

GLOBAL PUMP SOLUTION DOOCH

60Hz



VERTICAL MULTISTAGE PUMP

XR(L) SERIES

NSQ-XR(L)의 구성



제품특성

- 탁월한 에너지 절감
- 운전 부하에 따라 펌프 성능 최적화
- 워터해머현상(수충격) 방지 및 저소음 운전
- 컴팩트한 구조로 설치공간 절약
- 기존의 구형 시스템에서 요구되던 장치가 불필요
- 별도 컨트롤 패널, 컨트롤 밸브 등이 필요치 않음
- 펌프 시스템의 수명연장
- 간편하고 편리한 설치
- 직관적이고 쉬운 운전방법

주요기능

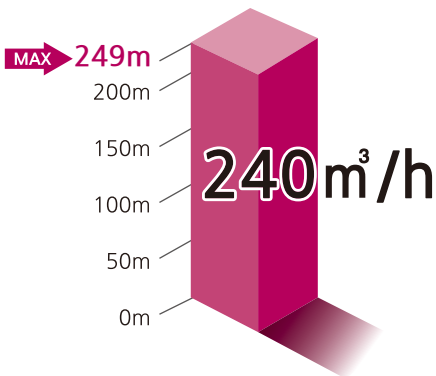
- 부하변동에 따른 펌프의 회전수 제어
- 사용압력 설정
- 펌프 공회전 방지 (갈수 자동감지)
- 동파방지
- 토출 무유량 자동감지
- 정전후 자동복구 운전
- 인버터, 펌프 보호
- 운전정보 표시 및 저장 - FND
- 외부통신 기능 탑재(RS-485)

기술사양

- 최대유량 : 240m³/h
- 최대양정 : 249m
- 펌프동력 : 0.75-22kW (1~30HP)
- 전원사양 : 3Φx380V~440V / 60Hz

적용분야

- 아파트, 빌딩, 빌라건물의 급수
- 학교, 호텔, 병원, 백화점 급수
- 스포츠센터, 수영장, 놀이공원 급수
- 골프장, 스프링클러, 농업시설
- 상수도 가압장, 산업체 공장 급수용

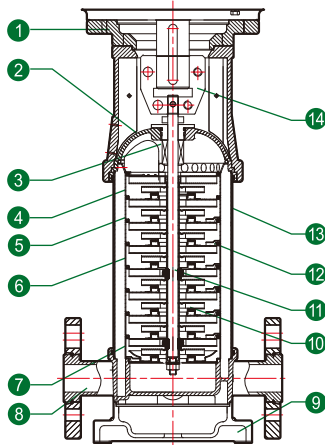


주요 시스템 구성품

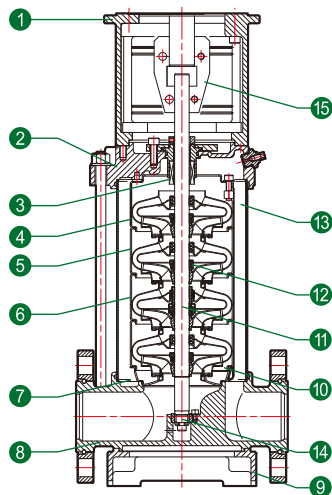


제품 구조

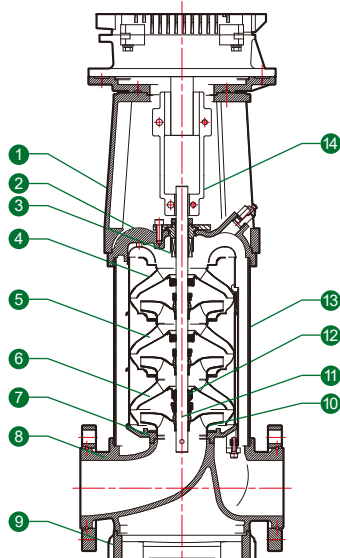
XR(L) 1, 3, 5, 10, 15, 20



XR(L) 32, 45, 64



XR(L) 95, 125, 155, 185, 215, 255



부품 재질

NO.	부품명	재질		
		KS	EN	ASTM
1	모터 브라켓	GCD450-10	EN-GJS-450-10	A536-65-45-12
2	펌프헤드	XR: GCD450-10 XRL: SSC13	EN-GJS-450-10 EN10283-1.4308	A536-65-45-12 A351-CF8
3	메카니컬 씰	SIC / Carbon / Viton		
4	토출 디퓨저	STS304	EN10088-1.4301	A240-304
5	디퓨저	STS304	EN10088-1.4301	A240-304
6	메탈 디퓨저	STS304	EN10088-1.4301	A240-304
7	흡입 디퓨저	STS304	EN10088-1.4301	A240-304
8	펌프케이싱	XR: GC250 XRL: SSC13	EN-GJL-250 EN10283-1.4308	A48-CL35 A351-CF8
9	베이스플레이트	GC250	EN-GJL-250	A48-CL35
10	임펠러	STS304	EN10088-1.4301	A240-304
11	샤프트	STS304	EN10088-1.4301	A276-304
12	임펠러 슬리브	STS304	EN10088-1.4301	A240-304
13	실린더	STS304	EN10088-1.4301	A240-304
14	커플링	GCD450-10	EN-GJS-450-10	A536-65-45-12
	고무부품	EPDM		

* 중간플랜지 재질 : GC250

NO.	구성요소	재질		
		KS	EN	ASTM
1	모터 브라켓	GCD450-10	EN-GJS-450-10	A536-65-45-12
2	펌프헤드	XR: GCD450-10 XRL: SSC13	EN-GJS-450-10 EN10283-1.4308	A536-65-45-12 A351-CF8
3	메카니컬 씰	SIC / Carbon / Viton		
4	토출 디퓨저	STS304	EN10088-1.4301	A240-304
5	디퓨저	STS304	EN10088-1.4301	A240-304
6	메탈 디퓨저	STS304	EN10088-1.4301	A240-304
7	흡입 디퓨저	STS304	EN10088-1.4301	A240-304
8	펌프케이싱	XR: GC250 XRL: SSC13	EN-GJL-250 EN10283-1.4308	A48-CL35 A351-CF8
9	베이스플레이트	GC250	EN-GJL-250	A48-CL35
10	임펠러	STS304	EN10088-1.4301	A240-304
11	샤프트	STS304 STS329J3L (Duplex 2205)	EN10088 1-4301 EN10088 1-4462	A276-304 A276-S32205
12	중간 베어링	Tungsten Carbide		
13	실린더	STS304	EN10088-1.4301	A240-304
14	하부 베어링	Tungsten Carbide		
15	커플링	GCD450-10	EN-GJS-450-10	A536-65-45-12
	고무부품	EPDM		

* 샤프트 재질 : 22kW이하 STS304, 30kW 이상 STS329J3L(Duplex2205) 적용

* 중간플랜지 재질 : GC250

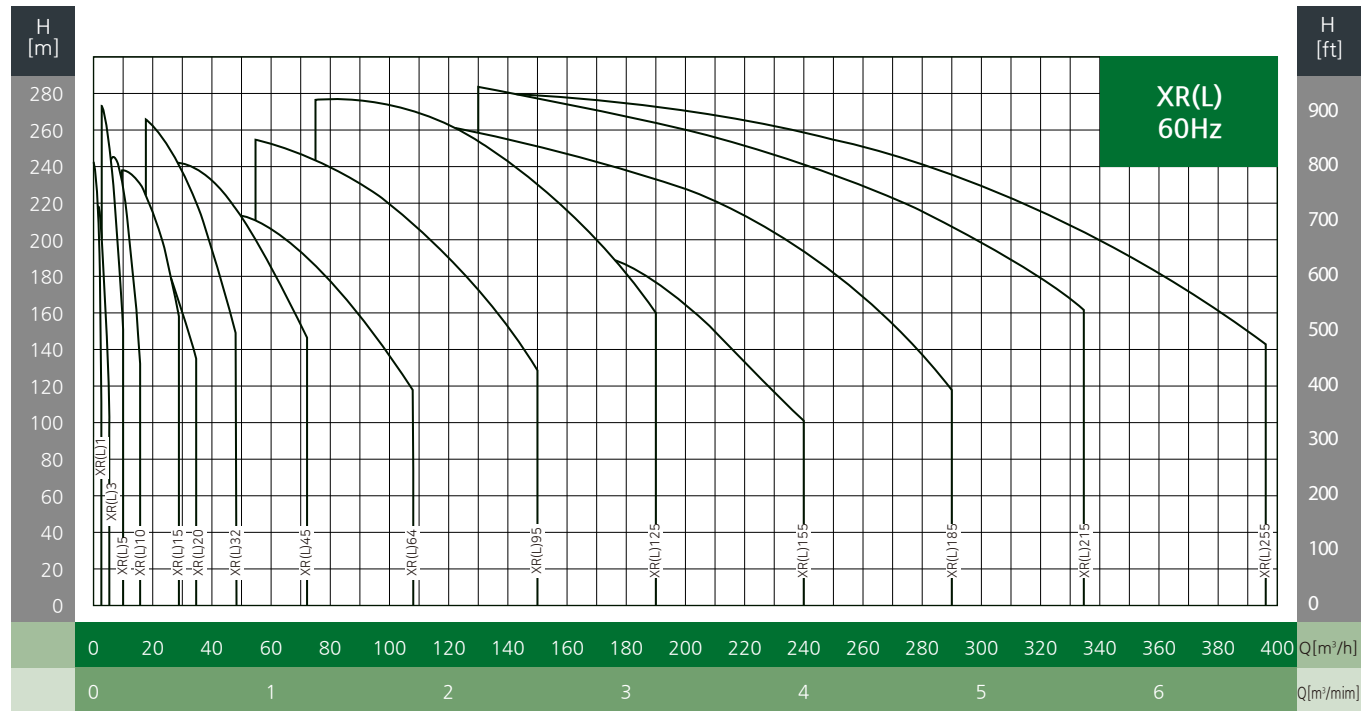
NO.	부품명	재질		
		KS	EN	ASTM
1	모터 브라켓	GCD500-7	EN-GJS-500-7	A536-80-55-06
2	펌프헤드	XR: GCD500-7 XRL: SSC13	EN-GJS-500-7 EN10283-1.4308	A536-80-55-06 A351-CF8
3	메카니컬 씰	SIC / Carbon / Viton		
4	토출 디퓨저	STS304	EN10088-1.4301	A240-304
5	디퓨저	STS304	EN10088-1.4301	A240-304
6	메탈 디퓨저	STS304	EN10088-1.4301	A240-304
7	흡입 디퓨저	STS304	EN10088-1.4301	A240-304
8	펌프케이싱	XR: GCD500-7 XRL: SSC13	EN-GJS-500-7 EN10283 1-4308	A536-80-55-06 A351-CF8
9	베이스플레이트	GCD500-7	EN-GJS-500-7	A536-80-55-06
10	임펠러	STS304	EN10088-1.4301	A240-304
11	샤프트	STS304 STS329J3L (Duplex 2205)	EN10088 1-4301 EN10088 1-4462	A276-304 A276-S32205
12	중간 베어링	Tungsten Carbide		
13	실린더	STS304	EN10088-1.4301	A240-304
14	커플링	GCD450	EN-GJS-450	A536-65-45
	고무부품	EPDM		

* 샤프트 재질 : 22kW이하 STS304, 30kW 이상 STS329J3L(Duplex2205) 적용

* 단, 125번 시리즈부터는 모두 STS329(Duplex2205) 적용

* 중간플랜지 재질 : GC250/GCD500

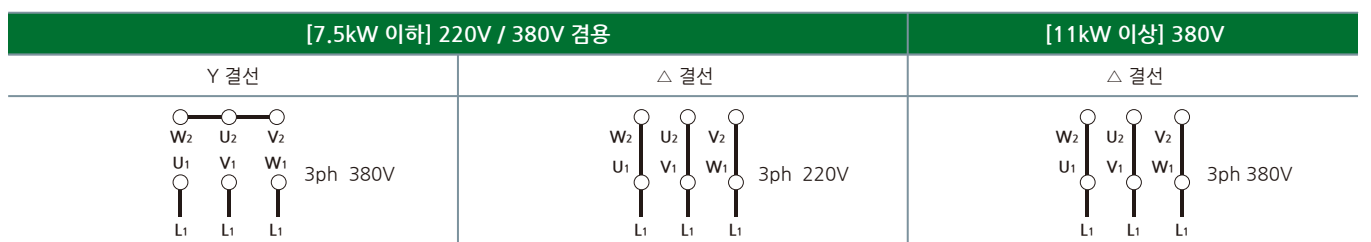
성능범위



표준사양

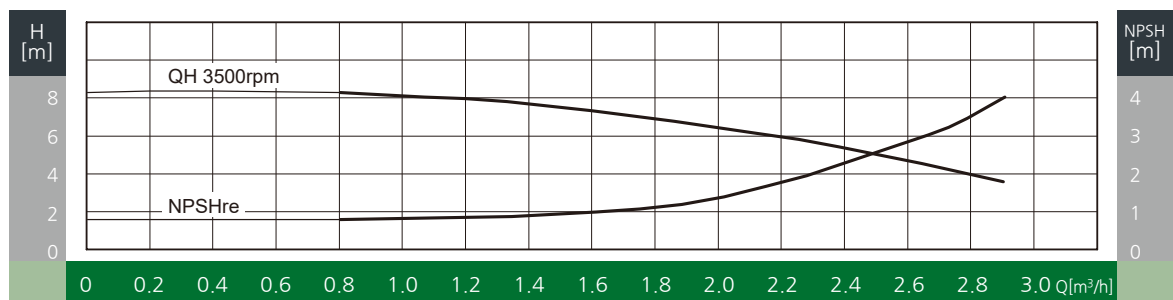
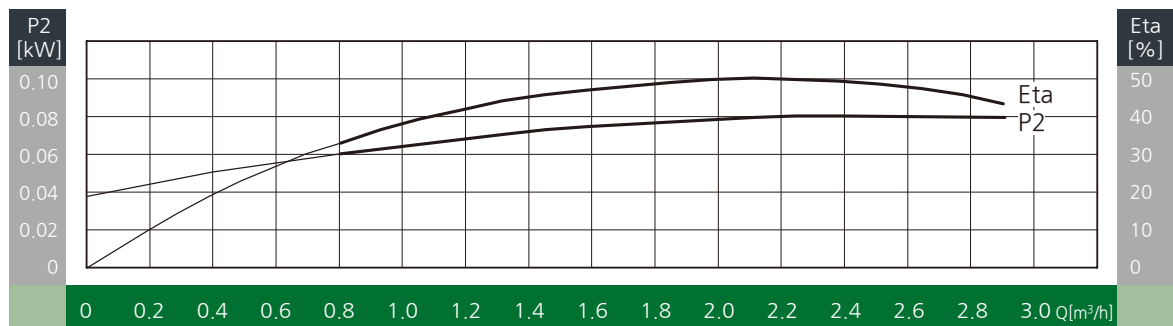
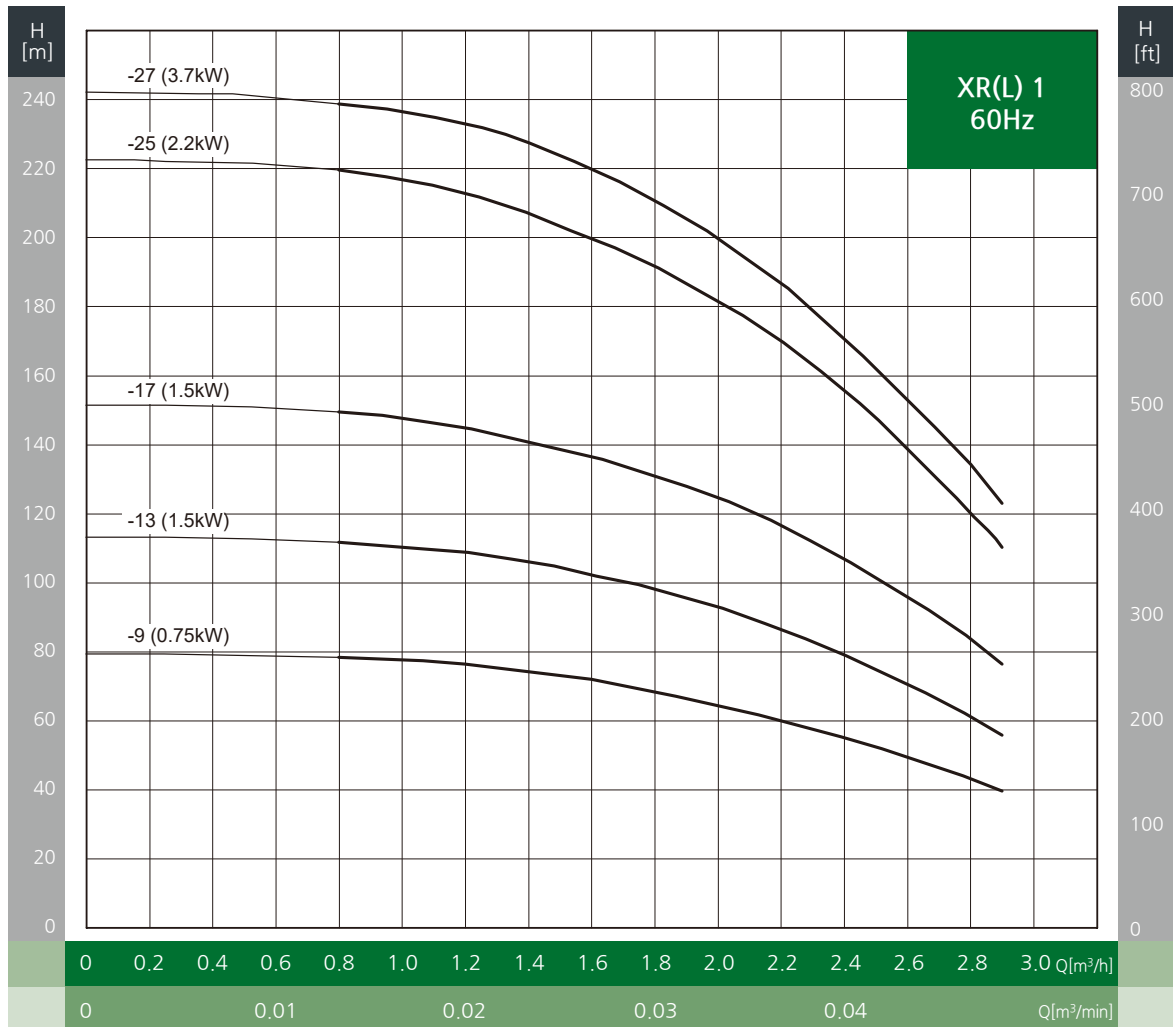
사양	Series	XR(L)1	XR(L)3	XR(L)5	XR(L)10	XR(L)15	XR(L)20	XR(L)32	XR(L)45	XR(L)64	XR(L)95	XR(L)125	XR(L)155	XR(L)185	XR(L)215	XR(L)255
모터동력 [kW]		0.75~3.7	0.75~3.7	0.75~7.5	1.5~11	3.7~18.5	3.7~18.5	5.5~30	5.5~45	7.5~45	11~55	15~110	18.5~110	30~132	45~225	55~200
흡입/토출 구경		DN25		DN32	DN40	DN50		DN65	DN80	DN100		DN150		DN200		
공칭 유량 [m³/h]		1	3	5	10	15	20	32	45	64	95	125	155	185	215	255
유량 범위 [m³/h]		0.8~2.9	1.4~5.4	3~10.2	6~16	10~29	12~35	18~48	25~72	36~108	55.5~150	75~190	90~240	110~290	130~335	150~395
최대운전압력 [bar]		25bar						33bar				40bar				
허용유체온도 [°C]	XR	-15°C ~ 80°C									-15°C ~ 120°C					
	XRL	-15°C ~ 120°C														
운전주위온도 [°C]		최대 40°C														
펌프타입		입형다단 원심펌프														
XR		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
XRL		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

삼상모터 결선도(두크 표준모터)



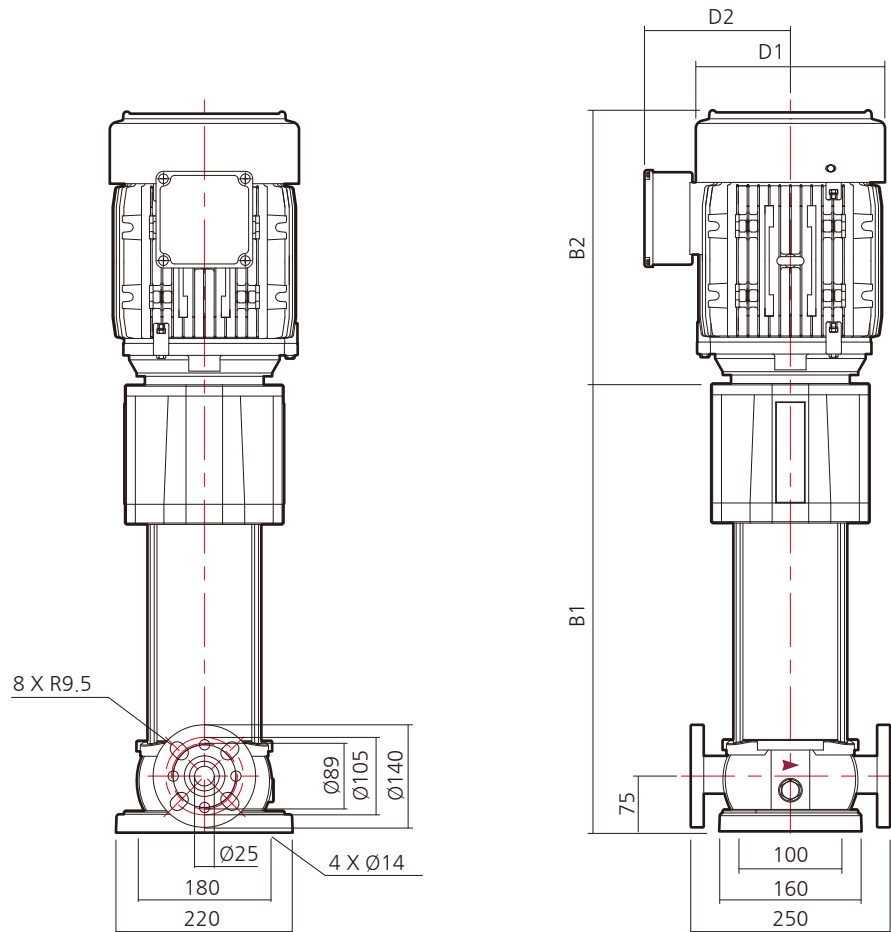
※ 11kW 이상 모터는 정격 전압 380V를 적용하며, 기동 전류 저감을 위해 현장 여건에 따라 적절한 기동 방식을 적용해야 합니다.

성능곡선도



※ 상기 제품은 주문 생산품이므로 본사에 문의 바랍니다.

외형도

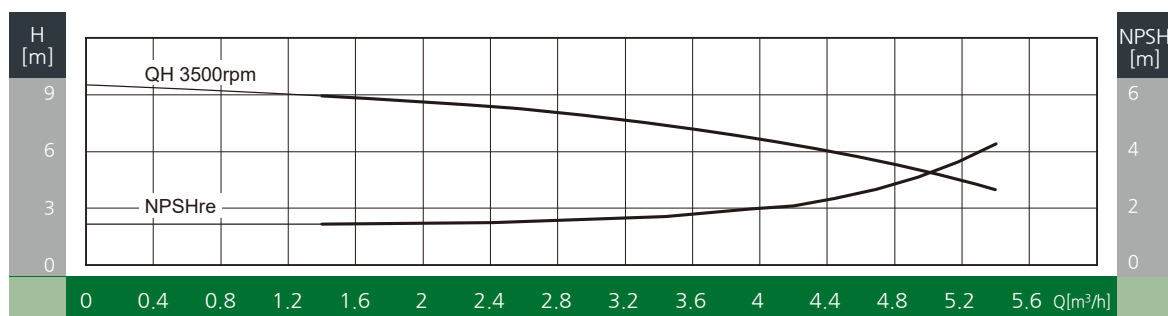
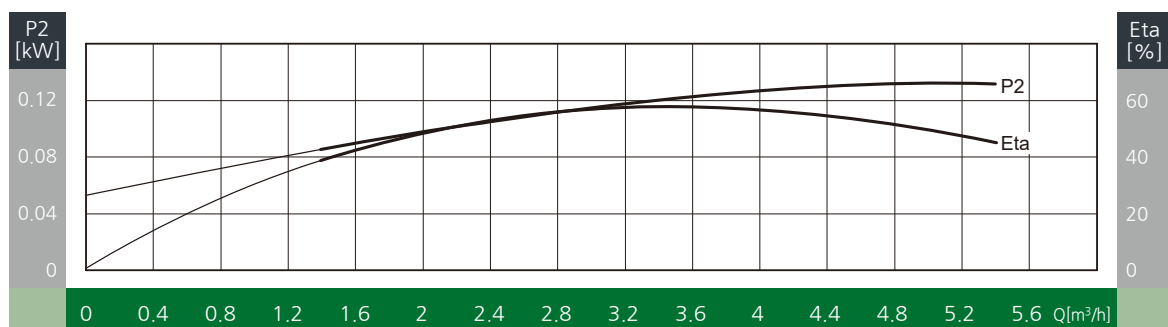
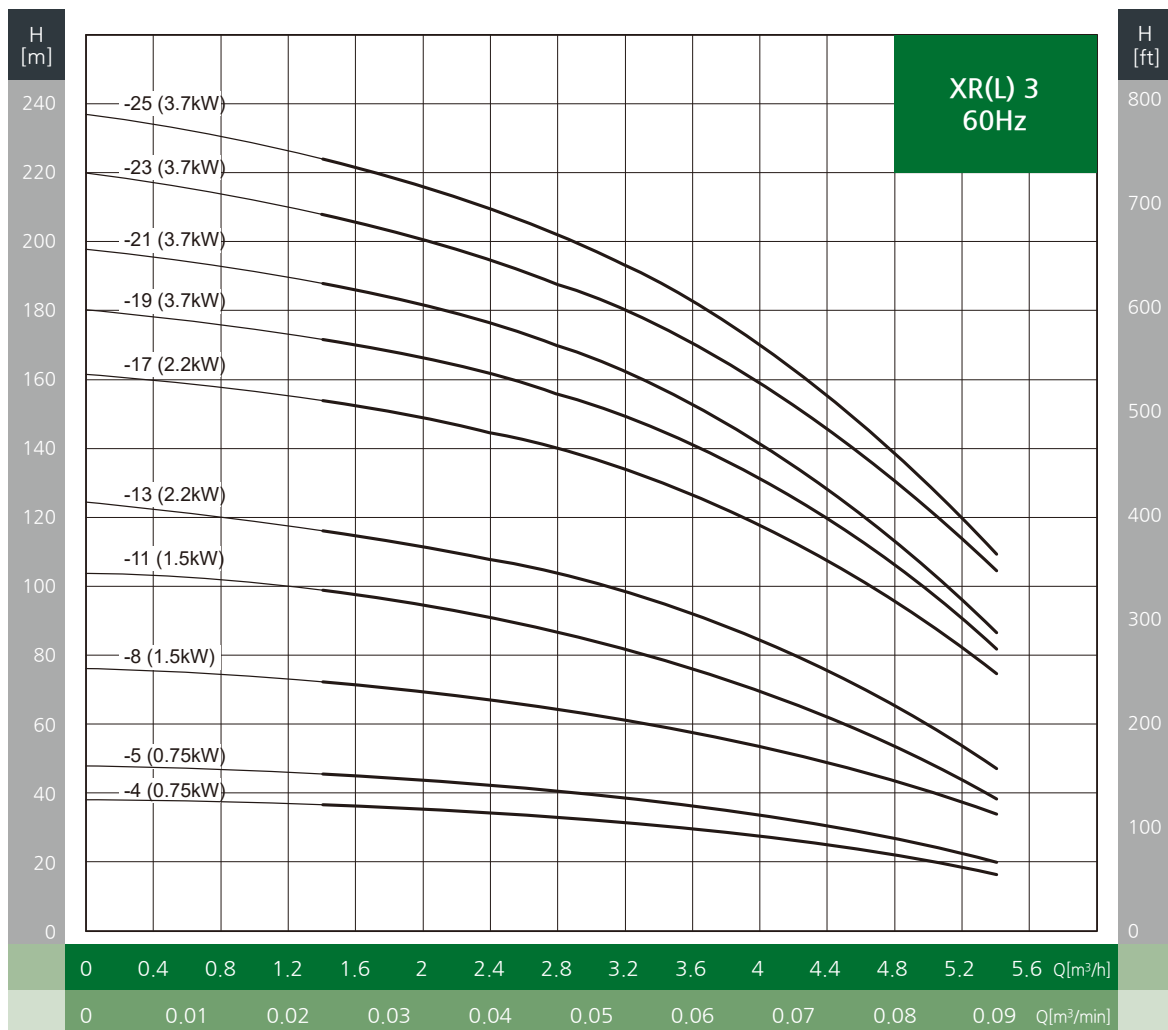


외형치수 및 중량

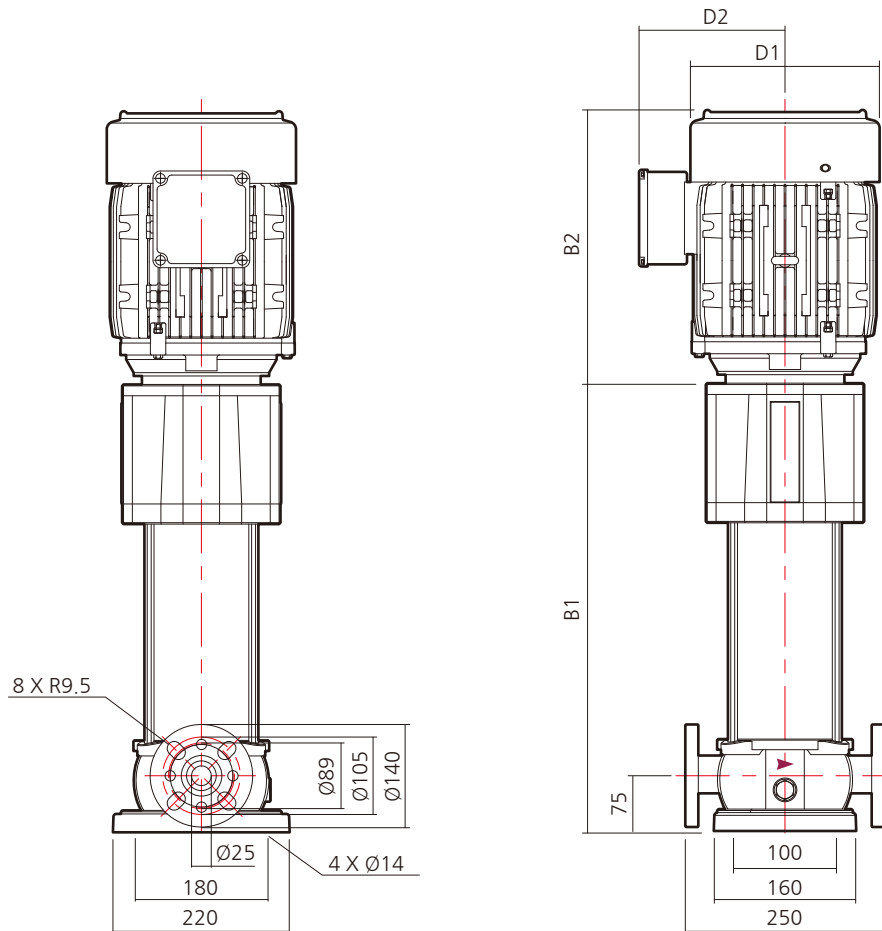
모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 1-9	0.75	1	DN25	PN16~PN25	474.5	255	729.5	174	134	58
XR(L) 1-13	1.5	2			546.5	285	831.5	183	143	64
XR(L) 1-17	1.5	2			618.5	285	903.5	183	143	67
XR(L) 1-25	2.2	3			762.5	285	1047.5	183	143	70
XR(L) 1-27	3.7	5			798.5	330	1128.5	227	180	100

※ 상기 제품은 주문 생산품이므로 본사에 문의 바랍니다.

성능곡선도



외형도

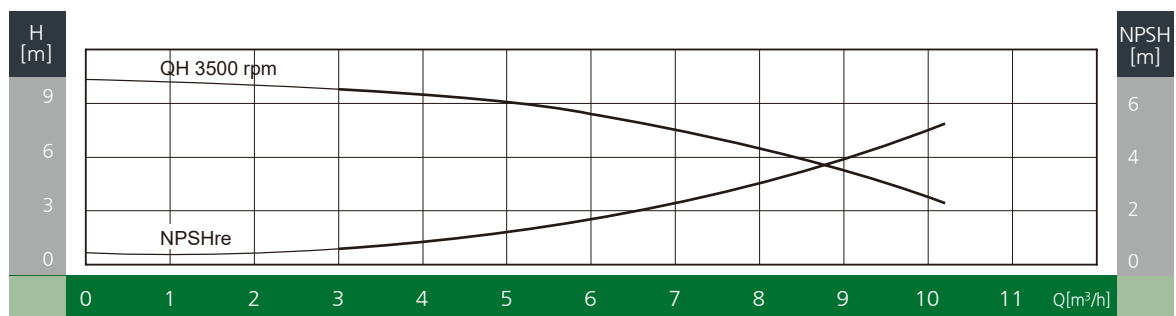
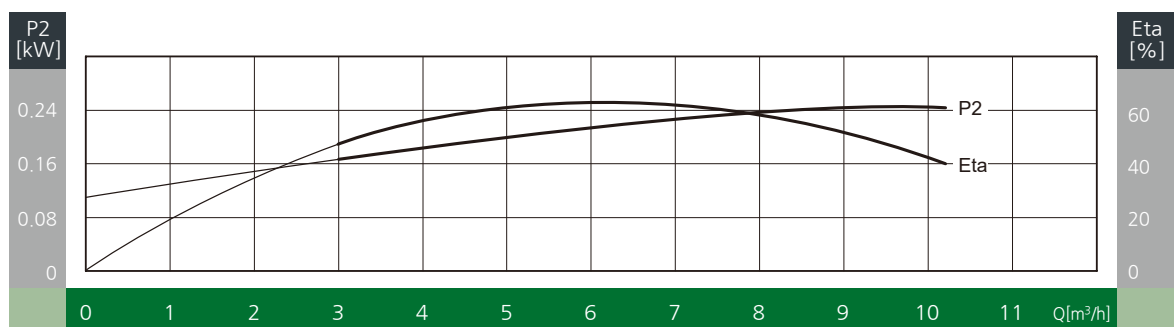
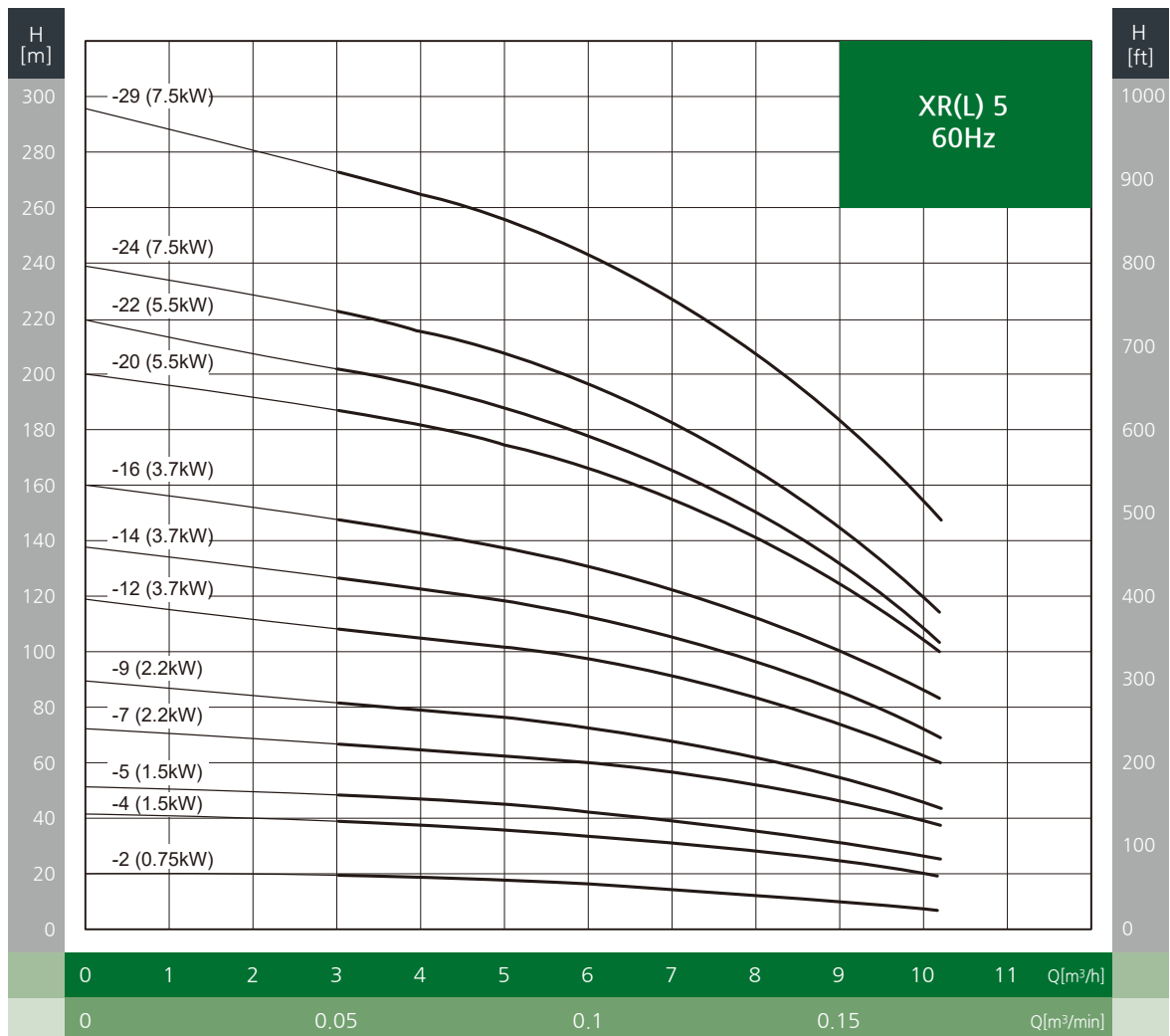


외형치수 및 중량

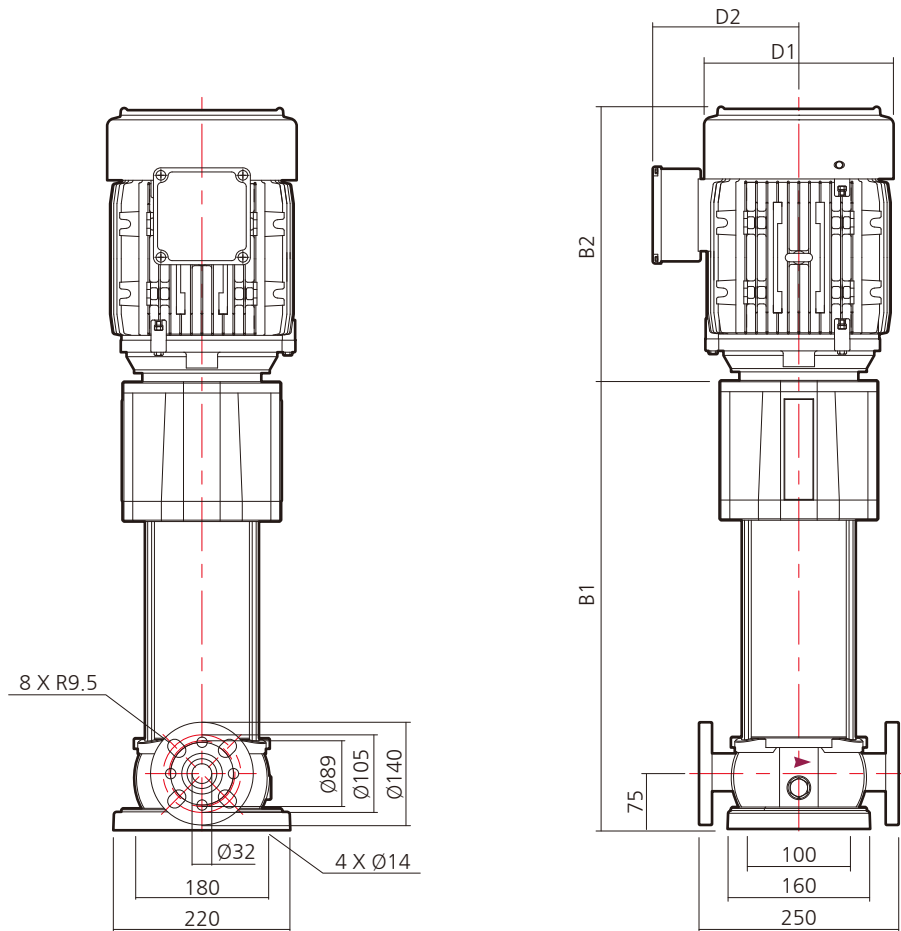
모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 3-4	0.75	1	DN25	PN16~PN25	384.5	255	639.5	174	134	54
XR(L) 3-5	0.75	1			402.5	255	657.5	174	134	54
XR(L) 3-8	1.5	2			456.5	285	741.5	183	143	60
XR(L) 3-11	1.5	2			510.5	285	795.5	183	143	62
XR(L) 3-13	2.2	3			546.5	285	831.5	183	143	63
XR(L) 3-17	2.2	3			618.5	285	903.5	183	143	65
XR(L) 3-19	3.7	5			654.5	330	984.5	227	180	94
XR(L) 3-21	3.7	5			690.5	330	1020.5	227	180	95
XR(L) 3-23	3.7	5			726.5	330	1056.5	227	180	96
XR(L) 3-25	3.7	5			762.5	330	1092.5	227	180	97

※ 상기 외형치수 및 중량 정보는 효성모터 적용 기준입니다.

성능곡선도



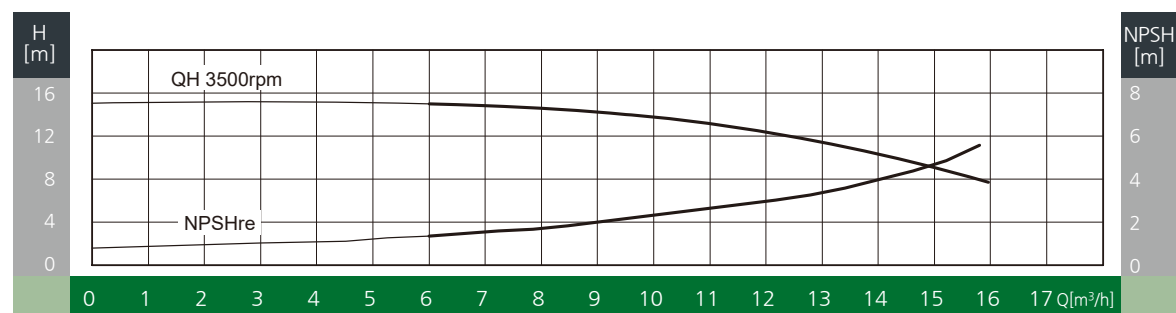
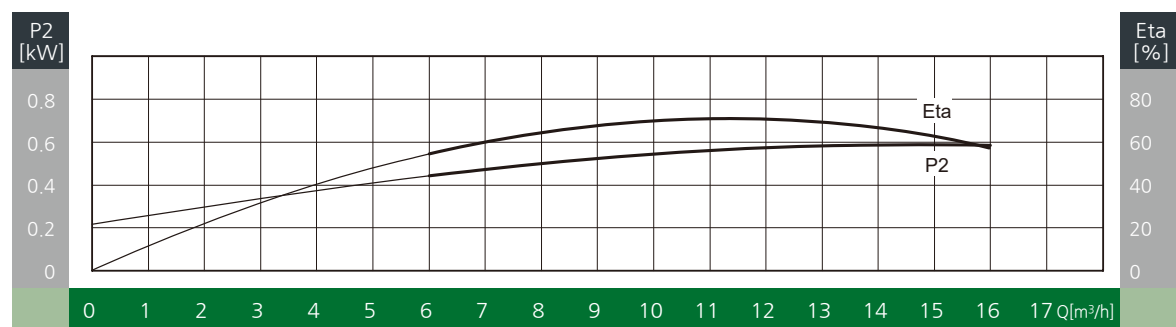
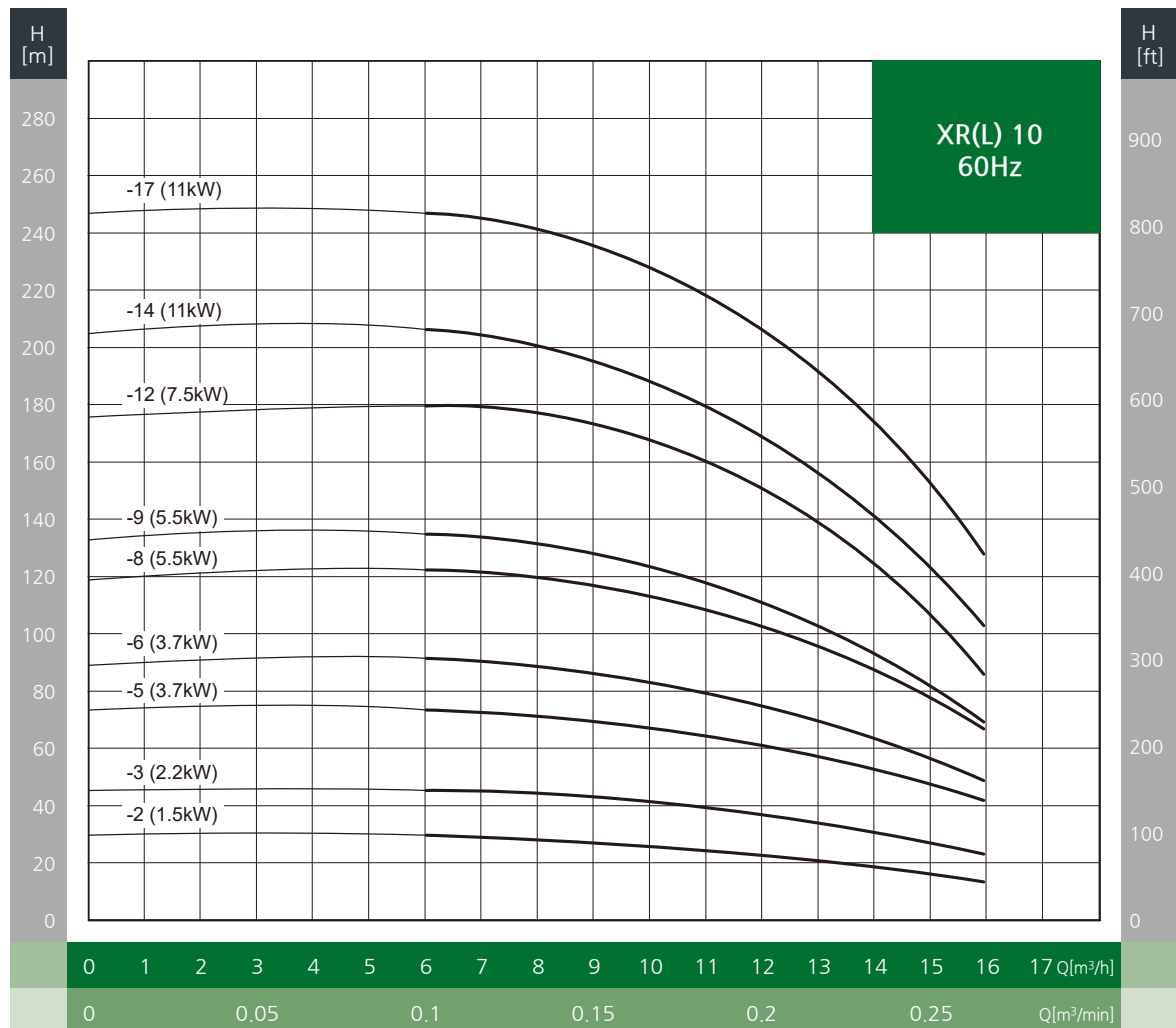
외형도



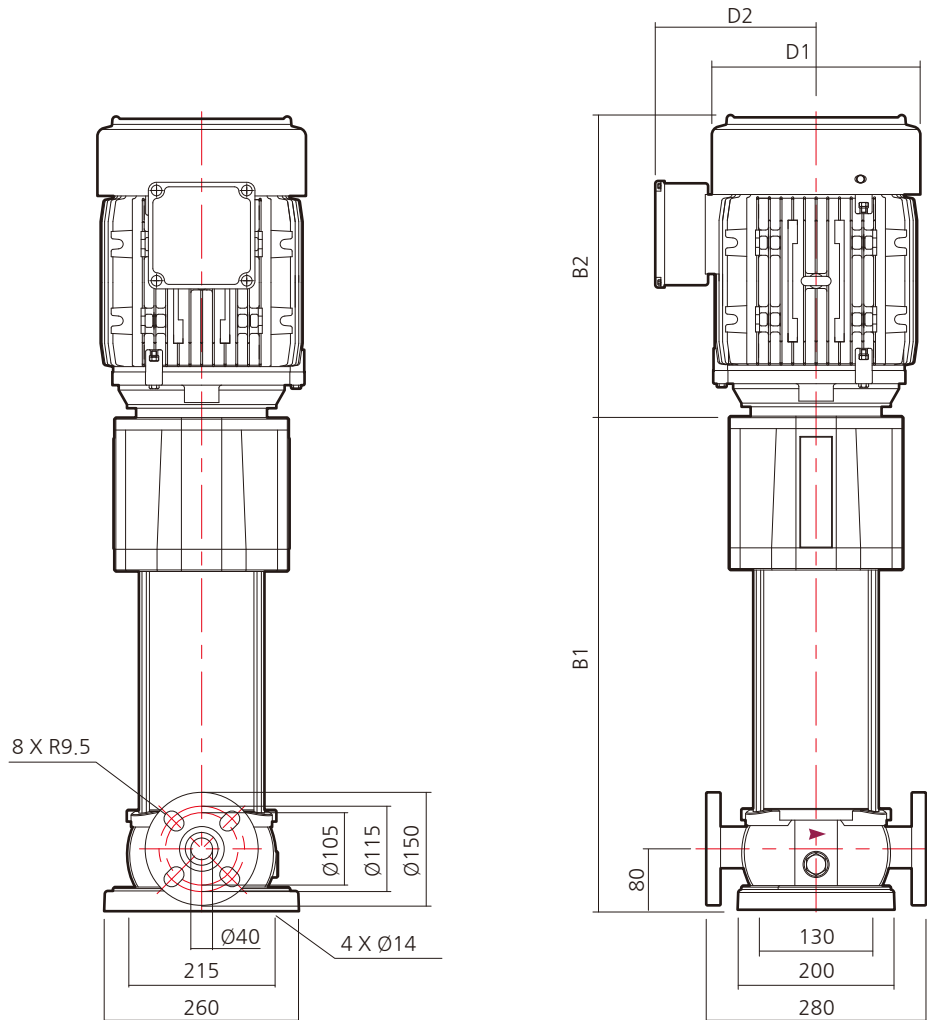
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 5-2	0.75	1	DN32	PN16~PN25	366.5	255	621.5	174	134	53
XR(L) 5-4	1.5	2			420.5	285	705.5	183	143	58
XR(L) 5-5	1.5	2			447.5	285	732.5	183	143	59
XR(L) 5-7	2.2	3			501.5	285	786.5	183	143	60
XR(L) 5-9	2.2	3			555.5	285	840.5	183	143	61
XR(L) 5-12	3.7	5			636.5	330	966.5	227	180	90
XR(L) 5-14	3.7	5			690.5	330	1020.5	227	180	91
XR(L) 5-16	3.7	5			744.5	330	1074.5	227	180	92
XR(L) 5-20	5.5	7.5			882.5	372	1254.5	270	202	129
XR(L) 5-22	5.5	7.5			936.5	372	1308.5	270	202	130
XR(L) 5-24	7.5	10			990.5	372	1362.5	270	202	131
XR(L) 5-29	7.5	10			1125.5	372	1497.5	270	202	135

성능곡선도



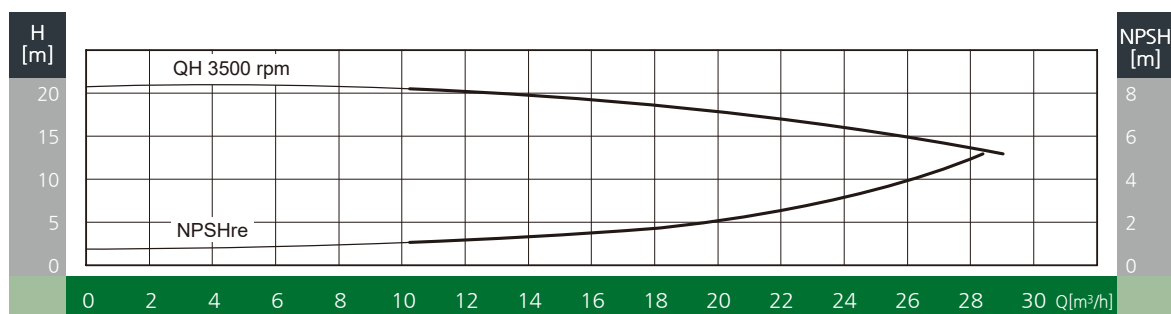
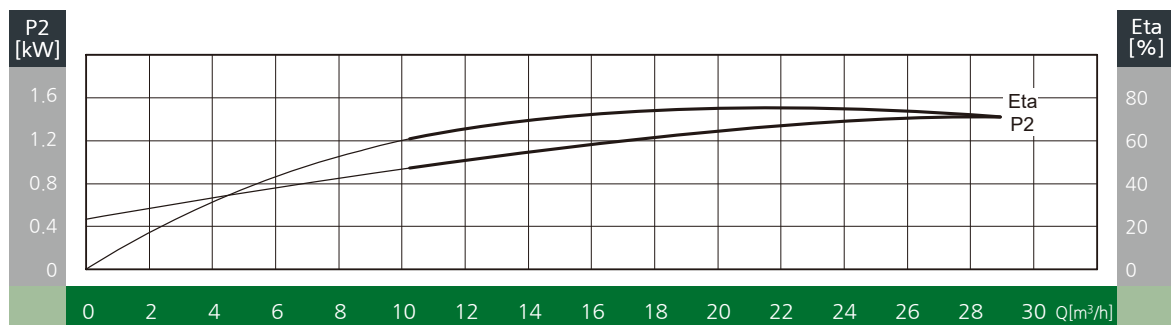
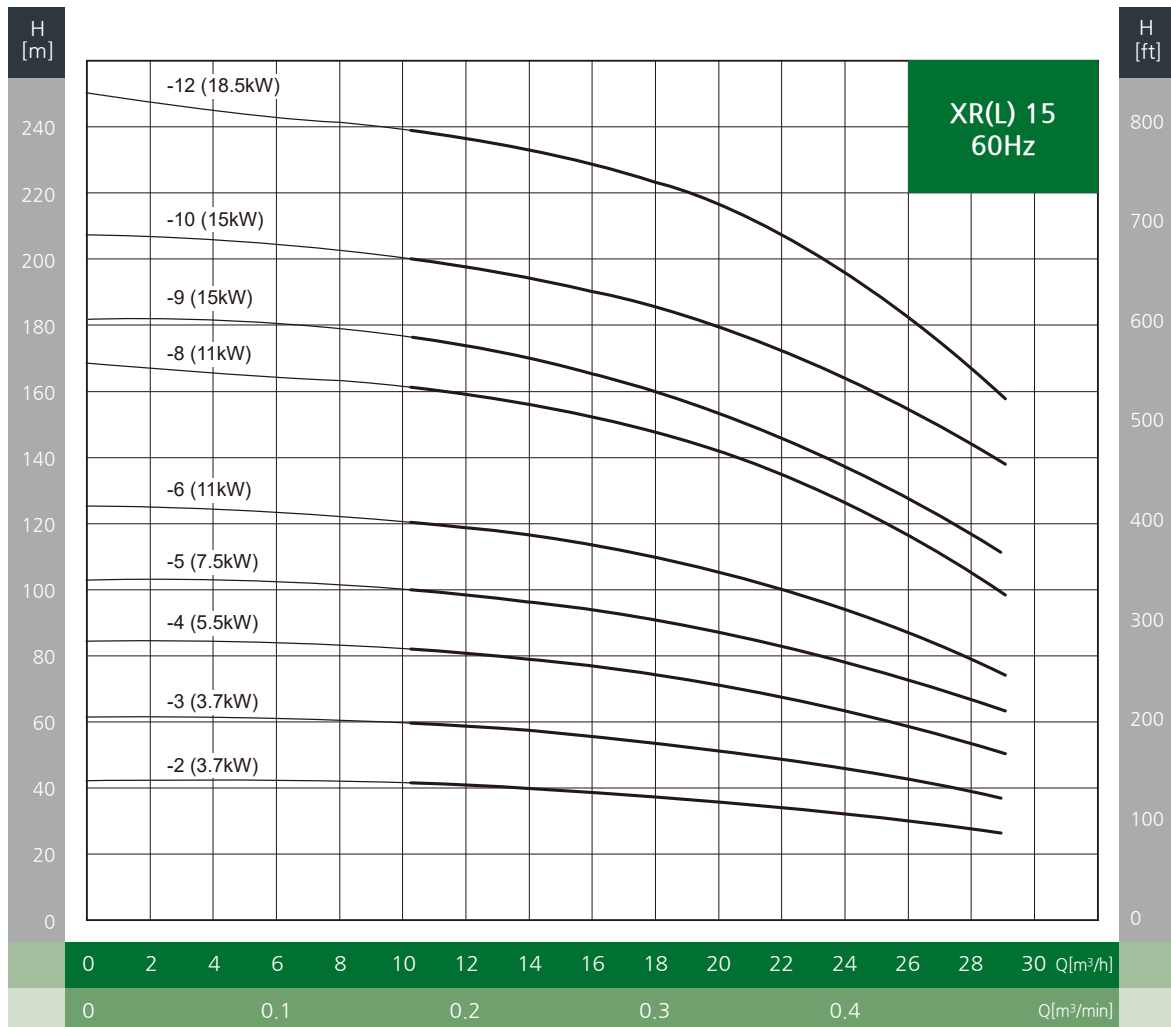
외형도



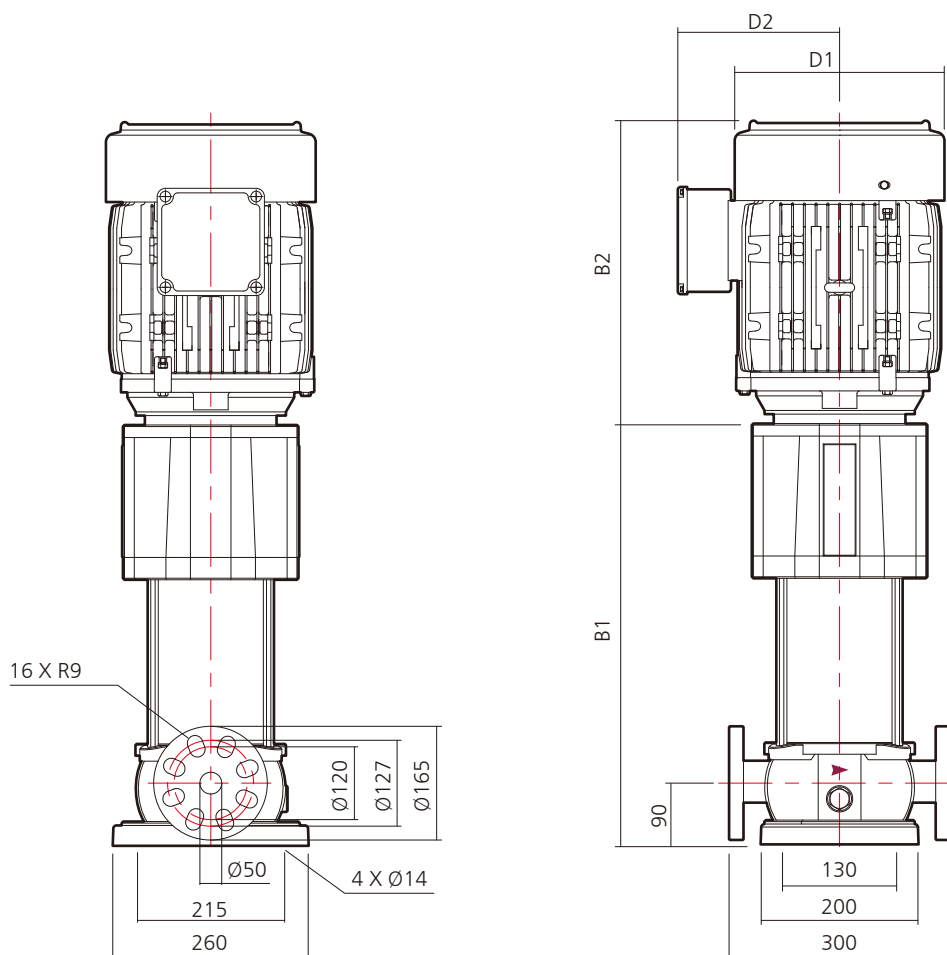
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 10-2	1.5	2	DN40	PN16~PN25	433	285	718	183	143	74
XR(L) 10-3	2.2	3			463	285	748	183	143	75
XR(L) 10-5	3.7	5			523	330	853	227	180	105
XR(L) 10-6	3.7	5			553	330	883	227	180	106
XR(L) 10-8	5.5	7.5			633	372	1005	270	202	139
XR(L) 10-9	5.5	7.5			663	372	1035	270	202	140
XR(L) 10-12	7.5	10			753	372	1125	270	202	143
XR(L) 10-14	11	15			843	480	1323	318	290	223
XR(L) 10-17	11	15			933	480	1413	318	290	226

성능곡선도



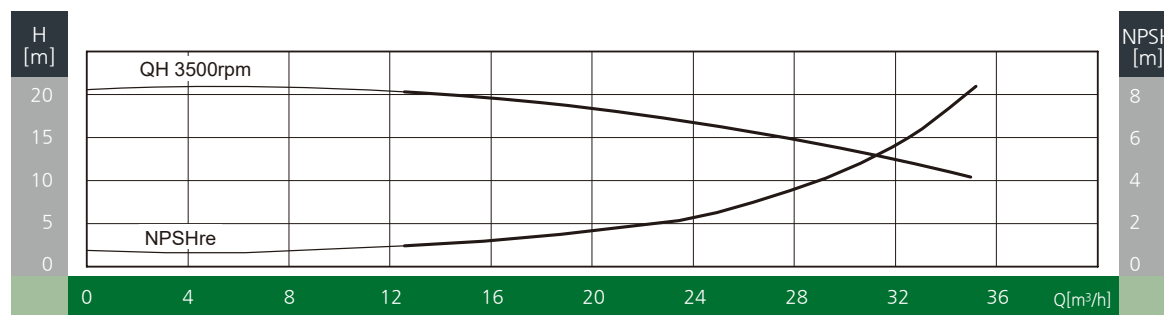
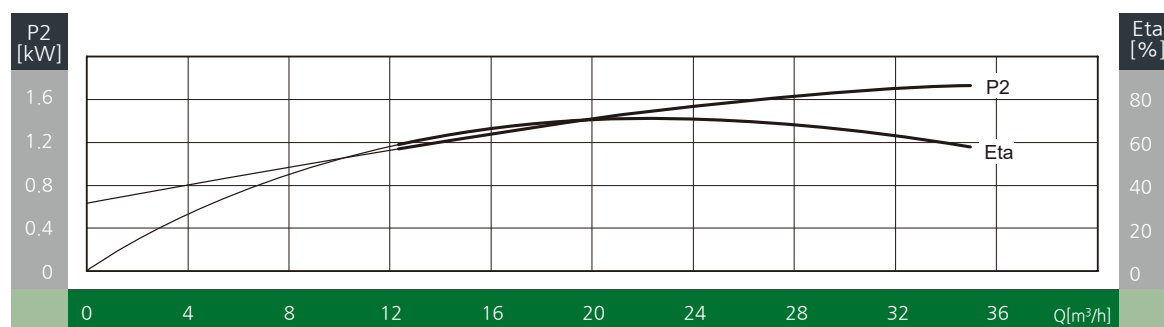
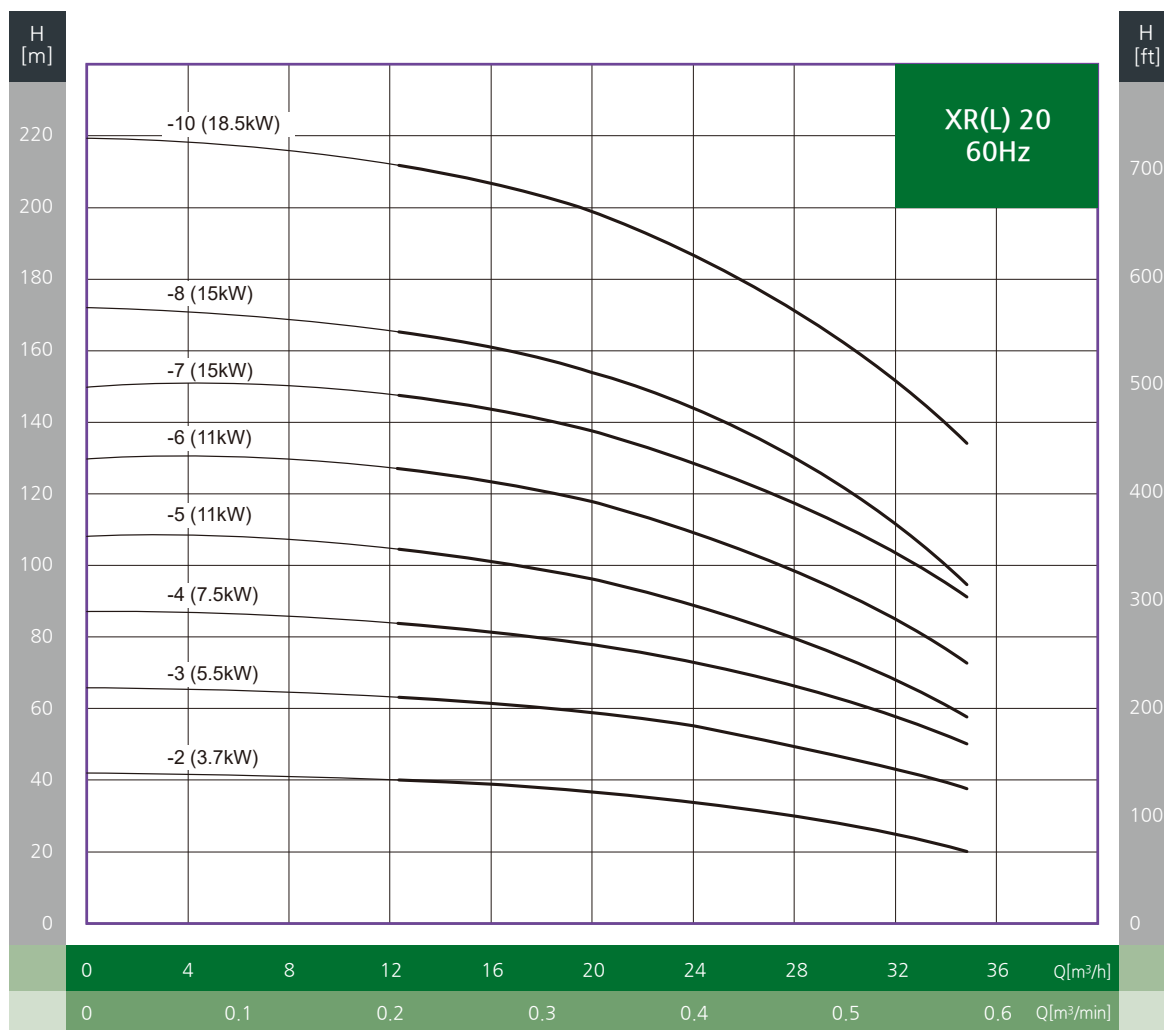
외형도



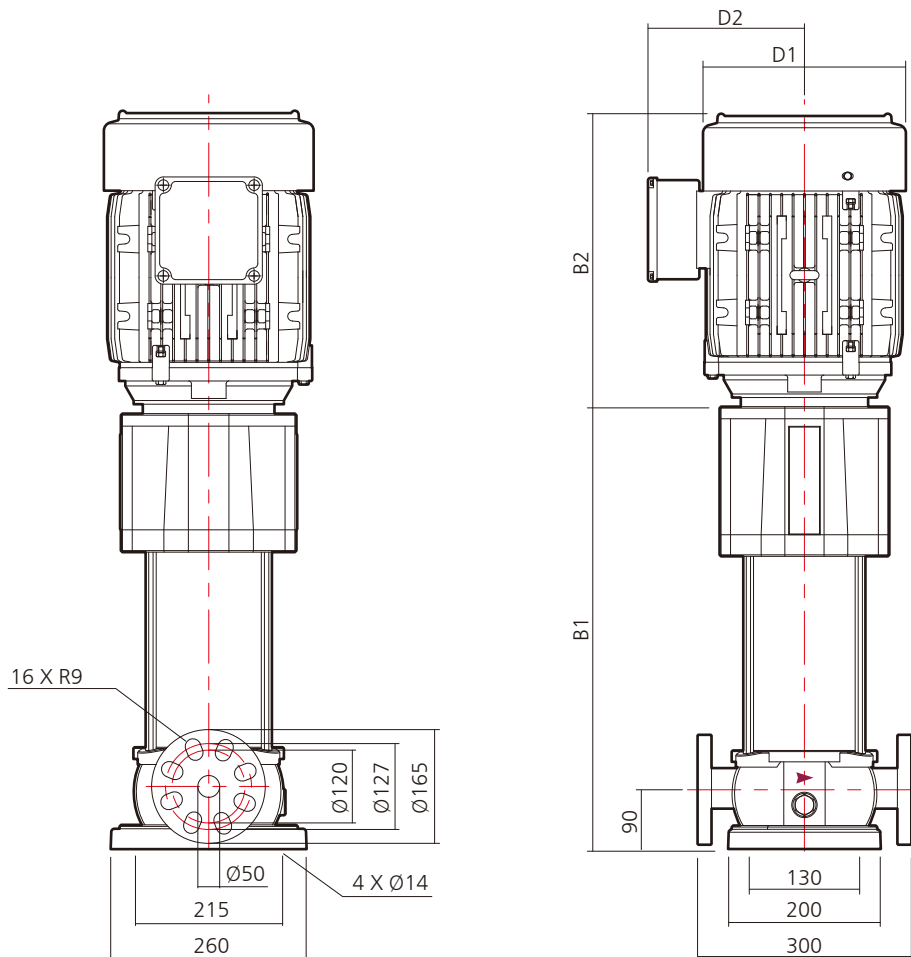
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 15-2	3.7	5	DN50	PN16~PN25	478	330	808	227	180	102
XR(L) 15-3	3.7	5			523	330	853	227	180	103
XR(L) 15-4	5.5	7.5			588	372	960	270	202	136
XR(L) 15-5	7.5	10			633	372	1005	270	202	137
XR(L) 15-6	11	15			708	480	1188	318	290	218
XR(L) 15-8	11	15			798	480	1278	318	290	221
XR(L) 15-9	15	20			843	480	1323	318	290	222
XR(L) 15-10	15	20			888	480	1368	318	290	223
XR(L) 15-12	18.5	25			978	525	1503	318	290	232

성능곡선도



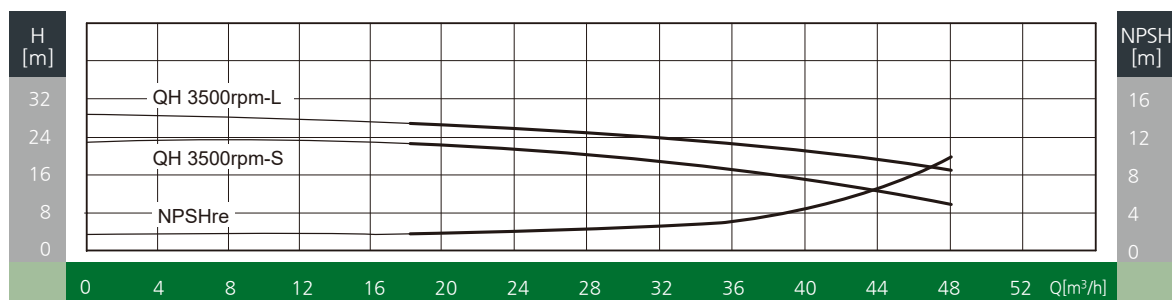
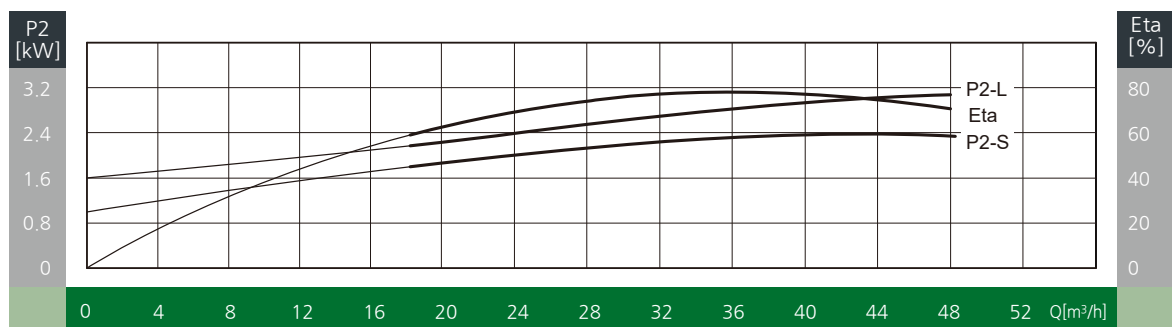
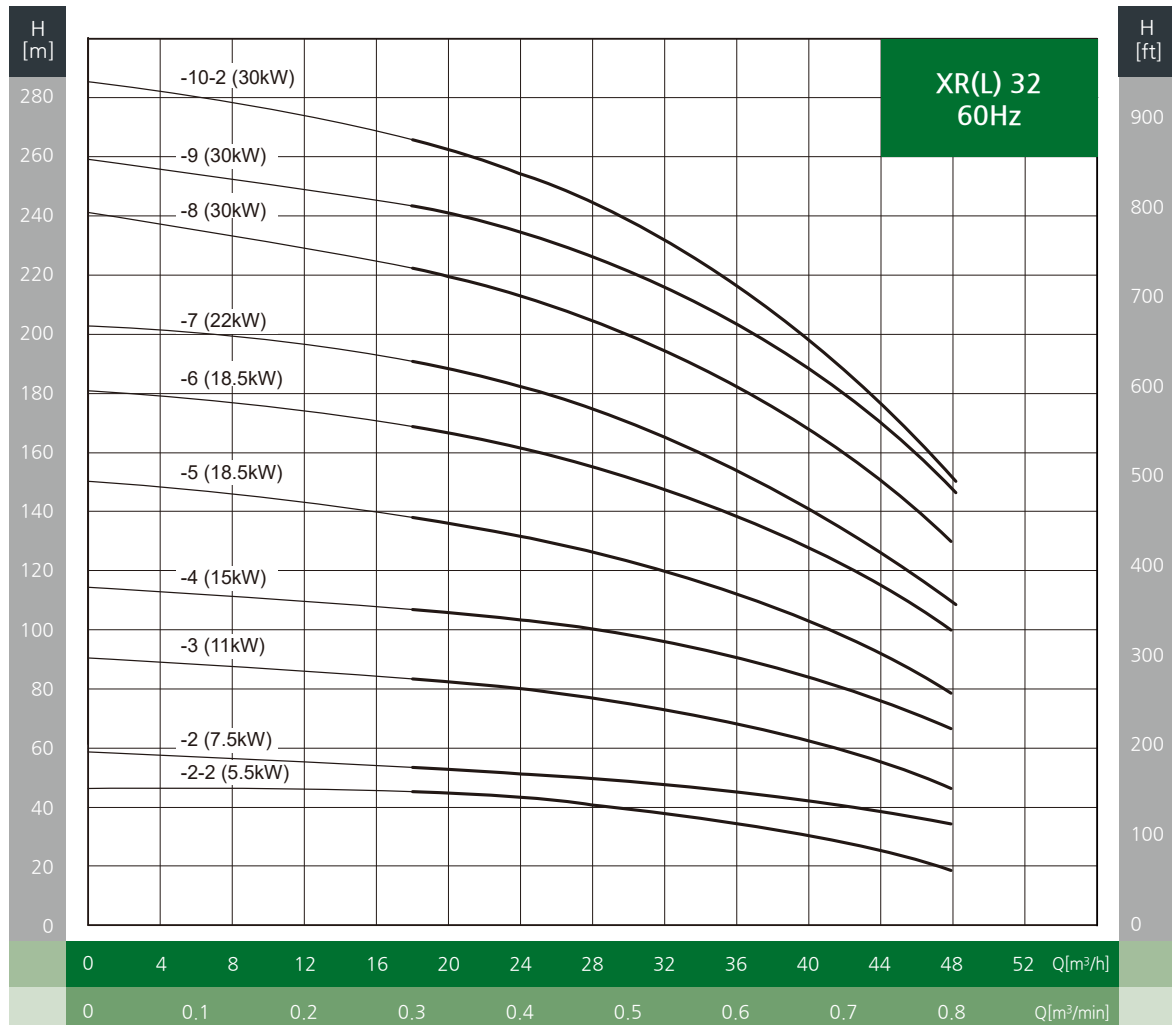
외형도



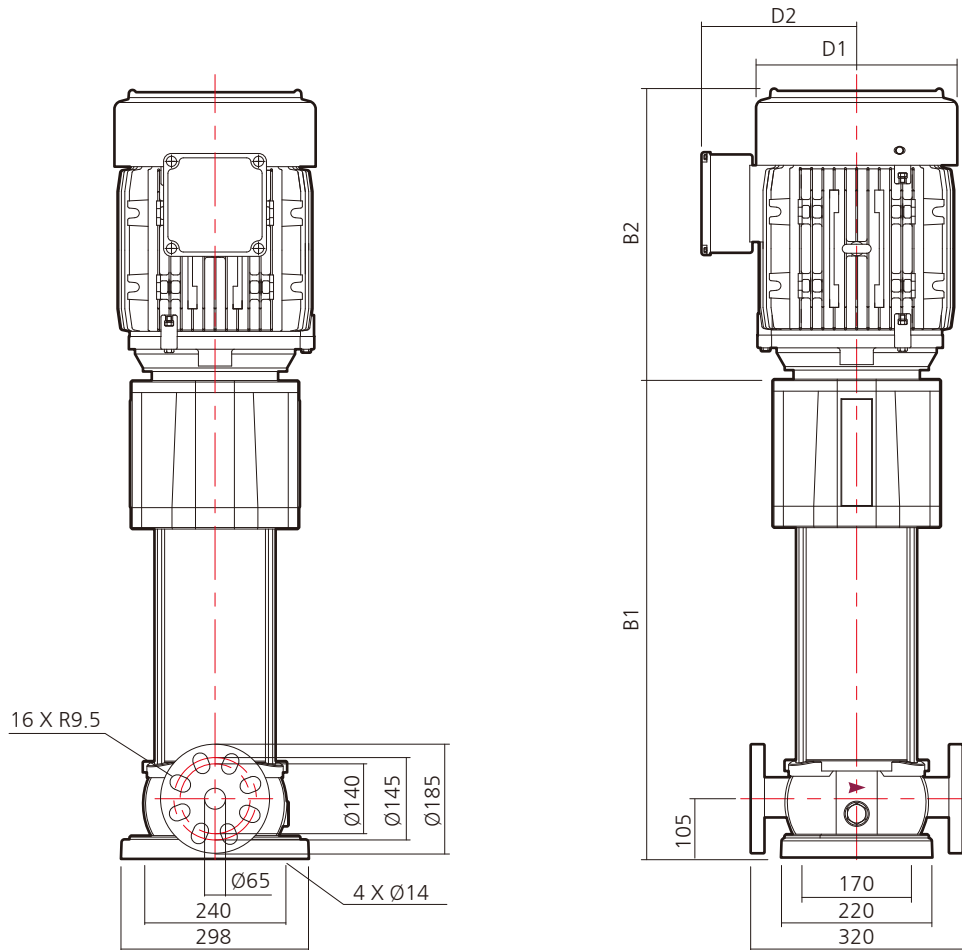
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 20-2	3.7	5	DN50	PN16~PN25	478	330	808	227	180	102
XR(L) 20-3	5.5	7.5			543	372	915	270	202	134
XR(L) 20-4	7.5	10			588	372	960	270	202	136
XR(L) 20-5	11	15			663	480	1143	318	290	216
XR(L) 20-6	11	15			708	480	1188	318	290	218
XR(L) 20-7	15	20			753	480	1233	318	290	219
XR(L) 20-8	15	20			798	480	1278	318	290	221
XR(L) 20-10	18.5	25			888	525	1413	318	290	229

성능곡선도



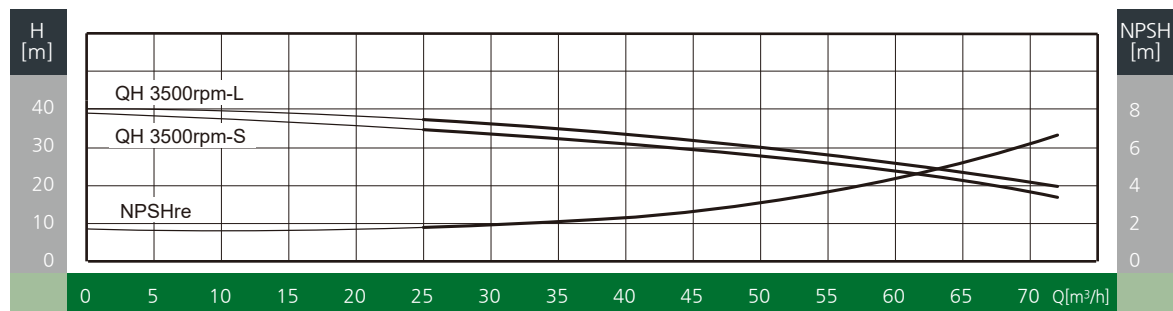
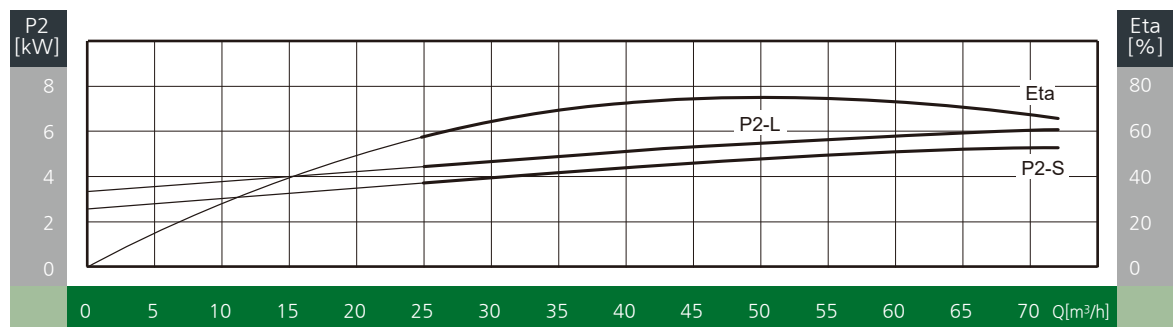
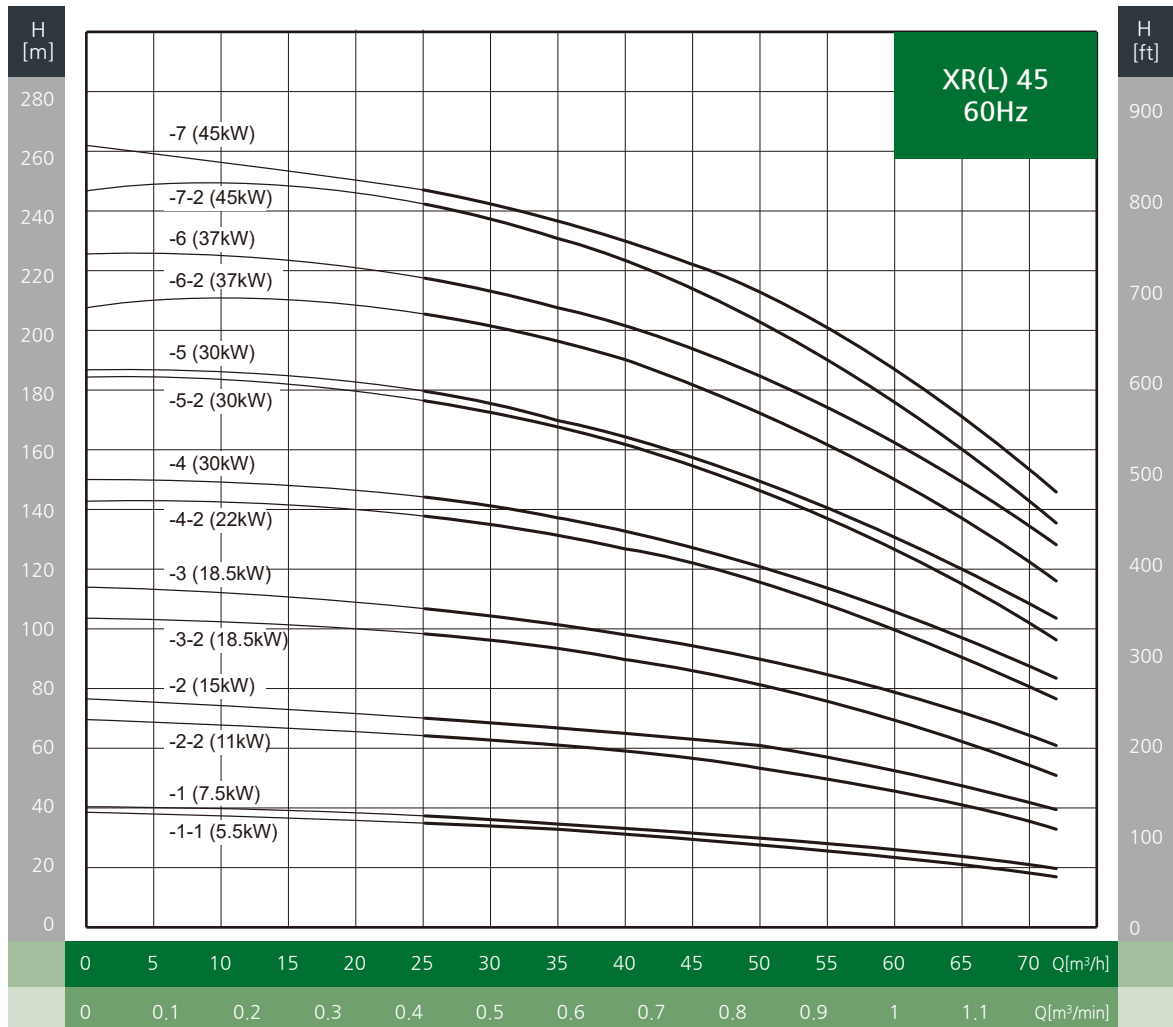
외형도



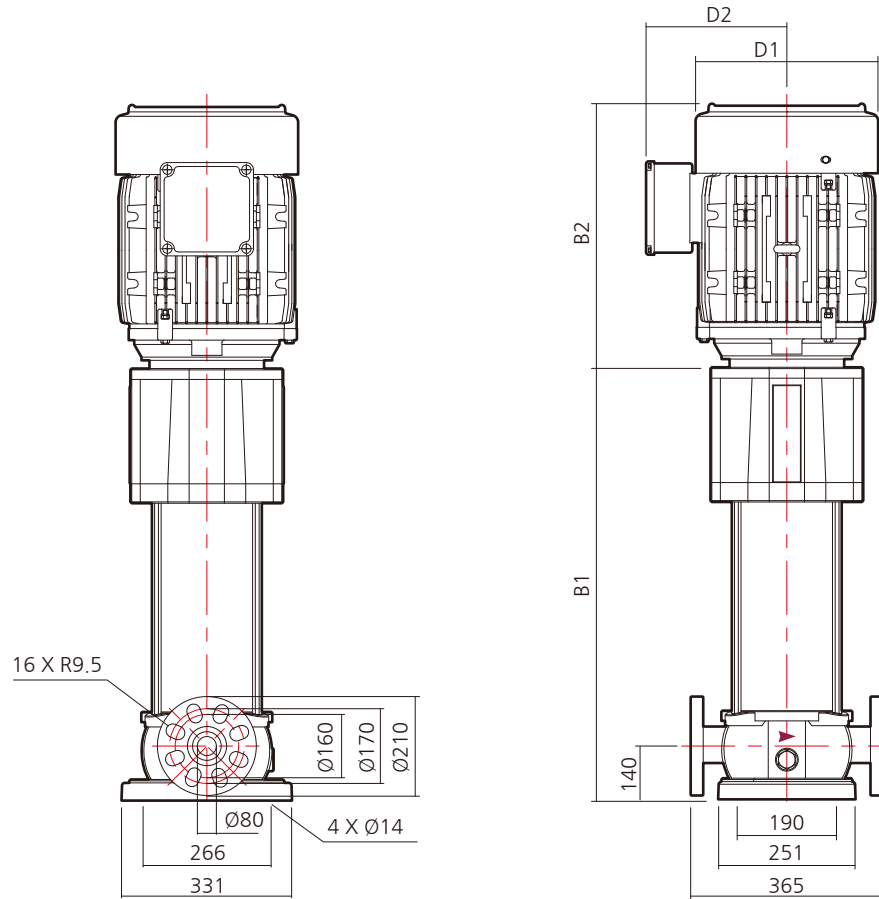
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 32-2-2	5.5	7.5	DN65	PN16~PN25	645	410	1055	250	210	157
XR(L) 32-2	7.5	10			645	410	1055	250	210	157
XR(L) 32-3	11	15			745	528	1273	330	315	242
XR(L) 32-4	15	20			815	528	1343	330	315	245
XR(L) 32-5	18.5	25			885	558	1443	330	315	254
XR(L) 32-6	18.5	25			955	558	1513	330	315	257
XR(L) 32-7	22	30			1025	581	1606	380	340	312
XR(L) 32-8	30	40			1095	619	1714	380	340	334
XR(L) 32-9	30	40			1165	619	1784	380	340	337
XR(L) 32-10-2	30	40			1235	619	1854	380	340	340

성능곡선도



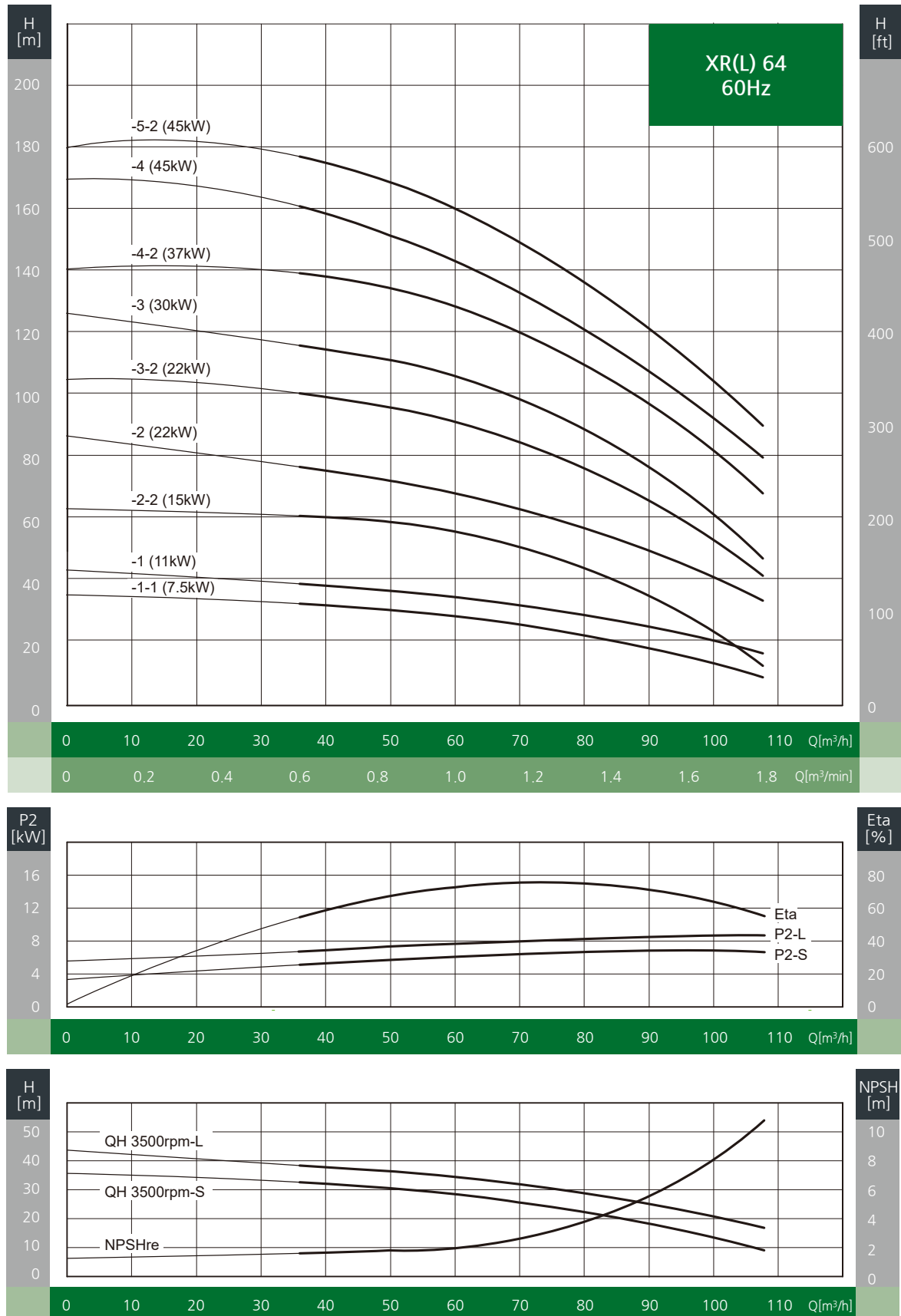
외형도



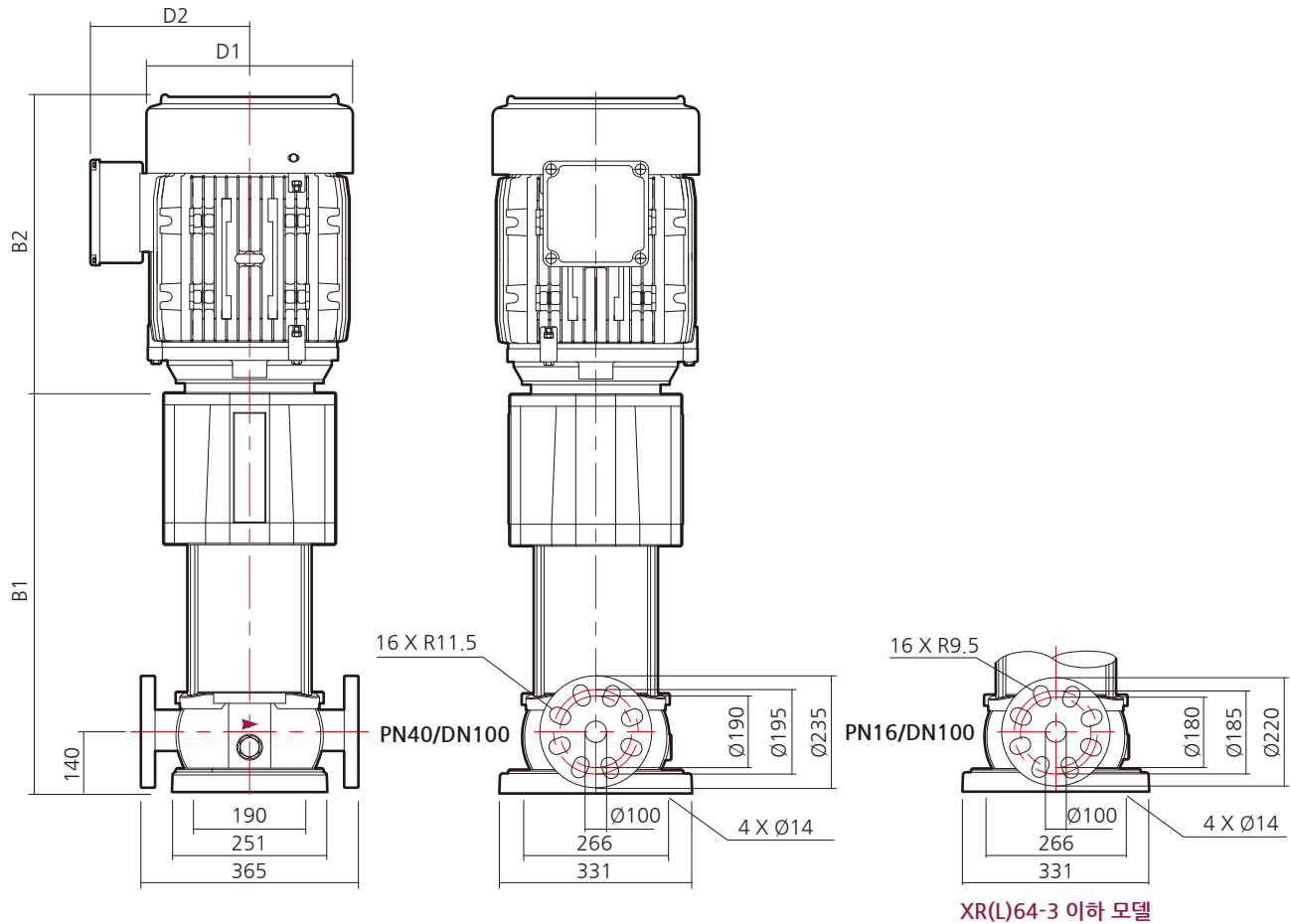
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 45-1-1	5.5	7.5	DN80	PN16~PN25	632	372	1004	270	202	164
XR(L) 45-1	7.5	10			632	372	1004	270	202	164
XR(L) 45-2-2	11	15			742	480	1222	318	290	246
XR(L) 45-2	15	15			742	480	1222	318	290	246
XR(L) 45-3-2	18.5	20			822	525	1347	318	290	256
XR(L) 45-3	18.5	25			822	525	1347	318	290	256
XR(L) 45-4-2	22	30			902	570	1472	354	305	312
XR(L) 45-4	30	40			902	610	1512	354	305	331
XR(L) 45-5-2	30	40			982	610	1592	354	305	335
XR(L) 45-5	30	40			982	610	1592	354	305	335
XR(L) 45-6-2	37	40			1062	690	1752	404	370	405
XR(L) 45-6	37	50			1062	690	1752	404	370	405
XR(L) 45-7-2	45	60			1142	670	1812	404	370	415
XR(L) 45-7	45	60			1142	670	1812	404	370	415

성능곡선도



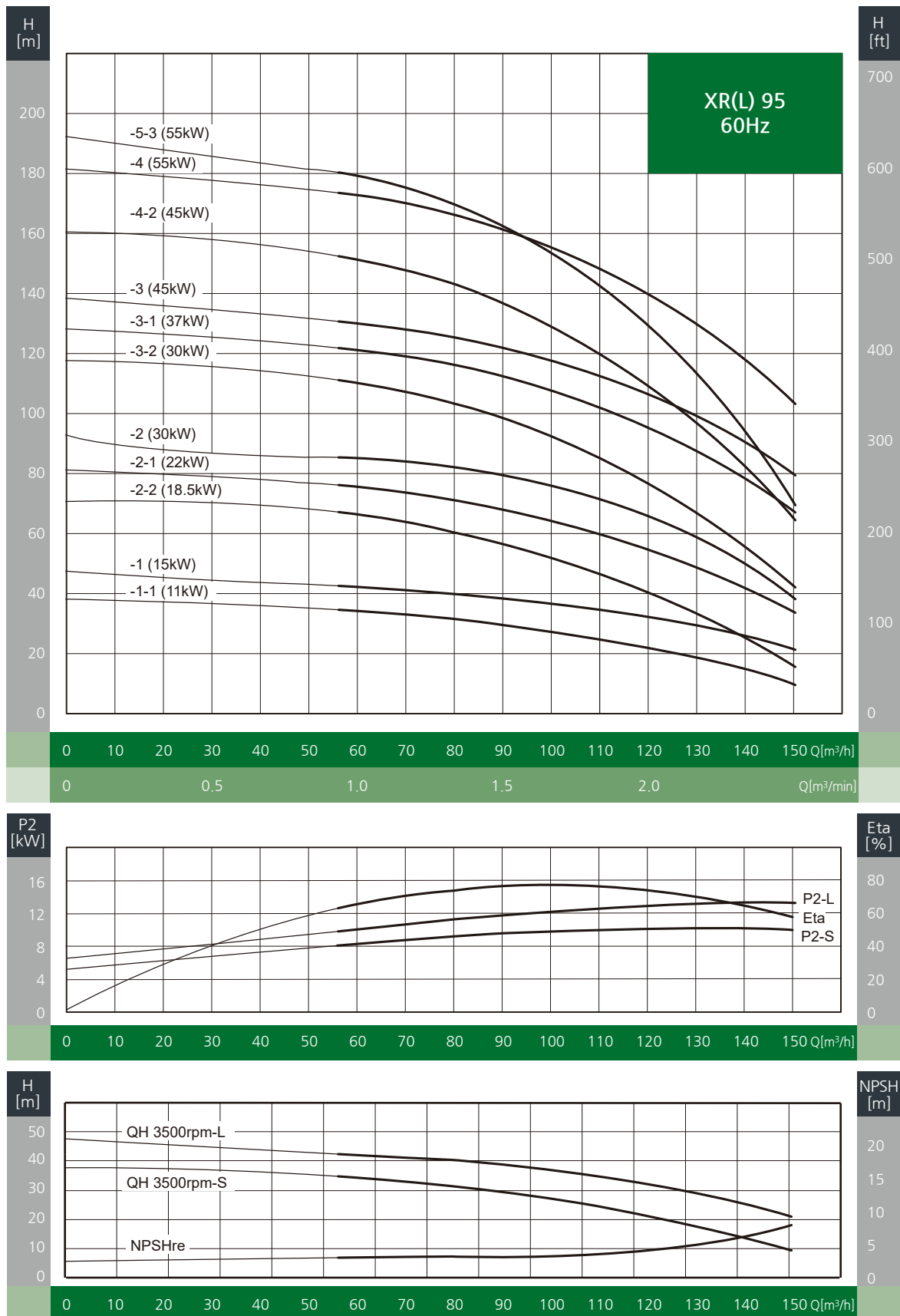
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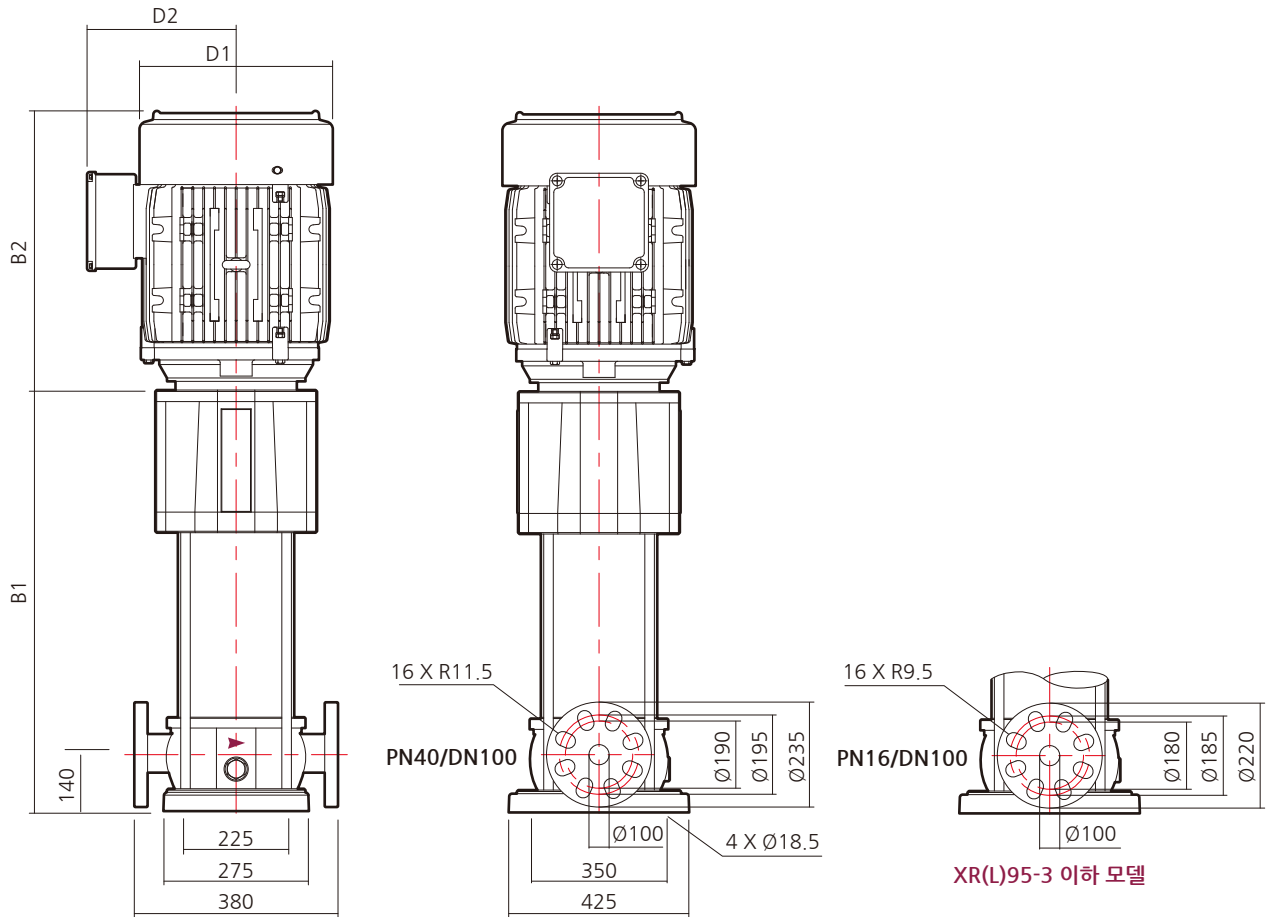
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 64-1-1	7.5	10	DN100	PN16	634	372	1006	270	202	166
XR(L) 64-1	11	15			634	480	1114	318	290	244
XR(L) 64-2-2	15	20			747	480	1227	318	290	247
XR(L) 64-2	22	30			747	570	1317	354	305	305
XR(L) 64-3-2	22	30			829	570	1399	354	305	308
XR(L) 64-3	30	40			829	610	1439	354	305	327
XR(L) 64-4-2	37	50		PN25~PN40	912	690	1602	404	370	397
XR(L) 64-4	45	60			912	670	1582	404	370	403
XR(L) 64-5-2	45	60			994	670	1664	404	370	406

성능곡선도



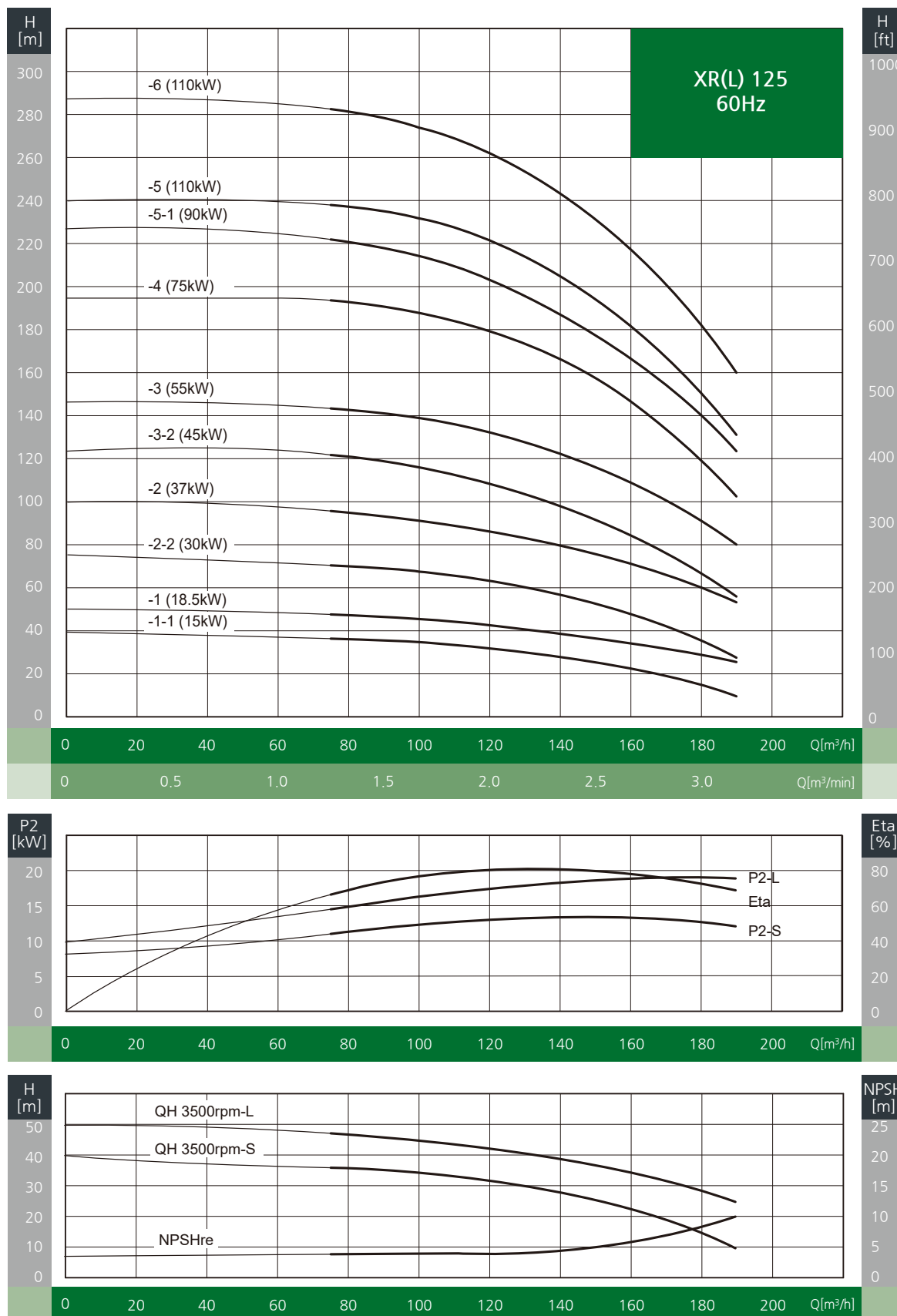
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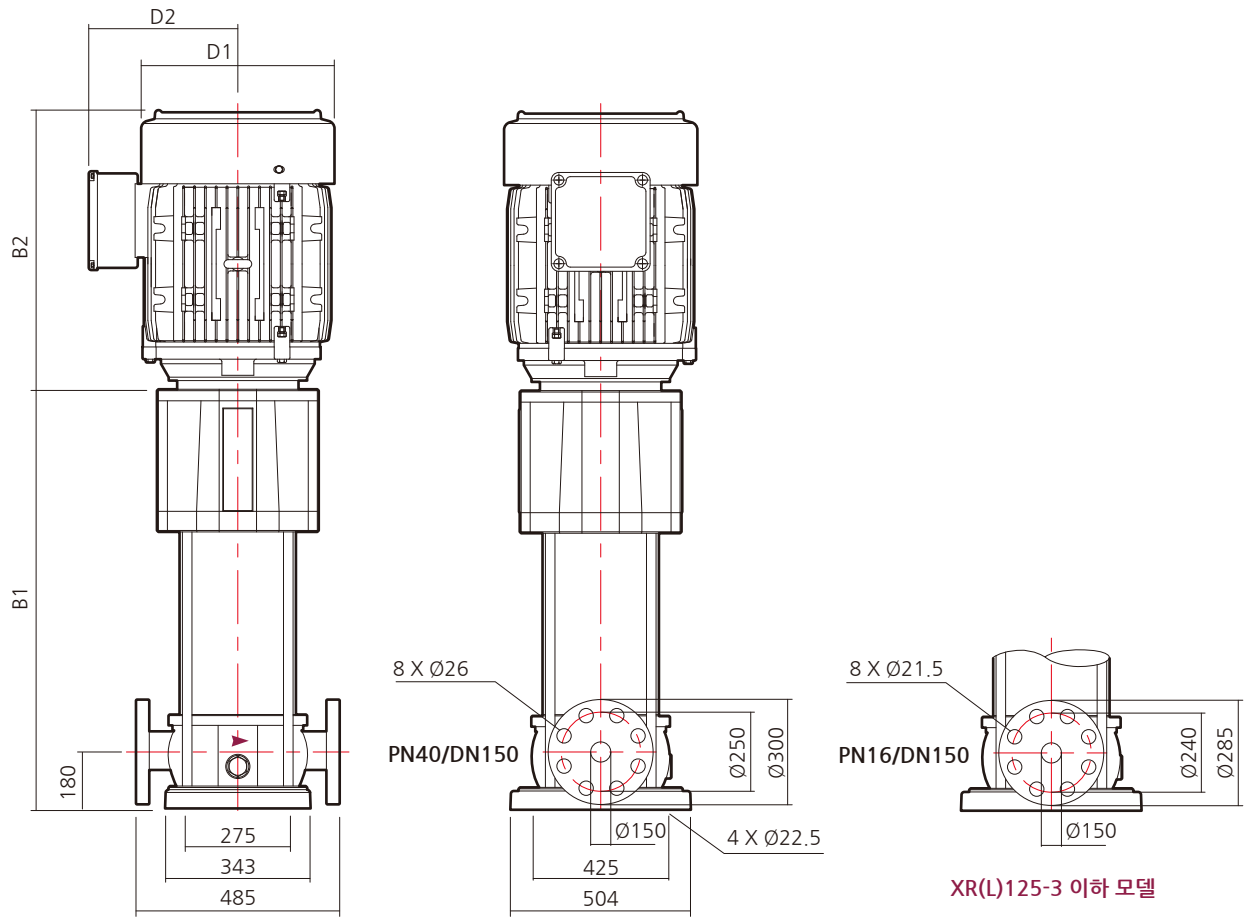
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 95-1-1	11	15	DN100	PN16	701	480	1181	318	290	270
XR(L) 95-1	15	20			701	480	1181	318	290	270
XR(L) 95-2-2	18.5	25			806	525	1331	318	290	283
XR(L) 95-2-1	22	30			806	570	1376	354	305	335
XR(L) 95-2	30	40			806	610	1416	354	305	353
XR(L) 95-3-2	30	40			910	610	1520	354	305	360
XR(L) 95-3-1	37	50			910	690	1600	404	370	427
XR(L) 95-3	45	60			910	670	1580	404	370	433
XR(L) 95-4-2	45	60		PN25~PN40	1015	670	1685	404	370	440
XR(L) 95-4	55	75			1035	685	1720	457	457	547
XR(L) 95-5-3	55	75			1139	685	1824	457	457	555

성능곡선도



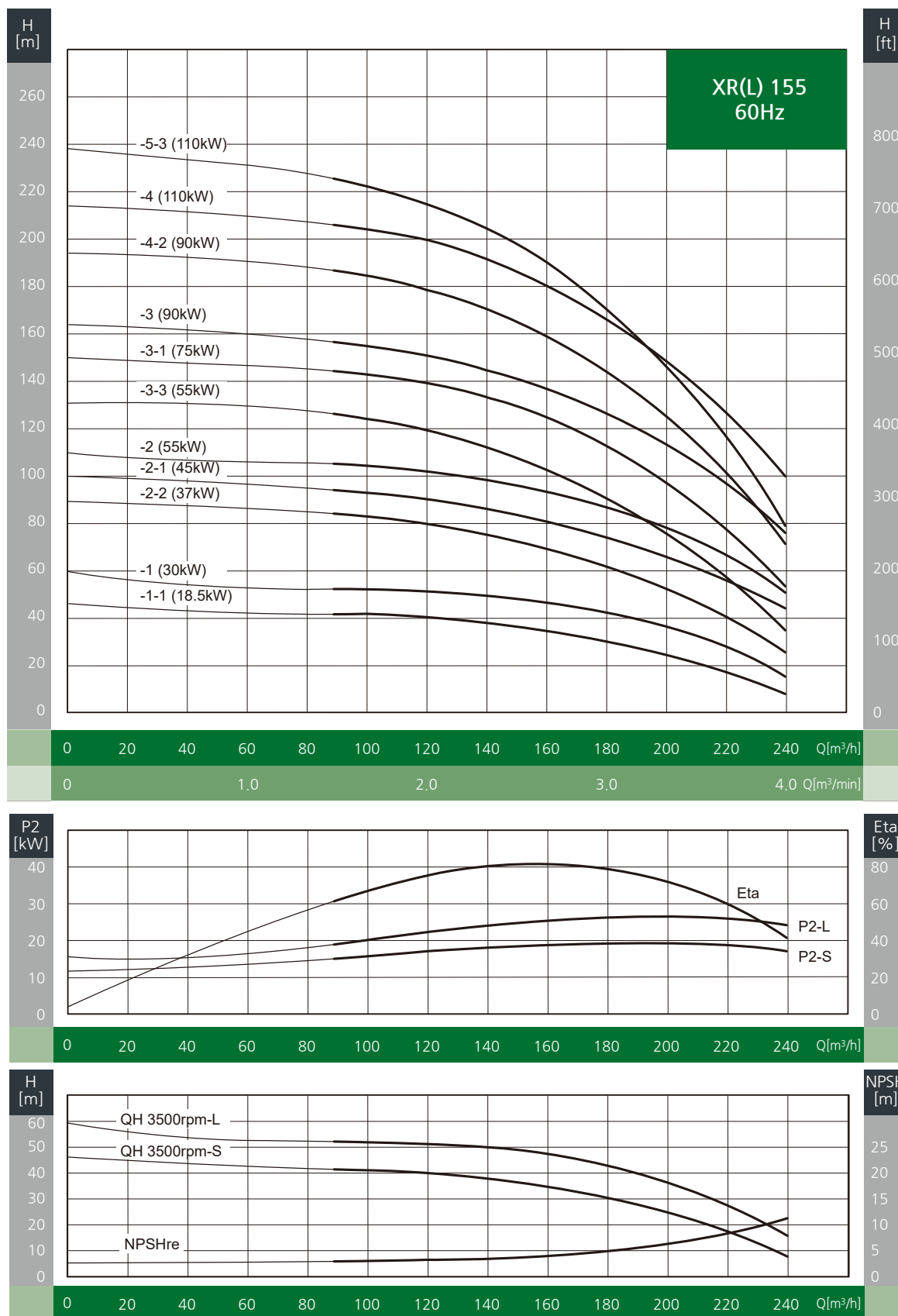
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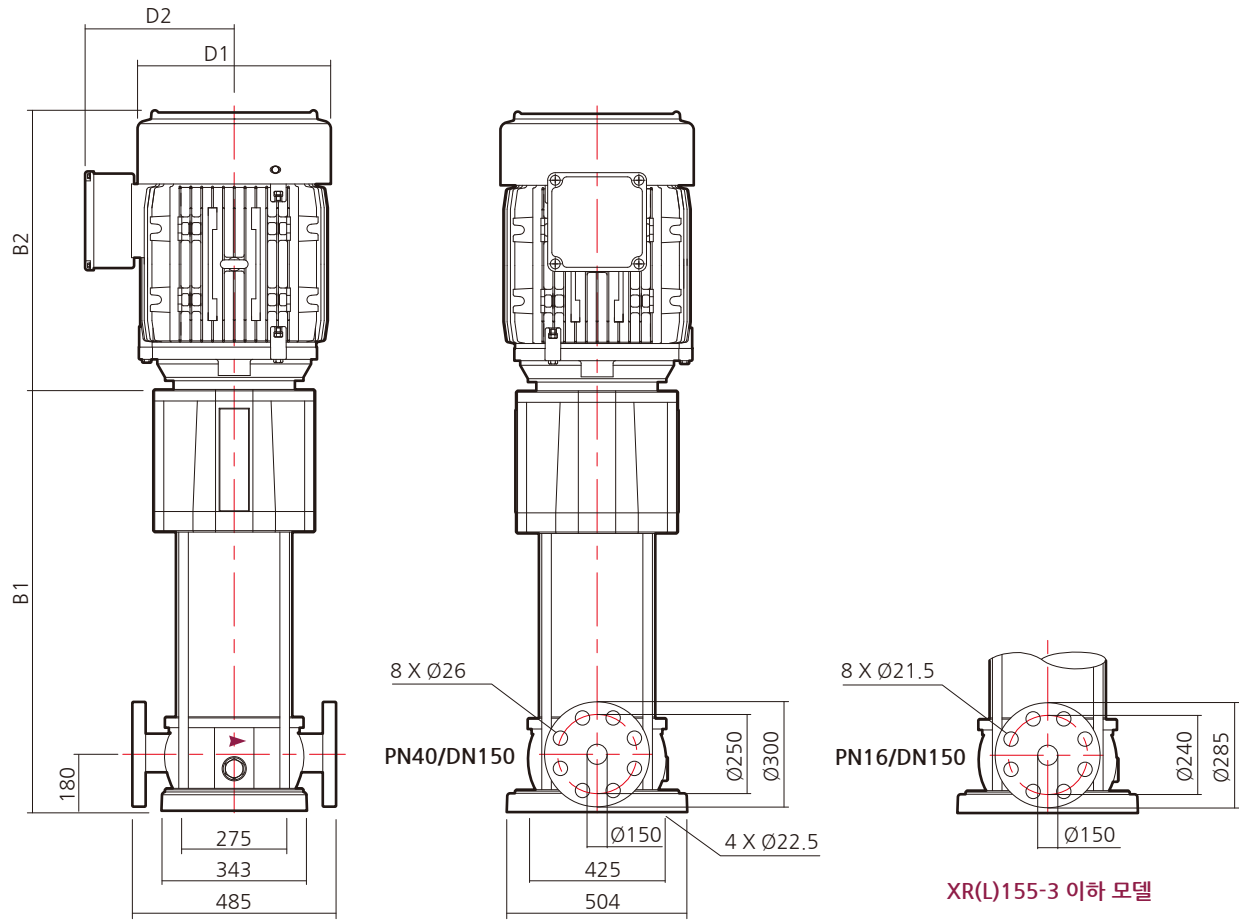
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 125-1-1	15	20	DN150	PN16	783	480	1263	318	290	313
XR(L) 125-1	22	30			783	570	1353	354	305	371
XR(L) 125-2-2	30	40			905	610	1515	354	305	410
XR(L) 125-2	37	50			905	690	1595	404	370	477
XR(L) 125-3-2	45	60			1057	670	1727	404	370	500
XR(L) 125-3	75	100			1057	760	1817	512	450	770
XR(L) 125-4	75	100			1179	760	1939	512	450	796
XR(L) 125-5-1	90	120			1301	800	2101	512	450	870
XR(L) 125-5	110	150		PN25~PN40	1311	925	2236	578	518	1101
XR(L) 125-6	110	150			1433	925	2358	578	518	1115

성능곡선도



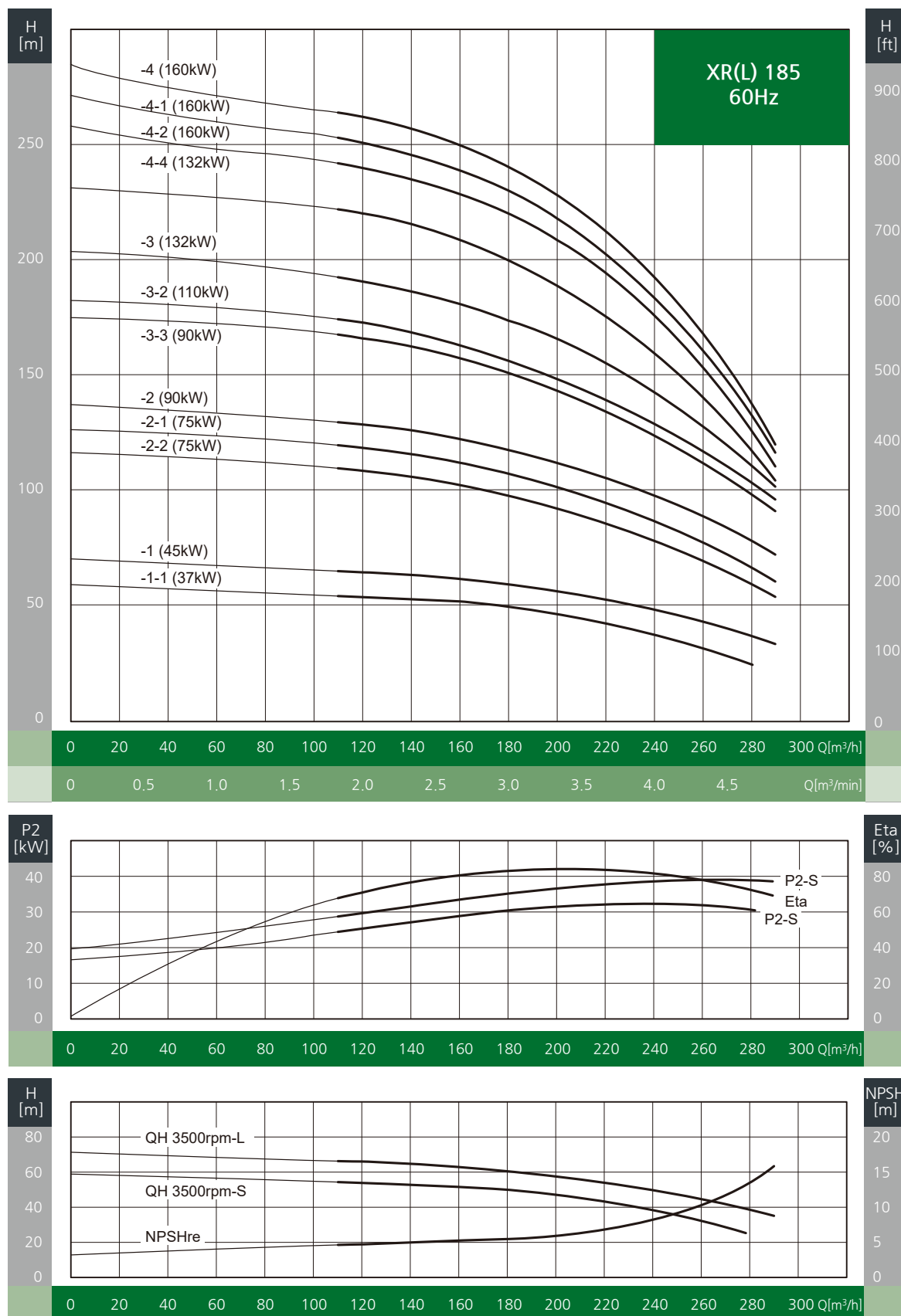
외형도



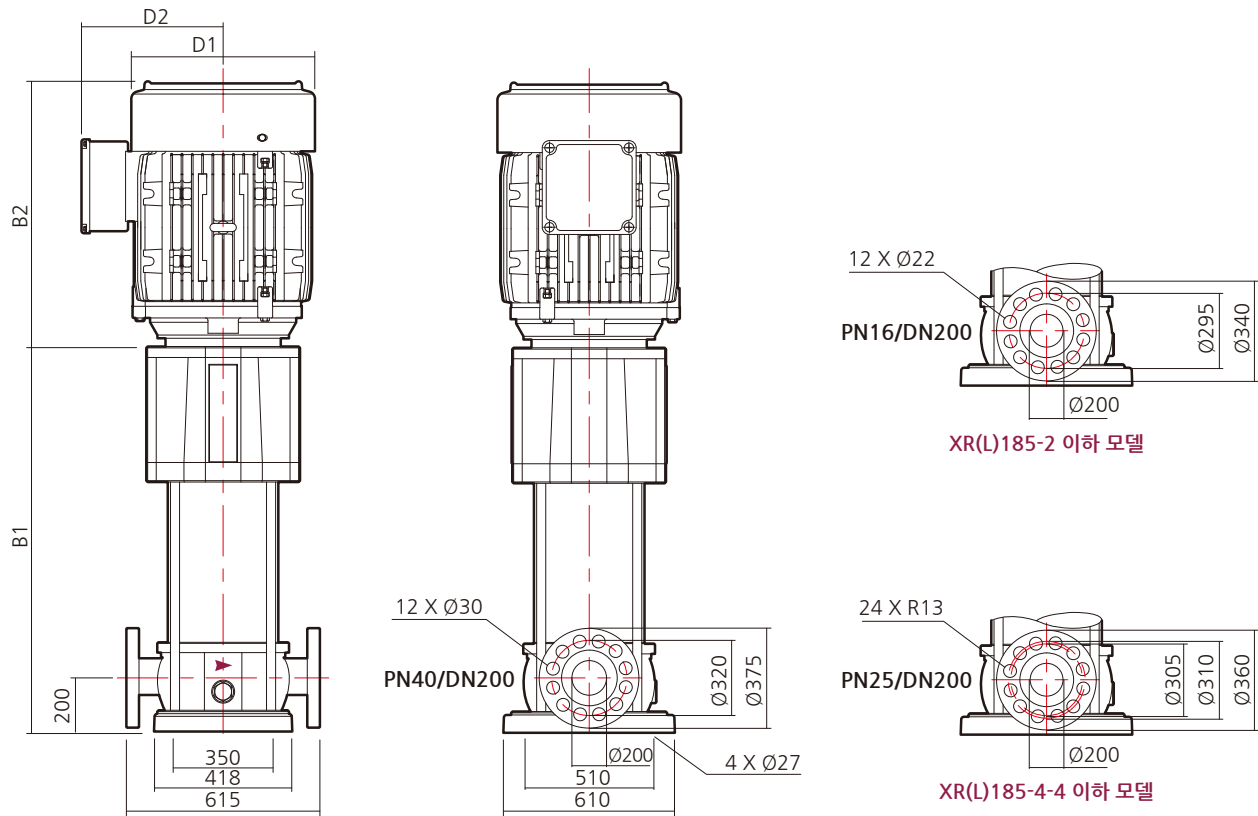
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 155-1-1	18.5	25	DN150	PN16	783	525	1308	318	290	319
XR(L) 155-1	30	40			783	610	1393	354	305	396
XR(L) 155-2-2	37	50			905	690	1595	404	370	477
XR(L) 155-2-1	45	60			935	670	1605	404	370	486
XR(L) 155-2	55	75			935	685	1620	457	457	597
XR(L) 155-3-3	55	75			1057	685	1742	457	457	611
XR(L) 155-3-1	75	100			1057	760	1817	512	450	783
XR(L) 155-3	90	120			1057	800	1857	512	450	843
XR(L) 155-4-2	90	120		PN25~PN40	1189	800	1989	512	450	857
XR(L) 155-4	110	150			1189	925	2114	578	518	1088
XR(L) 155-5-3	110	150			1311	925	2236	578	518	1102

성능곡선도



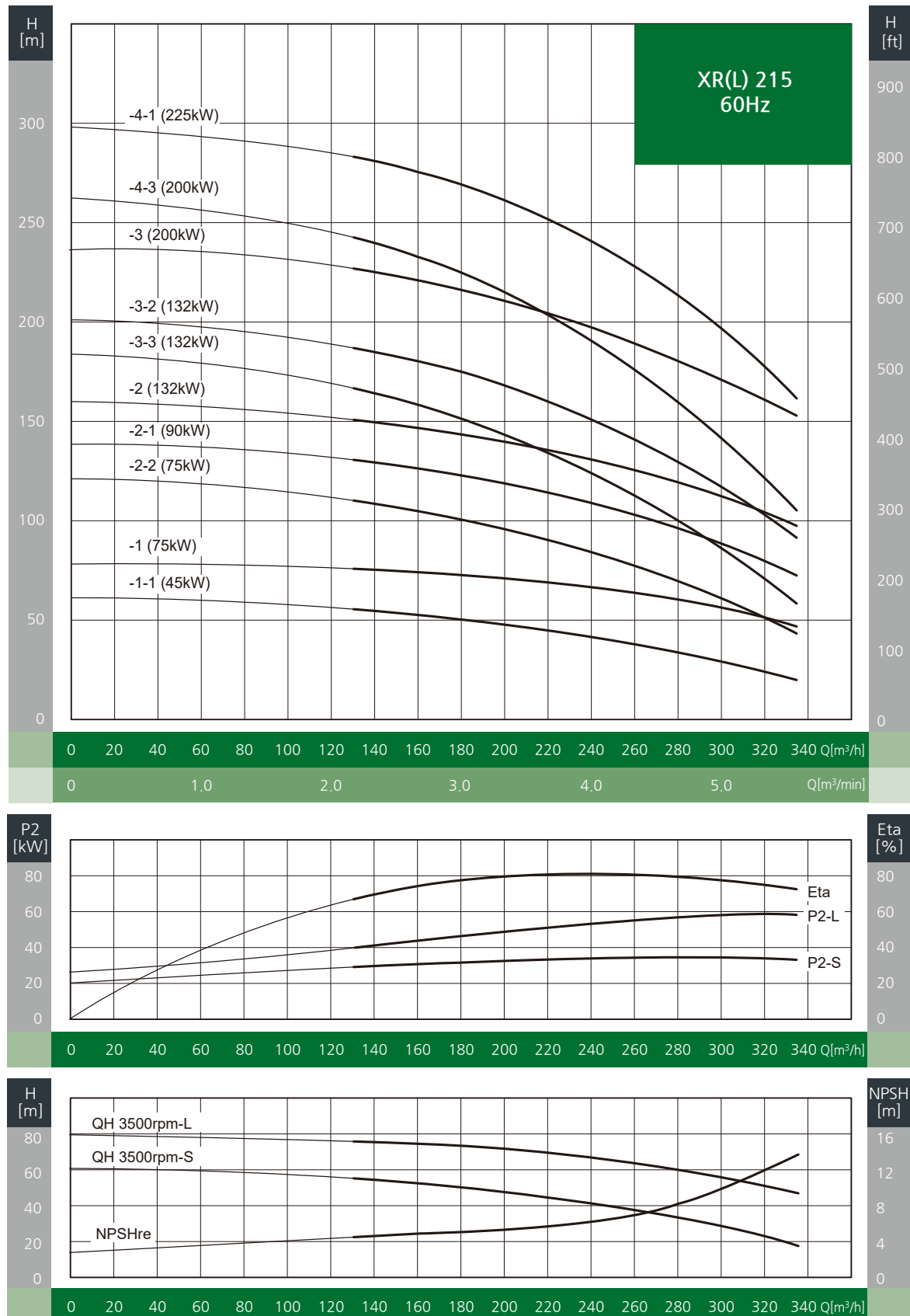
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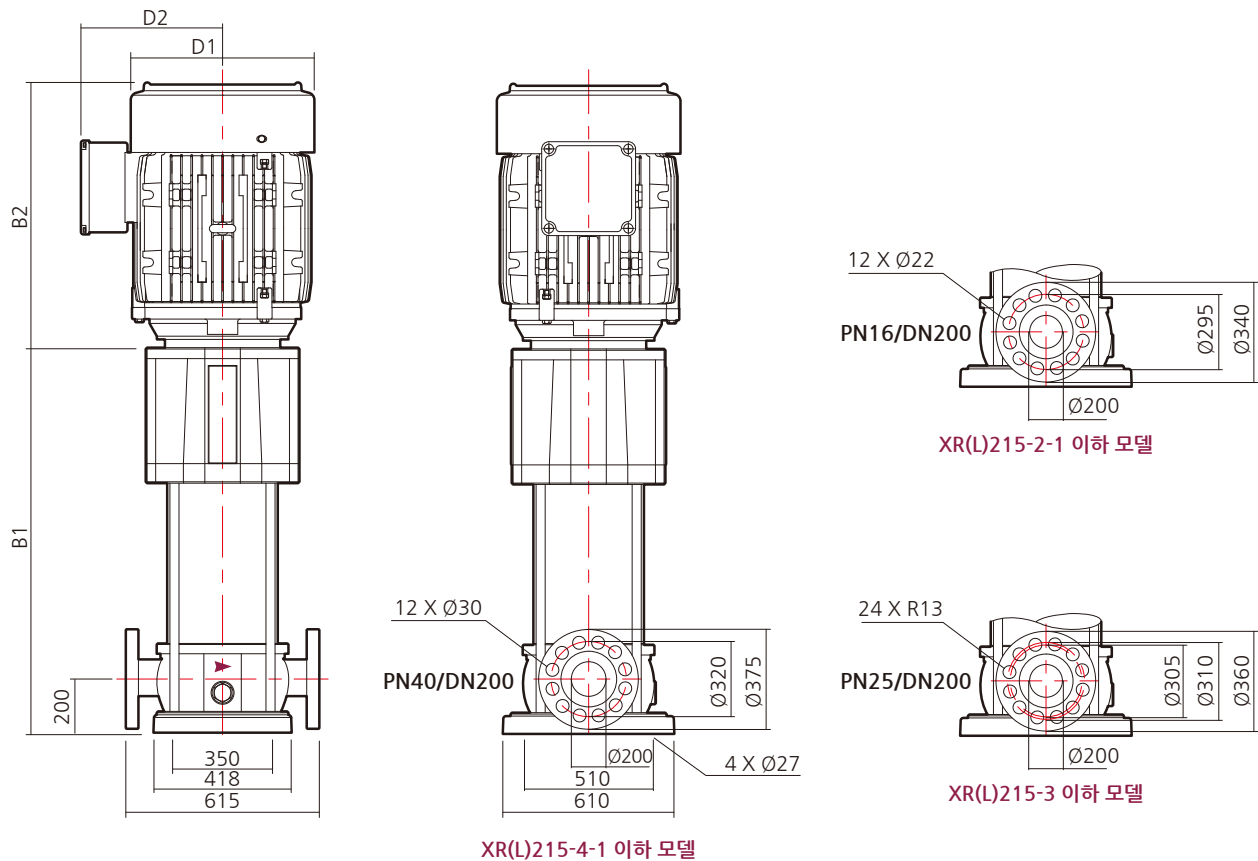
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 185-1-1	37	50	DN200	PN16	868	690	1558	404	370	526
XR(L) 185-1	45	60			868	670	1538	404	370	526
XR(L) 185-2-2	75	100			1026	760	1786	512	450	817
XR(L) 185-2-1	75	100			1026	760	1786	512	450	817
XR(L) 185-2	90	120			1026	800	1826	512	450	877
XR(L) 185-3-3	90	120		PN25	1184	800	1984	512	450	890
XR(L) 185-3-2	110	150			1184	925	2109	578	518	1110
XR(L) 185-3	132	175			1184	980	2164	578	525	1290
XR(L) 185-4-4	132	175			1312	980	2292	578	525	1308
XR(L) 185-4-2	160	215		PN40	1312	1130	2442	578	525	1438
XR(L) 185-4-1	160	215			1312	1130	2442	578	525	1438
XR(L) 185-4	160	215			1312	1130	2442	578	525	1438

성능곡선도



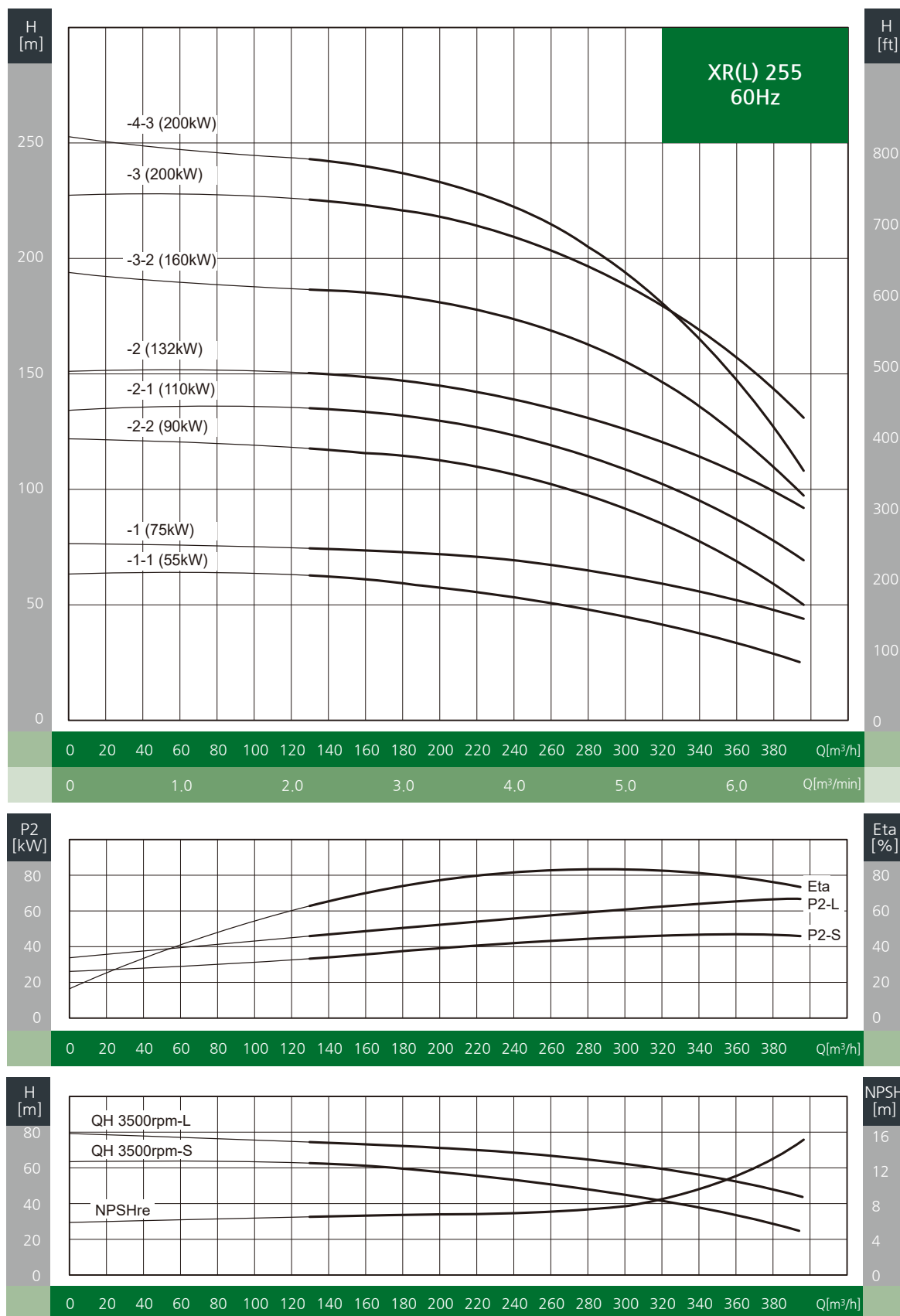
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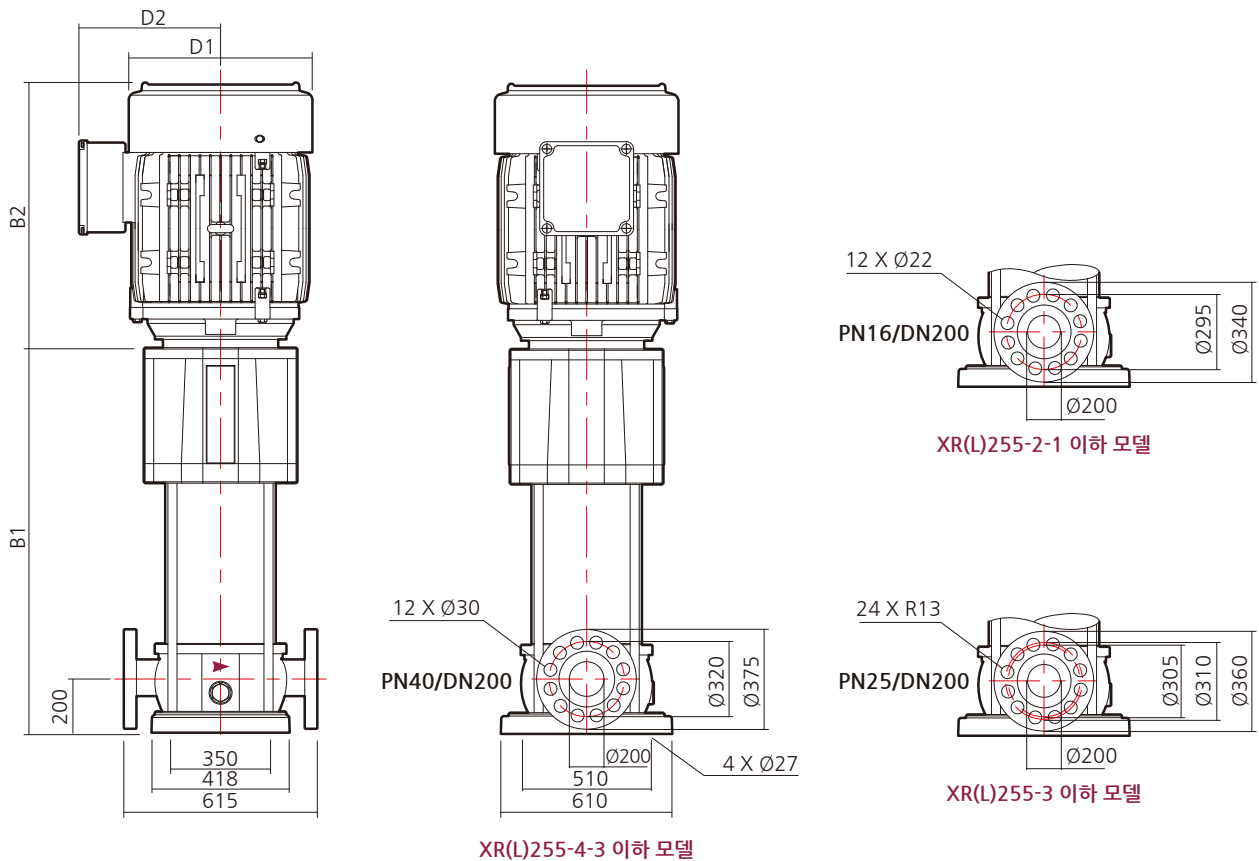
외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 215-1-1	45	60	DN200	PN16	868	670	1538	404	370	526
XR(L) 215-1	75	100			898	760	1658	512	450	799
XR(L) 215-2-2	75	100			1026	760	1786	512	450	817
XR(L) 215-2-1	90	120			1026	800	1826	512	450	877
XR(L) 215-2	132	175		PN25	1056	980	2036	578	525	1272
XR(L) 215-3-3	132	175			1184	980	2164	578	525	1290
XR(L) 215-3-2	132	175			1184	980	2164	578	525	1290
XR(L) 215-3	200	268			1184	1130	2314	578	525	1420
XR(L) 215-4-3	200	268		PN40	1312	1130	2442	578	525	1438
XR(L) 215-4-1	225	300			1312	1292	2604	800	644	2038

성능곡선도



외형도



외형치수 및 중량

모 델	동 력		흡입/토출 구경	압력등급	외형 치수 (mm)					중 량 (kg)
	kW	HP			B1	B2	B1+B2	D1	D2	
XR(L) 255-1-1	55	75	DN200	PN16	898	685	1583	457	457	624
XR(L) 255-1	75	100			898	760	1658	512	450	799
XR(L) 255-2-2	90	120			1026	800	1826	512	450	877
XR(L) 255-2-1	110	150			1056	925	1981	578	518	1132
XR(L) 255-2	132	175		PN25	1056	980	2036	578	525	1272
XR(L) 255-3-2	160	215			1184	1130	2314	578	525	1420
XR(L) 255-3	200	268			1184	1130	2314	578	525	1420
XR(L) 255-4-3	200	268		PN40	1312	1130	2442	578	525	1463

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