



## YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP



### POMPA DEĞERLERİ / PUMP PROPERTIES

Q	: 3 m <sup>3</sup> /h
Hm	:1 ~ 14 Bar
T	:0 ~ 200 °C
n	:1400 d/d
Visc.	:100 ~ 250.000 SSU

### KULLANIM ALANLARI

- Fuel Oil Servis Tankları, Gaz Yağı, Mazot Tankerlerinde
- Reçine ve Polimerler
- Asfalt ve Bitüm
- Kağıt ve Boya Sanayinde
- Küçük çapta kızgın yağ sirkülasyonlarında
- İlaç, kimya ve deterjan sanayinde
- Gıda Sanayinde.

### USE AREAS

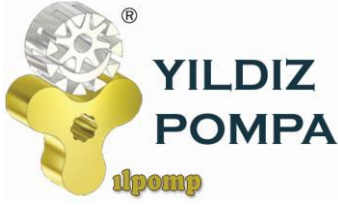
- Fuel Oil Service Tanks, Gasoil, Diesel Tankers
- Resin and Polymer
- Asphalt and Bitumen
- Paper and Paint/dye industry
- Circulation of Hot Oil (limited)
- Medicine, Chemical and Detergent Industry
- Food Industry.

### MALZEME SEÇENEKLERİ

- Pompa Gövdesi, Kapaklar : Dökme (pik) demir, Sfero döküm, Çelik döküm, Paslanmaz AISI 304- AISI 316 döküm
- Dişliler : Sfero döküm, Çelik döküm, Paslanmaz AISI 304- AISI 316 döküm
- Yataklar : Snbz 12 bronz, karbon grafit, Silisyum Karbür, Sert Metal Kaplama, rulman
- Sızdırmazlık: Yumuşak Salmastra, Rotatherm Salmastra, Mekanik salmastra. Keçeli Sistem, Kartex Mekanik Salmastra

### MATERIAL OPTIONS

- Pump Body, covers : Pig Cast Iron, Spheroidal Cast iron, Cast Steel, AISI 304/316 CrNi Stainless Steel
- Gears : Spheroidal Cast iron, Cast Steel, AISI 304/316 CrNi Stainless Steel
- Bearings: Snbz 12 bronze, carbon graphite, silicon carbide, hard metal coated steel, bearing
- Sealing: Soft Seal or Packing Gland, Rotatherm Seal, Lip Seal, Mechanical Seal, Cartridge Type Mechanical Seal



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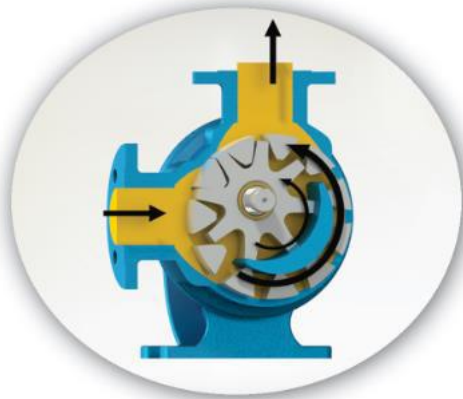
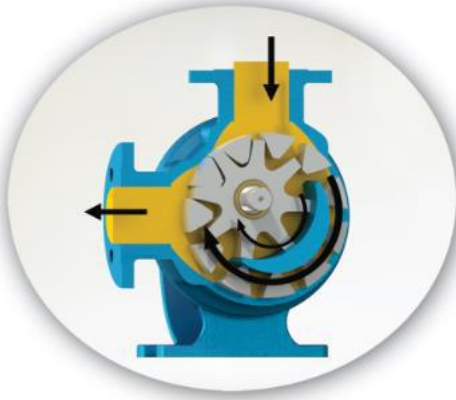
### İÇTEN EKSANTİK DİŞLİ POMPA ÇALIŞMA PRENSİBİ / WORKING PRINCIPLE OF INTERNAL ECCENTRIC GEAR PUMP

Yıldız Pompa' nın "dişli içinde dişli" prensibinde sadece iki tane hareketli parça vardır. Bütün pozitif deplasmanlı YILDIZ dişli pompalarının güvenilir ve verimli çalışmasının sırrı budur. Sıvının pozitif deplasmanı (yer değiştirmesi) rotor ve avare dişlisinin dişleri arasındaki boşluğun komple dolmasıyla sağlanmaktadır. Bütün dişli pompalarda olduğu gibi, YILDIZ POMPA' da da performansın en üst noktaya çıkmasını sınırlayıcı yegane faktör, pompalanan sıvının diğerlerine göre daha temiz olmasını istemesidir.

Pompa milinin her devrinde emiş ağızı yoluyla belli bir miktar sıvı pompaya girer. Bu sıvı rotor ile avare dişlisi arasındaki boşluğu doldurur. Pompa kapağında bulunan hilal, çıkış ağızına doğru pürüzsüz şekilde hareket eden sıvının akışını ayırır. Kendi dişleri ile hilalin iç yüzeyi arasında sıvı taşıyan avare dişlisi pompa kapağının desteklediği bir mil üzerinde döner. Dişleri arasında sıvı taşıyan rotor dişlisi pompa gövdesi ile hilalin dış yüzeyi arasında hareket eder ve pompa miline bağlıdır.

*YILDIZ's simple "gear-within a gear" principle has only two moving parts. It is the secret of dependable, efficient operation of all positive displacement YILDIZ POMPA's PUMPS. The positive displacement of liquid is accomplished by the complete filling of the spaces between the teeth of the rotor and idler gears. The only limiting factor to peak performance in YILDIZ POMPA, as with all rotary pumps, is that the liquid pumped must be comparatively clean.*

*With every revolution of the pump's shaft, a definite amount of liquid enters the pump through the suction port. This liquid fills the spaces between the teeth of the rotor and the idler. The crescent on the pump head splits the flow of liquid as it moves smoothly towards the discharge port. The idler gear, which carries the liquid between its teeth and the inside surface of the crescent is connected to pump cover. On the otherhand, rotor gear which is rotated directly with pump shaft delivers the liquid between gear teeth and crescent's souter surface.*



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Yandaki renkli kısım sıvının pompa gövdesindeki emiş ağızı alanına, rotor dişlisi ve avare dişlisi dişleri arasındaki dişli boşlukları alanına girişini gösterir. İki siyah ok pompanın dönüş ve sıvının ilerleyişini gösterir.

*The yellow colored portion at side indicates the liquid as it enters the suction port area of the casing and the area between the rotor teeth and corresponding concave area between the idler teeth. The two black arrows indicate the pump rotation and progress of the liquid.*



"Dişli içinde dişli" prensibinde çalışan dişliler ile pompa içinde sıvının ilerleyişine dikkat edin. Aynı zamanda, pompa kapağı üzerindeki hilal şeklinin sıvıyı nasıl böldüğüne ve emiş ile boşaltma ağızları arasında bir keçe (conta) gibi vazife gördüğüne dikkat ediniz.

*Notice the progress of the liquid through the pump and between the teeth of rotor idler gear. Also, note how the crescent shape on the head divides the liquid and acts as a seal between the suction and discharge ports.*



Bu resim pompanın iç kısmının dolup sıvının boşaltma ağızı alanına itilmesinden hemen önceki durumunu göstermektedir. Avare ve rotor dişlilerinin dizaynının sıvı için nasıl bir kapalı cep oluşturduğuna ve bunun tam bir hacim kontrolü sağlanmasını nasıl garantilediğine dikkat ediniz.

*This illustration shows the pump in a nearly flooded condition just previous to the liquid being forced into the discharge port area. Notice how the gear design of the idler and rotor form locked pockets for the liquid to guarantee absolute volume control.*



Bu görüntü pompanın tamamen dolup taşıdığı durumu ve sıvının boşaltma işlemini, boşaltma ağızından ilerleyişini göstermektedir. Emiş ve boşaltma ağızlarına eşit mesafede sızdırmaz bir keçe oluşturan, sıvıyı boşaltma ağızından dışarı doğru iten, rotor ve avare dişlisinin dişleri birbiri içine geçer.

*The view shows the pump in a completely flooded condition and in the process of discharging the liquid through discharge port. The rotor and idler teeth mesh, forming a seal equidistant between the both ports, forcing liquid out the discharge port.*





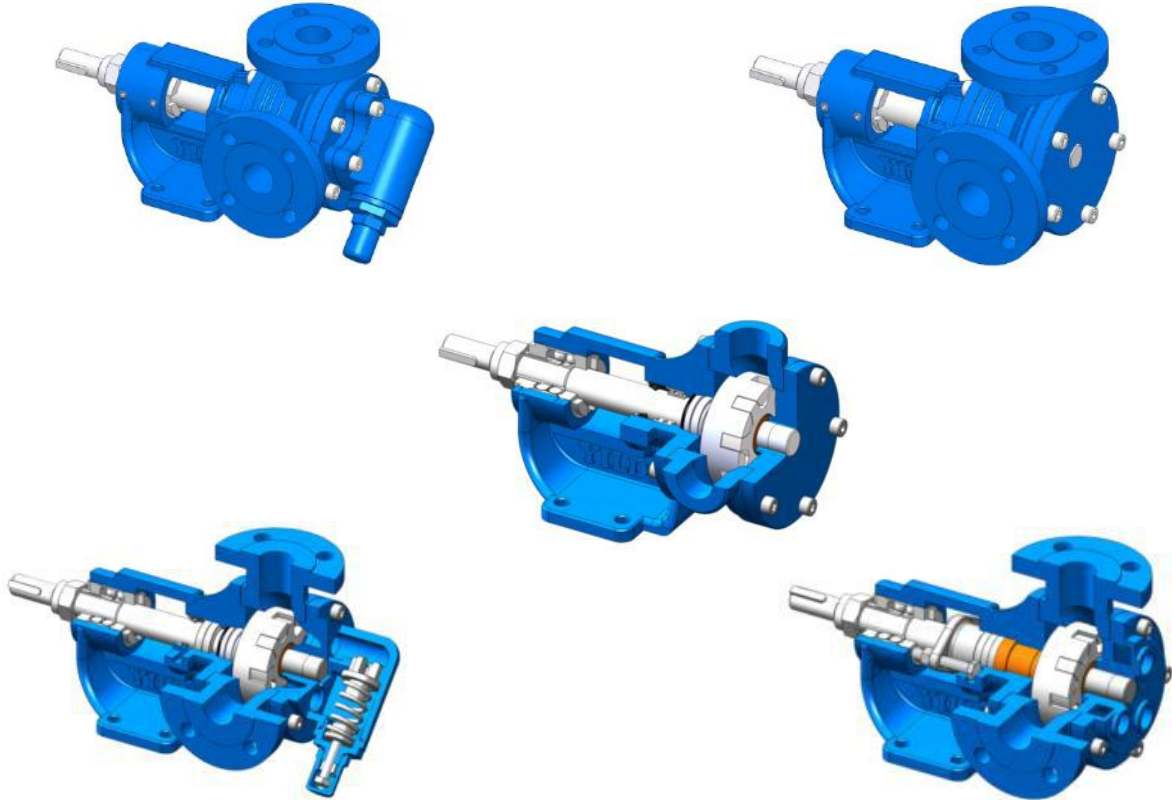
## YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP

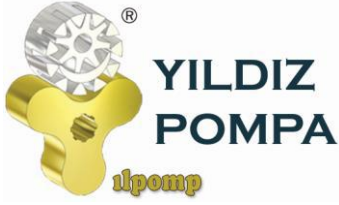


YK-1" - YKF-1" POMPASINA AİT KAPASİTE VE GÜÇ TABLOSU / CAPACITY AND POWER TABLE						
KAPASİTE (m <sup>3</sup> /h) CAPACITY (Q)	DEVİR (d/d) SPEED (rpm)	ÇIKIŞ BASINCI / PRESSURE				VİSKOZİTE VISCOSITY
		2,5 Bar	5 Bar	7,5 Bar	10 Bar	
0,100	60	0,5 HP	0,5 HP	0,75 HP	0,75 HP	75.000 SSU
0,150	80	0,5 HP	0,75 HP	1 HP	1 HP	25.000 SSU
0,180	100	0,75 HP	0,75 HP	1 HP	1 HP	25.000 SSU
1,8	900	0,75 HP	1 HP	1,5 HP	2 HP	750 SSU
3	1400	1 HP	1,5 HP	2 HP	3 HP	100 SSU

MOTOR GÜÇLERİ MOTOR POWERS		MOTOR GÜÇLERİ MOTOR POWERS		MOTOR GÜÇLERİ MOTOR POWERS	
1 HP	1400 d/d (rpm)	1 HP	900 d/d (rpm)	1,5 HP	750 d/d (rpm)
0,75 HP	900 d/d (rpm)	1,5 HP	900 d/d (rpm)	2 HP	900 d/d (rpm)
MOTOR GÖVDESİ MOTOR BODY		MOTOR GÖVDESİ MOTOR BODY		MOTOR GÖVDESİ MOTOR BODY	
80		90		100	

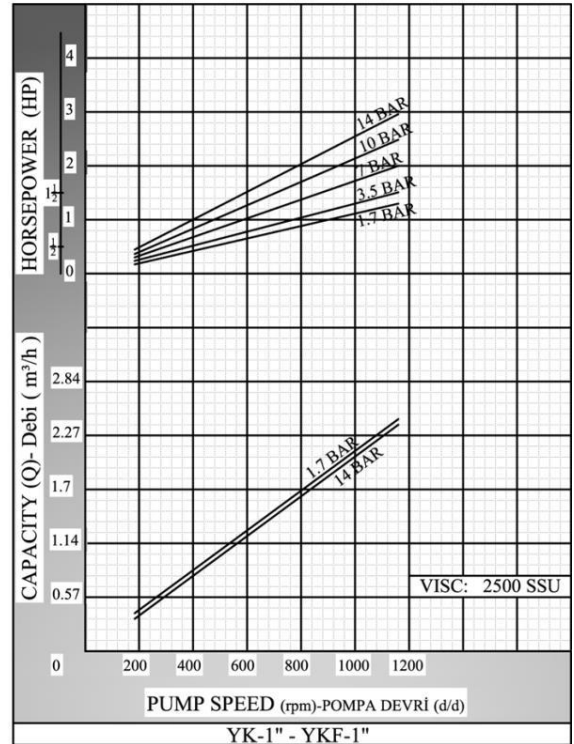
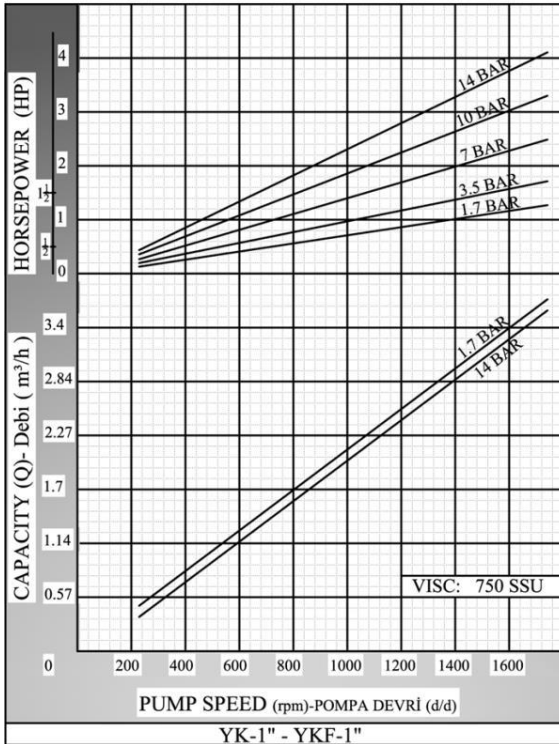
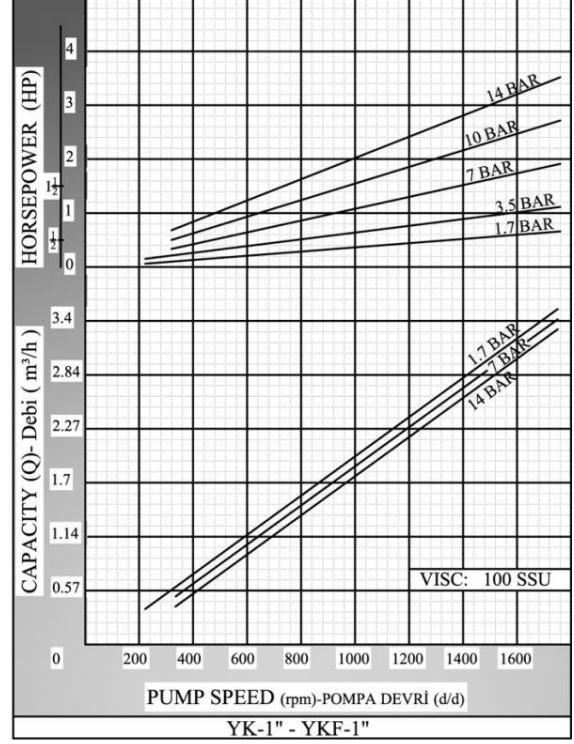
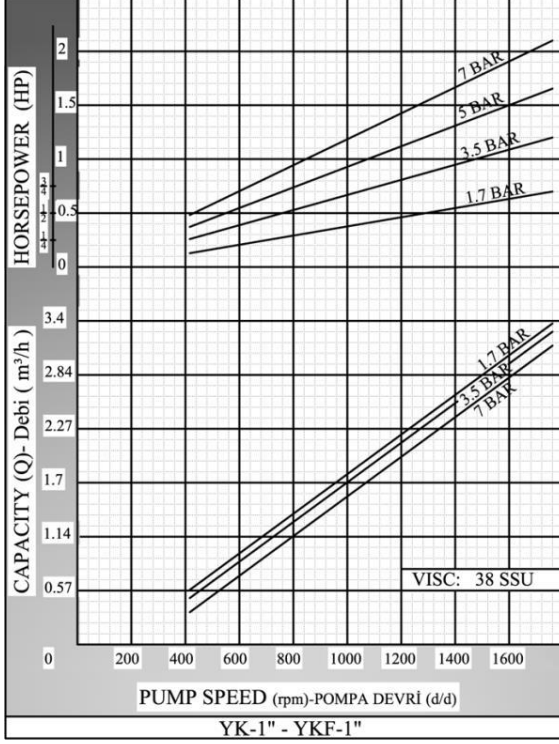




# YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP



## KAPASİTE EĞRİLERİ / CAPACITY GRAPHS



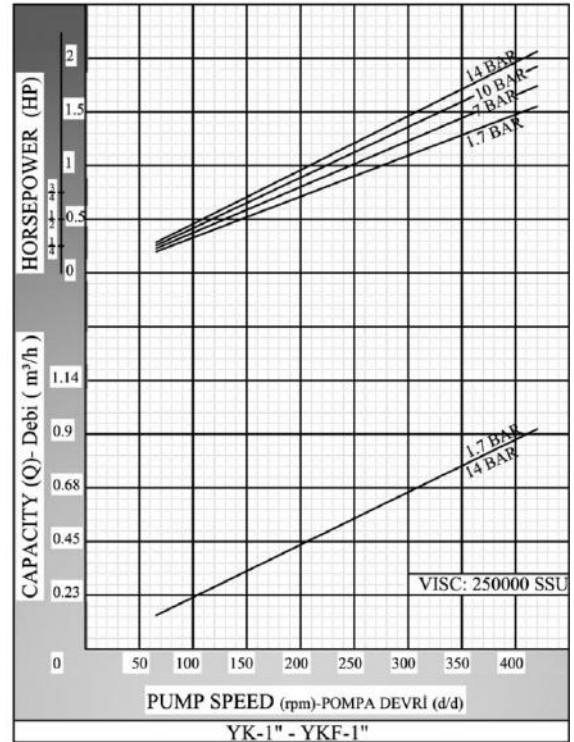
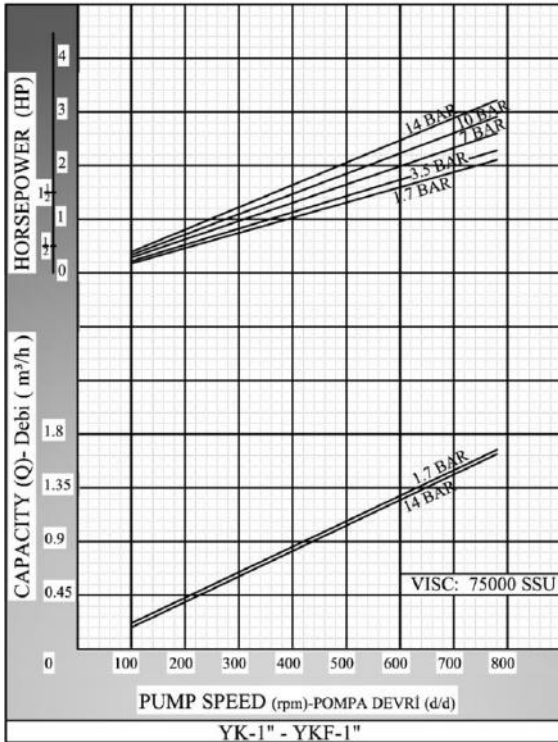
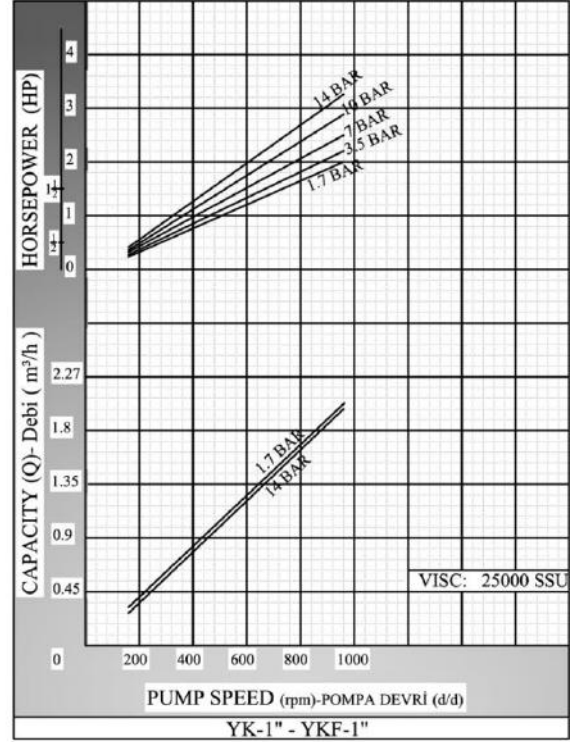
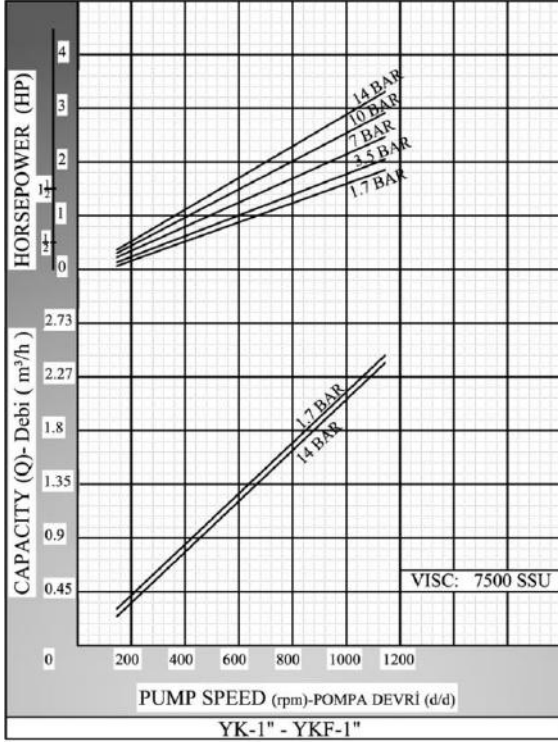


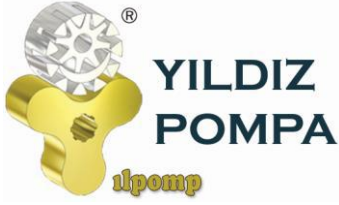


**YILDIZ  
POMPA**

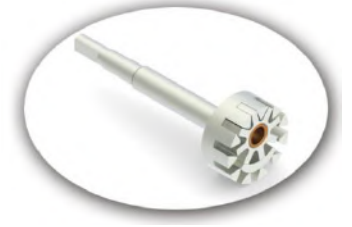
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## YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP

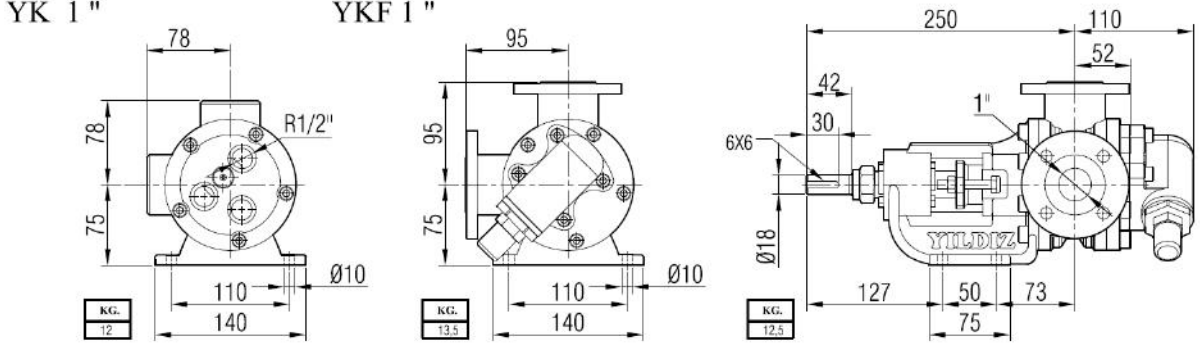




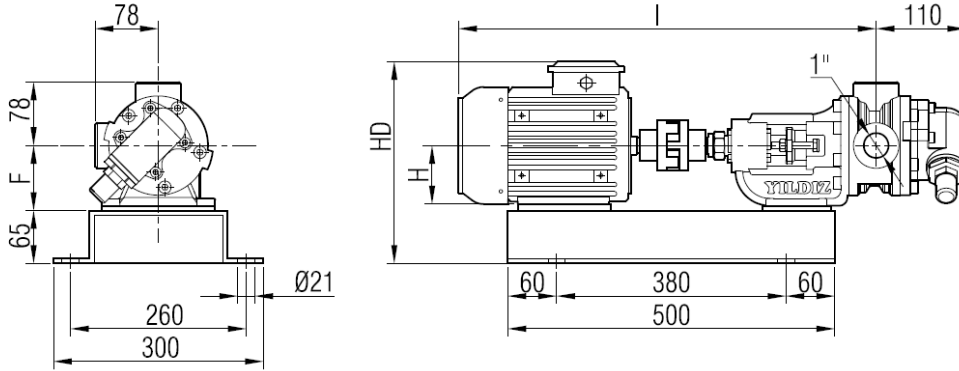
## YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP



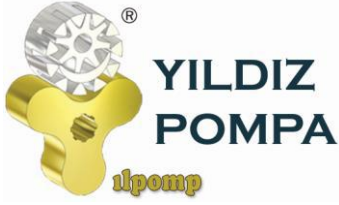
### POMPA BOYUT ÖLÇÜLERİ / PUMP DIMENSIONS



### AKUPLAJ ÖLÇÜLERİ / COUPLING DIMENSIONS MOTOR AKUPELİ / MOTOR DRIVE



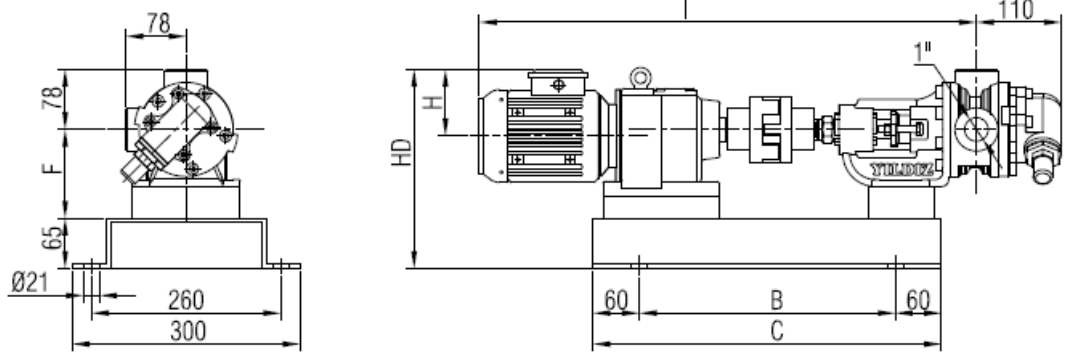
MOTOR GÜÇ VE DEVİRLERİ / MOTOR POWER AND SPEED			I	HD	H	F	kg.	
0,5-0,75 hp / 0,37-0,55 kw	900 d/d (rpm)	MOTOR 80	542	263	80	80	31	32
0,75-1 hp / 0,55-0,75 kw	1400 d/d (rpm)						30	31
1 hp / 0,75 kw	900 d/d (rpm)	MOTOR 90S	575	281	90	90	37	38
1,5 hp / 1,1 kw	1400 d/d (rpm)						40	40
1,5 hp / 1,1 kw	900 d/d (rpm)	MOTOR 90L	627				45	45
2 hp / 1,5 kw	1400 d/d (rpm)						40	40
1,5 hp / 1,1 kw	750 d/d (rpm)	MOTOR 100L	681	300	100	100	45	45
2 hp / 1,5 kw	900 d/d (rpm)						43	47
3 - 4 hp / 2,2 - 3 kw	1400 d/d (rpm)							



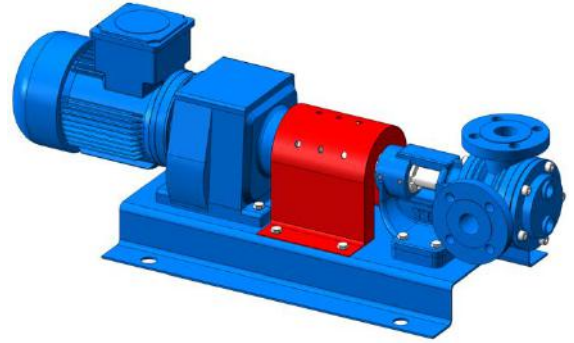
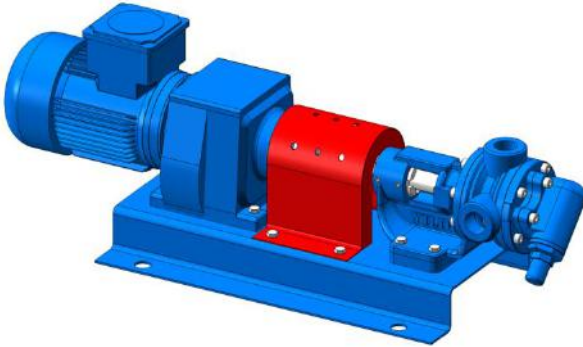
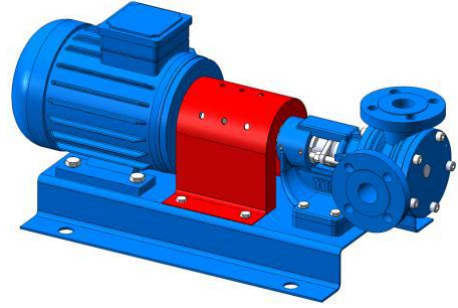
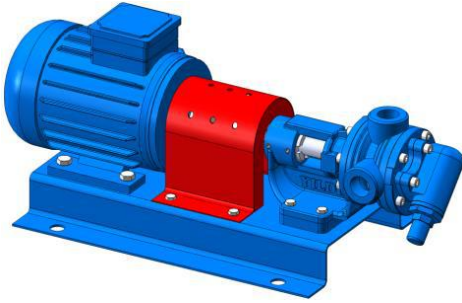
## YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP



### REDÜKTÖR AKUPELİ / GEARBOX DRIVE



MOTOR GÜÇ VE DEVİRLERİ / MOTOR POWER AND SPEED			I	HD	H	B	C	F	kg.
1 hp / 0,75 kw	90/400 d/d (rpm)	İRAM42/80M	681	254	118	300	420	75	39
1,5 hp / 1,1 kw	200/400 d/d (rpm)	İRAM42/90S	700	268	132			43	
1 hp / 0,75 kw	40/240 d/d (rpm)	İRAM53/80M	714	268	118	380	500	90	46
1,5 hp / 1,1 kw	60/382 d/d (rpm)	İRAM53/90S	733	282	132			49	





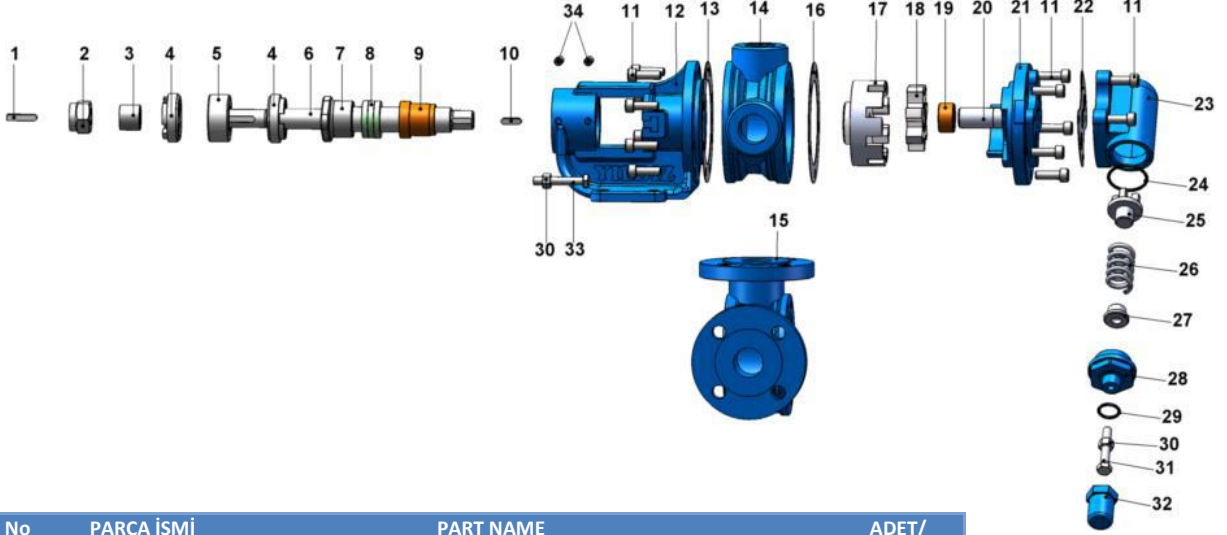


## YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP



### YEDEK PARÇA LİSTESİ / SPARE PARTS LIST

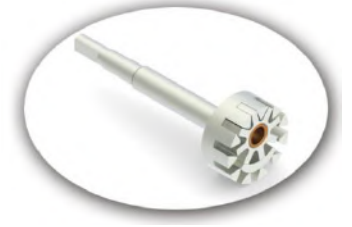
YUMUŞAK SALMASTRALI VE BYPASSLI / SEALED WITH SOFT SEAL AND PRESSURE RELIEF VALVE ON COVER



No	PARÇA İSMİ	PART NAME	ADET/ QTY.
1	KAMA 6x6x30 AB	COUPLING KEY 6x6x30 AB	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	SPACER	1
4	AYAR SOMUNU	ADJUSTING NUT	2
5	RULMAN (3204-2RS)	BALL BEARING (3204-2RS)	1
6	MİL	SHAFT	1
7	SALMASTRA BASKISI	PACKING PRESS	1
8	YUMUŞAK SALMASTRA	SOFT SEAL / PACKING GLAND	1 TK.
9	KONSOL BURCU	BRACKET BUSHING	1
10	KAMA 6x6x20 A	ROTOR KEY 6x6x20 A	1
11	IMBUS CİVATA M8x25	INBUS BOLT M8x25	17
12	KONSOL	BRACKET	1
13	KONSOL CONTASI	BRACKET GASKET	1
14	ARA GÖVDE (BORU DIŞLI 90°)	CASING (w/ 90° THREADED PORTS)	1
15	ARA GÖVDE (FLANŞLI 90°)	CASING (w/ 90° FLANGED PORTS)	1
16	KAPAK CONTASI	COVER GASKET	1
17	ÇEVRE DİŞLİ	ROTOR GEAR	1
18	AVARA DİŞLİ	IDLER GEAR	1
19	AVARA DİŞLİ BURCU	IDLER GEAR BUSHING	1
20	KAPAK MİLİ	COVER PIN	1
21	KAPAK (BYPASSLI)	COVER (w/ BYPASS INLETS)	1
22	BYPASS CONTASI	BYPASS GASKET	1
23	BYPASS	PRESSURE RELIEF VALVE – BYPASS	1
24	BYPASS O-RING	BYPASS O-RING	1
25	KLEPE	VALVE	1
26	YAY	SPRING	1
27	PUL	WASHER	1
28	BYPASS KAPAĞI	BYPASS COVER	1
29	TİJ KAPAK O-RİNG	CAP O-RING	1
30	M8 SOMUN	NUT M8	3
31	6 KÖŞE CİVATA M8x55	ADJUSTING SCREW M8x55	1
32	TİJ KAPAĞI	CAP	1
33	6 KÖŞE CİVATA M8x50	HEX BOLT M8x50	2
34	SETUSKUR M8x16	GRUB SCREW M8x16	4

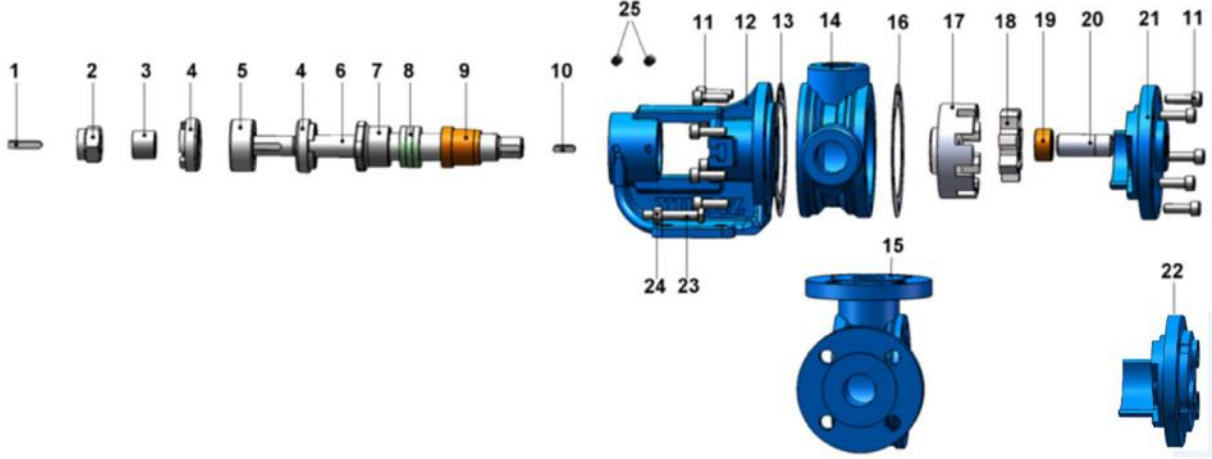


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### YEDEK PARÇA LİSTESİ / SPARE PARTS LIST

YUMUŞAK SALMASTRALI, CEKETLİ VE KÖR KAPAKLI / SEALED WITH SOFT SEAL, JACKETED,  
AND WITH BLIND COVER

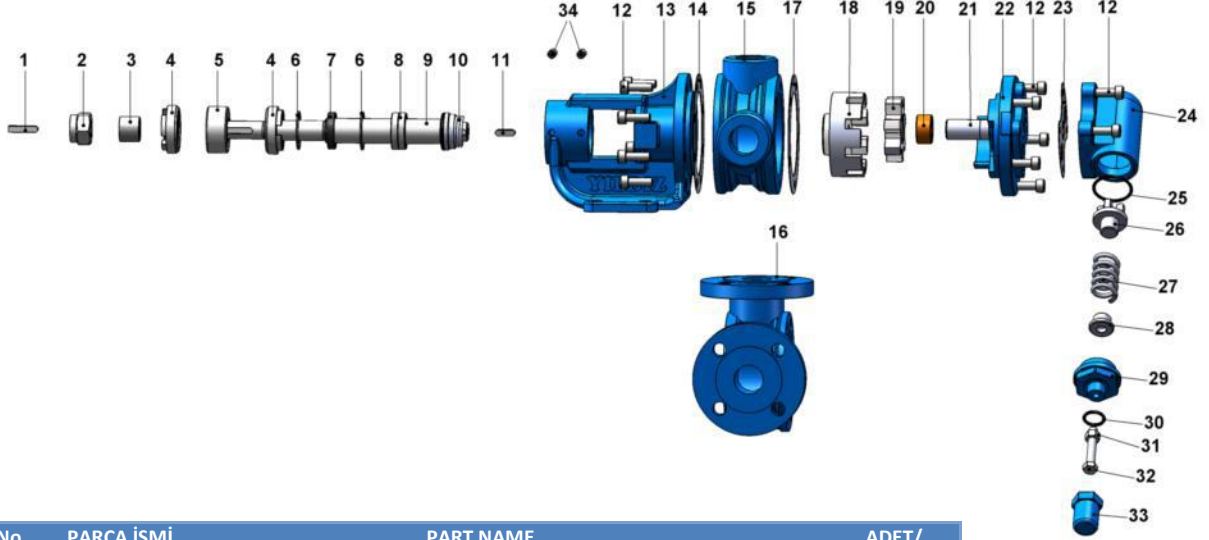


No	PARÇA İSMİ	PART NAME	ADET/ QTY.
1	KAMA 6x6x30 AB	COUPLING KEY 6x6x30 AB	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	SPACER	1
4	AYAR SOMUNU	ADJUSTING NUT	2
5	RULMAN (3204-2RS)	BALL BEARING (3204-2RS)	1
6	MİL	SHAFT	1
7	SALMASTRA BASKISI	PACKING PRESS	1
8	YUMUŞAK SALMASTRA	SOFT SEAL / PACKING GLAND	1 TK.
9	KONSOL BURCU	BRACKET BUSHING	1
10	KAMA 6x6x20 A	ROTOR KEY 6x6x20 A	1
11	IMBUS CİVATA M8x25	IMBUS BOLT M8x25	13
12	KONSOL	BRACKET	1
13	KONSOL CONTASI	BRACKET GASKET	1
14	ARA GÖVDE (BORU DİŞLİ 90°)	CASING (w/ 90° THREADED PORTS)	1
15	ARA GÖVDE (FLANŞLI 90°)	CASING (w/ 90° FLANGED PORTS)	1
16	KAPAK CONTASI	COVER GASKET	1
17	ÇEVRE DİŞLİ	ROTOR GEAR	1
18	AVARA DİŞLİ	IDLER GEAR	1
19	AVARA DİŞLİ BURCU	IDLER GEAR BUSHING	1
20	KAPAK MİLİ	COVER PIN	1
21	KAPAK (KÖR)	BLIND COVER	1
22	KAPAK (CEKETLİ)	COVER (w/ HEATING JACKET)	1
23	6 KÖŞE CİVATA M8x50	HEX BOLT M8x50	2
24	M8 SOMUN	NUT M8	2
25	SETUSKUR M8x16	GRUB SCREW M8x16	4



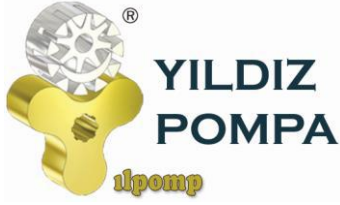
**YEDEK PARÇA LİSTESİ / SPARE PARTS LIST**

**MEKANİK SALMASTRALI VE BYPASSLI / SEALED WITH MECHANICAL SEAL, AND PRESSURE RELIEF VALVE ON COVER**



No	PARÇA İSMİ	PART NAME	ADET/ QTY.
1	KAMA 6x6x30 AB	COUPLING KEY 6x6x30 AB	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	SPACER	1
4	AYAR SOMUNU	ADJUSTING NUT	2
5	RULMAN (3204-2RS)	BALL BEARING (3204-2RS)	1
6	İÇ SEGMAN (Ø37)	INTERNAL CIRCLIP (Ø37)	2
7	KEÇE Ø25xØ37x7	LIP SEAL Ø25xØ37x7	1
8	RULMAN (61805T-2RS)	BALL BEARING (61805T-2RS)	2
9	MİL	SHAFT	1
10	MEKANİK SALMASTRA Ø25	MECHANICAL SEAL Ø25	1
11	KAMA 6x6x20 A	ROTOR KEY 6x6x20 A	1
12	IMBUS CİVATA M8x25	INBUS BOLT M8x25	17
13	KONSOL	BRACKET	1
14	KONSOL CONTASI	BRACKET GASKET	1
15	ARA GÖVDE (BORU DİŞLİ 90°)	CASING (w/ 90° THREADED PORTS)	1
16	ARA GÖVDE (FLANŞLI 90°)	CASING (w/ 90° FLANGED PORTS)	1
17	KAPAK CONTASI	COVER GASKET	1
18	ÇEVRE DİŞLİ	ROTOR GEAR	1
19	AVARA DİŞLİ	IDLER GEAR	1
20	AVARA DİŞLİ BURCU	IDLER BUSHING	1
21	KAPAK MİLİ	COVER PIN	1
22	KAPAK (BYPASSLI)	COVER (w/ BYPASS INLETS)	1
23	BYPASS CİVATA	BYPASS GASKET	1
24	BYPASS	PRESSURE RELIEF VALVE – BYPASS	1
25	BYPASS O-RING	BYPASS O-RING	1
26	KLEPE	VALVE	1
27	YAY	SPRING	1
28	PUL	WASHER	1
29	BYPASS KAPAĞI	BYPASS COVER	1
30	TİJ KAPAK O-RİNG	CAP O-RING	1
31	M8 SOMUN	NUT M8	1
32	6 KÖŞE CİVATA M8x55	ADJUSTING SCREW M8x55	1
33	TİJ KAPAĞI	CAP	1
34	SETUSKUR M8x16	GRUB SCREW M8x16	4

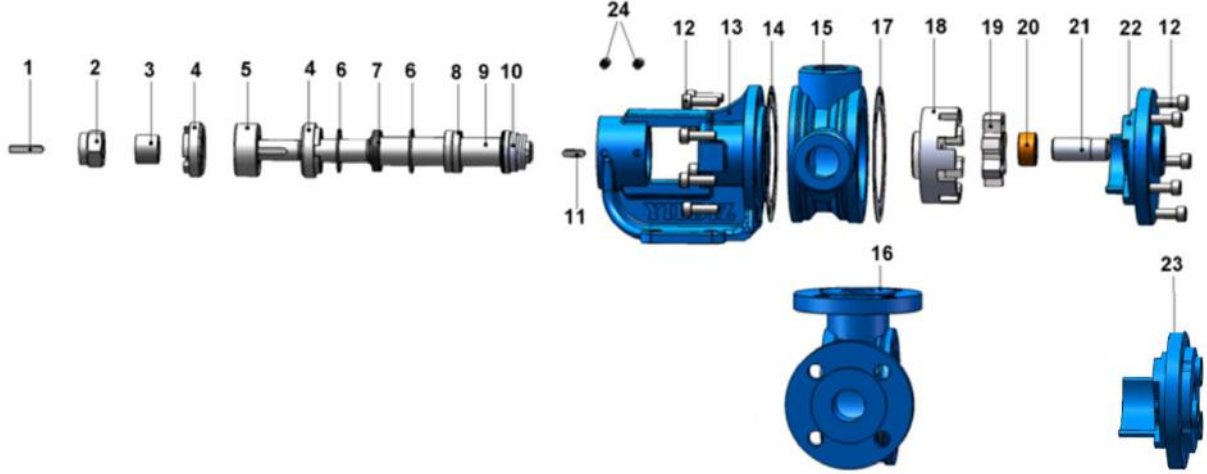




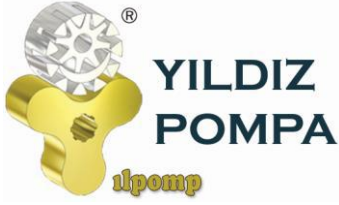
## YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP



### YEDEK PARÇA LİSTESİ / SPARE PARTS LIST MEKANİK SALMASTRALI, CEKETLİ VE KÖR KAPAKLI / SEALED WITH MECHANICAL SEAL, JACKETED, AND WITH BLIND COVER



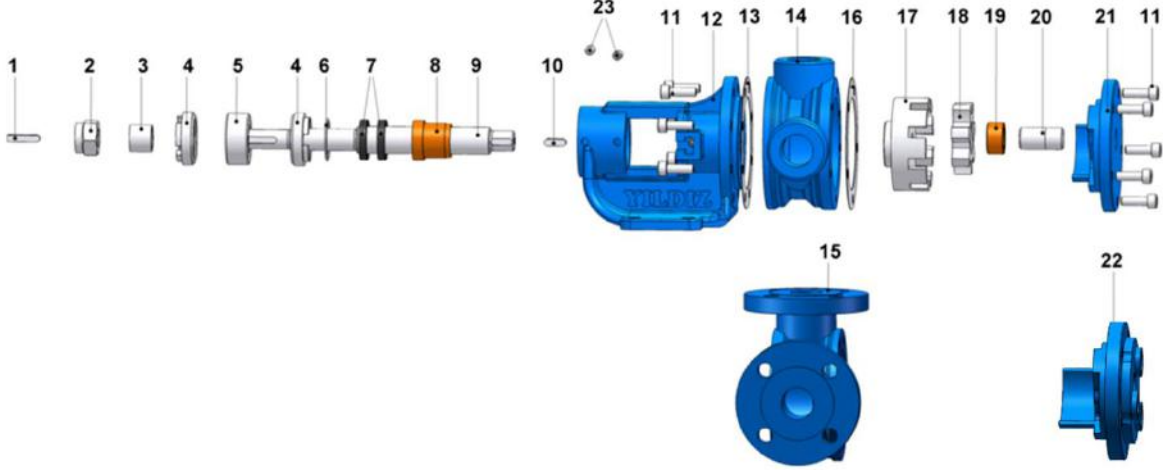
No	PARÇA İSMİ	PART NAME	ADET/ QTY.
1	KAMA 6x6x30 AB	COUPLING KEY 6x6x30 AB	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	SPACER	1
4	AYAR SOMUNU	ADJUSTING NUT	2
5	RULMAN (3204-2RS)	BALL BEARING (3204-2RS)	1
6	İÇ SEGMAN (ø37)	INTERNAL CIRCLIP (ø37)	2
7	KEÇE ø25xø37x7	LIP SEAL ø25xø37x7	1
8	RULMAN (61805T-2RS)	BALL BEARING (61805T-2RS)	2
9	MİL	SHAFT	1
10	MEKANİK SALMASTRA ø25	MECHANICAL SEAL ø25	1
11	KAMA 6x6x20 A	ROTOR KEY 6x6x20 A	1
12	IMBUS CİVATA M8x25	HEX SOCKET M8x25	13
13	KONSOL	BRACKET	1
14	KONSOL CONTASI	BRACKET GASKET	1
15	ARA GÖVDE (BORU DIŞLI 90°)	CASING (w/ 90° THREADED PORTS)	1
16	ARA GÖVDE (FLANŞLI 90°)	CASING (w/ 90° FLANGED PORTS)	1
17	KAPAK CONTASI	COVER GASKET	1
18	ÇEVRE DIŞLI	ROTOR GEAR	1
19	AVARA DIŞLI	IDLER GEAR	1
20	AVARA DIŞLI BURCU	IDLER BUSHING	1
21	KAPAK MİLİ	COVER PIN	1
22	KAPAK (KÖR)	BLIND COVER	1
23	KAPAK (CEKETLİ)	COVER (w/ HEATING JACKET)	1
24	SETUSKUR M8x16	GRUB SCREW M8x16	4



## YK 1" POMPA INTERNAL ECCENTRIC GEAR PUMP



### YEDEK PARÇA LİSTESİ / SPARE PARTS LIST KEÇELİ, CEKETLİ VE KÖR KAPAKLI / SEALED WITH LIP SEAL, JACKETED AND WITH BLIND COVER



No	PARÇA İSMİ	PART NAME	ADET/ QTY.
1	KAMA 6x6x30 AB	COUPLING KEY 6x6x30 AB	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	SPACER	1
4	AYAR SOMUNU	ADJUSTING NUT	2
5	RULMAN (3204-2RS)	BALL BEARING (3204-2RS)	1
6	İÇ SEGMAN (ø37)	INTERNAL CIRCLIP (ø37)	1
7	KEÇE (ø25xø37x7)	LIP SEAL (ø25xø37x7)	2
8	KONSOL BURCU	BRACKET BUSHING	1
9	MİL	SHAFT	1
10	KAMA 6x6x20 A	ROTOR KEY 6x6x20 A	1
11	IMBUS CİVATA M8x25	INBUS BOLT M8x25	13
12	KONSOL	BRACKET	1
13	KONSOL CONTASI	BRACKET GASKET	1
14	ARA GÖVDE (BORU DİŞLİ 90°)	CASING (w/ 90° THREADED PORTS)	1
15	ARA GÖVDE (FLANŞLI 90°)	CASING (w/ 90° FLANGED PORTS)	1
16	KAPAK CONTASI	COVER GASKET	1
17	ÇEVRE DİŞLİ	ROTOR GEAR	1
18	AVARA DİŞLİ	IDLER GEAR	1
19	AVARA DİŞLİ BURCU	IDLER BUSHING	1
20	KAPAK MİLİ	COVER PIN	1
21	KAPAK (KÖR)	BLIND COVER	1
22	KAPAK (CEKETLİ)	COVER (w/ HEATING JACKET)	1
23	SETUSKUR M8x16	GRUB SCREW M8x16	4