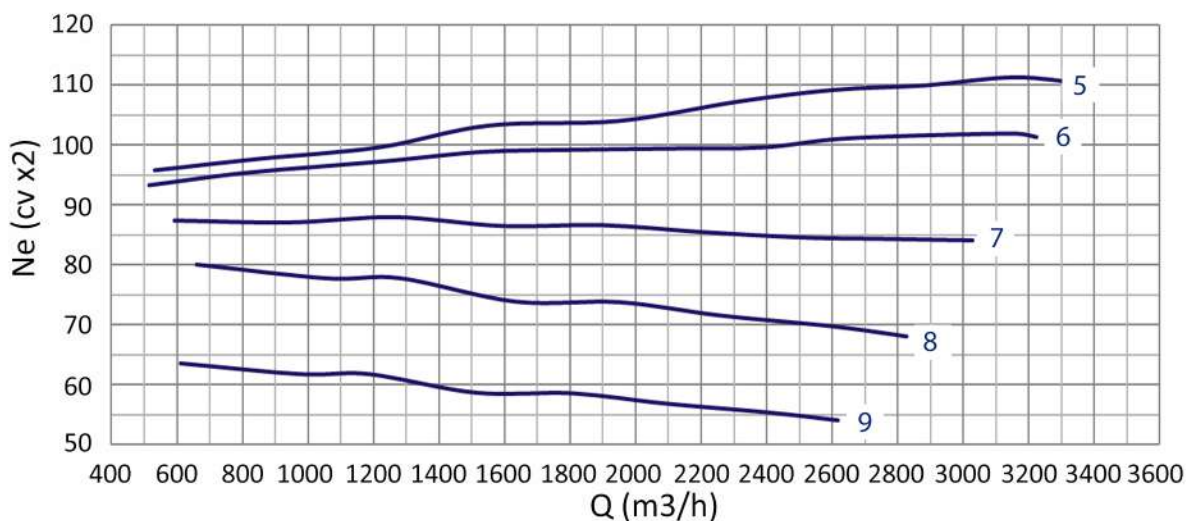
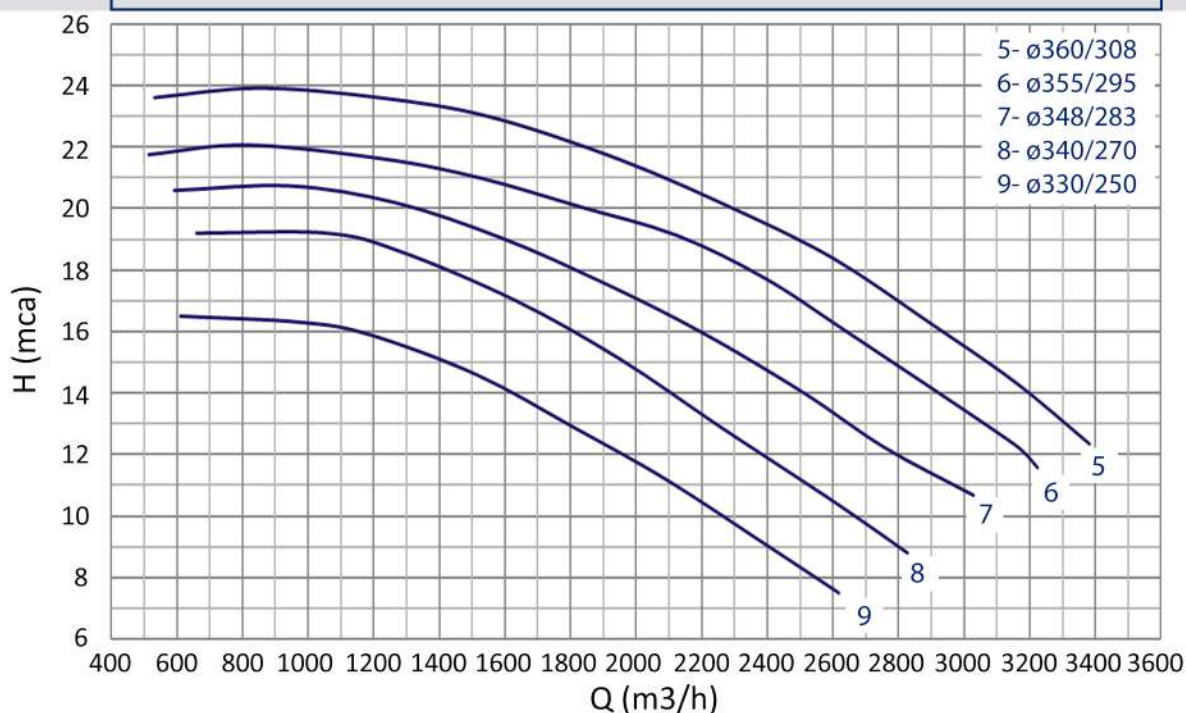
CURVA

1200 rpm

RECALQUE 500

Nº 10013504

60 Hz 6 P



SUCÇÃO 2x 400

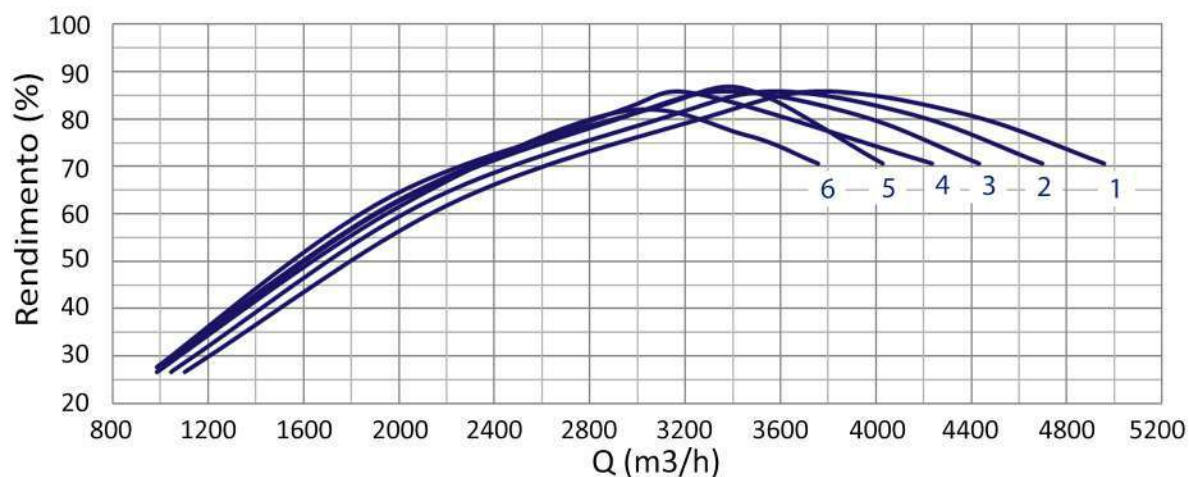
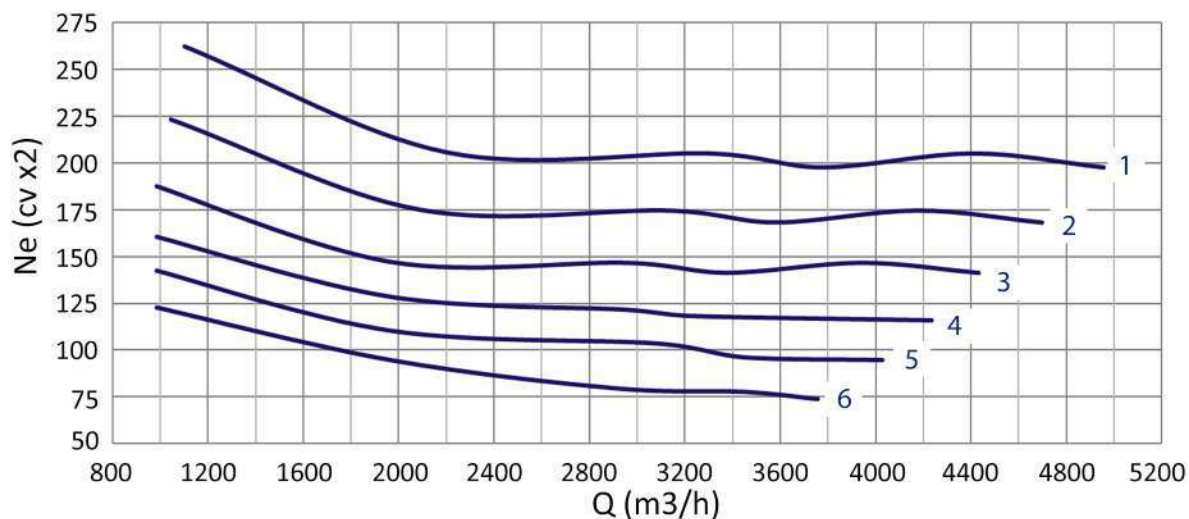
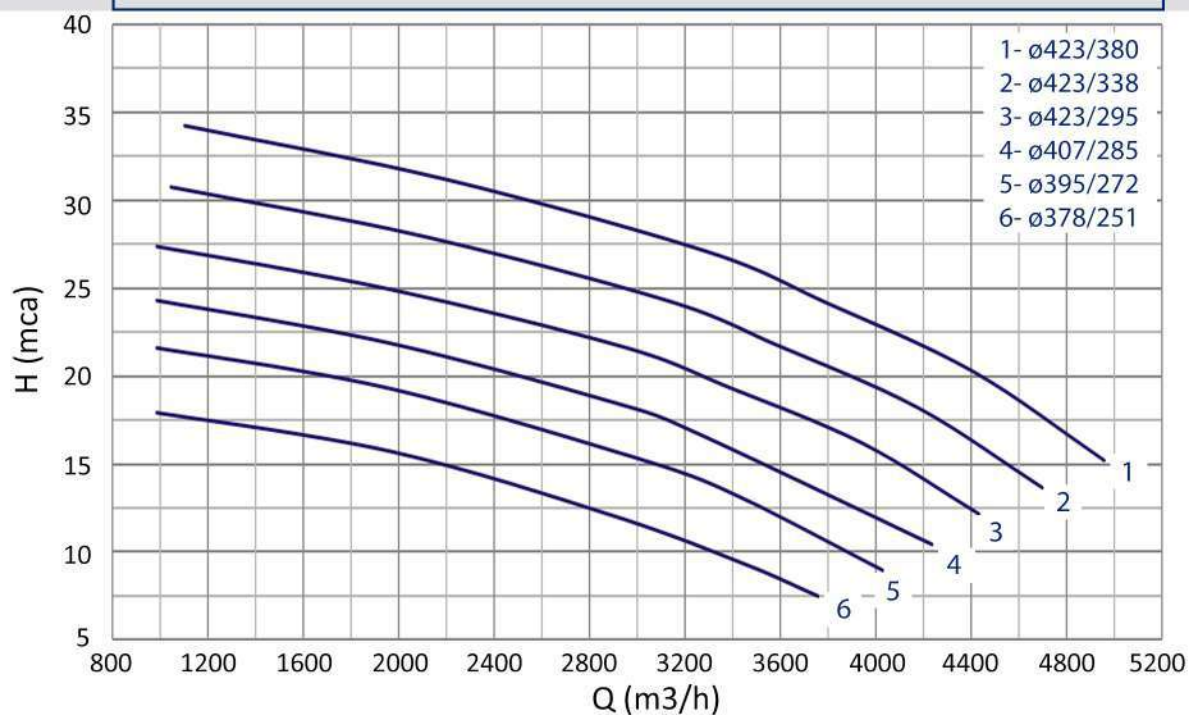
CURVA

1200 rpm

RECALQUE 600

Nº 10013551

60 Hz 6 P



SUCÇÃO 2x 400

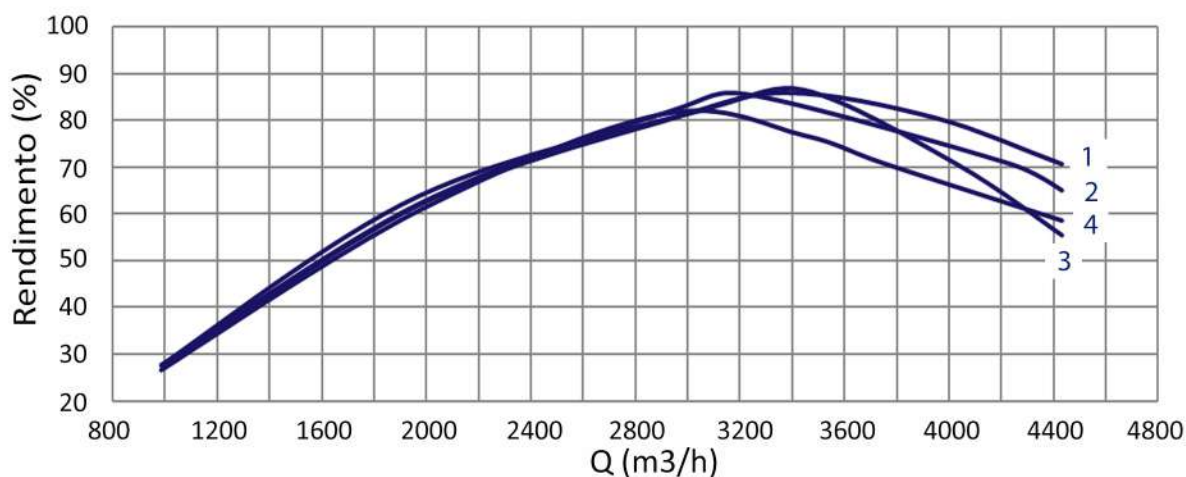
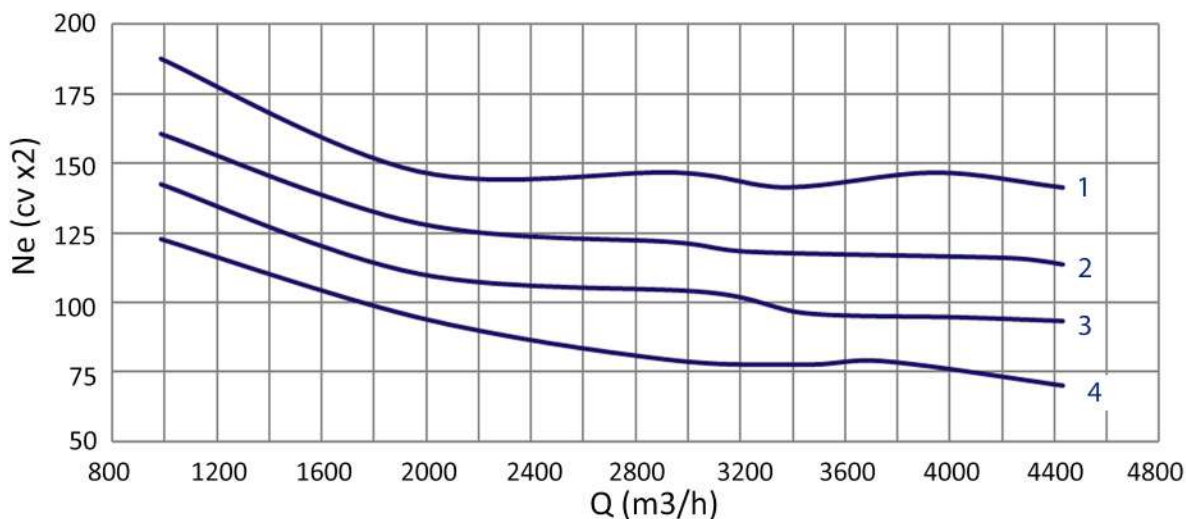
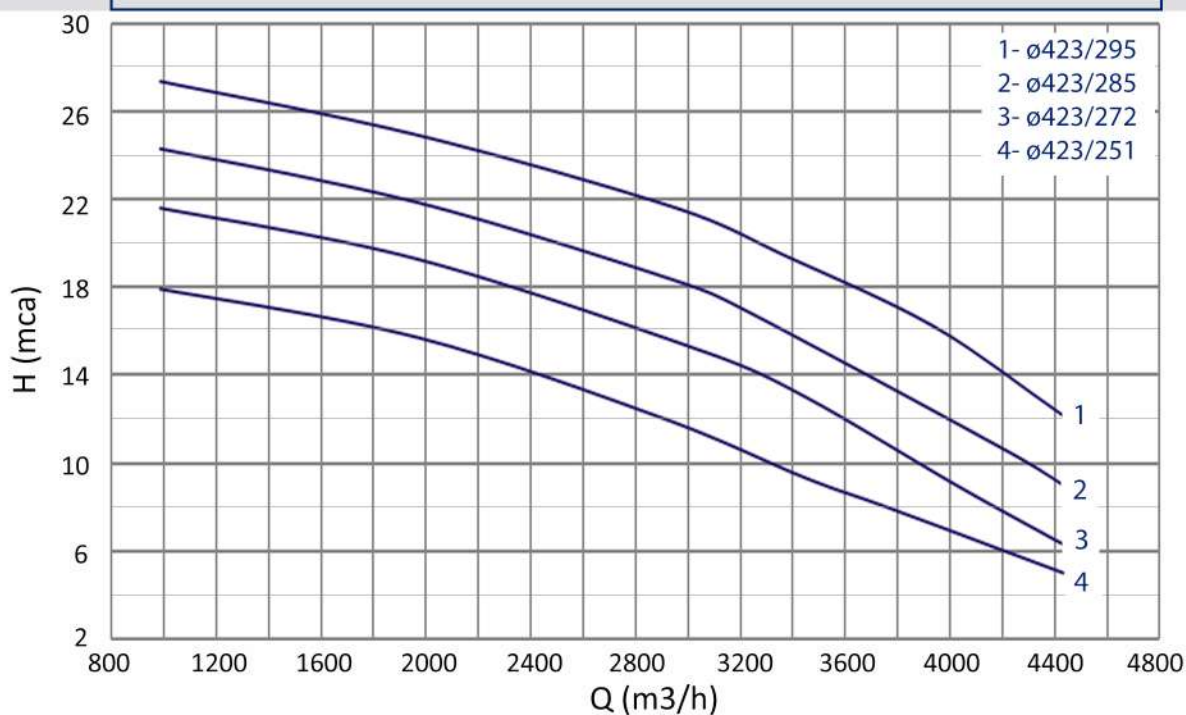
CURVA

1200 rpm

RECALQUE 600

Nº 10013554

60 Hz 6 P



SUCÇÃO 2x 500

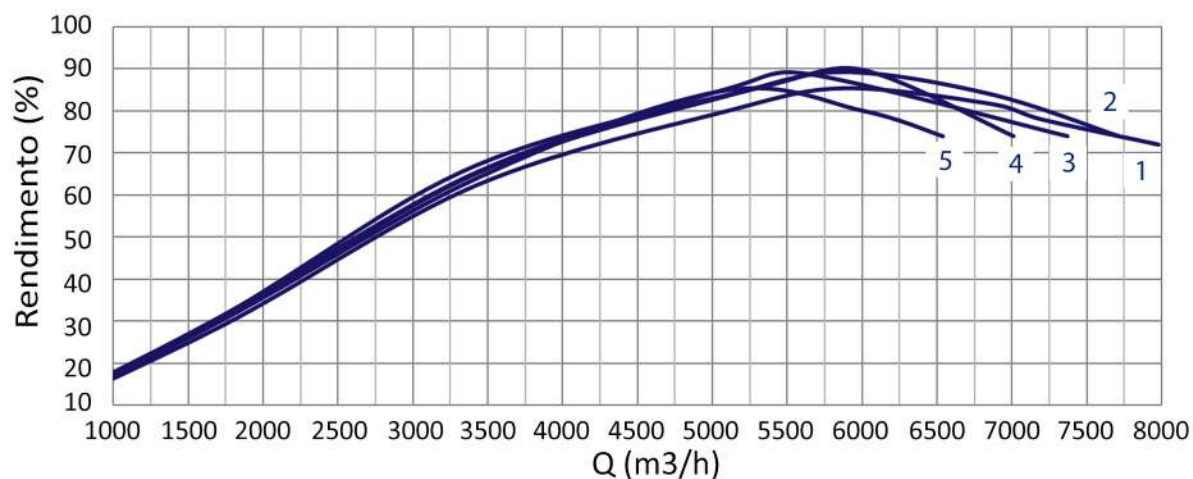
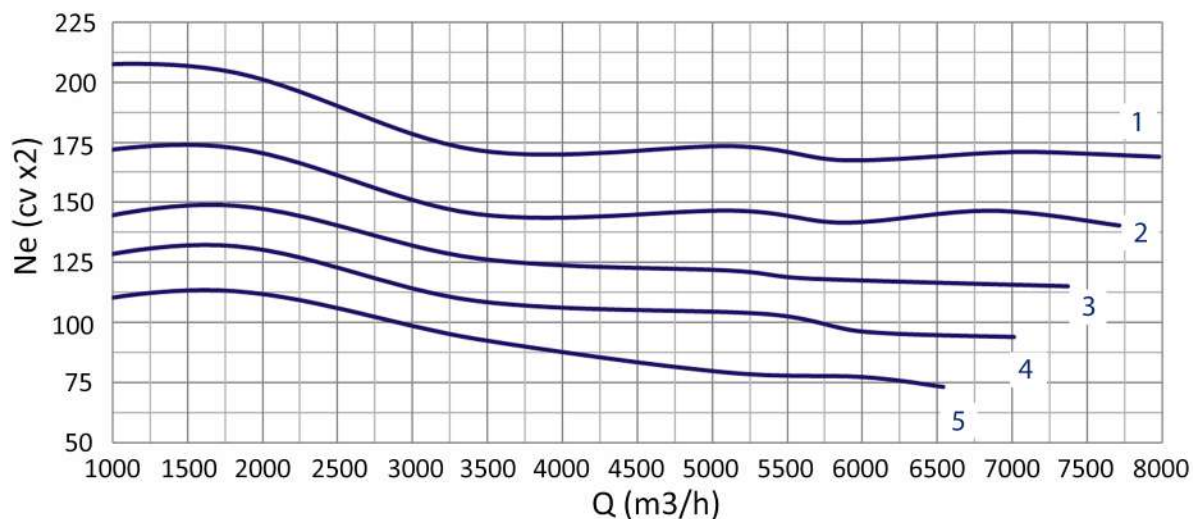
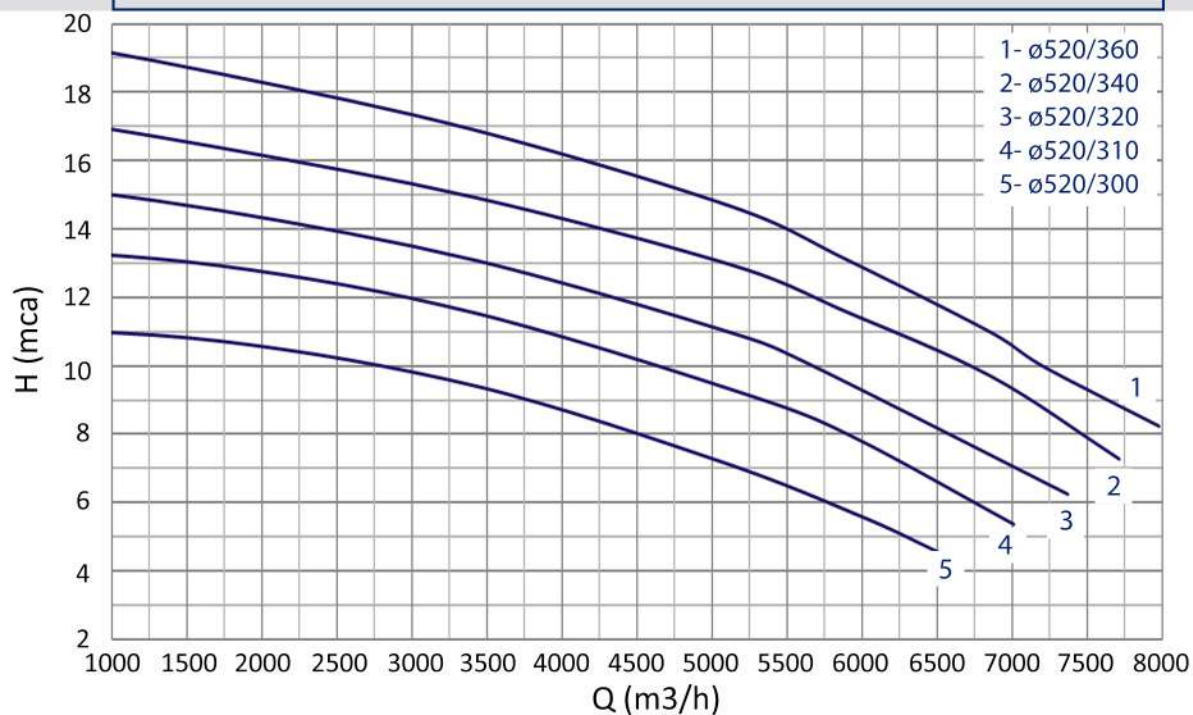
CURVA

900 rpm

RECALQUE 700

Nº 10013602

60 Hz 8 P



SUCÇÃO 2x 500

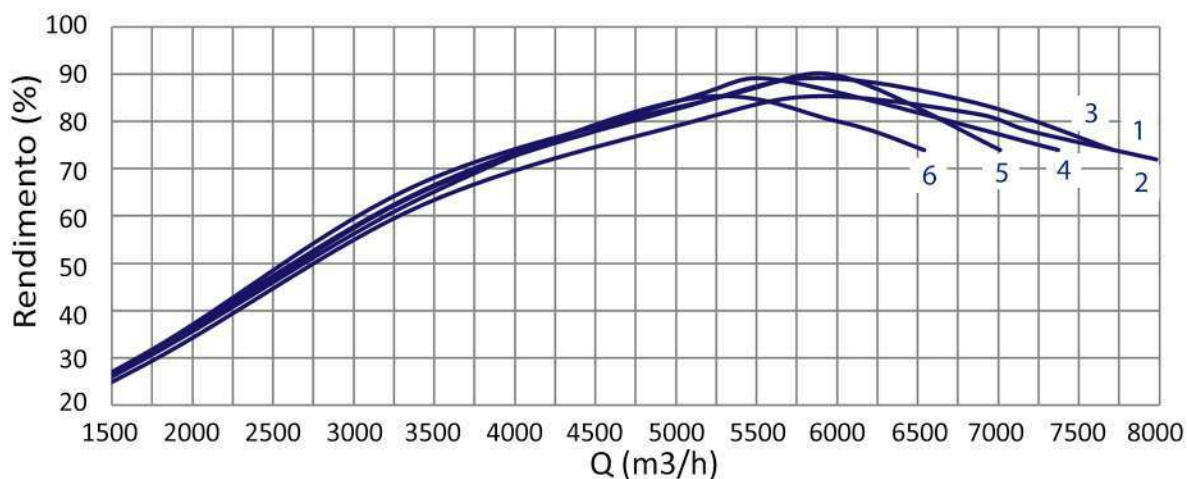
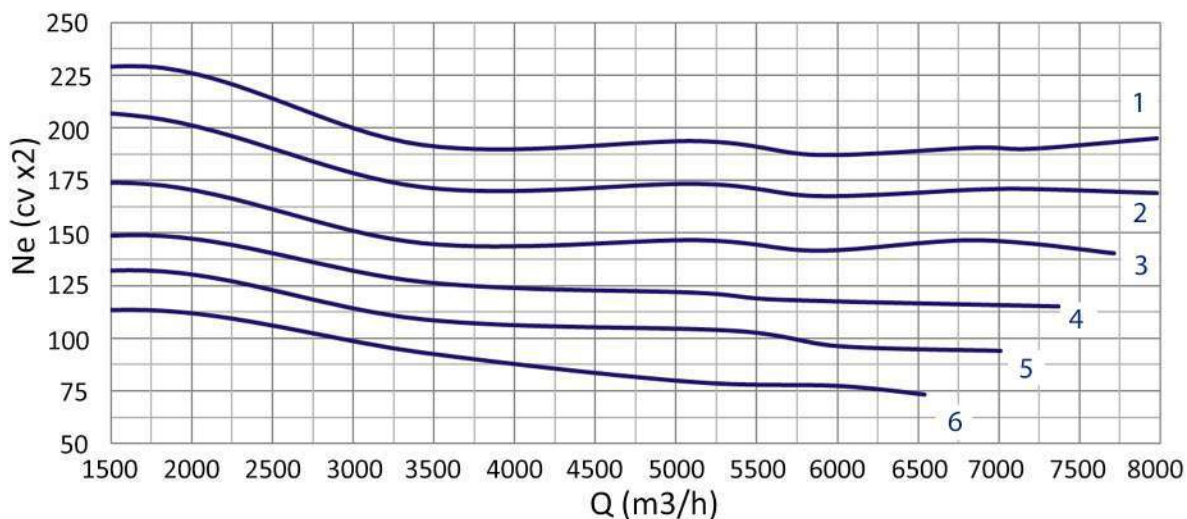
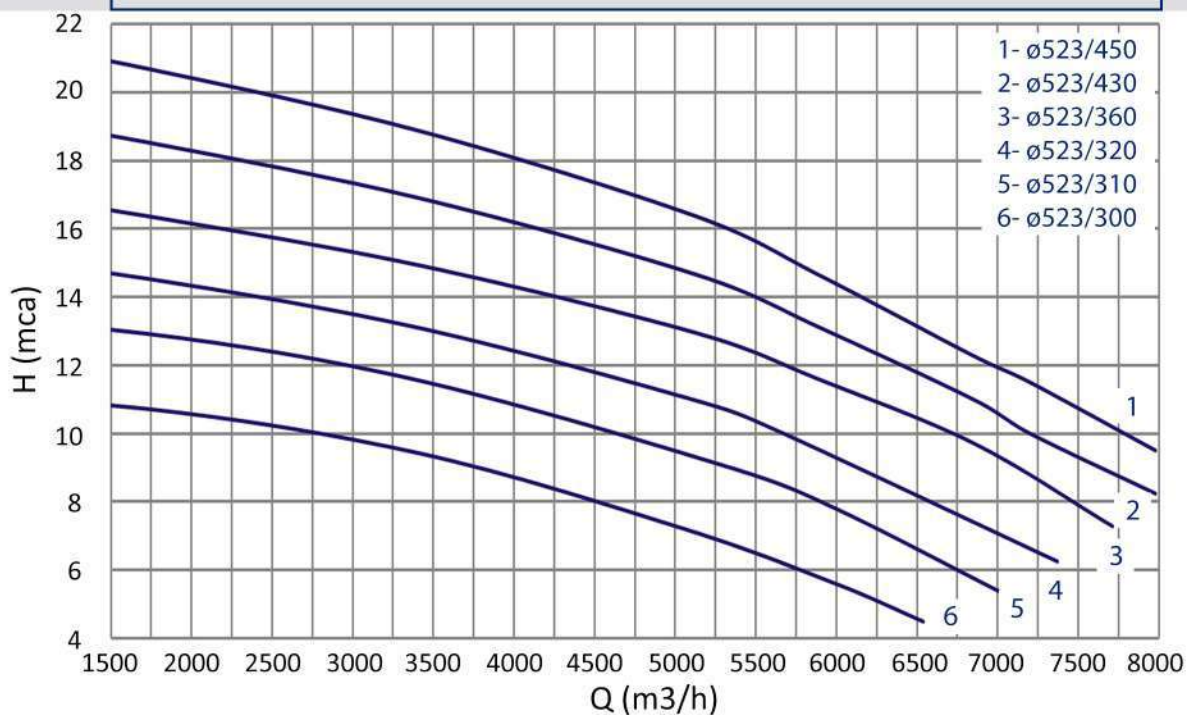
CURVA

900 rpm

RECALQUE 700

Nº 10013603

60 Hz 8 P



ANEXOS

Bitola de fios condutores de cobre, para ligação de motores eletricos trifásicos, admitindo queda máxima de tensão de 4%, conforme NBR5110																	
TENSÃO DA REDE (Volts)	POTÊNCIA DO MOTOR (cv)	DISTÂNCIA DO MOTOR AO QUADRO GERAL DE DISTRIBUIÇÃO (metros)															
		10	20	30	40	50	75	100	150	200	250	300	350	400	450	500	600
		BITOLA DO FIO CONDUTOR (mm²)															
220	1/3, 1/2	2,5	2,5	2,5	2,5	2,5	2,5	2,5	4	4	6	6	10	10	10	10	16
	3/4, 1	2,5	2,5	2,5	2,5	2,5	2,5	2,5	4	6	6	10	10	10	10	16	16
	1 1/2, 2	2,5	2,5	2,5	2,5	2,5	4	4	6	10	10	16	16	16	16	25	25
	3	2,5	2,5	2,5	2,5	2,5	4	6	10	16	16	25	25	25	25	25	25
	4	2,5	2,5	2,5	2,5	4	6	10	10	16	16	25	25	25	35	35	50
	5	2,5	2,5	2,5	4	4	6	10	16	16	25	25	35	35	35	50	50
	7.1/2	2,5	2,5	4	6	6	10	16	25	25	25	35	50	50	70	70	95
	10	6	6	6	6	10	16	16	25	35	50	50	70	70	95	95	120
	12.1/2	6	6	6	10	10	16	25	35	50	50	70	70	95	120	120	150
	15	10	10	10	10	10	16	25	35	50	70	70	95	120	120	150	185
	20	16	16	16	16	16	25	35	50	70	95	120	150	185	240	240	400
	25	25	25	25	25	25	35	35	70	95	120	125	185	240	300	400	-
	30	25	25	25	25	25	35	50	70	12	150	185	240	300	400	500	-
	40	50	50	50	50	50	50	70	120	185	240	400	500	-	-	-	-
	50	70	70	70	70	70	70	95	150	240	400	500	-	-	-	-	-
380	1/3, 1/2	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	4	4	4	4
	3/4, 1	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	4	4	4	4	6
	1 1/2, 2	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	4	4	6	6	6	6	10
	3	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	4	4	6	6	10	10	10	10
	4	2,5	2,5	2,5	2,5	2,5	2,5	2,5	4	6	6	10	10	10	10	16	16
	5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	4	6	10	10	10	10	16	16	16
	7.1/2	2,5	2,5	2,5	2,5	2,5	4	4	6	10	10	16	16	16	25	25	25
	10	2,5	2,5	2,5	2,5	2,5	4	6	10	10	16	16	25	25	25	25	35
	12.1/2	2,5	2,5	2,5	2,5	4	6	6	10	16	16	25	25	25	35	35	50
	15	4	4	4	4	4	6	10	10	16	25	25	25	35	35	35	50
	20	6	6	6	6	6	10	10	16	25	25	35	35	50	50	70	70
	25	10	10	10	10	10	10	16	25	25	35	35	50	70	70	70	95
	30	10	10	10	10	10	10	16	25	35	35	50	70	70	70	95	120
	40	16	16	16	16	16	16	25	35	50	70	70	95	95	120	120	185
	50	25	25	25	25	25	25	25	35	70	70	95	120	120	150	185	240

Observação:

Para motores monofásico ou bifásico adequar para operar em redes de 127, 254 ou 508 volts. Utilizar fios com uma bitola acima da indicada, baseando-se na tabela com a tensão mais próxima potência x distância correspondente.

Para motores trifásicos com tensões diferentes das acima especificadas deveser consultada a concessionária de energia local, para obter a bitola de fio adequada para cada aplicação.

ANEXOS

Perda de Carga em Tubulações de PVC (Valores em %)													
DC Ø Comercial (Pol)	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
DC Ø Nominal (mm)	20	25	32	40	50	65	75	100	125	150	200	250	300
DE Ø externo (mm)	25	32	40	50	60	75	85	110	125	170	222	274	326
Vazão m³/h	Perdas de cargas em 100 metros de tubos de PVC												
0,5	1,2	0,4	0,1										
1,0	4,0	1,2	0,4	0,1	0,1								
1,5	8,2	2,5	0,8	0,3	0,1								
2,0	13,5	4,1	1,3	0,5	0,2	0,1							
2,5	20,0	6,0	2,0	0,7	0,3	0,1	0,1						
3,0	27,5	8,3	2,7	0,9	0,4	0,1	0,1						
3,5	36,0	10,8	3,5	1,2	0,5	0,2	0,1						
4,0	45,4	13,7	4,5	1,5	0,6	0,2	0,1						
4,5	55,8	16,8	5,5	1,9	0,8	0,3	0,1						
5,0	67,1	20,3	6,6	2,3	0,9	0,3	0,2	0,1					
5,5	79,3	23,9	7,8	2,7	1,1	0,4	0,2	0,1					
6,0	92,4	27,9	9,1	3,1	1,3	0,4	0,2	0,1					
6,5		32,1	10,4	3,6	1,4	0,5	0,3	0,1					
7,0		36,5	11,9	4,1	1,6	0,6	0,3	0,1					
7,5		41,2	13,4	4,6	1,9	0,6	0,4	0,1					
8,0		46,1	15,0	5,2	2,1	0,7	0,4	0,1					
8,5		51,3	16,7	5,8	2,3	0,8	0,4	0,1					
9,0		56,6	18,5	6,4	2,6	0,9	0,5	0,1					
9,5		62,3	20,3	7,0	2,8	1,0	0,5	0,2	0,1				
10,0		68,1	22,2	7,7	3,1	1,1	0,6	0,2	0,1				
12,0		93,7	30,5	10,6	4,2	1,5	0,8	0,2	0,1				
14,0			40,0	13,9	5,5	1,9	1,1	0,3	0,1				
16,0			50,5	17,5	7,0	2,4	1,3	0,4	0,1				
18,0			62,1	21,5	8,6	3,0	1,6	0,5	0,2	0,1			
20,0			74,7	25,9	10,3	3,6	2,0	0,6	0,2	0,1			
25,0				38,2	15,2	5,3	2,9	0,9	0,3	0,1			
30,0				52,6	21,0	7,3	4,0	1,2	0,4	0,1			
35,0				68,9	27,5	9,6	5,3	1,6	0,5	0,2	0,1		
40,0				87,0	34,7	12,1	6,7	2,0	0,6	0,2	0,1		
45,0					42,6	14,9	8,2	2,4	0,8	0,3	0,1		
50,0					51,3	18,0	9,8	2,9	0,9	0,3	0,1		
55,0					60,6	21,2	11,6	3,4	1,1	0,4	0,1		
60,0					70,5	24,7	13,5	4,0	1,3	0,5	0,1		
65,0					81,1	28,4	15,6	4,6	1,5	0,5	0,2	0,1	
70,0					92,4	32,4	17,7	0,2	1,7	0,6	0,2	0,1	
75,0						36,5	20,0	2,9	1,9	0,7	0,2	0,1	
80,0						40,9	22,4	6,6		0,8	0,2	0,1	
85,0						45,4	24,9	7,3	2,4	0,9	0,2	0,1	
90,0						50,2	27,5	8,1	2,6	1,0	0,3	0,1	
95,0						55,2	30,2	8,9	2,9	1,1	0,3	0,1	
100,0						60,4	33,1	9,7	3,2	1,2	0,3	0,1	0,1
120,0						83,1	45,5	13,4	4,3	1,6	0,4	0,2	0,1
150,0							67,2	19,8	6,4	2,4	0,7	0,2	0,1
200,0								32,7	10,6	3,9	1,1	0,4	0,2
250,0								48,4	15,7	5,8	1,6	0,6	0,3
300,0								66,6	21,6	7,9	2,2	0,8	0,4
350,0								87,2	28,2	10,4	2,9	1,1	0,5
400,0									35,7	13,1	3,7	1,4	0,6
450,0									43,8	16,2	4,5	1,7	0,7
500,0									52,7	19,4	5,4	2,0	0,9
600,0									72,5	26,7	7,5	2,8	1,2
700,0									95,0	35,0	9,8	3,6	1,6
800,0										44,2	12,4	4,6	2,0

Observação:

Cálculo baseado na equação de Flamet. Os valores apresentados são resultados de cálculos onde os diâmetros internos foram extraídos das normas ABNT NBR 5648 e ABNT NBR 7665/2007.

Considere a pressão nominal para tubos de pvc classe 15 é de 75 m.c.a. . Conforme aplicação, para pressões acima destes valores, recomenda-se uso de tubos de ferro fundidos ou galvanizados;

Evite o uso dos valores abaixo da linha grifada para não ocasionar excesso de perdas de carga, principalmente na tubulação de sucção, onde a velocidade máx. do líquido deve ser inferior a 3m/s;

Para tubulações de irrigação PN 40 (DN35, DN50, DN75, DN100, DN125, DN150), PN 80 (DN50, DN75, DN100) PN125 (DN100, DN200, DN250, DN300) e PN 60 (DN250, DN300) consulte respectiva tabela de perda de carga do fabricante.

ANEXOS

Perda de Carga em Tubulações de Metálicas (Valores em %)													
DC Ø Comercial (Pol)	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
DC Ø Nominal (mm)	20	25	32	40	50	65	75	100	125	150	200	250	300
DE Ø externo (mm)	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	165,1	219,1	273	323,8
Vazão m³/h	Perdas de cargas em 100 metros de tubos metálicos novos												
0,5	1,3	0,4	0,1										
1,0	4,8	1,6	0,4	0,2	0,1								
1,5	10,1	3,4	0,9	0,4	0,1								
2,0	17,2	5,8	1,5	0,7	0,2	0,1							
2,5	26,1	8,8	2,3	1,1	0,3	0,1	0,1						
3,0	36,5	12,3	3,2	1,5	0,5	0,1	0,1						
3,5	48,5	16,4	4,2	2,0	0,6	0,2	0,1	0,1					
4,0	62,2	21,0	5,4	2,6	0,8	0,2	0,1	0,1					
4,5	77,3	26,1	6,7	3,2	1,0	0,3	0,2	0,1					
5,0	93,9	31,7	8,1	3,9	1,2	0,3	0,2	0,1					
5,5		37,8	9,7	4,6	1,4	0,4	0,2	0,1					
6,0		44,4	11,4	5,4	1,7	0,5	0,2	0,1					
6,5		51,5	13,2	6,3	2,0	0,5	0,3	0,1					
7,0		59,0	15,1	7,2	2,3	0,6	0,3	0,2					
7,5		67,1	17,2	8,2	2,6	0,7	0,3	0,2					
8,0		75,6	19,4	9,2	2,9	0,8	0,4	0,2					
8,5		84,5	21,7	10,3	3,2	0,9	0,4	0,2					
9,0		94,0	24,1	11,4	4,0	1,0	0,4	0,2					
9,5			26,7	12,7	4,0	1,1	0,5	0,3					
10,0			29,3	13,9	4,4	1,2	0,5	0,3	0,1				
12,0			41,1	19,5	6,1	1,7	0,8	0,5	0,1				
14,0			54,6	25,9	8,8	2,3	1,0	0,5	0,1				
16,0			69,9	33,2	10,4	2,9	1,3	0,7	0,1	0,1			
18,0			86,9	41,3	12,9	3,6	1,6	0,8	0,2	0,1			
20,0				50,2	15,7	4,4	2,0	1,0	0,2	0,1			
25,0				75,8	23,7	6,6	3,0	1,5	0,3	0,1			
30,0					33,3	9,3	4,2	2,1	0,4	0,2			
35,0					44,2	12,4	5,5	2,8	0,5	0,2	0,1		
40,0					56,6	15,8	7,1	3,6	0,7	0,3	0,1		
45,0					70,4	19,7	8,8	4,4	0,9	0,4	0,1		
50,0					85,6	23,9	10,7	5,4	1,1	0,5	0,1		
55,0						28,5	12,8	6,4	1,3	0,5	0,1		
60,0						33,5	15,0	7,6	1,5	0,6	0,2		
65,0						38,9	17,4	8,8	1,7	0,7	0,2	0,1	
70,0						44,6	20,0	10,1	2,0	0,8	0,2	0,1	
75,0						50,6	22,7	11,4	2,2	1,0	0,2	0,1	
80,0						57,0	25,6	12,9	2,5	1,1	0,3	0,1	
85,0						63,8	28,6	14,4	2,8	1,2	0,3	0,1	
90,0						70,9	31,8	16,0	3,1	1,3	0,3	0,1	
95,0						78,4	35,1	17,7	3,5	1,5	0,4	0,1	
100,0						86,2	38,6	19,5	3,8	1,6	0,4	0,1	0,1
120,0							54,1	27,3	5,3	2,3	0,6	0,2	0,1
150,0							81,8	41,2	8,1	3,4	0,9	0,3	0,1
200,0								70,2	13,7	5,8	1,5	0,5	0,2
250,0									20,7	8,8	2,2	0,7	0,3
300,0									29,0	12,4	3,1	1,0	0,4
350,0									38,6	16,5	4,1	1,3	0,6
400,0									49,4	21,1	5,2	1,7	0,7
450,0									61,5	26,2	6,5	2,1	0,9
500,0									74,7	31,9	7,9	2,6	1,1
600,0										44,6	11,1	3,6	1,5
700,0										59,4	14,8	4,8	2,0
800,0										76,0	18,9	6,1	2,6

Observação:

Cálculo baseado na equação de Hazen-Williams. Os valores apresentados onde os diâmetros internos de 3/4" a 6" foram extraídos das normas ABNT NBR 5580 e de 8" a 12" utilizou-se tubulação Schedule n°20 referenciados a norma ABNT NBR 5590; Em se tratando de tubos galvanizados ou ferro fundido, deve-se acrescentar 3% aos valores acima para cada ano de uso da tubulação;

Evite o uso dos valores abaixo da linha grifada para não ocasionar excesso de perdas de carga, principalmente na tubulação de sucção, onde a velocidade máxima do líquido deve ser inferior a 3m/s.

ANEXOS

Comprimentos Equivalentes em Conexões											
Tabela de comprimentos equivalentes em metros de canalização, para cálculo das perdas de carga localizadas											
CONEXÃO		Diâmetro nominal X Equivalência em metros de canalização									
		Material	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"
Curva 90°		PVC	0,5	0,6	0,7	1,2	1,3	1,4	1,5	1,6	1,9
		Metal	0,4	0,5	0,6	0,7	0,9	1	1,3	1,6	2,1
Curva 45°		PVC	0,3	0,4	0,5	0,6	0,7	0,8	0,9	1	1,1
		Metal	0,2	0,2	0,3	0,3	0,4	0,5	0,6	0,7	0,9
Joelho 90°		PVC	1,2	1,5	2	3,2	3,4	3,7	3,9	4,3	4,9
		Metal	0,7	0,8	1,1	1,3	1,7	2	2,5	3,4	4,2
Joelho 45°		PVC	0,5	0,7	1	1,3	1,5	1,7	1,8	1,9	2,5
		Metal	0,3	0,4	0,5	0,6	0,8	0,9	1,2	1,5	1,9
Tê de passagem direta		PVC	0,8	0,9	1,5	2,2	2,3	2,4	2,5	2,6	3,3
		Metal	0,4	0,5	0,5	0,9	1,1	1,3	1,6	2,1	2,7
Tê de passagem lateral		PVC	2,4	3,1	4,6	7,3	7,6	7,8	8	8,3	10
		Metal	1,4	1,7	2,3	2,8	3,5	4,3	5,2	6,7	8,4
Tê de passagem bilateral		PVC	2,4	3,1	4,6	7,3	7,6	7,8	8	8,3	10
		Metal	1,4	1,7	2,3	2,8	3,5	4,3	5,2	6,7	8,4
União		PVC	0,1	0,1	0,1	0,1	0,1	0,1	0,15	0,2	0,25
		Metal	0,01	0,01	0,01	0,01	0,01	0,01	0,02	0,03	0,04
Saída de canalização		PVC	0,9	1,3	1,4	3,2	3,3	3,5	3,7	3,9	4,9
		Metal	0,5	0,7	0,9	1	1,5	1,9	2,2	3,2	4
Luva de redução (*)		PVC	0,3	0,2	0,15	0,4	0,7	0,8	0,85	0,95	1,2
		Metal	0,29	0,16	0,12	0,38	0,64	0,71	0,78	0,9	1,07
Registro de gaveta ou esfera aberto		PVC	0,2	0,3	0,4	0,7	0,8	0,9	0,9	1	1,1
		Metal	0,1	0,2	0,2	0,3	0,4	0,4	0,5	0,7	0,9
Registro de globo aberto		Metal	6,7	8,2	11,3	13,4	17,4	21	26	34	43
Registrto de ângulo aberto		Metal	3,6	4,6	5,6	6,7	8,5	10	13	17	21
Válvula de pé com crivo		PVC	9,5	13,3	15,3	18,3	23,7	25	26,8	28,8	37,4
		Metal	5,6	7,3	10	11,6	14	17	22	23	30
Válvula de Retenção	Horizontal 	Metal	1,6	2,1	2,7	3,2	4,2	5,2	6,3	6,4	10,4
	Vertical 	Metal	2,4	3,2	4	4,8	6,4	8,1	9,7	12,9	16,1

Observação:

Os valores acima estão de acordo com NBR 5626/82 e a Tabela de Perca de Carga da Tigre para PVC rígido e cobre, NBR 92/80 e Tabela de Perca de Carga Tupy para ferro fundido galvanizado, bronze ou latão.

(*) Os diâmetros indicados referem-se à menor bitola de reduções concêntricas, com fluxo da maior para a menor bitola, sendo a bitola maior uma medida acima da menor.

Ex: 1 1/4" x 1" - 1 1/2" x 1 1/4"

PERDA DE CARGA - TUBULAÇÃO FERRO

(m/m)

DIÂMETRO DA TUBULAÇÃO (cm)	20	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	75	80	85	90	95	100	110	120	140	160	180	200	220	240	260	280	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3500	4000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Vaz. m³/h	20	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	75	80	85	90	95	100	110	120	140	160	180	200	220	240	260	280	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3500	4000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Vaz. l/s	0,012	0,015	0,018	0,021	0,024	0,027	0,030	0,033	0,036	0,039	0,042	0,045	0,048	0,051	0,054	0,057	0,060	0,063	0,066	0,069	0,072	0,075	0,078	0,081	0,084	0,087	0,090	0,093	0,096	0,099	0,102	0,105	0,108	0,111	0,114	0,117	0,120	0,123	0,126	0,129	0,132	0,135	0,138	0,141	0,144	0,147	0,150	0,153	0,156	0,159	0,162	0,165	0,168	0,171	0,174	0,177	0,180	0,183	0,186	0,189	0,192	0,195	0,198	0,201	0,204	0,207	0,210	0,213	0,216	0,219	0,222	0,225	0,228	0,231	0,234	0,237	0,240	0,243	0,246	0,249	0,252	0,255	0,258	0,261	0,264	0,267	0,270	0,273	0,276	0,279	0,282	0,285	0,288	0,291	0,294	0,297	0,300	0,303	0,306	0,309	0,312	0,315	0,318	0,321	0,324	0,327	0,330	0,333	0,336	0,339	0,342	0,345	0,348	0,351	0,354	0,357	0,360	0,363	0,366	0,369	0,372	0,375	0,378	0,381	0,384	0,387	0,390	0,393	0,396	0,399	0,402	0,405	0,408	0,411	0,414	0,417	0,420	0,423	0,426	0,429	0,432	0,435	0,438	0,441	0,444	0,447	0,450	0,453	0,456	0,459	0,462	0,465	0,468	0,471	0,474	0,477	0,480	0,483	0,486	0,489	0,492	0,495	0,498	0,501	0,504	0,507	0,510	0,513	0,516	0,519	0,522	0,525	0,528	0,531	0,534	0,537	0,540	0,543	0,546	0,549	0,552	0,555	0,558	0,561	0,564	0,567	0,570	0,573	0,576	0,579	0,582	0,585	0,588	0,591	0,594	0,597	0,600	0,603	0,606	0,609	0,612	0,615	0,618	0,621	0,624	0,627	0,630	0,633	0,636	0,639	0,642	0,645	0,648	0,651	0,654	0,657	0,660	0,663	0,666	0,669	0,672	0,675	0,678	0,681	0,684	0,687	0,690	0,693	0,696	0,699	0,702	0,705	0,708	0,711	0,714	0,717	0,720	0,723	0,726	0,729	0,732	0,735	0,738	0,741	0,744	0,747	0,750	0,753	0,756	0,759	0,762	0,765	0,768	0,771	0,774	0,777	0,780	0,783	0,786	0,789	0,792	0,795	0,798	0,801	0,804	0,807	0,810	0,813	0,816	0,819	0,822	0,825	0,828	0,831	0,834	0,837	0,840	0,843	0,846	0,849	0,852	0,855	0,858	0,861	0,864	0,867	0,870	0,873	0,876	0,879	0,882	0,885	0,888	0,891	0,894	0,897	0,900	0,903	0,906	0,909	0,912	0,915	0,918	0,921	0,924	0,927	0,930	0,933	0,936	0,939	0,942	0,945	0,948	0,951	0,954	0,957	0,960	0,963	0,966	0,969	0,972	0,975	0,978	0,981	0,984	0,987	0,990	0,993	0,996	0,999	1,002	1,005	1,008	1,011	1,014	1,017	1,020	1,023	1,026	1,029	1,032	1,035	1,038	1,041	1,044	1,047	1,050	1,053	1,056	1,059	1,062	1,065	1,068	1,071	1,074	1,077	1,080	1,083	1,086	1,089	1,092	1,095	1,098	1,101	1,104	1,107	1,110	1,113	1,116	1,119	1,122	1,125	1,128	1,131	1,134	1,137	1,140	1,143	1,146	1,149	1,152	1,155	1,158	1,161	1,164	1,167	1,170	1,173	1,176	1,179	1,182	1,185	1,188	1,191	1,194	1,197	1,200	1,203	1,206	1,209	1,212	1,215	1,218	1,221	1,224	1,227	1,230	1,233	1,236	1,239	1,242	1,245	1,248	1,251	1,254	1,257	1,260	1,263	1,266	1,269	1,272	1,275	1,278	1,281	1,284	1,287	1,290	1,293	1,296	1,299	1,302	1,305	1,308	1,311	1,314	1,317	1,320	1,323	1,326	1,329	1,332	1,335	1,338	1,341	1,344	1,347	1,350	1,353	1,356	1,359	1,362	1,365	1,368	1,371	1,374	1,377	1,380	1,383	1,386	1,389	1,392	1,395	1,398	1,401	1,404	1,407	1,410	1,413	1,416	1,419	1,422	1,425	1,428	1,431	1,434	1,437	1,440	1,443	1,446	1,449	1,452	1,455	1,458	1,461	1,464	1,467	1,470	1,473	1,476	1,479	1,482	1,485	1,488	1,491	1,494	1,497	1,500	1,503	1,506	1,509	1,512	1,515	1,518	1,521	1,524	1,527	1,530	1,533	1,536	1,539	1,542	1,545	1,548	1,551	1,554	1,557	1,560	1,563	1,566	1,569	1,572	1,575	1,578	1,581	1,584	1,587	1,590	1,593	1,596	1,599	1,602	1,605	1,608	1,611	1,614	1,617	1,620	1,623	1,626	1,629	1,632	1,635	1,638	1,641	1,644	1,647	1,650	1,653	1,656	1,659	1,662	1,665	1,668	1,671	1,674	1,677	1,680	1,683	1,686	1,689	1,692	1,695	1,698	1,701	1,704	1,707	1,710	1,713	1,716	1,719	1,722	1,725	1,728	1,731	1,734	1,737	1,740	1,743	1,746	1,749	1,752	1,755	1,758	1,761	1,764	1,767	1,770	1,773	1,776	1,779	1,782	1,785	1,788	1,791	1,794	1,797	1,800	1,803	1,806	1,809	1,812	1,815	1,818	1,821	1,824	1,827	1,830	1,833	1,836	1,839	1,842	1,845	1,848	1,851	1,854	1,857	1,860	1,863	1,866	1,869	1,872	1,875	1,878	1,881	1,884	1,887	1,890	1,893	1,896	1,899	1,902	1,905	1,908	1,911	1,914	1,917	1,920	1,923	1,926	1,929	1,932	1,935	1,938	1,941	1,944	1,947	1,950	1,953	1,956	1,959	1,962	1,965	1,968	1,971	1,974	1,977	1,980	1,983	1,986	1,989	1,992	1,995	1,998	2,001	2,004	2,007	2,010	2,013	2,016	2,019	2,022	2,025	2,028	2,031	2,034	2,037	2,040	2,043	2,046	2,049	2,052	2,055	2,058	2,061	2,064	2,067	2,070	2,073	2,076	2,079	2,082	2,085	2,088	2,091	2,094	2,097	2,100	2,103	2,106	2,109	2,112	2,115	2,118	2,121	2,124	2,127	2,130	2,133	2,136	2,139	2,142	2,145	2,148	2,151	2,154	2,157	2,160	2,163	2,166	2,169	2,172	2,175	2,178	2,181	2,184	2,187	2,190	2,193	2,196	2,199	2,202	2,205	2,208	2,211	2,214	2,217	2,220	2,223	2,226	2,229	2,232	2,235	2,238	2,241	2,244	2,247	2,250	2,253	2,256	2,259	2,262	2,265	2,268	2,271	2,274	2,277	2,280	2,283	2,286	2,289	2,292	2,295	2,298	2,301	2,304	2,307	2,310	2,313	2,316	2,319	2,322	2,325	2,328	2,331	2,334	2,337	2,340	2,343	2,346	2,349	2,352	2,355	2,358	2,361	2,364	2,367	2,370	2,373	2,376	2,379	2,382	2,385	2,388	2,391	2,394	2,397	2,400	2,403	2,406	2,409	2,412	2,415	2,418	2,421	2,424	2,427	2,430	2,433	2,436	2,439	2,442	2,445	2,448	2,451	2,454	2,457	2,460	2,463	2,466	2,469	2,472	2,475	2,478	2,481	2,484	2,487	2,490	2,493	2,496	2,499	2,502	2,505	2,508	2,511	2,514	2,517	2,520	2,523	2,526	2,529	2,532	2,535	2,538	2,541	2,544	2,547	2,550	2,553	2,556	2,559	2,562	2,565	2,568	2,571	2,574	2,577	2,580	2,583	2,586	2,589	2,592	2,595	2,598	2,601	2,604	2,607	2,610	2,613	2,616	2,619	2,622	2,625	2,628	2,631	2,634	2,637	2,640	2,643	2,646	2,649	2,652	2,655	2,658	2,661	2,664	2,667	2,670	2,673	2,676	2,679	2,682	2,685	2,688	2,691	2,694	2,697	2,700	2,703	2,706	2,709	2,712	2,715	2,718	2,721	2,724	2,727	2,730	2,733	2,736	2,739	2,742	2,745	2,748	2,751	2,754	2,757	2,760	2,763	2,766	2,769	2,772	2,775	2,778	2,781	2,784	2,787	2,790	2,793	2,796	2,799	2,802	2,805	2,808	2,811	2,814	2,817	2,820	2,823	2,826	2,829	2,832	2,835	2,838	2,841	2,844	2,847	2,850	2,853	2,856	2,859	2,862	2,865	2,868	2,871	2,874	2,877	2,880	2,883	2,886	2,889	2,892	2,895	2,898	2,901	2,904	2,907	2,910	2,913	2,916	2,919	2,922	2,925	2,928	2,931	2,934	2,937	2,940	2,943	2,946	2,949	2,952	2,955	2,958	2,961	2,964	2,967	2,970	2,973	2,976	2,979	2,982	2,985	2,988	2,991	2,994	2,997	3,000	3,003	3,006	3,009	3,012	3,015	3,018	3,021	3,024	3,027	3,030	3,033	3,036	3,039	3,042	3,045	3,048	3,051	3,054	3,057	3,060	3,063	3,066	3,069	3,072	3,075	3,078	3,081	3,084	3,087	3,090	3,093	3,096	3,099	3,102	3,105	3,108	3,111	3,114	3,117	3,120	3,123	3,126	3,129	3,132	3,135	3,138	3,141	3,144	3,147	3,150	3,153	3,156	3,159	3,162	3,165	3,168	3,171	3,174	3,177	3,180	3,183	3,186	3,189	3,192	3,195	3,198	3,201	3,204	3,207	3,210	3,213	3,216	3,219	3,222	3,225	3,228	3,231	3,234	3,237	3,240	3,243	3,246	3,249	3,252	3,255	3,258	3,261	3,264	3,267	3,270	3,273	3,276	3,279	3,282	3,285	3,288	3,291	3,294	3,297	3,300	3,303	3,306	3,309	3,312	3,315	3,318	3,321	3,324	3,327	3,330	3,333	3,336	3,339	3,342	3,345	3,348	3,351

ANEXOS

Conversão de Unidades de Medidas

Grandeza	Para converter	Símbolo da unidade	Multiplicar por	Símbolo da unidade	Para obter
	Para obter		Dividir por		Para converter
Comprimento	Metros	m	3,281	ft	Pés
	Polegadas	"	25,4	mm	Milímetros
Área	Hectares	ha	10.000	m²	Metros Quadrados
	Quilômetro Quadrados	km²	100	ha	Hectares
	Quadra Quadrada	-	17.242	m²	Metros Quadrados
Volume	Litros	l	0,264	gal	Galões Americanos
	Metros Cúbicos	m³	264,17	gal	Galões Americanos
	Metros Cúbicos	m³	1.000	l	Litros
Vazão	Litros por Segundo	l/s	3.600	l/h	Litros por Hora
	Litros por Segundo	l/s	3,6	m³/h	Metros Cúbicos
	Litros por Segundo	l/s	15,85	gal/min	Galões por Minuto
	Litros por Minuto	l/min	0,264	gal/min	Galões por Minuto
	Metros Cúbicos por Hora	m³/h	4,40,	gal/min	Galões por Minuto
	Metros Cúbicos por Hora	m³/h	1.000	l/h	Litros por Hora
Pressão	Metros por Coluna D'água	m.c.a.	3,284	ft	Pés
	Milímetros de Mercúrio	mmHg	0,0014	kgf/cm²	Quilograma Força por Centímetro Quadrado
	Libras Força por Polegada Quadrada	lbf/pol² (psi)	0,703	m.c.a.	Metros por Coluna D'água
	Quilograma Força por Centímetro Quadrado	kgf/cm²	14,22	lbf/pol² (psi)	Libras Força por Polegada Quadrada
	Quilograma Força por Centímetro Quadrado	kgf/cm²	10	m.c.a.	Metros por Coluna D'água
	BAR	bar	10,197	m.c.a.	Metros por Coluna D'água
Peso	Libras	lb	0,4536	kg	Quilograma
Velocidade	Metros por Segundo	m/s	3,281	ft/s	Pés por Segundo
	Metros por Minuto	m/min	0,0167	m/s	Metros por Segundo
Potência	Cavalos Vapor	cv	0,7355	kW	Quilowatts
	Cavalos Vapor	cv	0,9863	hp	Horse Power
	Cavalos Vapor	cv	735,5	W	Watts
	Quilowatts	kW	1.000	W	Watts
	Quilowatts	kW	1,341	hp	Horse Power

MOTOBOMBAS

RIO DO SUL



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