NORA®

NLL Serisi
Düz Boruya Monte Edilen
IN-LINE Santrifüj Pompalar

DÜZ BORUYA MONTE EDİLEN
IN-LINE SANTRİFÜJ POMPALAR

NLL Serisi Pompalar;

İçinde katı parçacık ve elyaf bulunmayan, temiz veya çok hafif kirli, düşük vizkozitesi olan sıvıların pompalanması için tasarlanmıştır.

İşletme Bilgileri

Emme Flanşı	:	DN 40 / DN 200
Basma Flanşı	:	DN 40 / DN 200
Q (Debi)	:	500 m³/h’ (max)
H (Basma Yüksekliği)	:	95 m (max)
Hız (Motor Devri)	:	1450 d/dk. - 3600 d/dk.’a kadar
t (Çalışma Sıcaklığı) *	:	-10 °C (min.)/+140 °C (max.)
Pd (Gövde Basıncı Pmax)	:	(10-16 bar)
Dönüş Yönü (Motor)	:	Saat Yönünde (Sağ)

(Pmaks : Emme Basıncı + Kapalı Vanadaki Basma Yüksekliği)

(*) Basılan sıvının cinsine, çalışma sıcaklığı ve basıncına bağlı olarak pompa malzemesi farklılık gösterir. Ayrıntılı bilgi için firmamıza başvurunuz.

Teknik Özellikler

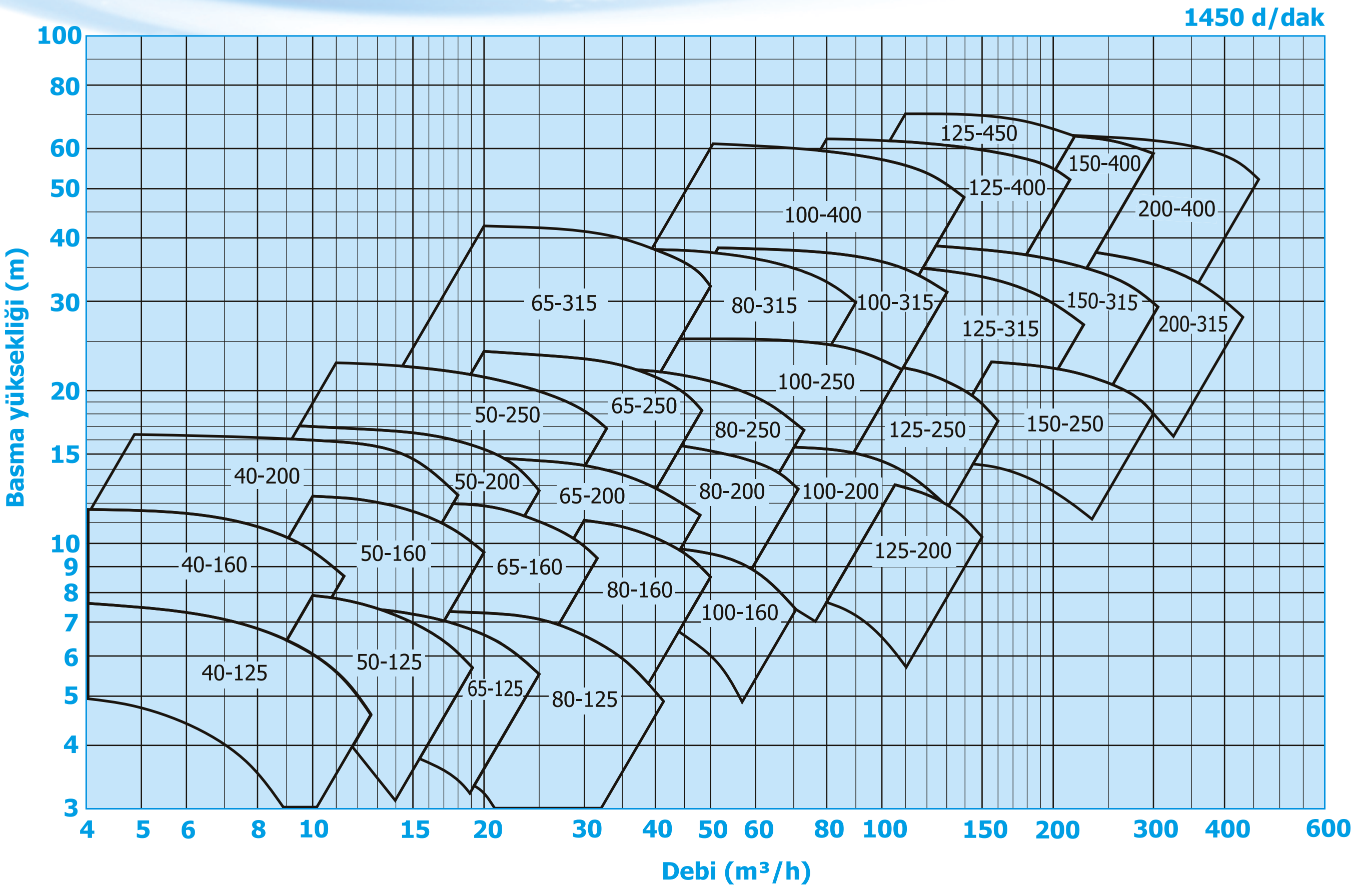
- Salyangozlu, tek kademeli düz boruya bağlanabilen kapalı çarklı santrifüj pompalar.
- Pompa Mili motor rulmanları tarafından yataklanmaktadır.
- Mil Sızdırmazlık mekanik salmastra ile sağlanır.
- NLL pompalar VDI standartlarına ve IEC yapı büyüklüklerine uygun norm elektrik motorları ile kullanılmaktadır.
- NLL pompalar arkadan sökülebilir tasarımı sayesinde salyangozlu boru tesisatından ayırmadan motor, motor taşıyıcı, salmastra yatağı, çark sökülebilir.
- Emme - Basma flanşları TS EN 1092-2/PN 16'ya uygundur.
- NLL Pompalar DN 40 ...... DN 200’e kadar 32 modeldir.

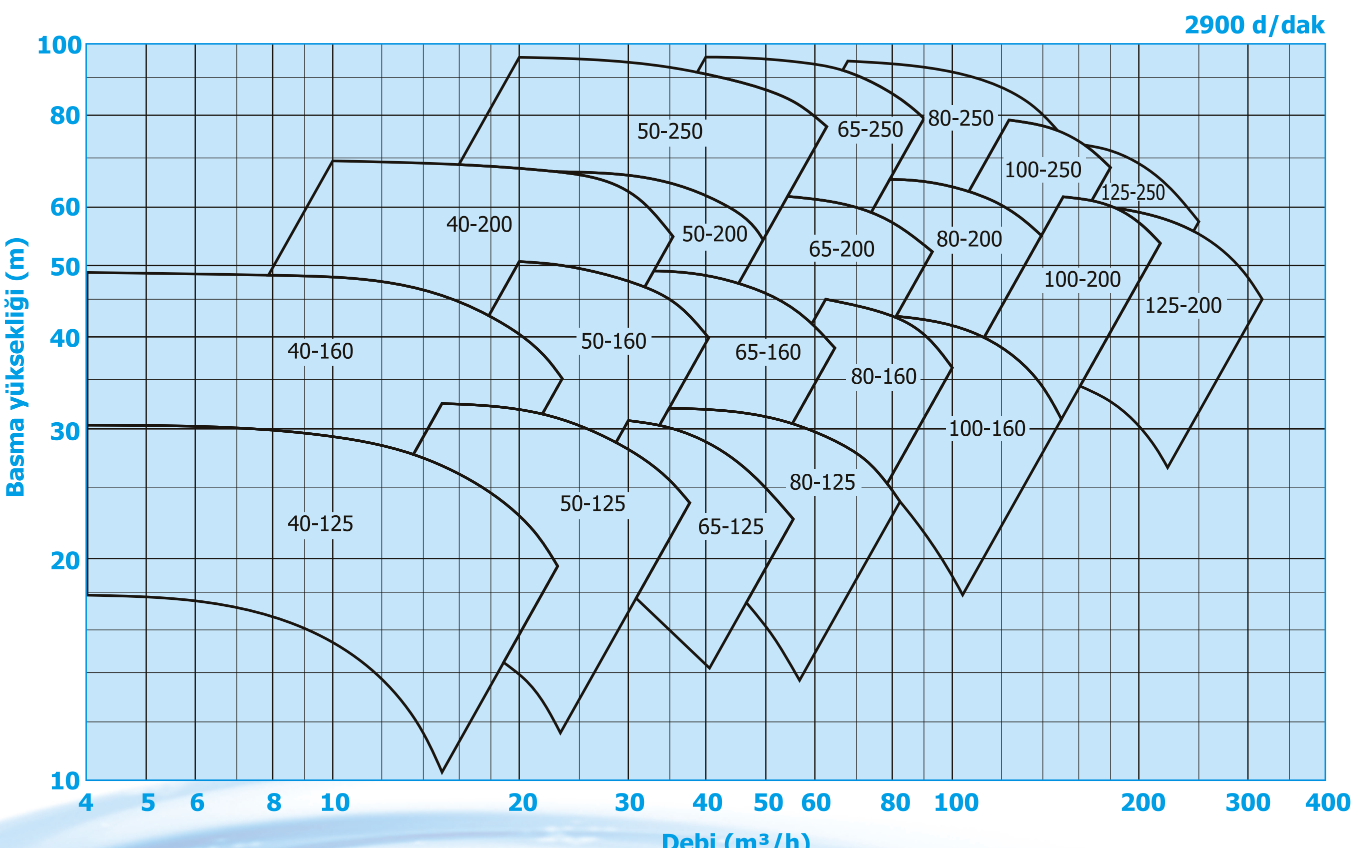
Pompa Tanımı

NLL 50 / 250

Pompa Tipi — NLL
Basma Flanşı DN (mm) — 50
Çark Anma Çapı (mm) — 250

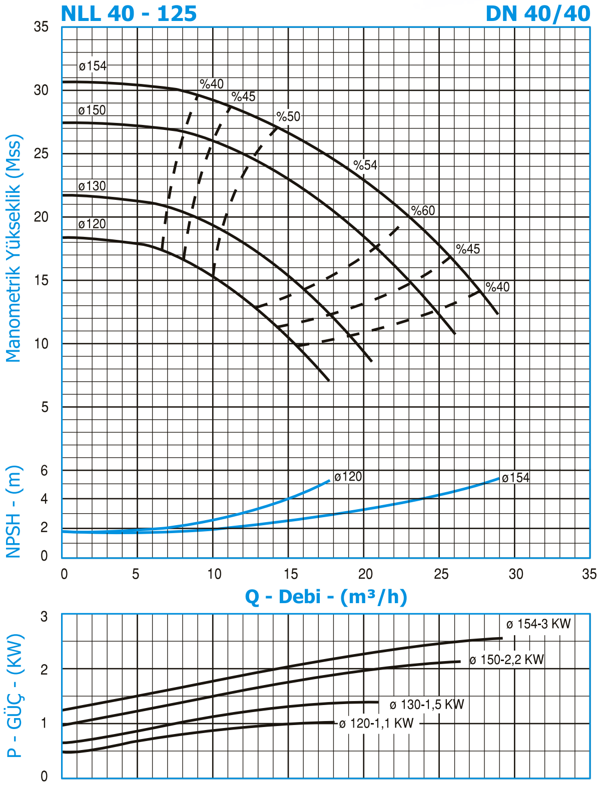
PERFORMANS ALANLARI





Karakteristik Eğriler (2900 d/dk.)

NLL 40 - 125 **DN 40/40**



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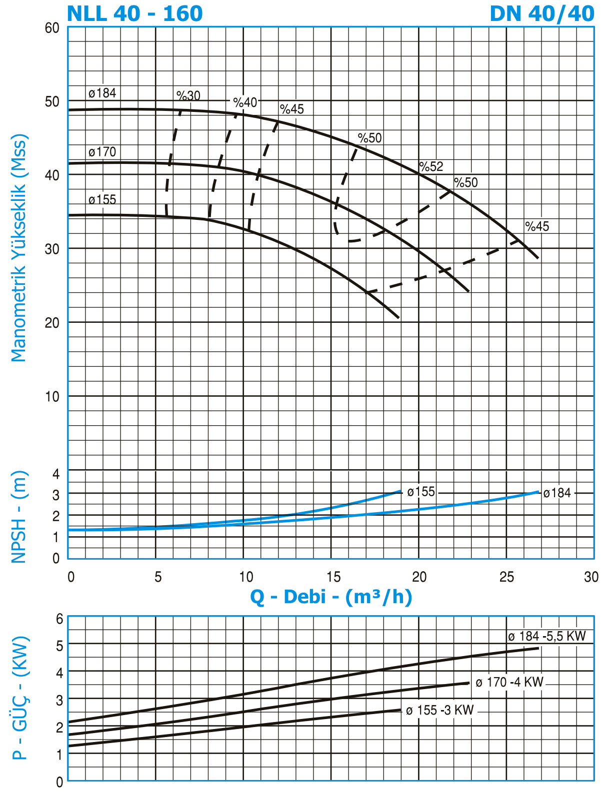

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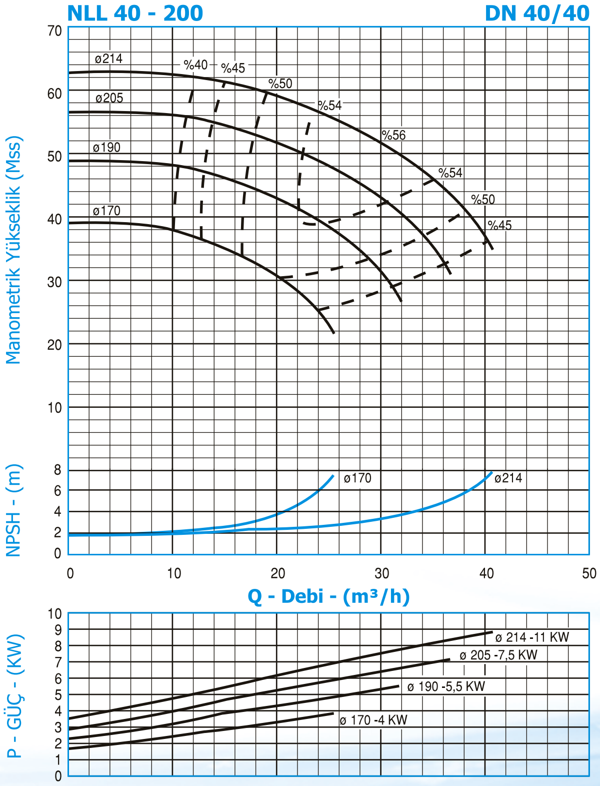

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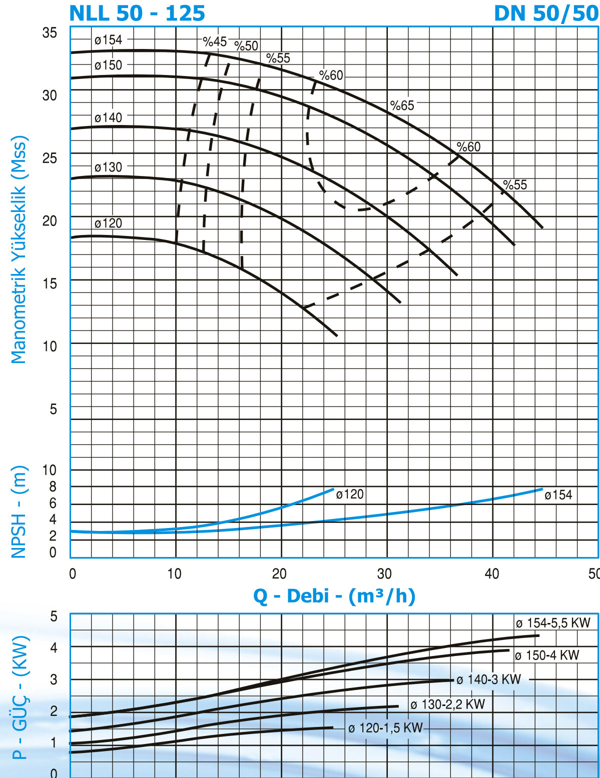
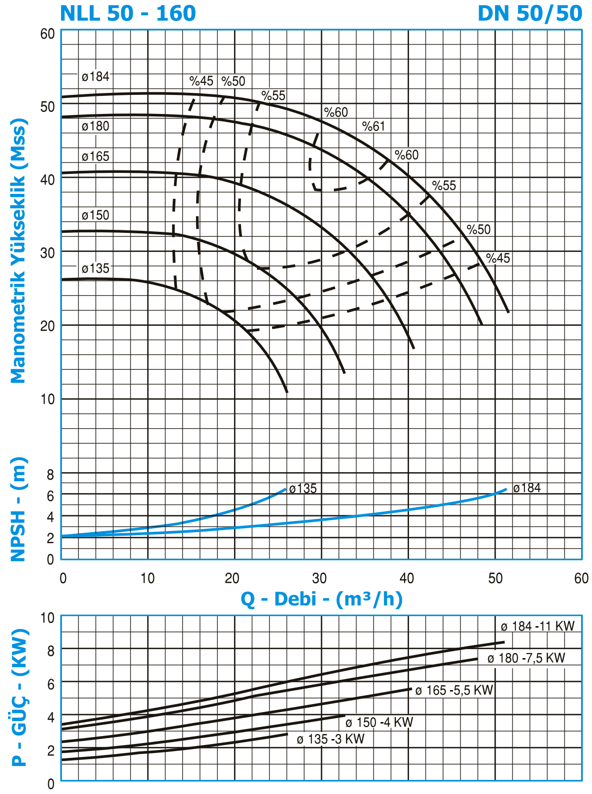
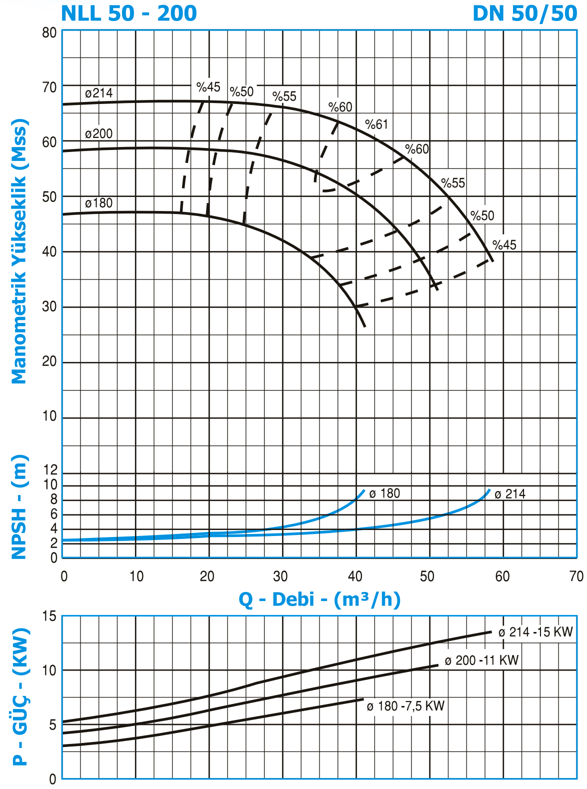


Karakteristik Eğriler (2900 d/dk.)

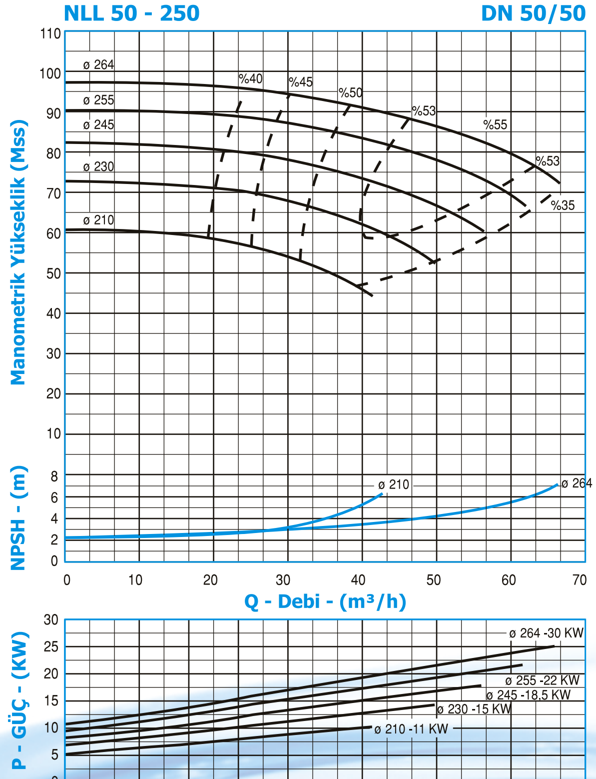
NLL 50 - 160 DN 50/50



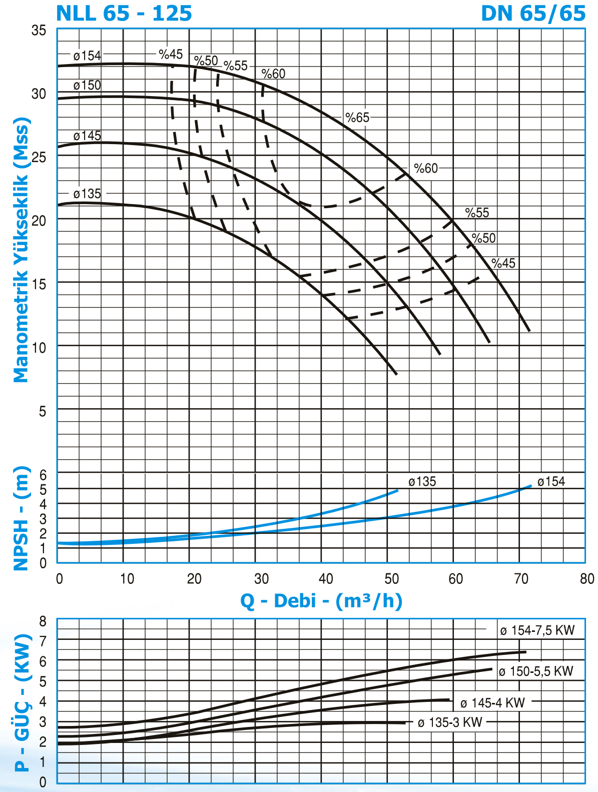
NLL 50 - 200 DN 50/50



NLL 50 - 250 DN 50/50



NLL 65 - 125 DN 65/65



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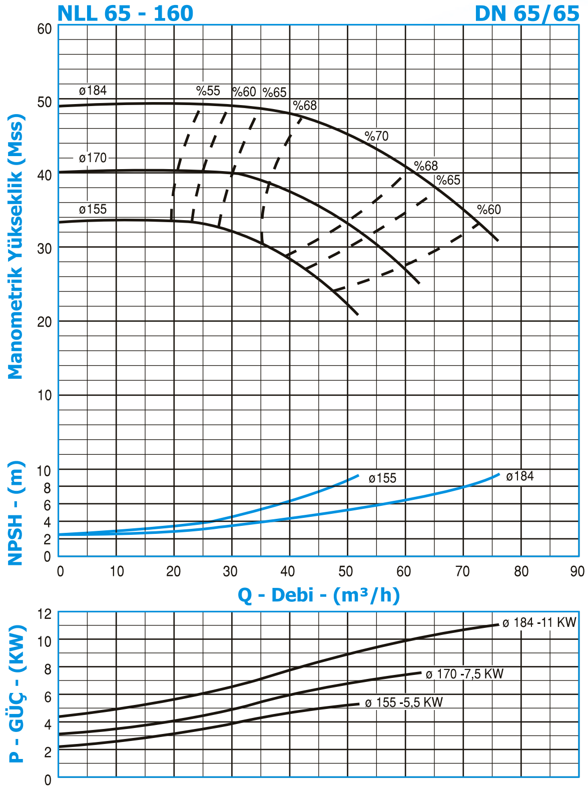
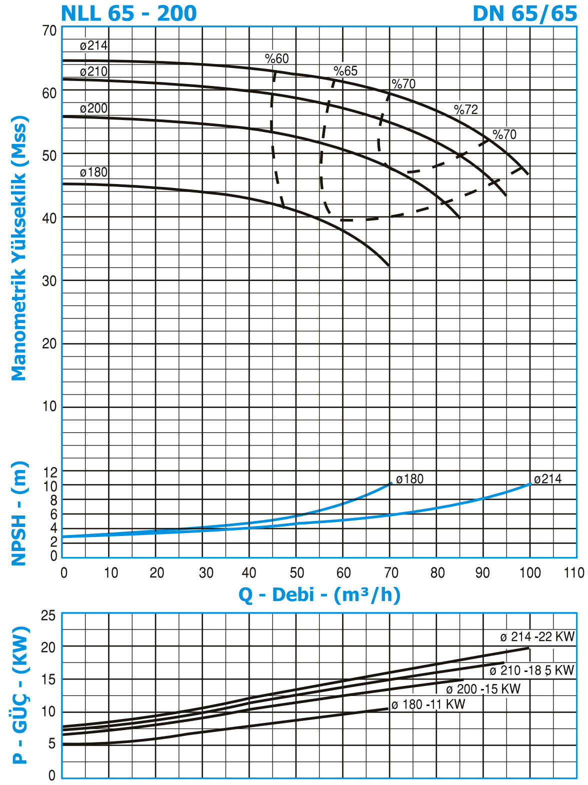
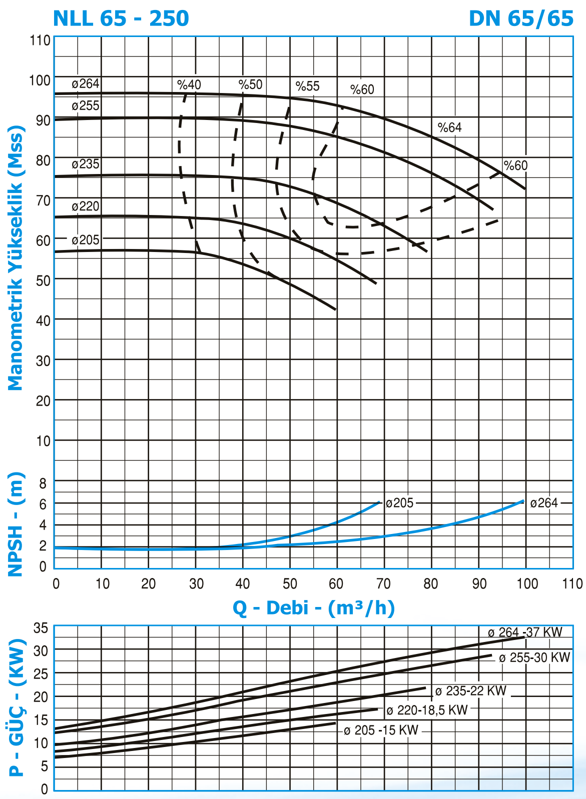
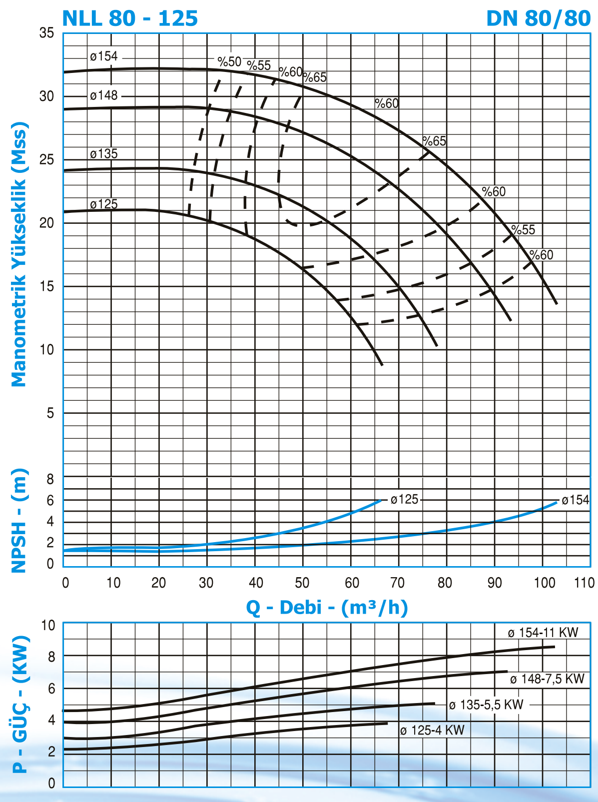


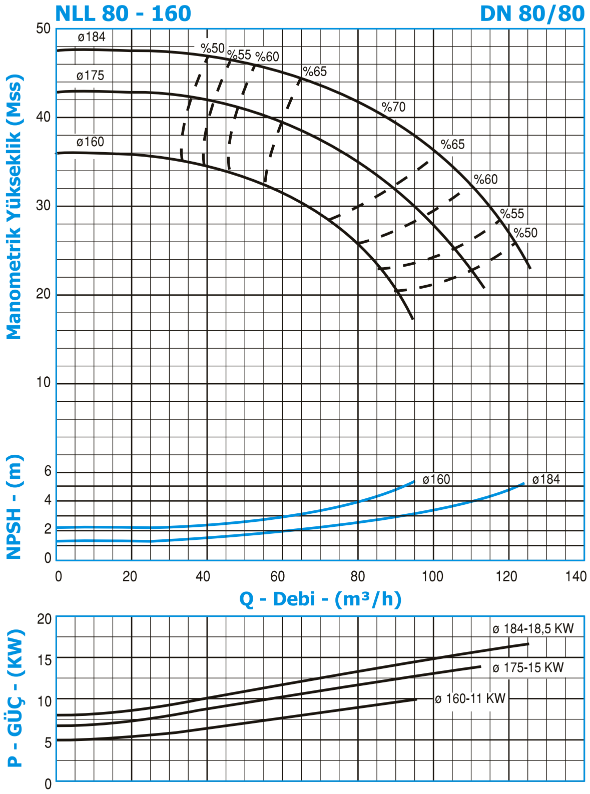




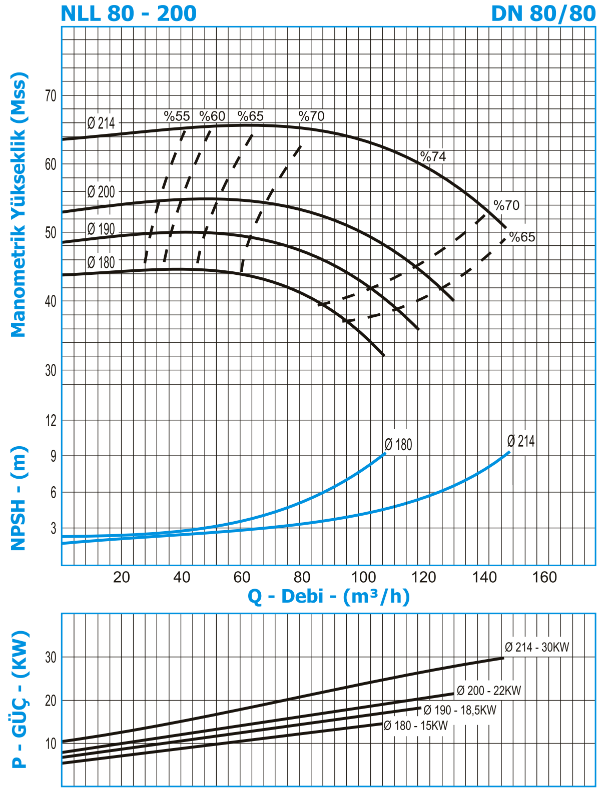


Karakteristik Eğriler (2900 d/dk.)

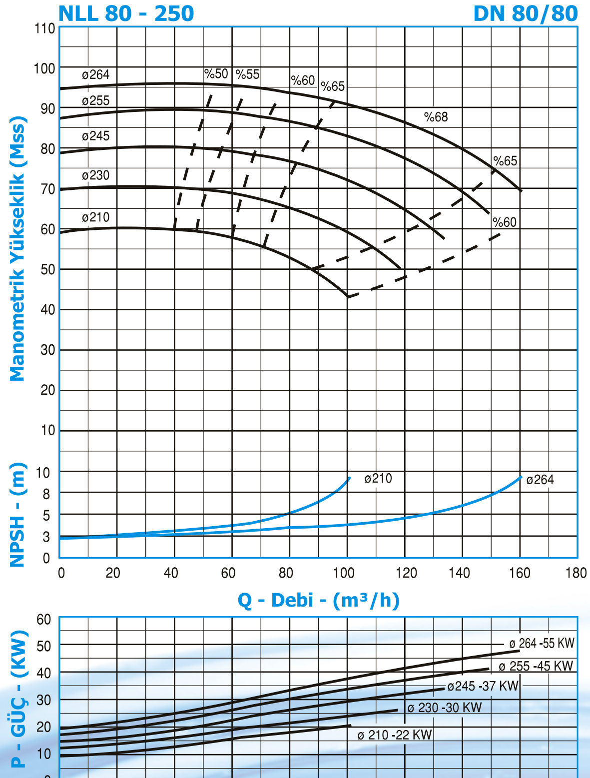
NLL 80 - 160 DN 80/80



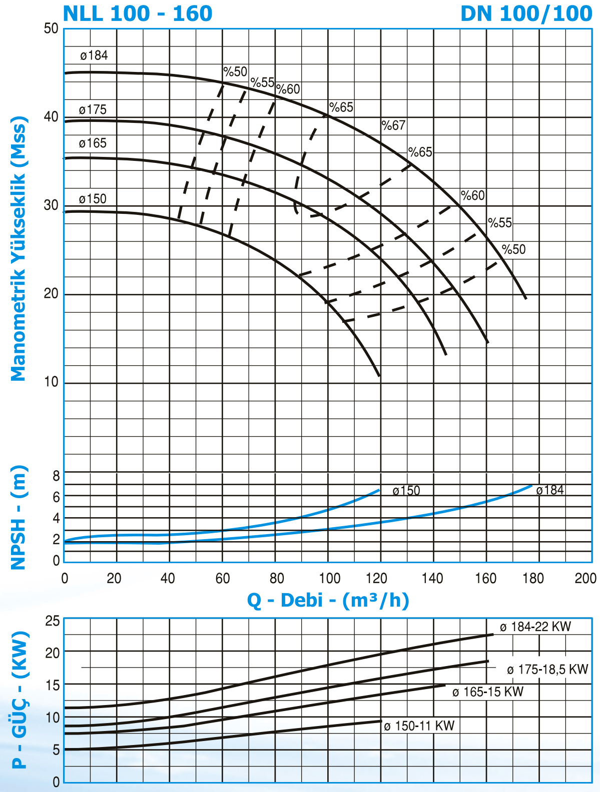
NLL 80 - 200 DN 80/80



NLL 80 - 250 DN 80/80

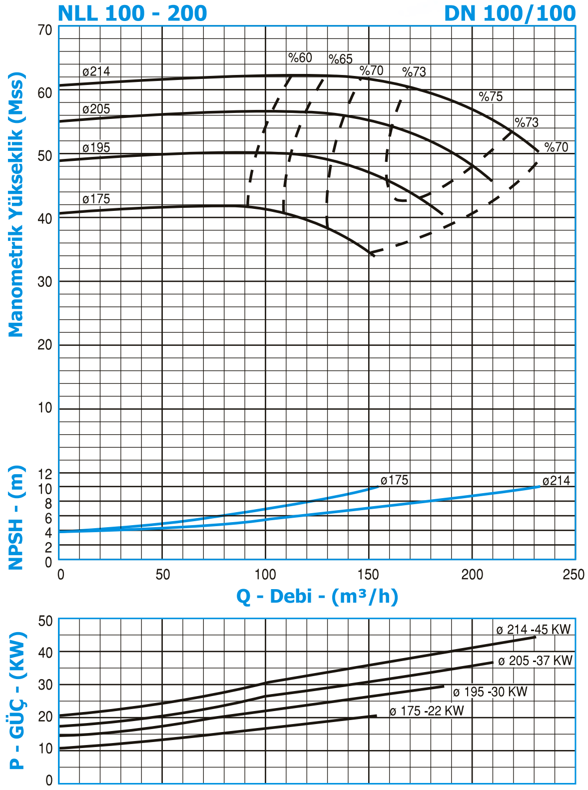


NLL 100 - 160 DN 100/100

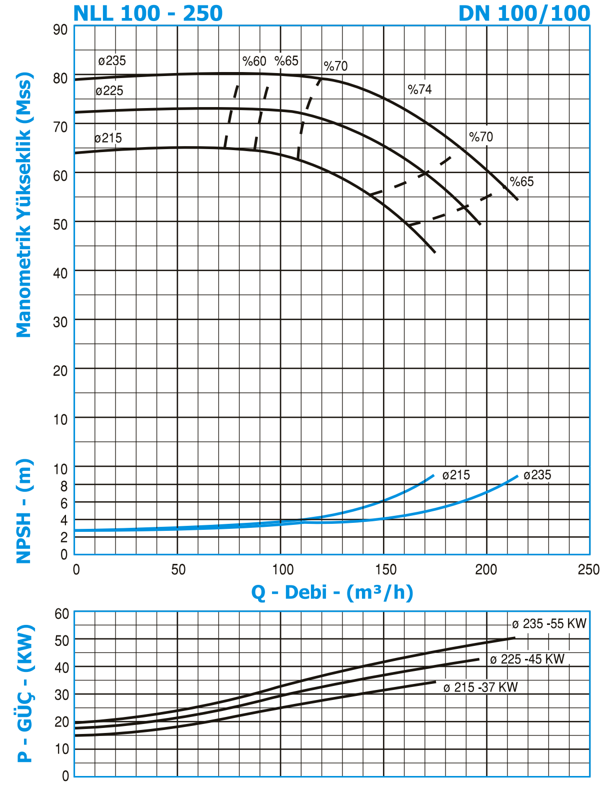


Karakteristik Eğriler (2900 d/dk.)

NLL 100 - 200 **DN 100/100**

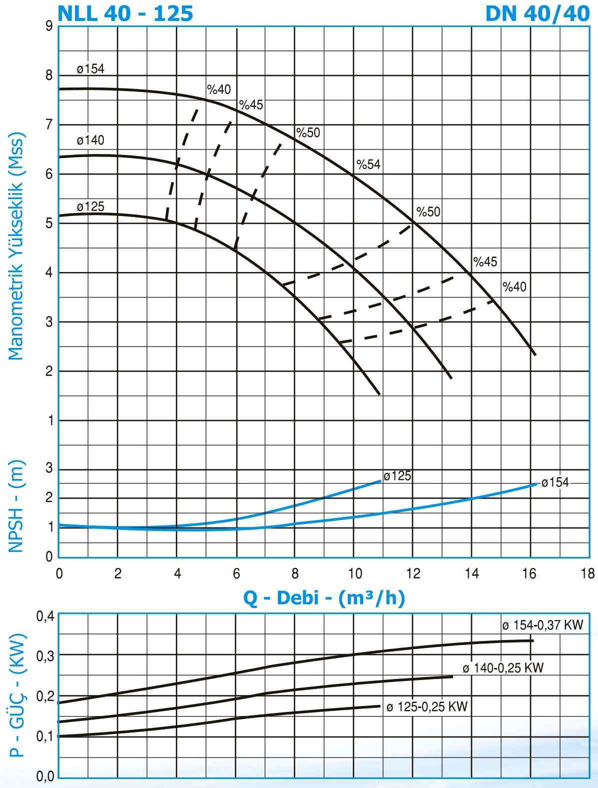


NLL 100 - 250 **DN 100/100**



Karakteristik Eğriler (1450 d/dk.)

NLL 40 - 125 **DN 40/40**



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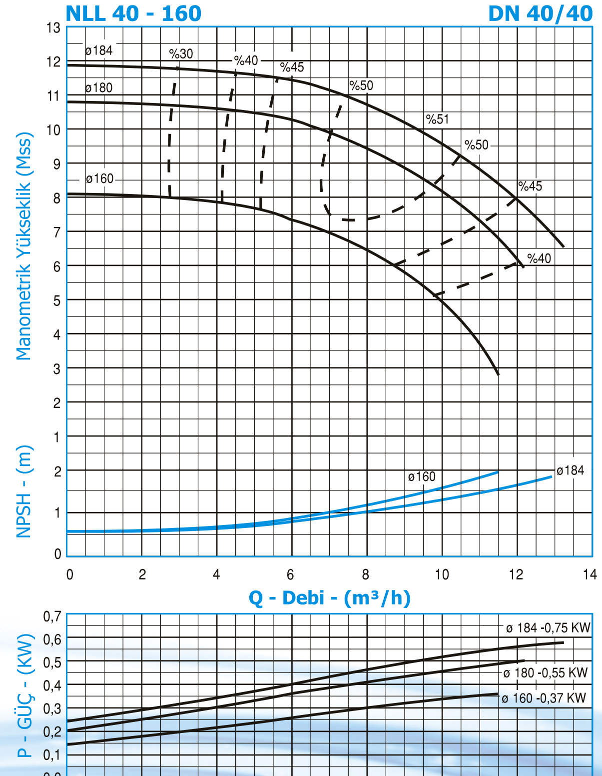

Karakteristik Eğriler (1450 d/dk.)

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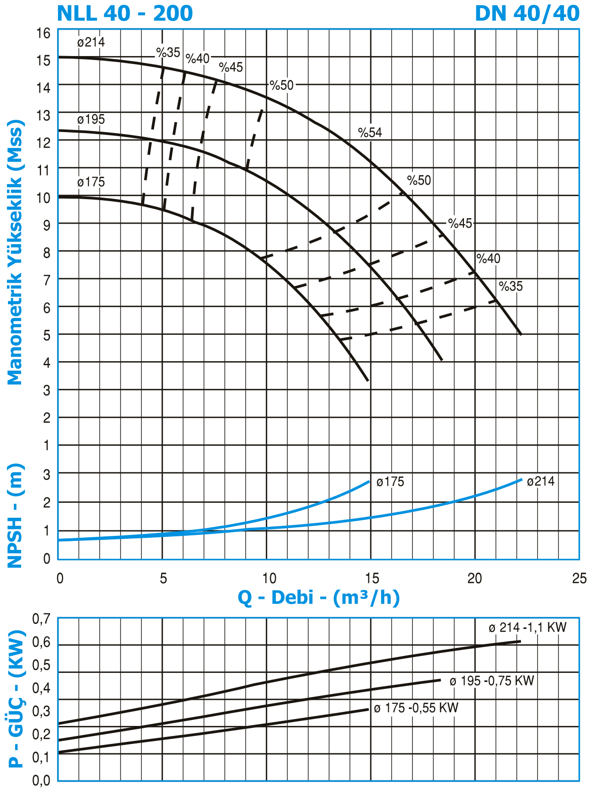
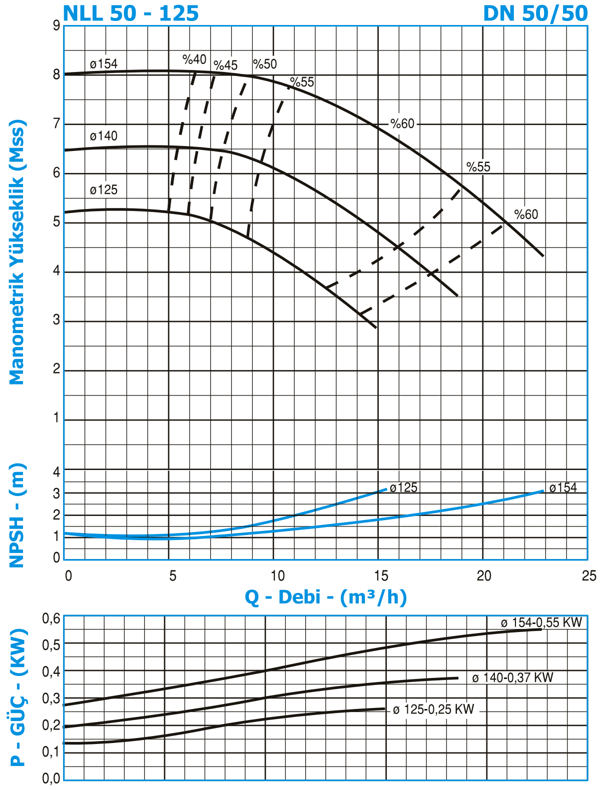


NLL 50 - 125 DN 50/50



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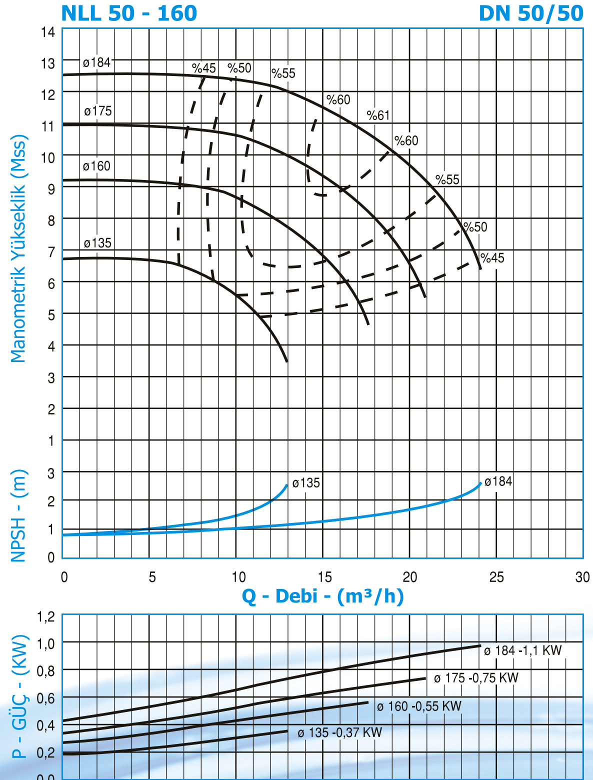

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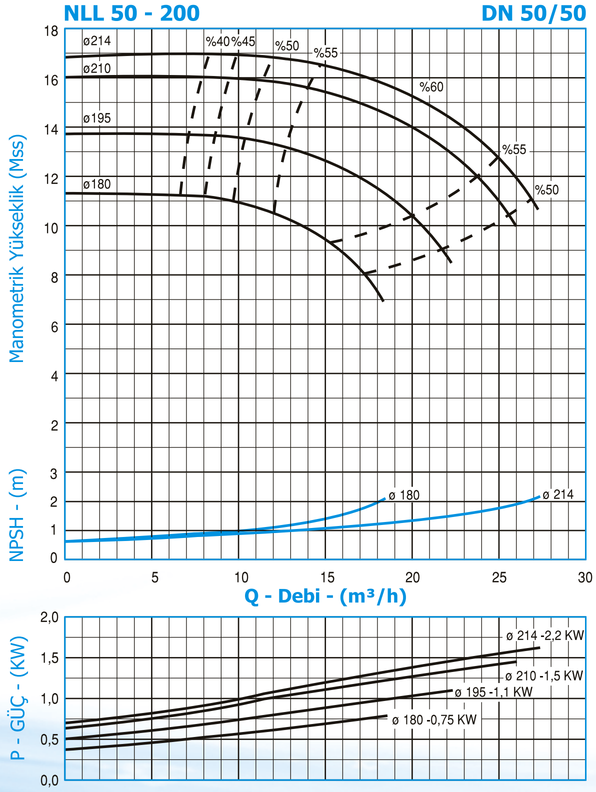

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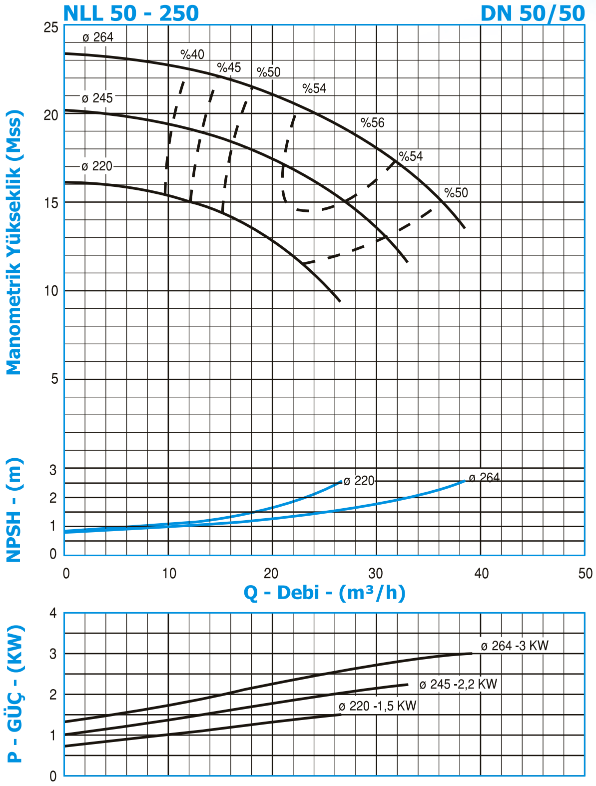
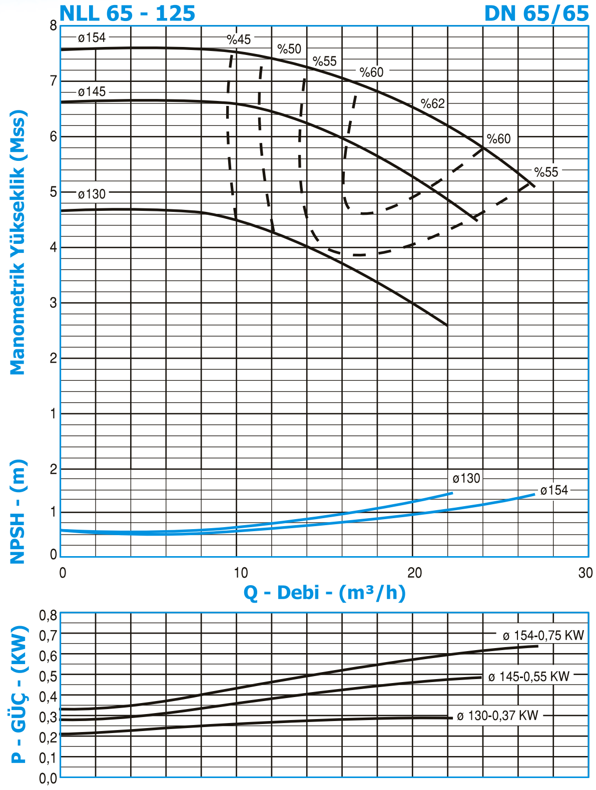


NLL 65 - 125 **DN 65/65**



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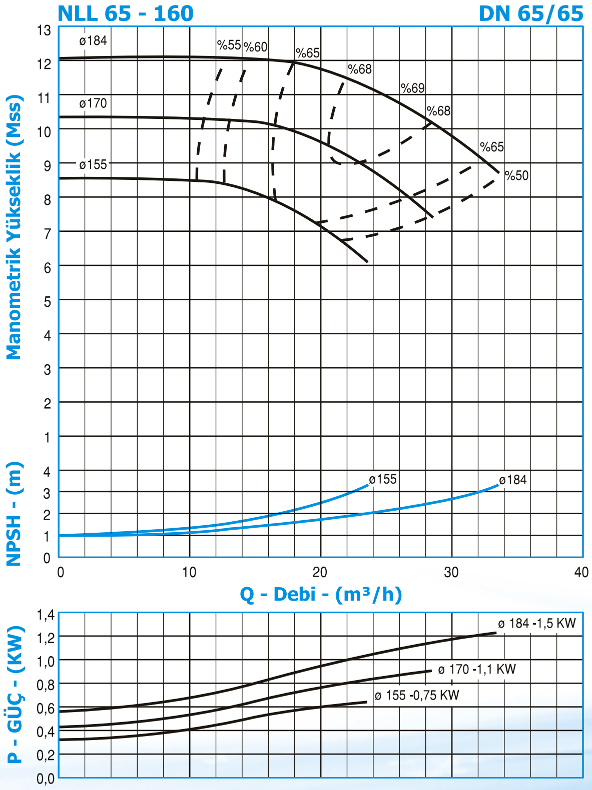

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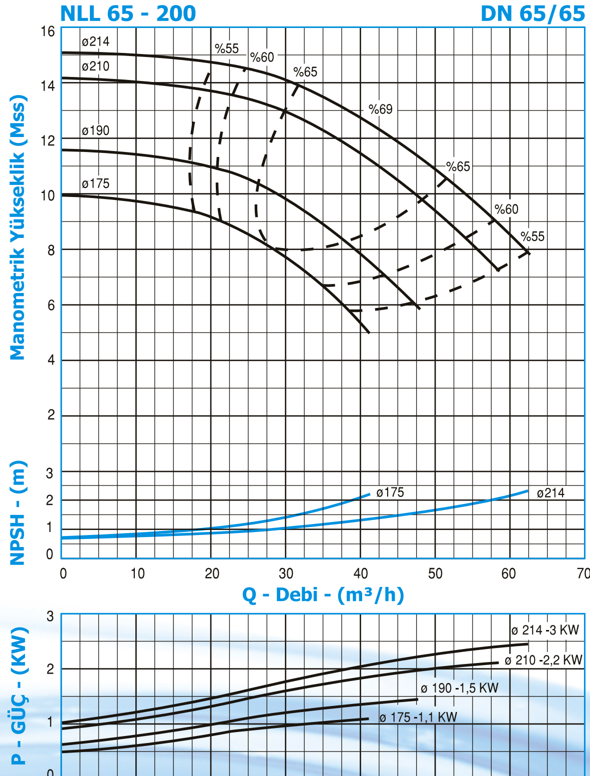

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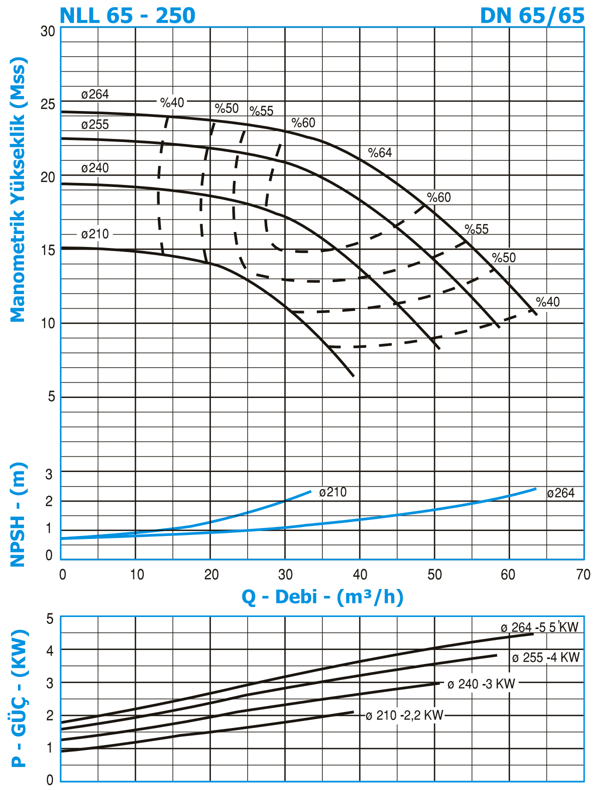
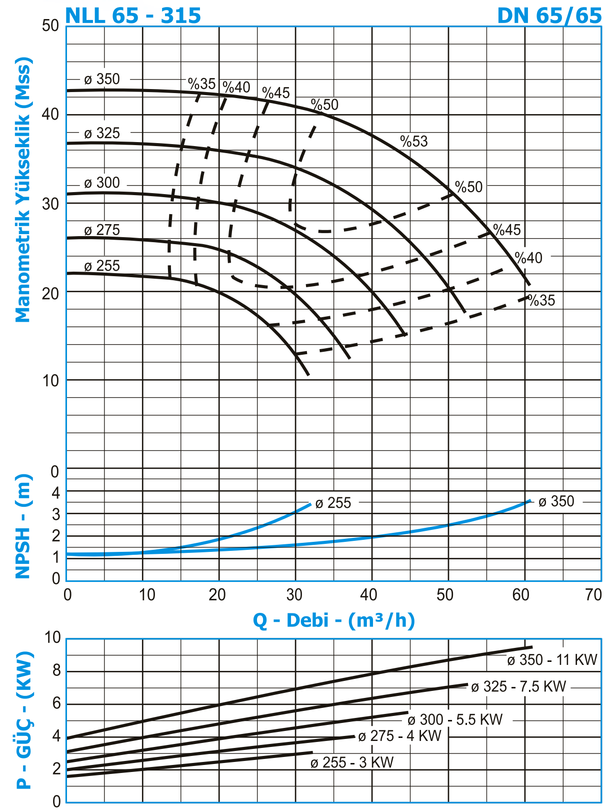
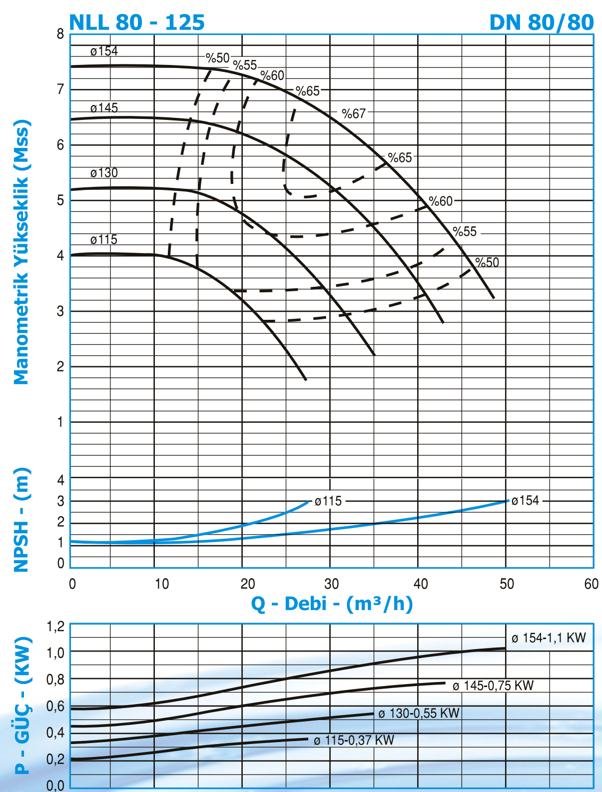
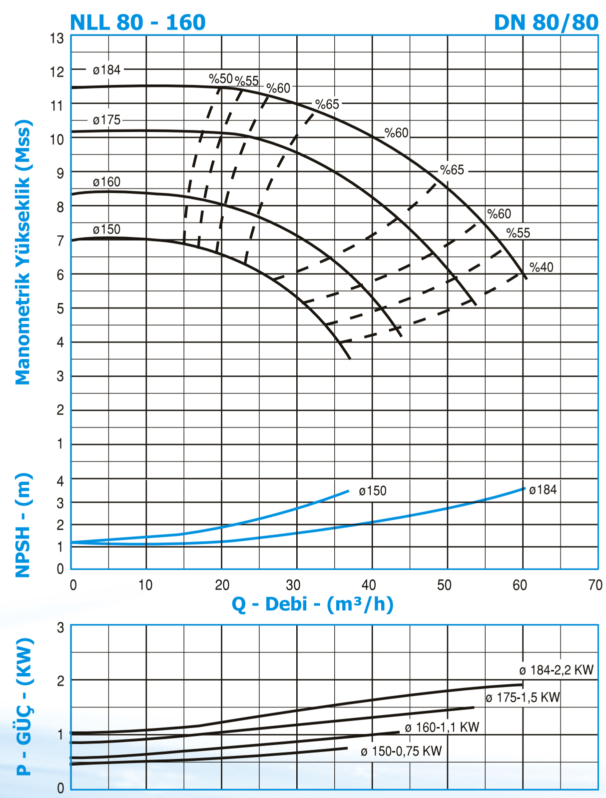


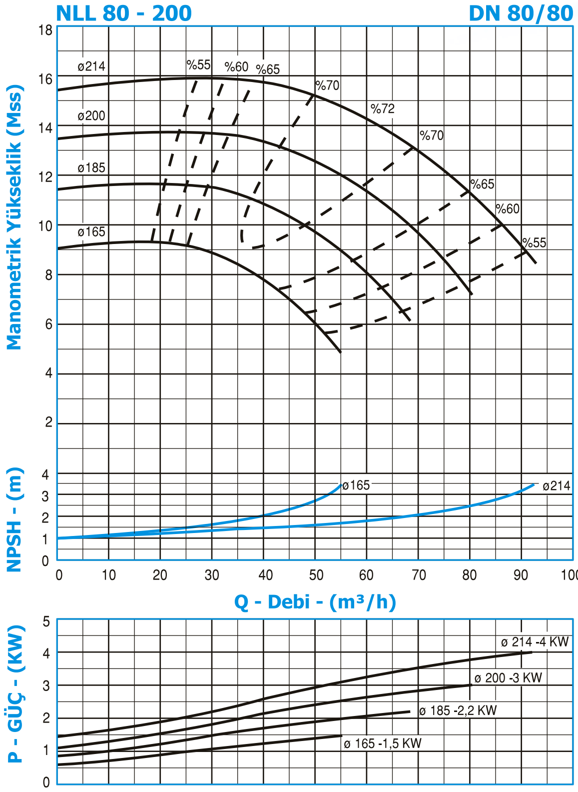




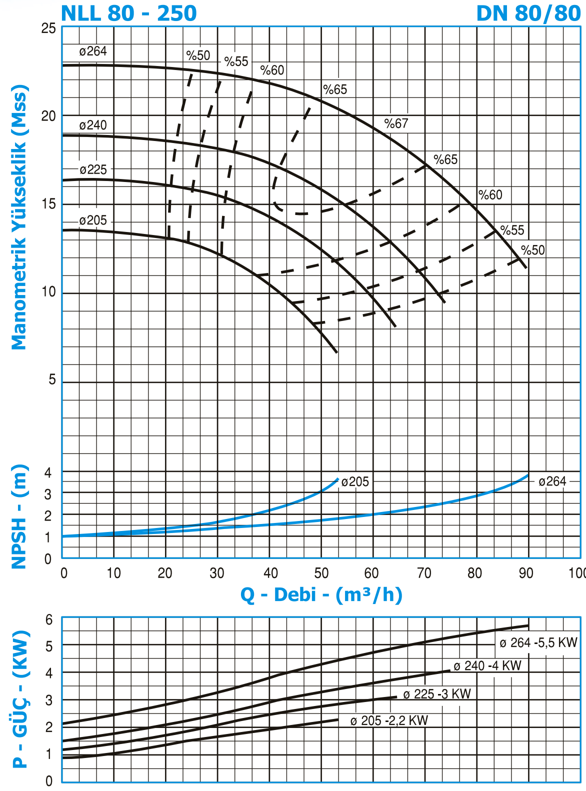


Karakteristik Eğriler (1450 d/dk.)

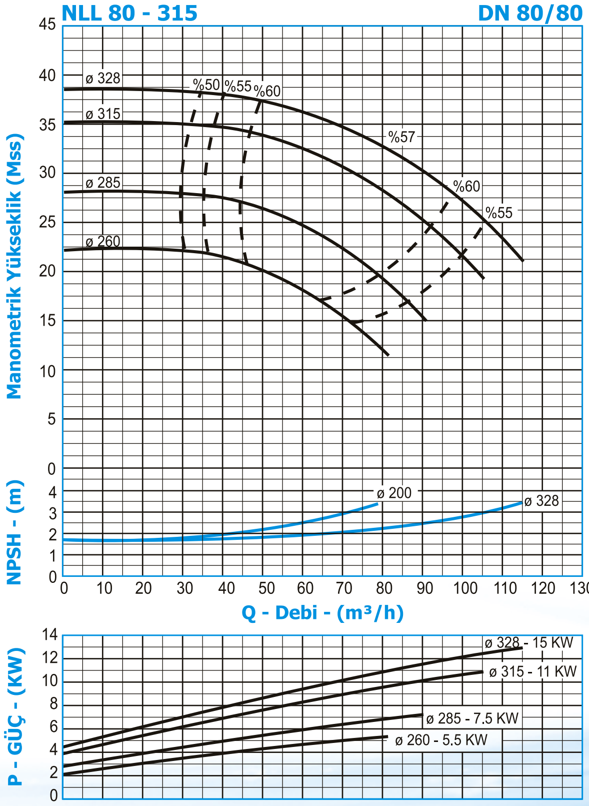
NLL 80 - 200 **DN 80/80**



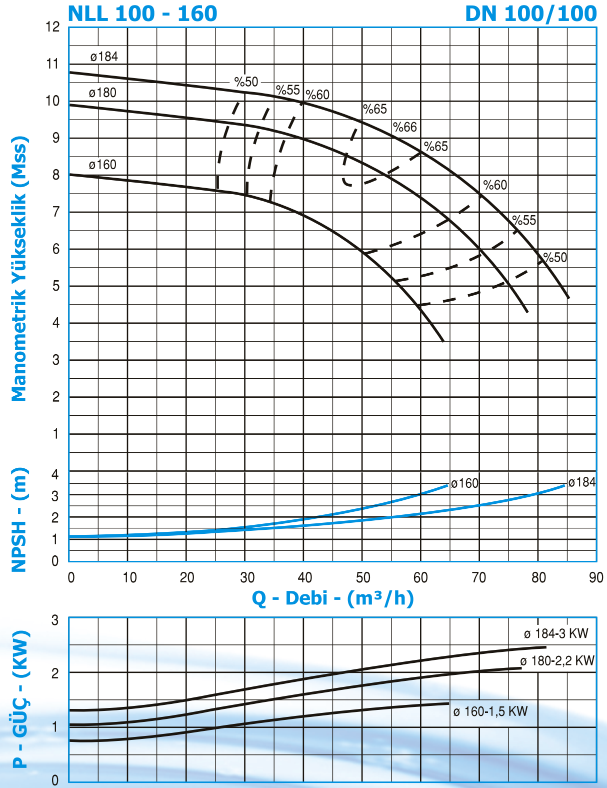
NLL 80 - 250 **DN 80/80**



NLL 80 - 315 **DN 80/80**



NLL 100 - 160 **DN 100/100**



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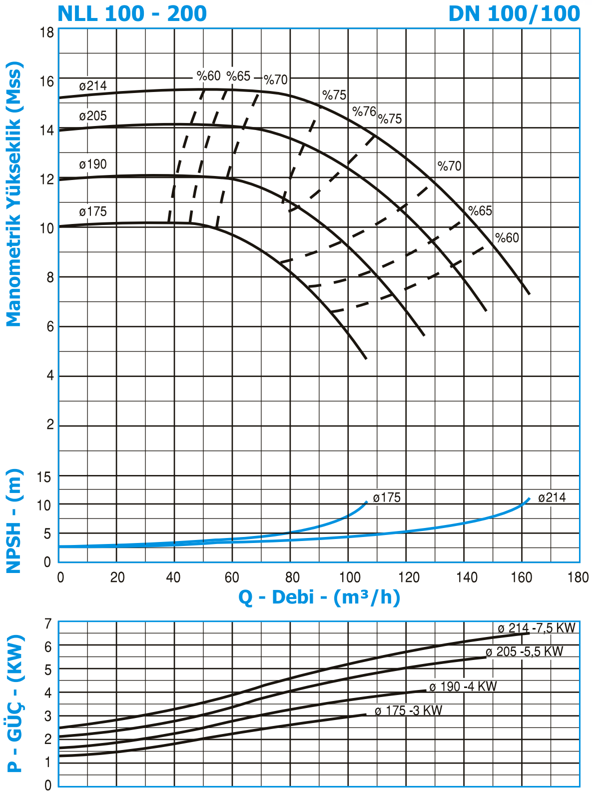

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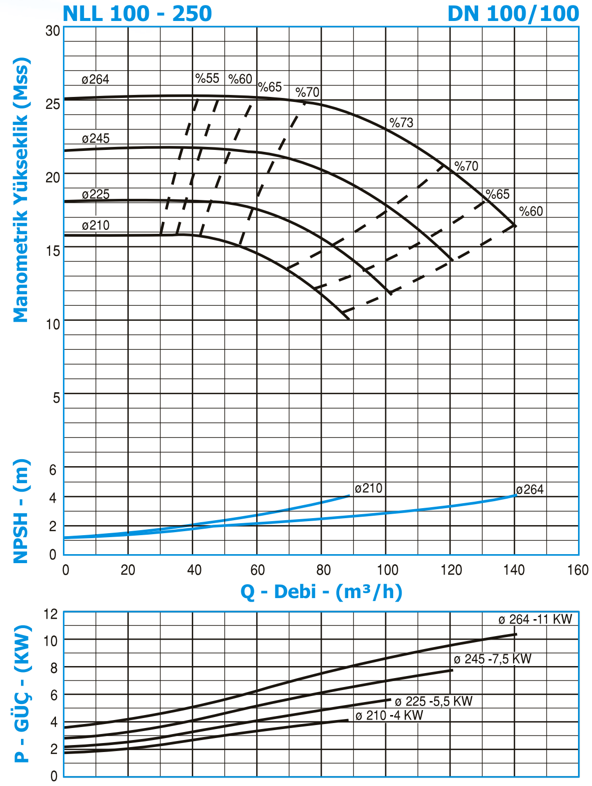

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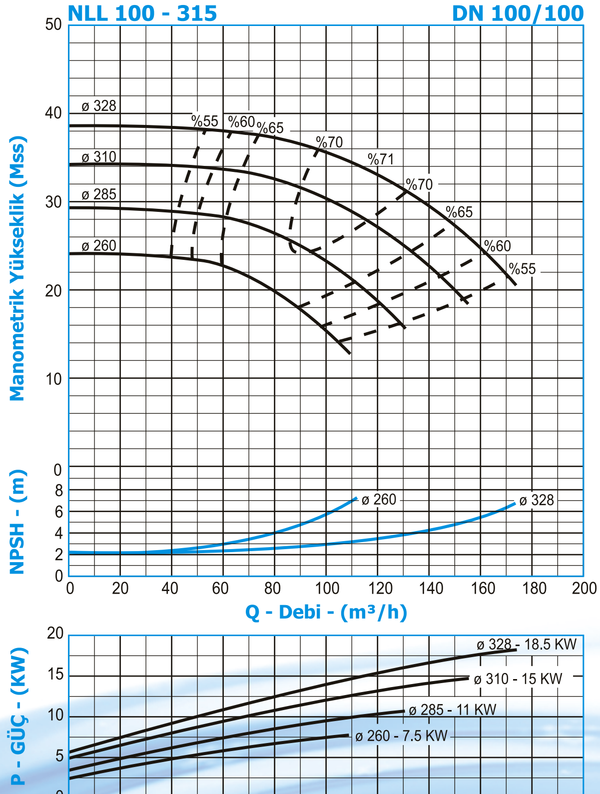

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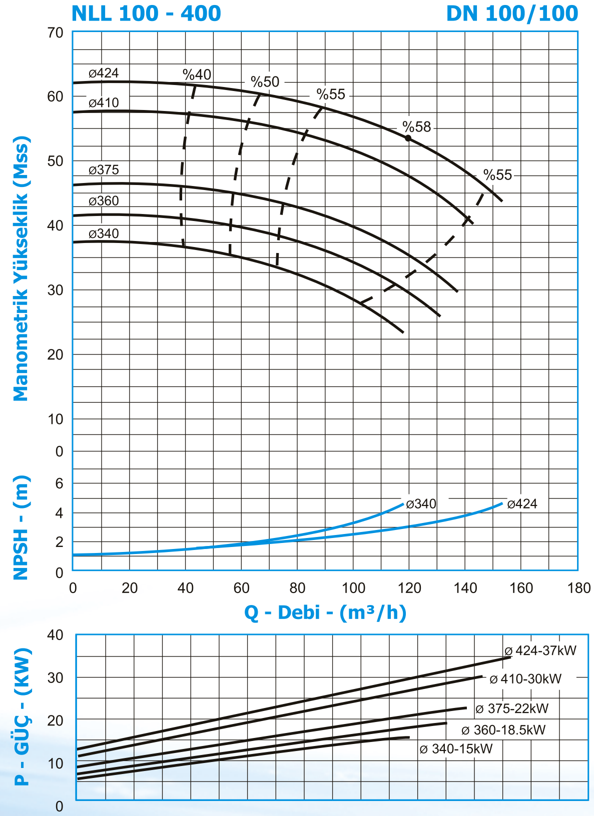

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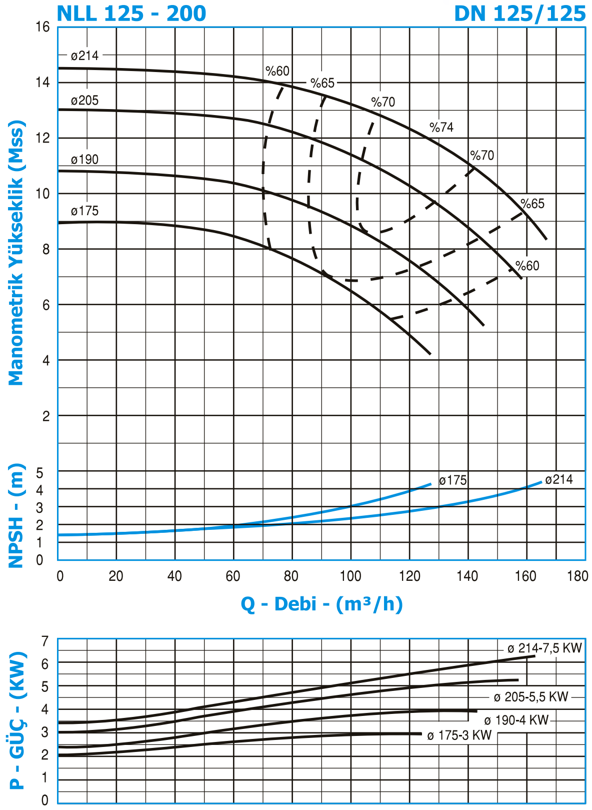

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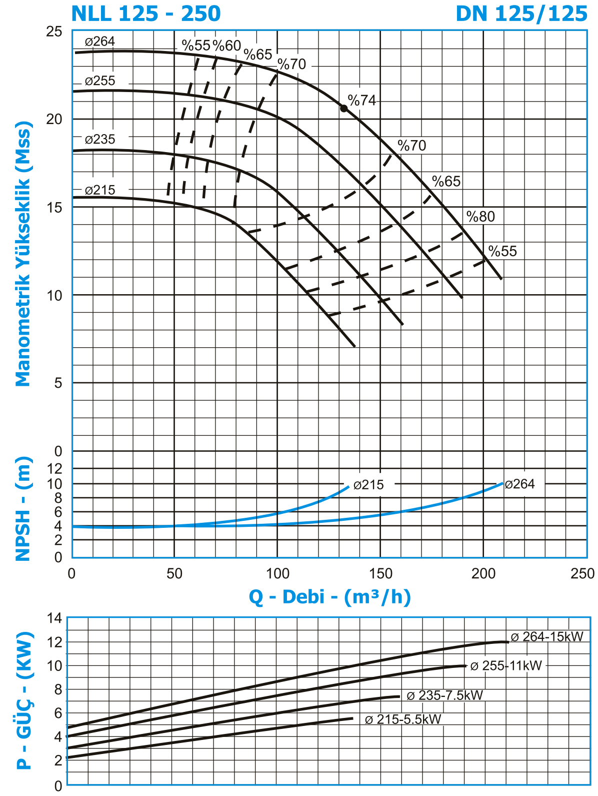

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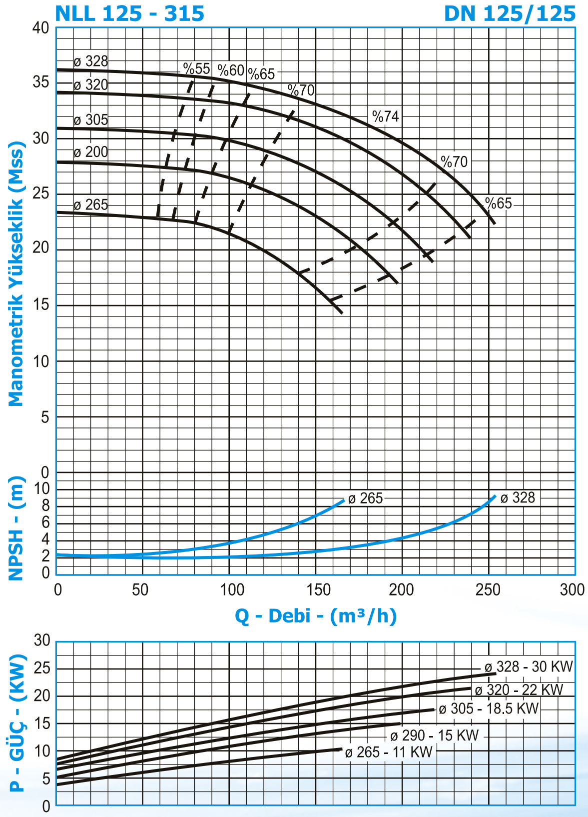

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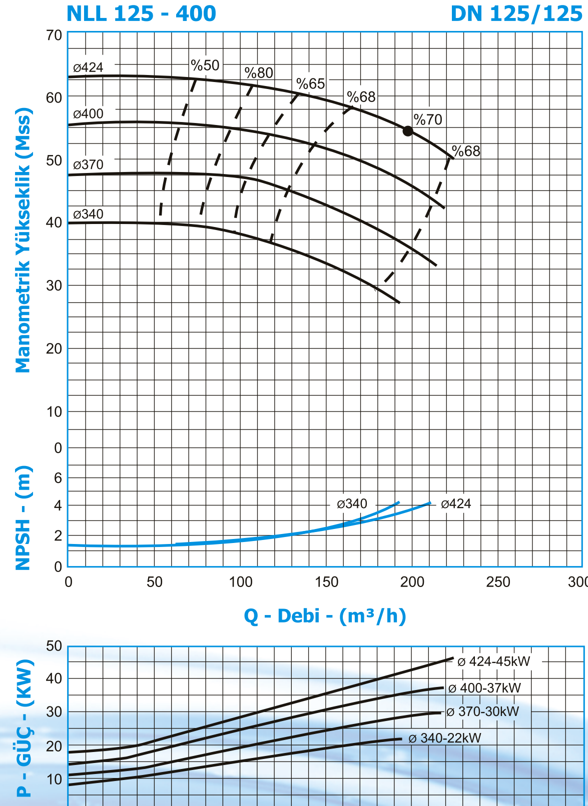

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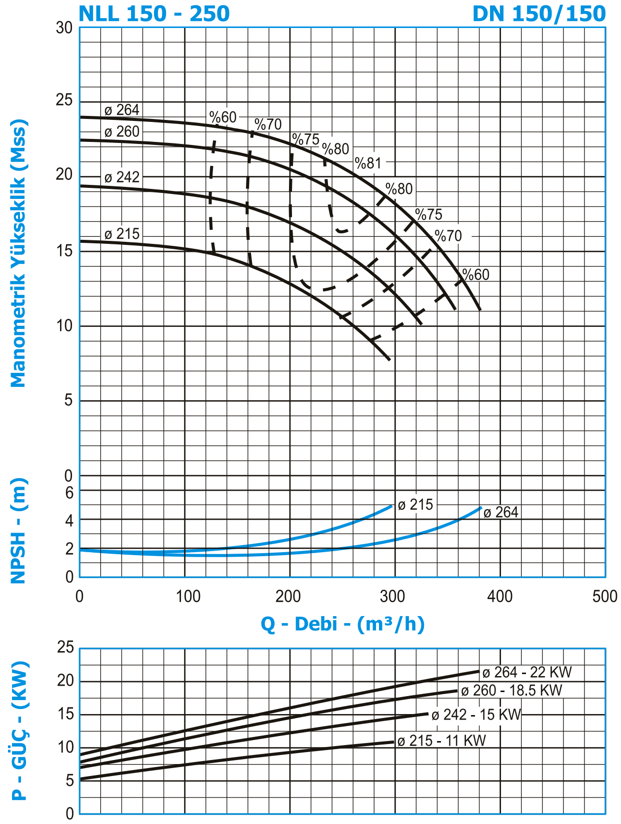
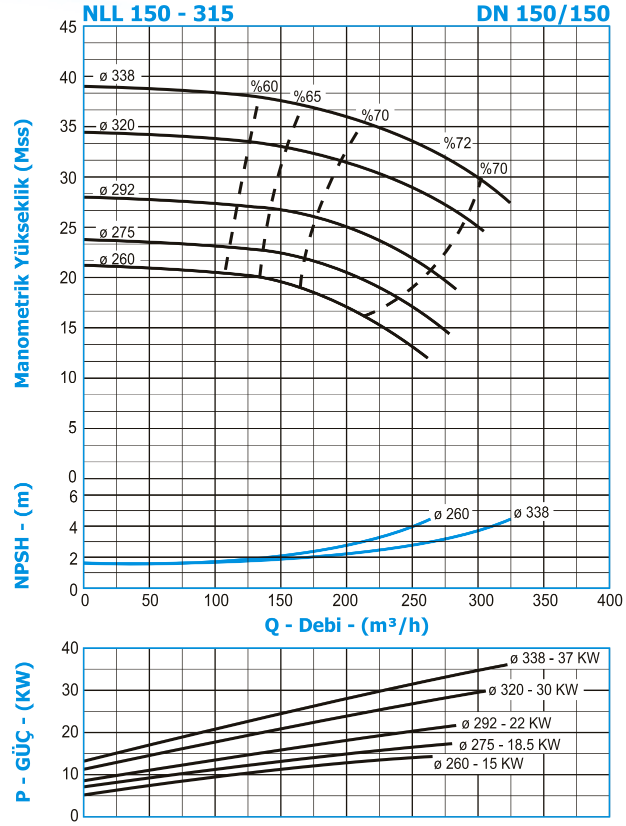


NLL 150 - 315 DN 150/150



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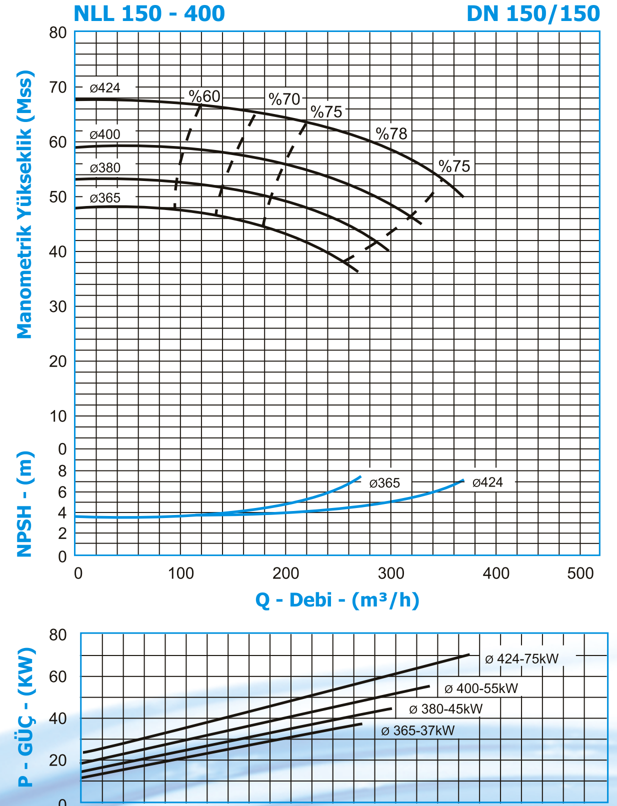
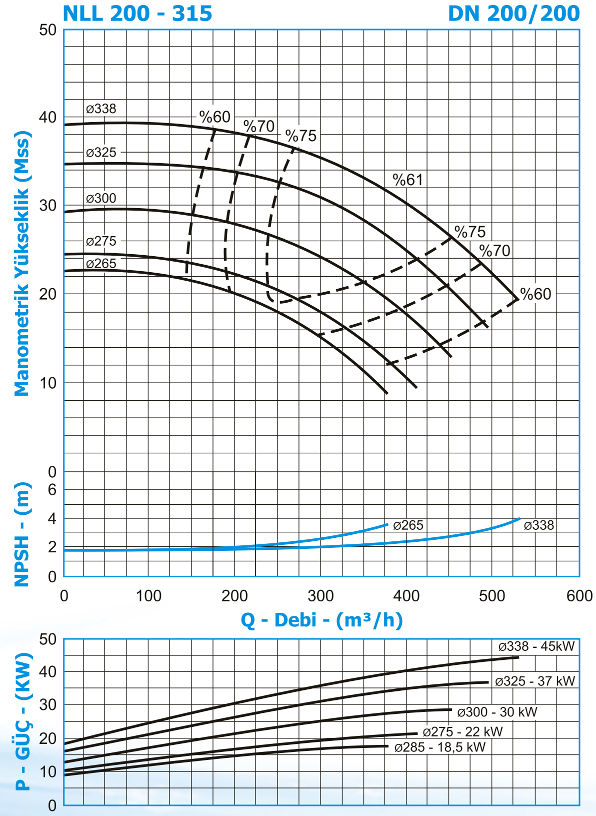


NLL 200 - 315 DN 200/200



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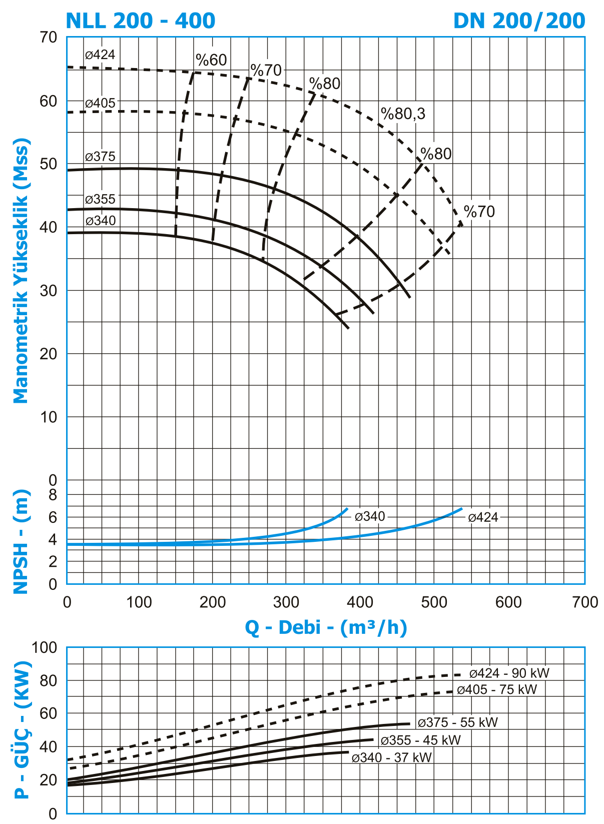
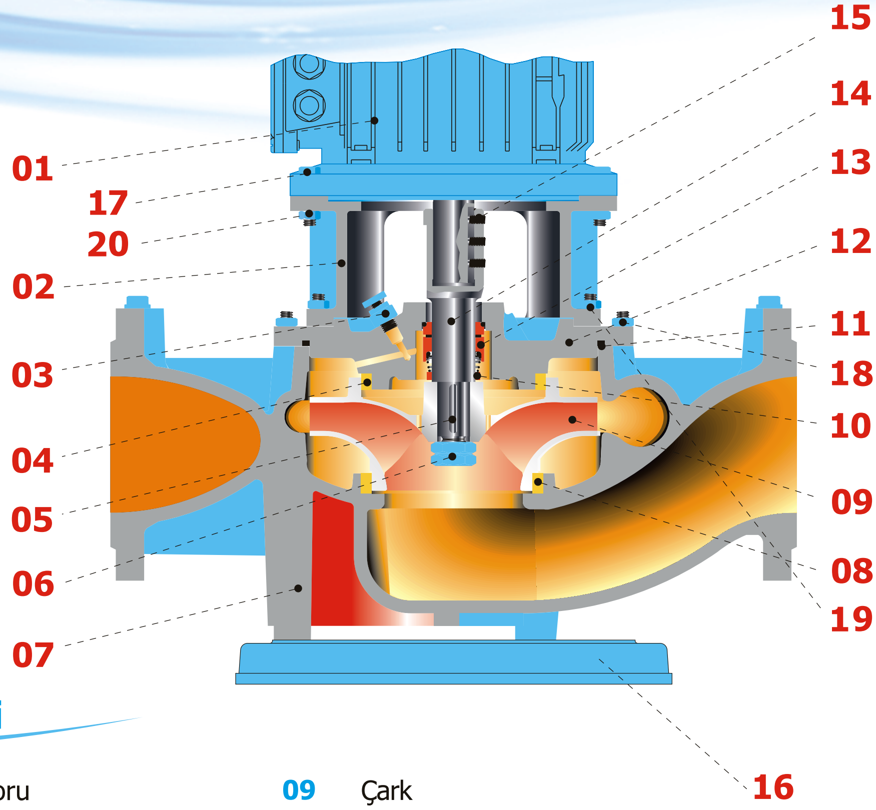


KESİT RESMİ



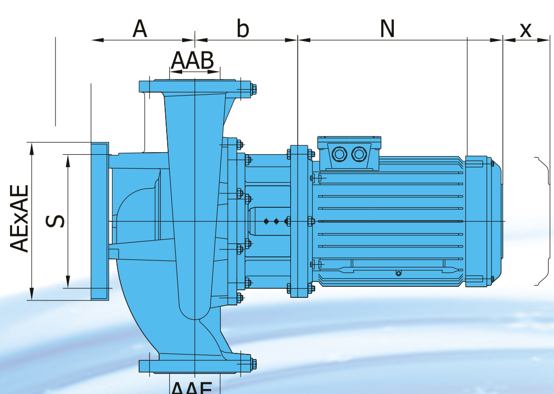
Parça Listesi

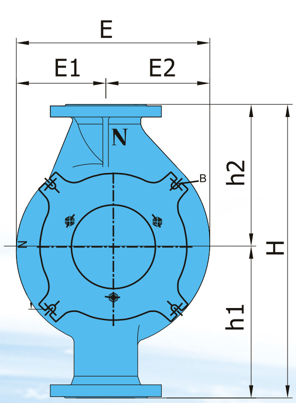
01 Elektrik Motoru
02 Motor Taşıyıcı
03 Hava Alma Tapası
04 Aşınma Bileziği (Gövde Kapağı)
05 Çark Kaması
06 Çark Somunu
07 Salyangoz Gövde
08 Aşınma Bileziği (Gövde)
09 Çark
10 Ara Burç
11 O-Ring
12 Gövde Kapağı
13 Mekanik Salmastra
14 Pompa Mili
15 Setuskur
16 Alt Tabaka
17 Motor Taşıyıcı Civatası
18 Taşıyıcı Gövde Saplaması
19 Taşıyıcı Kapak Saplaması
20 Somun

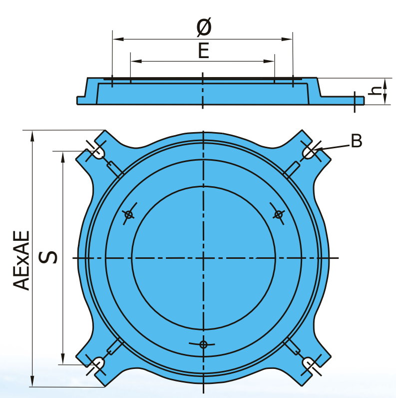
Alt Şase Ölçüleri

Tip No	Ölçüler						
	ø	AE	h	E	zx10	S	B
A1	132	205	25	115	3x10	165	14
A2	168 / 200	265	30	140	3x10	225	14
A3	235	325	35	175	3x10	225	18
A4	350	440	45	260	3x10	380	22

Teknik Özellikler







TEKNİK BİLGİLER

2900 d/dk.

POMPA TİPİ	MOTOR		AAE/AAB	A	b	N	L	H	h1	h2	X	E	e1	e2	Alt Şase
	KW	IEC													
40-125	1.1	80M	40	75	165	244	485	300	160	140	100	208	100	108	A1
	1.5	90S				246	485								
	2.2	90N				266	505								
	3	100L				292	535								
40-160	3	100L	40	75	165	295	535	340	180	160	100	236	114	122	
	4	112M				335	575								
	5.5	132S			195	360	630								
40-200	4	112M	40	75	165	336	576	380	200	180	100	275	135	140	
	5.5	132S			195	361	631								
	7.5	132S				361	631								
	11	160M			240	476	790								
50-125	1.5	90S	50	90	165	246	500	300	160	140	100	212	102	110	
	2.2	90L				266	520								
	3	100L				292	550								
	4	112M				336	590								
	5.5	132S			195	361	645								
50-160	3	100L	50	90	165	292	550	340	180	160	100	238	114	124	
	4	112M				336	590								
	5.5	132S			195	361	645								
	7.5	132S				361	645								
	11	160M			239	476	805								
50-200	7.5	132S	50	90	195	361	645	425	225	200	100	280	135	145	
	11	160M			239	476	805								
	15	160M				476	805								
50-250	11	160M	50	90	239	476	805	475	250	225	100	342	167	175	A2
	15	160M				476	805								
	18.5	160L				476	805								
	22	180M				519	850								
	30	200L		125		555	920				125				
65-125	3	100L	65	110	165	292	570	340	180	160	100	222	102	120	A1
	4	112M				336	610								
	5.5	132S			195	361	665								
	7.5	132S				361	665								
65-160	5.5	132S	65	110	195	361	665	380	200	180	100	252	116	136	
	7.5	132S				361	665								
	11	160M			239	476	825								
65-200	11	160M	65	110	239	476	825	475	250	225	100	315	153	162	A2
	15	160M				476	825								
	18.5	160L				476	825								
	22	180M				519	870								
65-250	15	160M	65	110	239	476	825	475	250	225	125	343	166	177	
	18.5	160L				476	825								
	22	180M				519	870								
	30	200L				555	905								
	37	200L				555	905								
80-125	4	112M	80	130	165	336	630	380	200	180	125	252	114	138	
	5.5	132S			195	361	685								
	7.5	132S				361	685								
	11	160M			239	476	845								
80-160	11	160M	80	130	239	476	845	425	225	200	125	280	128	152	
	15	160M				476	845								
	18.5	160L				476	845								
80-200	15	160M	80	130	239	476	845	475	225	225	125	315	145	170	
	18.5	160L				476	845								
	22	180M				519	888								
	30	200L				555	925								
80-250	22	180M	80	140	247	519	906	560	280	280	125	379	182	197	A3
	30	200L			253	555	948								
	37	200L				555	948				140				
	45	225M				625	1018								
	55	250M			283	644	1067								
100-160	11	160M	100	150	239	476	865	475	250	225	140	292	130	162	A2
	15	160M				476	865								
	18.5	160L				476	865								
	22	180M			247	519	916								
100-200	22	180M	100	170	247	519	936	525	275	250	140	362	170	192	
	30	200L			253	555	978								
	37	200L				555	978								
	45	225M				625	1048								
100-250	37	200L	100	170	253	555	978	580	300	280	140	384	178	206	A3
	45	225M				625	1048								
	55	250M			283	644	1097								

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POMPA TİPİ	MOTOR KW	MOTOR IEC	AAE/AAB	A	b	N	L	H	h1	h2	X	E	e1	e2	Alt Şase
40-125	0.25	71M	40	75	165	223	463	300	160	140	100	208	100	108	A1
	0.25	71M				223	463								
	0.37	71M				223	463								
40-160	0.37	71M	40	75	165	223	463	340	180	160	100	236	114	122	
	0.55	80M				244	484								
	0.75	80M				244	484								
40-200	0.55	80M	40	75	165	244	484	380	200	180	100	275	135	140	
	0.75	80M				244	484								
	1.1	90S				246	486								
50-125	0.25	71M	50	90	165	223	478	380	160	140	100	212	102	110	
	0.37	71M				223	478								
	0.55	80M				244	499								
50-160	0.37	71M	50	90	165	223	478	340	180	160	100	238	114	124	
	0.55	80M				244	499								
	0.75	80M				244	499								
	1.1	90S				246	501								
50-200	0.75	80M	50	90	165	244	499	425	225	200	100	286	135	145	
	1.1	90S				246	501								
	1.5	90L				266	521								
	2.2	100L				292	547								
50-250	1.5	90L	50	90	165	266	521	475	250	225	100	342	167	175	
	2.2	100L				292	547								
	3	100L				292	547								
65-125	0.37	71M	65	110	165	223	498	340	180	160	100	222	102	120	A2
	0.55	80M				244	519								
	0.75	80M				244	519								
65-160	0.75	80M	65	110	165	244	519	380	200	180	100	252	116	136	
	1.1	90S				246	521								
	1.5	90L				266	541								
65-200	1.1	90S	65	110	165	246	521	475	250	225	100	315	153	162	A1
	1.5	90L				266	541								
	2.2	100L				292	567								
	3	100L				292	567								
65-250	2.2	100L	65	110	195	292	567	475	250	225	125	343	166	177	
	3	100L				292	567								
	4	112M				336	611								
	5.5	132S			202	361	636								
65-315	3	100L	65	130	187	292	609	560	280	280	125	418	202	216	A4
	4	112M			187	336	653								
	5.5	132S			202	361	693								
	7.5	132M			202	361	693								
	11	160M			246	476	852								
80-125	0.37	71M	80	130	165	223	518	380	200	180	125	252	114	138	A1
	0.55	80M				244	539								
	0.75	80M				244	539								
	1.1	90S				246	541								
80-160	0.75	80M	80	130	165	244	539	425	225	200	125	280	128	152	
	1.1	90S				246	541								
	1.5	90L				266	561								
	2.2	100L				292	587								
80-200	1.5	90L	80	130	165	266	561	475	250	225	125	315	145	170	A2
	2.2	100L				292	587								
	3	100L				292	587								
	4	112M				336	631								
80-250	2.2	100L	90	140	188	292	620	560	280	280	125	379	182	197	A3
	3	100L				292	620								
	4	112M				336	664								
	5.5	132S			203	361	704								
80-315	5.5	132S	80	150	203	361	714	595	315	280	140	425	205	220	A4
	7.5	132M				361	714								
	11	160M			247	476	873								
	15	160L				476	873								
100-160	1.5	90L	100	150	165	266	581	475	250	225	140	292	130	162	A2
	2.2	100L				292	607								
	3	100L				292	607								
100-200	3	100L	100	170	188	292	650	525	275	250	140	362	170	192	
	4	112M				336	594								
	5.5	132S			203	361	734								
	7.5	132M				361	734								
100-250	4	112M	100	170	188	336	594	580	300	280	140	384	178	206	A3
	5.5	132S			205	361	736								
	7.5	132M				361	736								
	11	160M			248	476	894								
100-315	7.5	132M	100	160	205	361	726	670	355	315	140	455	215	240	A4
	11	160M				476	886								
	15	160L			250	476	886								
	18.5	180M				519	929								
100-400	15	160L	100	150		476	881	800	400	400	160	558	270	288	
	18.5	180M				519	924								
	22	180L			255	519	924								
	30	200L				555	960								
	37	225S			300	625	1075								

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POMPA TİPİ	MOTOR KW	MOTOR IEC	AAE/AAB	A	b	N	L	H	h1	h2	X	E	e1	e2	Alt Şase
125-200	3	100L	125	180	213	292	685	560	280	280	140	390	182	208	A4
	4	112M				336	729								
	5.5	132S			228	361	769								
	7.5	132M				361	769								
125-250	5.5	132S	125	180	228	361	769	630	315	315	140	413	195	218	
	7.5	132M				361	769								
	11	160M			272	476	928								
	15	160L				476	928								
125-315	11	160M	125	160	280	476	916	710	355	355	140	488	230	258	
	15	160L				476	916								
	18.5	180M				519	959								
	22	180L				519	959								
	30	200L				555	995								
125-400	22	180L	125	160	280	519	959	800	400	400	160	562	270	292	
	30	200L				555	995								
	37	225S			325	625	1110								
	45	225M				625	1110								
150-250	11	160M	150	180	304	476	960	710	355	355	140	474	220	254	
	15	160L				476	960								
	18.5	180M				519	1003								
	22	180L				519	1003								
150-315	15	160L	150	180	315	476	971	710	355	355	160	548	258	290	
	18.5	180M				519	1014								
	22	180L				519	1014								
	30	200L				555	1050								
	37	225S			360	625	1165								
150-400	37	225S	150	180	360	625	1165	800	400	400	160	604	290	314	
	45	225M				625	1165								
	55	250M				645	1185								
200-315	18.5	180M	200	200	355	519	1074	800	450	350	160	547	295	252	
	22	180L				519	1074								
	30	200L				555	1110								
	37	225S			400	625	1225								
	45	225M				625	1225								
200-400	37	225S	200	200	400	625	1225	900	500	400	160	618	328	290	
	45	225M				625	1225								
	55	250M				644	1244								

TEKNİK BİLGİLER

Malzeme Seçenekleri

Parçanın Adı	MALZEME					
	Standart Malzeme	**Bronz Malzeme**	**Komple Bronz**	**Sfero Döküm**	**Çelik Döküm**	**Paslanmaz Çelik**
Salyangoz gövde	GG 25	GG 25	Bronz	GGG 40	GS-C25	SS 304-316
Çark	GG 25	Bronz	Bronz	GGG 40	GS-C25	SS 304-316
Motor Taşıyıcı	GG 25	GG 25	GG 25	GG 25	GG 25	GG 25
Aşınma Halkası(*)	Bronz (*)	GG 25 (*)	Bronz (*)	Bronz(*)	Bronz	X20Cr13
Pompa Mili	X20Cr13	X20Cr13	X20Cr13	X20Cr13	SS 304-316	SS 304-316

(*) Aşınma halkası isteğe bağlıdır.
Seçenekler; Alıcının isteğine veya çalışma şartlarına bağlı olarak değişik tip ve markalarla mekanik salmastra kullanılabilir.

Malzeme Seçim Tablosu

Parça Listesi	0.6025	0.7040	1.0619	1.4308	1.4408	1.4409	2.1050.01	2.1090.01	1.4021	1.4301	1.4401	1.4404
Salyangoz gövde	●	○	○	○	○	○	○					
Gövde kapağı	●	○	○	○	○	○	○					
Çark	●	○	○	○	○	○	○					
Pompa mili									●	○	○	○
Motor taşıyıcı	●	○										
Aşınma bileziği	○	○	○	○	○	○	○	○				
Mekanik salmastra *	DIN 24960 / EN 12756											

(*)Seçenekler : Alıcının isteğine veya çalışma şartlarına bağlı olarak değişik tip ve markalarda mekanik salmastra kullanılabilir.

● Standart imalat
○ İsteğe bağlı

Malzeme Seçenekleri

Tanım	DIN 17007	EN-DIN	ASTM
Pik döküm	0.6025	GJL-250 (GG 25)	A 48 Class 40-B
Sfero döküm	0.7040	GJS-400-15 (GGG 40)	A 536 Gr. 60-40-18
Çelik döküm	1.0619	GP240GH (GS-C 25)	A 216 Gr. WCB
Krom nikelli çelik döküm	1.4308	G-X5 Cr Ni 19-10	A 351-75 Grade CF8
Krom nikel molibdenli çelik döküm	1.4408	G-X5 Cr Ni Mo 19-11-2	A 351-75 Grade CF8M
Krom nikel molibdenli çelik döküm (düşük karbon)	1.4409	G-X2 Cr Ni Mo 19-11-2	A 351-75 Grade CF3M
Bronz döküm	2.1050.01	G-Cu Sn 10	B 584 C 90700
Bronz döküm	2.1090.01	G-Cu Sn 7 Zn Pb	B 584 C 93200
Kromlu çelik	1.4021	X20 Cr 13	A 276 Type 420
Krom nikel çeliği	1.4301	X5 Cr Ni 18.9	A 276 Type 304
Krom nikel molibdenli çelik	1.4401	X5 Cr Ni Mo 18.10	A 276 Type 316
Krom nikel molibdenli çelik (düşük karbon)	1.4404	X2 Cr Ni Mo 18.10	A 167-74 Type 316 L

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