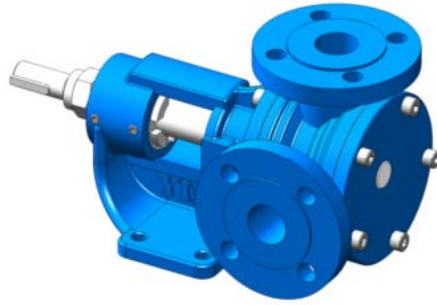


## YK1" POMPA GEAR PUMP



### KULLANIM ALANLARI:

- Fuel Oil Servis Tankları, Gaz Yağı, Mazot Tankerlerinde
- Küçük çapta kızgın yağ sirkülasyonlarında
- Endüstrinin yarı viskoz mayilerinin pompaj işlemlerinde.
- İlaç, kimya ve deterjan sanayinde
- Gıda Sanayinde.

### Malzeme Özellikleri

- Pompa Gövdesi ve Dişli: Dökme (pik) demir, Çelik döküm, Paslanmaz AISI 304- AISI 316 döküm, Sfero döküm
- Yataklar : Snbz 12 Bronz, Rulman, Karbon Grafit, Silisyum Karbür, Sert Metal Kaplama
- Sızdırmazlık: Mekanik salmastra.

### USE AREA:

- Fuel Oil Service Tanks, Gas Oil, Diesel-fuel Tanks.
- On a small scale hot oil circulations
- Half viscose liquids of industry are on pumping process
- Medicine, Chemistry and Detergent Industry
- Food Industry

### Material Properties

- Pump Body and Gears: Cast iron, Steel , Stainless Steel AISI 304- AISI 316
- Bearings: Snbz 12 bronz, Bearing, Carbon Graphite, Silicon Carbide, Hard Metal Plating
- Sealing: Packing, Rotatherm Seal, Mechanical seal.

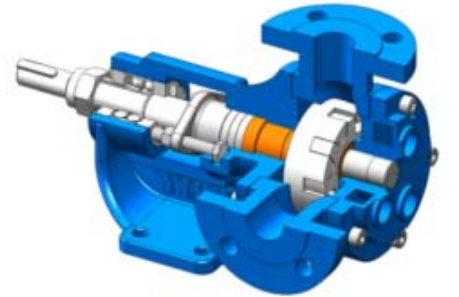
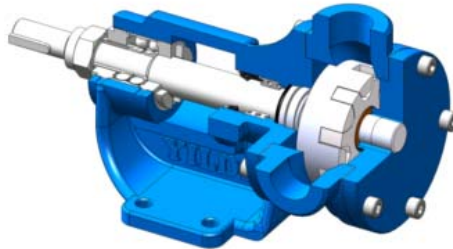
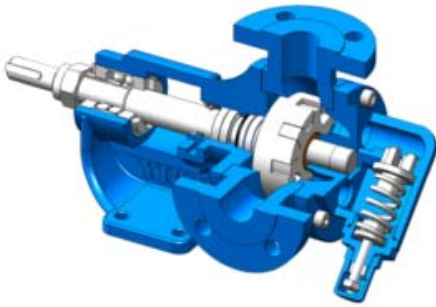
## ÇALIŞMA PRENSİBİ :

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 sıvıyı taşıyan avare dişlisi pompa kapağının desteklediği bir mil üzerinde döner. Dişleri arasında sıvıyı taşıyan rotor dişlisi pompa gövdesi ile hilalin dış yüzeyi arasında hareket eder ve pompa miline bağlıdır.

Dört şematik çizim pompa içindeki akış karakteristiğinin grafik bir gösterimini vermektedir.



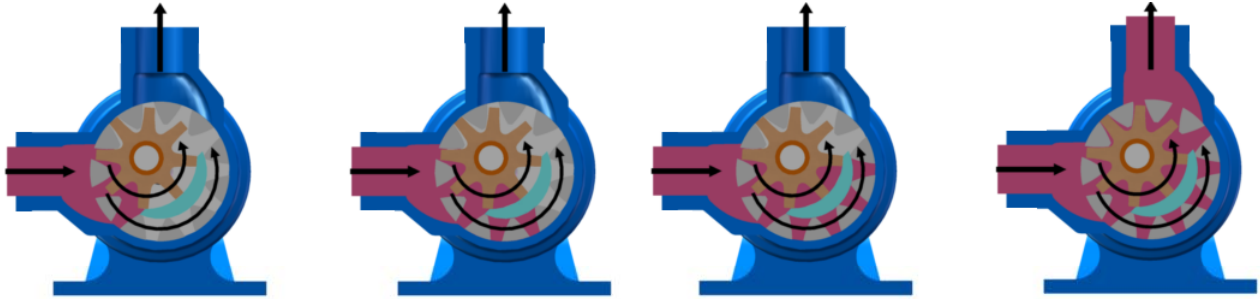
## WORKING PRINCIPLE :

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 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 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 moved smoothly toward the discharge port. The idler gear, which carries the liquid between its teeth and the inside surface of the crescent and is connected to the pump shaft.

The four schematic drawings at side give a graphic illustration of flow characteristics through the pump.



**Şekil 1.**  
**Shape 1.**

**Şekil 2.**  
**Shape 2.**

**Şekil 3.**  
**Shape 3.**

**Şekil 4.**  
**Shape 4.**

**Şekil 1** deki renkli kısım sıvının pompa gövdesindeki emiş ağızı alanına ve rotor dişleri ve avare dişlisi dişleri arasındaki dişli boşluğu alanına girişini gösterir. İki siyah ok pompanın dönüş ve sıvının ilerleyişini gösterir.

**Şekil 2** "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.

**Şekil 3.** 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.

**Şekil 4.** Bu görüntü pompanın tamamen dolup taşıdığı durumu ve sıvının boşaltma işleminin 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 colored portion at Shape 1** 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.

**Shape 2.** Notice the progress of the liquid through the pump and between the teeth of the "gear-within-a-gear" principle. Also, note how the crescent shape on the head divides the liquid and acts as a seal between the suction and discharge ports.

**Shape 3.** 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 so as to guarantee absolute volume control.

**Shape 4.** The view shows the pump in a completely flooded condition and in the process of discharging the liquid through the discharge port. The rotor and idler teeth mesh, forming a seal equi-distant between the discharge and suction ports, forcing liquid out the discharge port.

## KAPASİTE VE GÜÇ TABLOSU /CAPACITY AND POWER TABLE

KAPASİTE m <sup>3</sup> /h	HIZ d/d (rpm)	ÇIKIŞ BASINCI (PRESSURE) (mSS)				Viskozite
		25	50	75	100	
1,8 m <sup>3</sup> /h	950	0,75 HP	1 HP	1,5 HP	2 HP	750 SSU
3 m <sup>3</sup> /h	1450	1 HP	1,5 HP	2 HP	3 HP	100 SSU

### MOTOR GÜÇLERİ / MOTOR POWER

1 HP 1400 d/d (rpm)

3/4 HP 900 d/d (rpm)

MOTOR GÖVDE YAPISI /  
MOTOR BODY

80

### MOTOR GÜÇLERİ / MOTOR POWER

1 HP 900 d/d (rpm)

1,5 HP 900 d/d (rpm)

1,5 HP 1400 d/d (rpm)

2 HP 1400 d/d (rpm)

MOTOR GÖVDE YAPISI /  
MOTOR BODY

90

### MOTOR GÜÇLERİ / MOTOR POWER

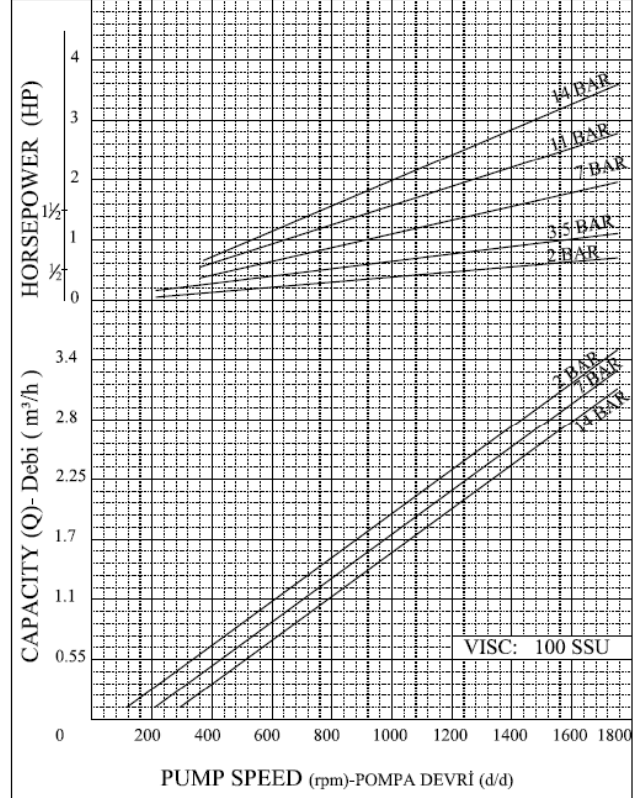
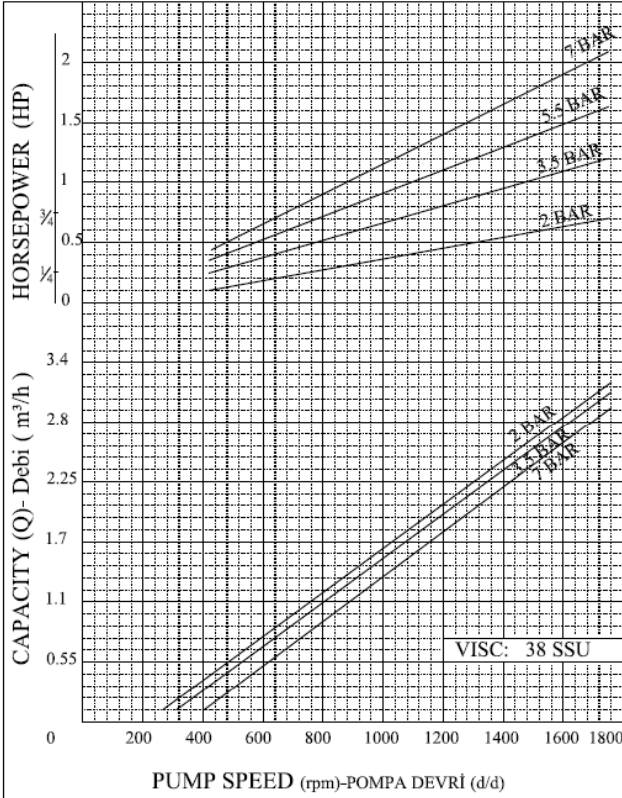
1,5 HP 750 d/d (rpm)

2 HP 900 d/d (rpm)

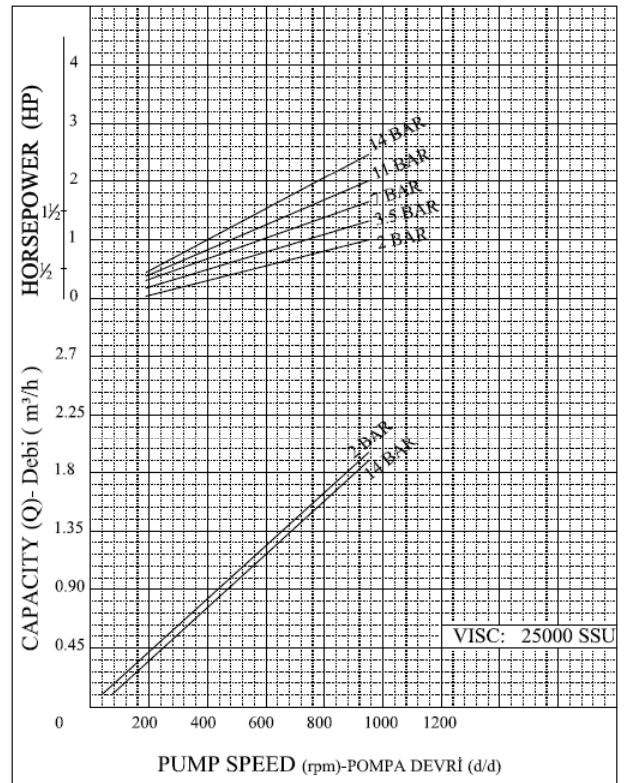
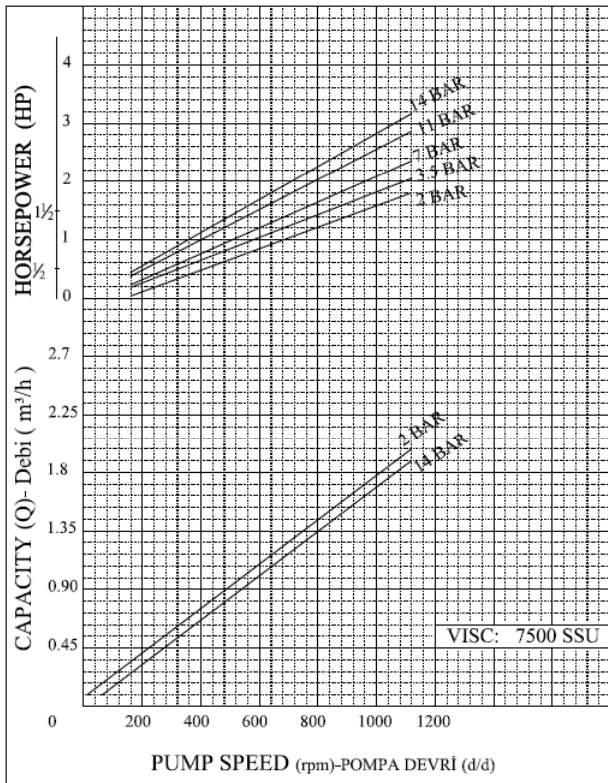
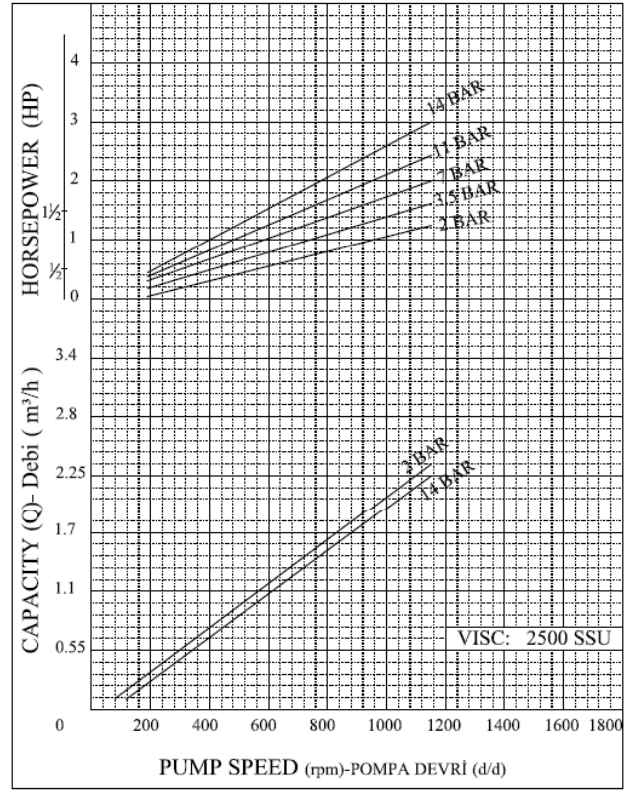
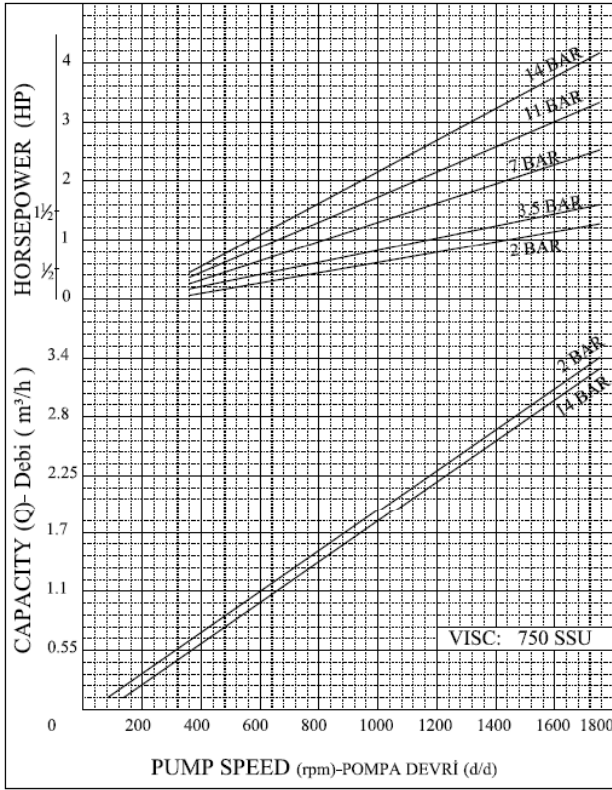
3 HP 1400 d/d (rpm)

MOTOR GÖVDE YAPISI /  
MOTOR BODY

100

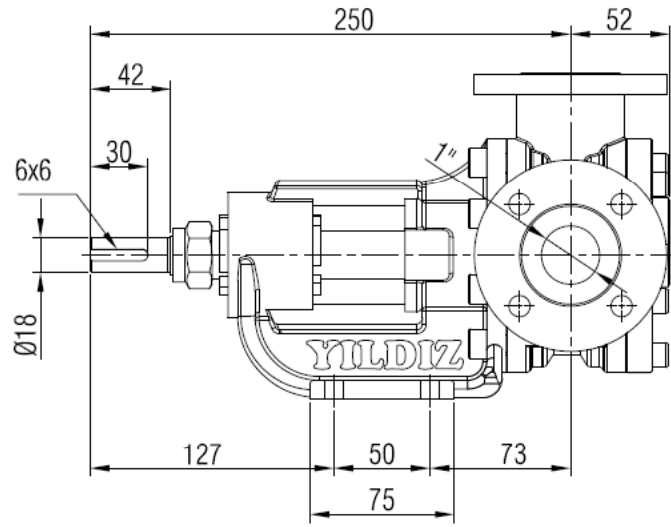
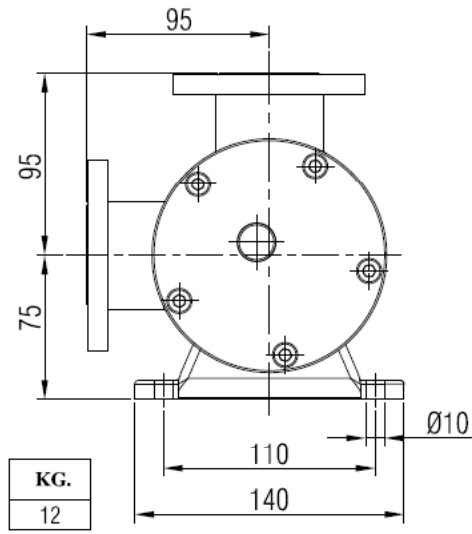




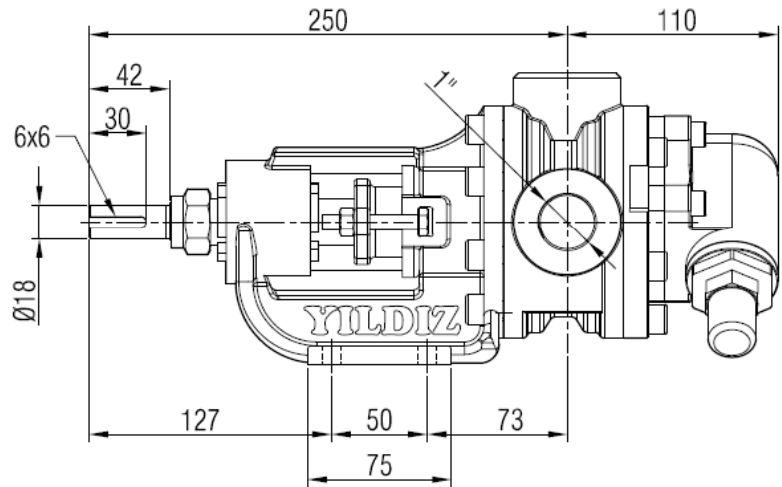
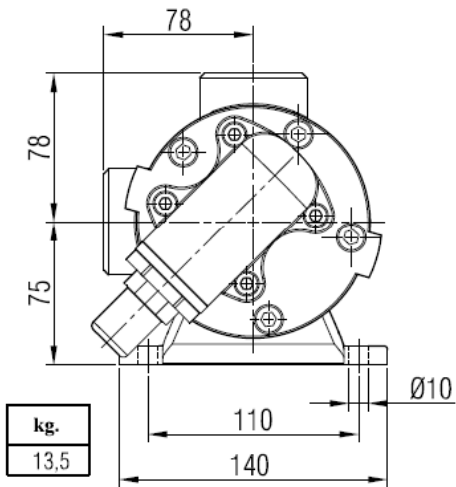


# POMPA BOYUT ÖLÇÜLERİ / PUMP DIMENSIONS

## YKF1" KÖR KAPAKLI / BLIND COVERED

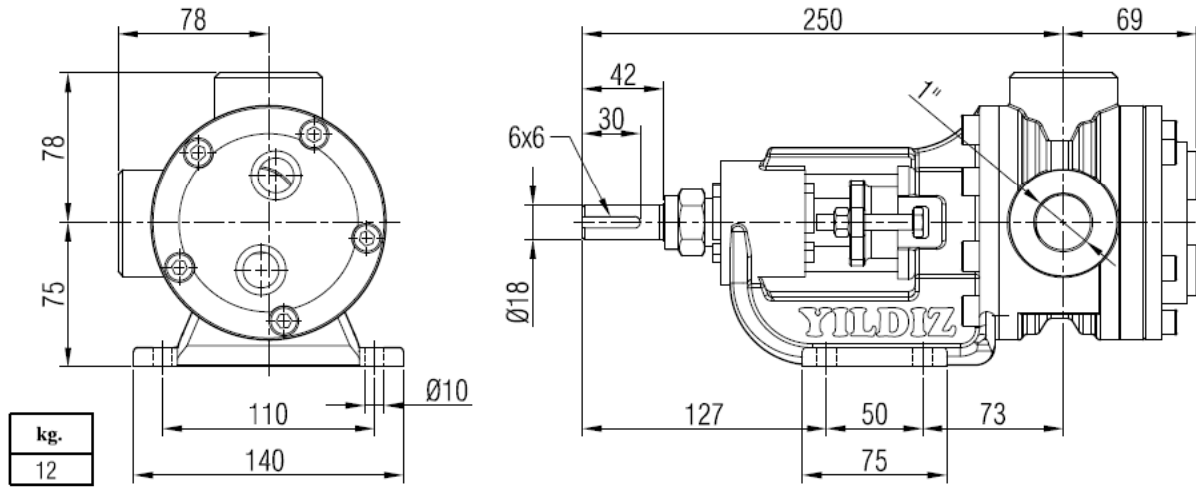


## YK1" BYPASSLI / BYPASSED

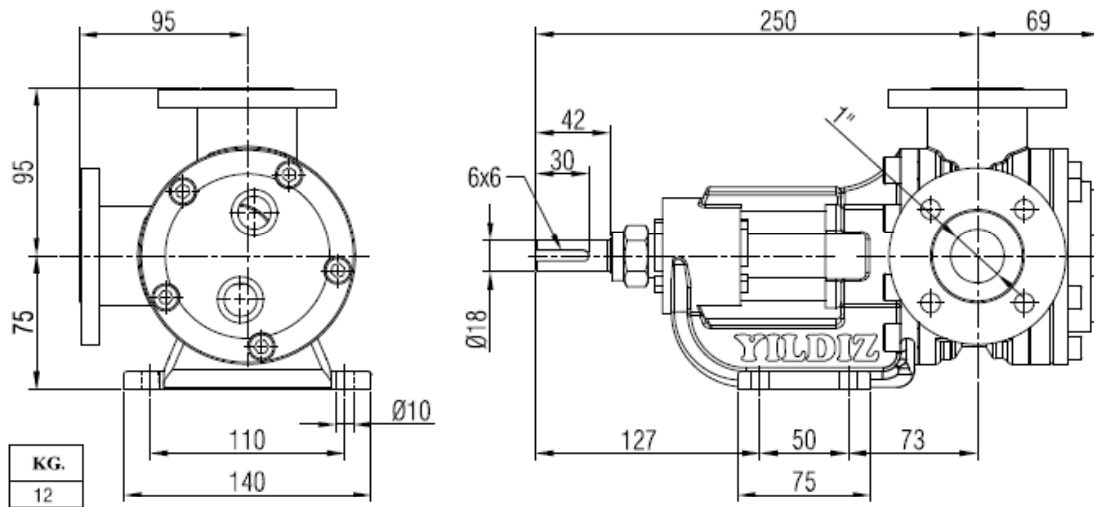


# POMPA BOYUT ÖLÇÜLERİ / PUMP DIMENSIONS

## YK1" CEKETLİ / WITH A JACKET FROM COVER

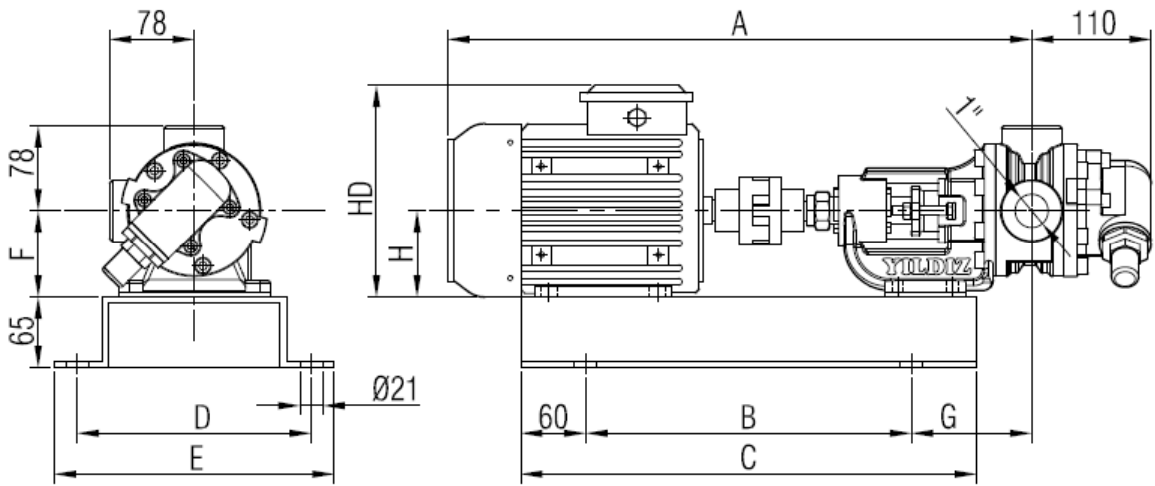


## YKF1" CEKETLİ / WITH A JACKET FROM COVER



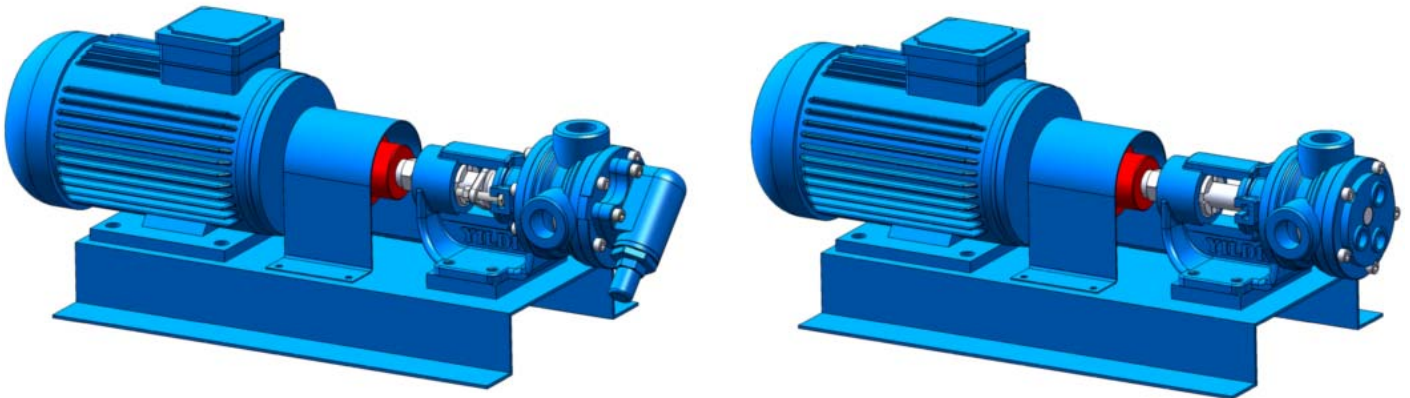
# AKUPLAJ ÖLÇÜLERİ / COUPLING DIMENSIONS

## MOTOR AKUPLİLİ / MOTOR DRIVE



			A	HD	H	B	C	D	E	F	G	kg.
0,75 hp / 0,55 kw	900 d/d (rpm)	MOTOR 80	540	198	80	380	500	260	300	80	71	35
1 hp / 0,75 kw	1400 d/d (rpm)											
1 hp / 0,75 kw	900 d/d (rpm)	MOTOR 90S	590	216	90	380	500	260	300	90	96	42
1,5 hp / 1,1 kw	1400 d/d (rpm)											
1,5 hp / 1,1 kw	900 d/d (rpm)	MOTOR 90L	600	216	90	380	500	260	300	90	96	45
2 hp / 1,5 kw	1400 d/d (rpm)											
1,5 hp / 1,1 kw	750 d/d (rpm)	MOTOR 100L	630	235	100	380	500	260	300	100	111	50
2 hp / 1,5 kw	900 d/d (rpm)											
3 hp / 2,2 kw	1400 d/d (rpm)											

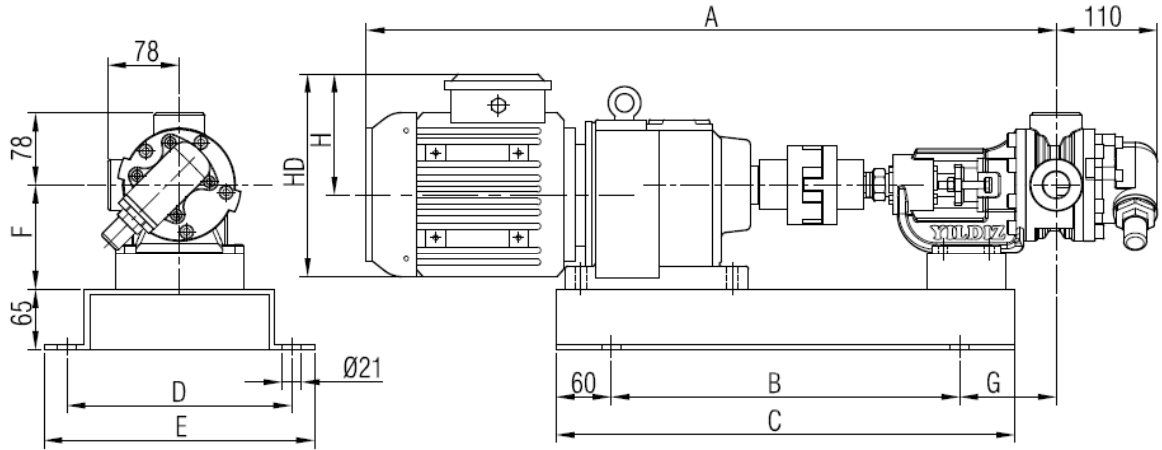
## PICTURE



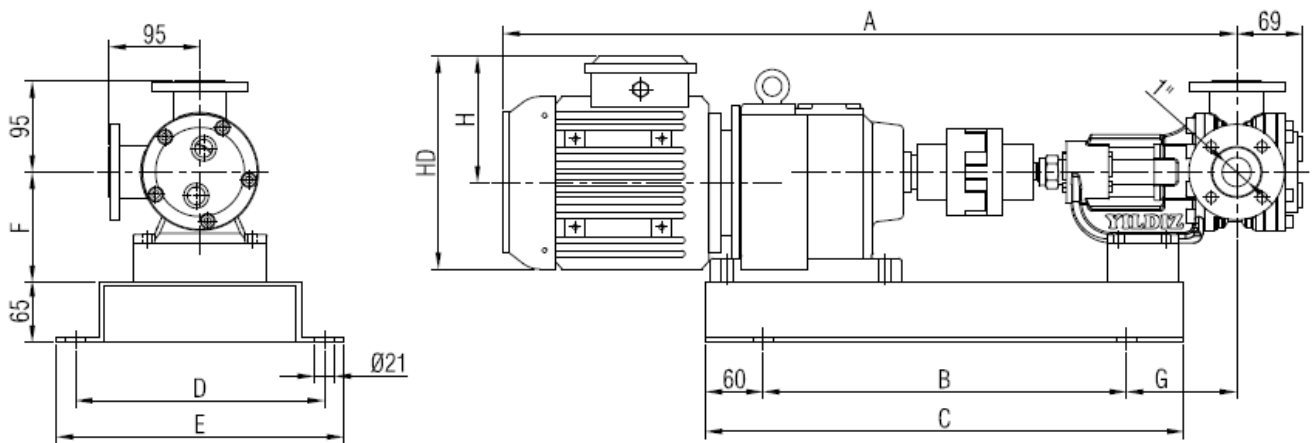


# AKUPLAJ ÖLÇÜLERİ / COUPLING DIMENSIONS

## REDÜKTÖR AKUPLERİ / GEARBOX DRIVE

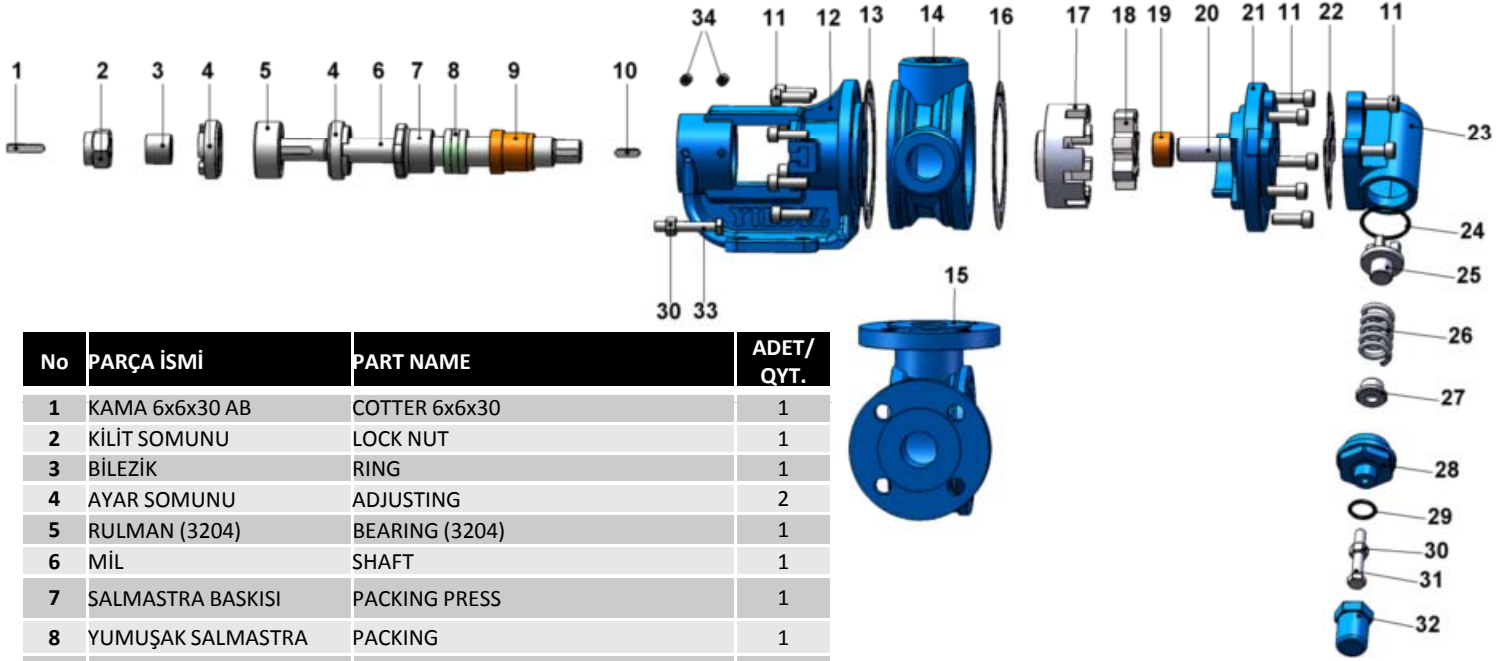


			A	HD	H	B	C	D	E	F	G	kg.
1 hp / 0,75 kw	80/240 d/d (rpm)	İRAM52/80M	718	195	115	380	500	260	300	90	80	52
1,5 hp / 1,1 kw	104 d/d (rpm)	İRAM62/90S	790	222	132	380	500	260	300	115	115	62



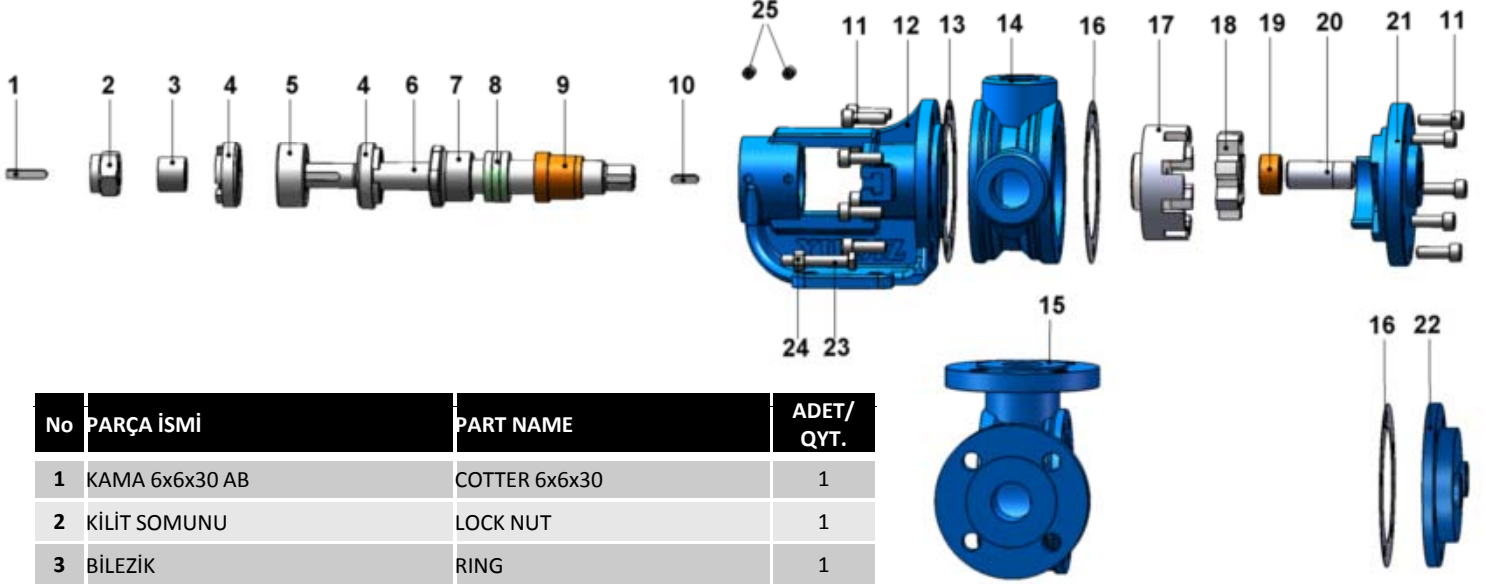
			A	HD	H	B	C	D	E	F	G	kg.
0,75 hp / 0,55 kw	30/64 d/d (rpm)	İRAM53/80	718	198	118	380	500	260	300	90	80	51
1 hp / 0,75 kw	20/55 d/d (rpm)	İRAM63/80M	768	195	115	380	500	260	300	115	115	56
1,5 hp / 1,1 kw	27/77 d/d (rpm)	İRAM63/90S	790	222	132	380	500	260	300	115	115	60

## YEDEK PARÇA LİSTESİ YUMUŞAK SALMASTRALI VE BYPASSLI/ SPARE PART LIST FOR PUMP WHICH WITH PACKING AND BYPASS



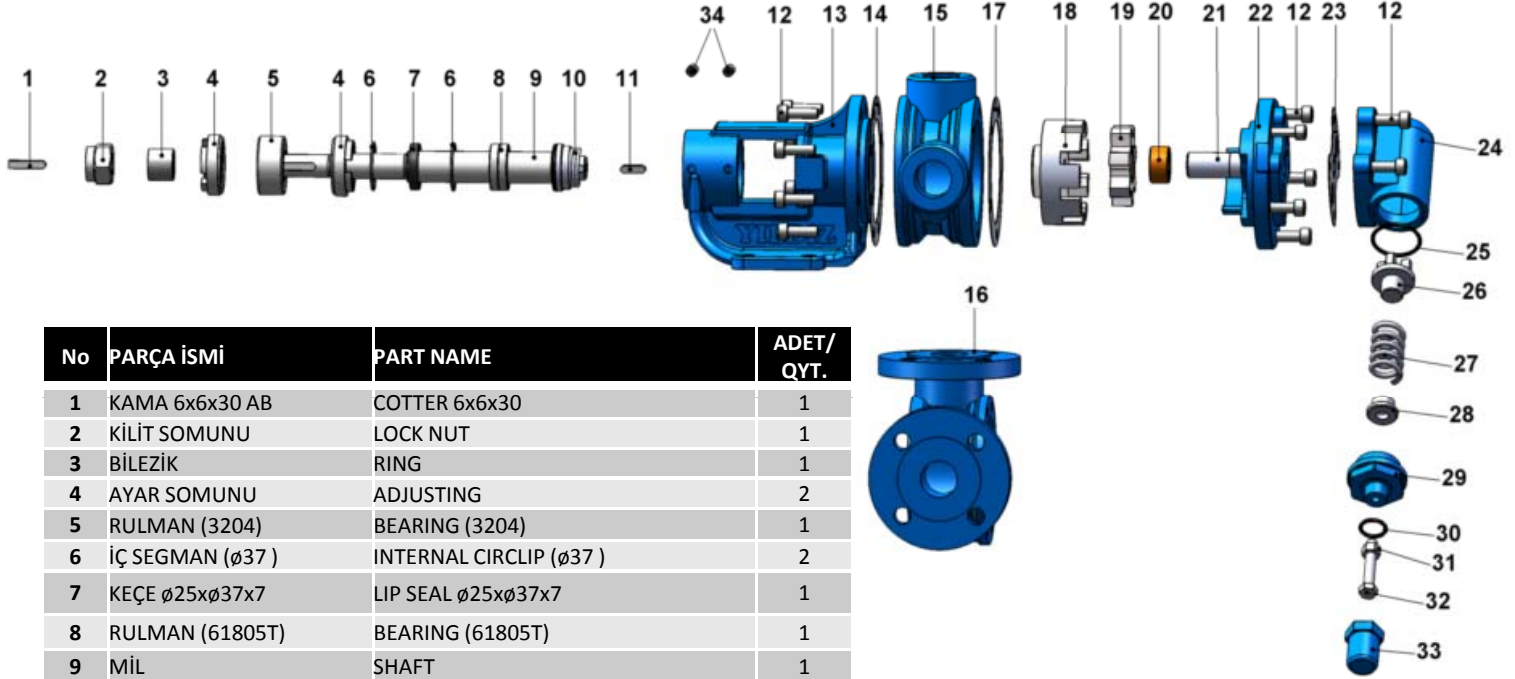
No	PARÇA İSMİ	PART NAME	ADET/ QYT.
1	KAMA 6x6x30 AB	COTTER 6x6x30	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	RING	1
4	AYAR SOMUNU	ADJUSTING	2
5	RULMAN (3204)	BEARING (3204)	1
6	MİL	SHAFT	1
7	SALMASTRA BASKISI	PACKING PRESS	1
8	YUMUŞAK SALMASTRA	PACKING	1
9	KONSOL BURCU	BRACKET BUSHING	1
10	KAMA 6x6x20 A	COTTER 6x6x20	1
11	IMBUS CİVATA M8x25	HEX SOCKET M8x25 FOR CASING, COVER, INTERNAL RELIEF VALVE	17
12	KONSOL (YUMUŞAK SALMASTRALI)	BRACKET (FOR PACKING)	1
13	KONSOL CONTASI	BRACKET GASKET	1
14	ARA GÖVDE (BORU DİŞLİ)	CASING (PIPE TOOTHED)	1
15	ARA GÖVDE (FLANŞLI)	CASING (FLANSCHED)	1
16	KAPAK CONTASI	HEAD GASKET	1
17	ÇEVRE DİŞLİ	ROTOR	1
18	AVARA DİŞLİ	IDLER	1
19	AVARA DİŞLİ BURCU	IDLER BUSHING	1
20	KAPAK MİLİ	COVER PIN	1
21	KAPAK (BYPASSLI)	COVER (FOR BYPASS)	1
22	BYPASS CONTASI	RELIEF VALVE GASKET	1
23	BYPASS	INTERNAL RELIEF VALVE	1
24	BYPASS O-RING	O-RING FOR INTERNAL RELIEF VALVE	1
25	KLEPE	VALVE	1
26	YAY	SPRING	1
27	PUL	WASHER	1
28	BYPASS KAPAĞI	BYPASS HEAD	1
29	TİJ KAPAK O-RİNG	GASKET FOR CAP (O-RING)	1
30	M8 SOMUN	NUT M8	3
31	6 KÖŞE CİVATA M8x55	ADJUSTING SCREW M8x55	1
32	TİJ KAPAĞI	SCREW COVER	1
33	6 KÖŞE CİVATA M8x50	HEX BOLT M8x50	2
34	SETUSKUR M8x16	STAY BOLT M8x16	4

# YEDEK PARÇA LİSTESİ YUMUŞAK SALMASTRALI VE CEKETLİ - KÖRKAPAKLI/ SPARE PART LIST FOR PUMP WHICH WITH PACKING AND JACKET - BLIND COVER



No	PARÇA İSMİ	PART NAME	ADET/ QYT.
1	KAMA 6x6x30 AB	COTTER 6x6x30	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	RING	1
4	AYAR SOMUNU	ADJUSTING	2
5	RULMAN (3204)	BEARING (3204)	1
6	MİL	SHAFT	1
7	SALMASTRA BASKISI	PACKING PRESS	1
8	YUMUŞAK SALMASTRA	PACKING	1
9	KONSOL BURCU	BRACKET BUSHING	1
10	KAMA 6x6x20 A	COTTER 6x6x20	1
11	IMBUS CİVATA M8x25	HEX SOCKET M8x25 FOR CASING, COVER, INTERNAL RELIEF VALVE	13
12	KONSOL (YUMUŞAK SALMASTRALI)	BRACKET (FOR PACKING)	1
13	KONSOL CONTASI	BRACKET GASKET	1
14	ARA GÖVDE (BORU DİŞLİ)	CASING (PIPE TOOTHED)	1
15	ARA GÖVDE (FLANŞLI)	CASING (FLANSCHED)	1
16	KAPAK CONTASI	HEAD GASKET	1
17	ÇEVRE DİŞLİ	ROTOR	1
18	AVARA DİŞLİ	IDLER	1
19	AVARA DİŞLİ BURCU	IDLER BUSHING	1
20	KAPAK MİLİ	COVER PIN	1
21	KAPAK (KÖR KAPAK)	COVER (FOR BLIND)	1
22	KAPAK (CEKET KAPAK)	COVER (FOR JACKET)	1
23	6 KÖŞE CİVATA M8x50	HEX BOLT M8x50	2
24	M8 SOMUN	NUT M8	2
25	SETUSKUR M8x16	STAY BOLT M8x16	4

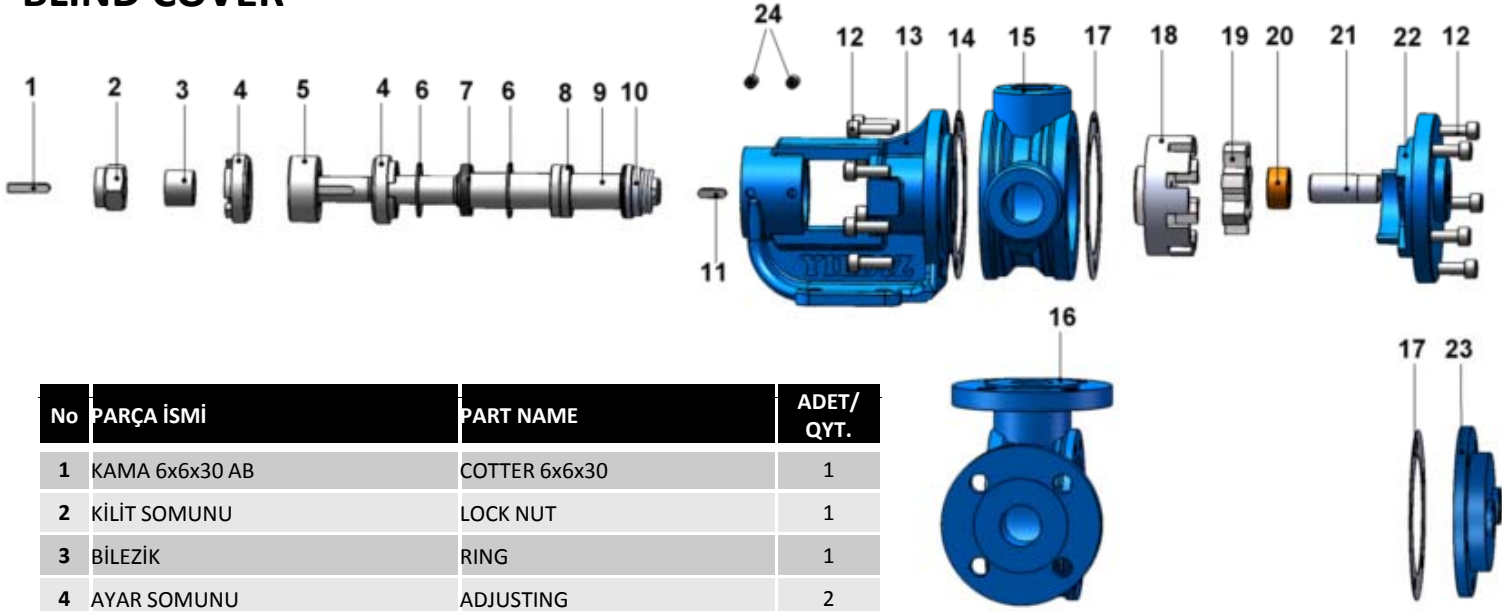
# YEDEK PARÇA LİSTESİ MEKANİK SALMASTRALI VE BYPASSLI/ SPARE PART LIST FOR PUMP WHICH WITH MECHANICAL SEAL AND BYPASS



No	PARÇA İSMİ	PART NAME	ADET/ QYT.
1	KAMA 6x6x30 AB	COTTER 6x6x30	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	RING	1
4	AYAR SOMUNU	ADJUSTING	2
5	RULMAN (3204)	BEARING (3204)	1
6	İÇ SEGMAN (ø37)	INTERNAL CIRCLIP (ø37)	2
7	KEÇE ø25xø37x7	LIP SEAL ø25xø37x7	1
8	RULMAN (61805T)	BEARING (61805T)	1
9	MİL	SHAFT	1
10	MEKANİK SALMASTRA ø25	MECHANICAL SEAL ø25	1
11	KAMA 6x6x20 A	COTTER 6x6x20	1
12	IMBUS CİVATA M8x25	HEX SOCKET M8x25 FOR CASING, COVER, INTERNAL RELIEF VALVE	17
13	KONSOL (MEKANİK SALMASTRALI)	BRACKET (FOR MECHANICAL SEAL)	1
14	KONSOL CONTASI	BRACKET GASKET	1
15	ARA GÖVDE (BORU DİŞLİ)	CASING (PIPE TOOTHED)	1
16	ARA GÖVDE (FLANŞLI)	CASING (FLANSCHED)	1
17	KAPAK CONTASI	HEAD GASKET	1
18	ÇEVRE DİŞLİ	ROTOR	1
19	AVARA DİŞLİ	IDLER	1
20	AVARA DİŞLİ BURCU	IDLER BUSHING	1
21	KAPAK MİLİ	COVER PIN	1
22	KAPAK (BYPASSLI)	COVER (FOR BYPASS)	1
23	BYPASS CONTASI	RELIEF VALVE GASKET	1
24	BYPASS	INTERNAL RELIEF VALVE	1
25	BYPASS O-RING	O-RING FOR INTERNAL RELIEF VALVE	1
26	KLEPE	VALVE	1
27	YAY	SPRING	1
28	PUL	WASHER	1
29	BYPASS KAPAĞI	BYPASS HEAD	1
30	TİJ KAPAK O-RİNG	GASKET FOR CAP (O-RING)	1
31	M8 SOMUN	NUT M8	1
32	6 KÖŞE CİVATA M8x55	ADJUSTING SCREW M8x55	1
33	TİJ KAPAĞI	SCREW COVER	1
34	SETUSKUR M8x16	STAY BOLT M8x16	4

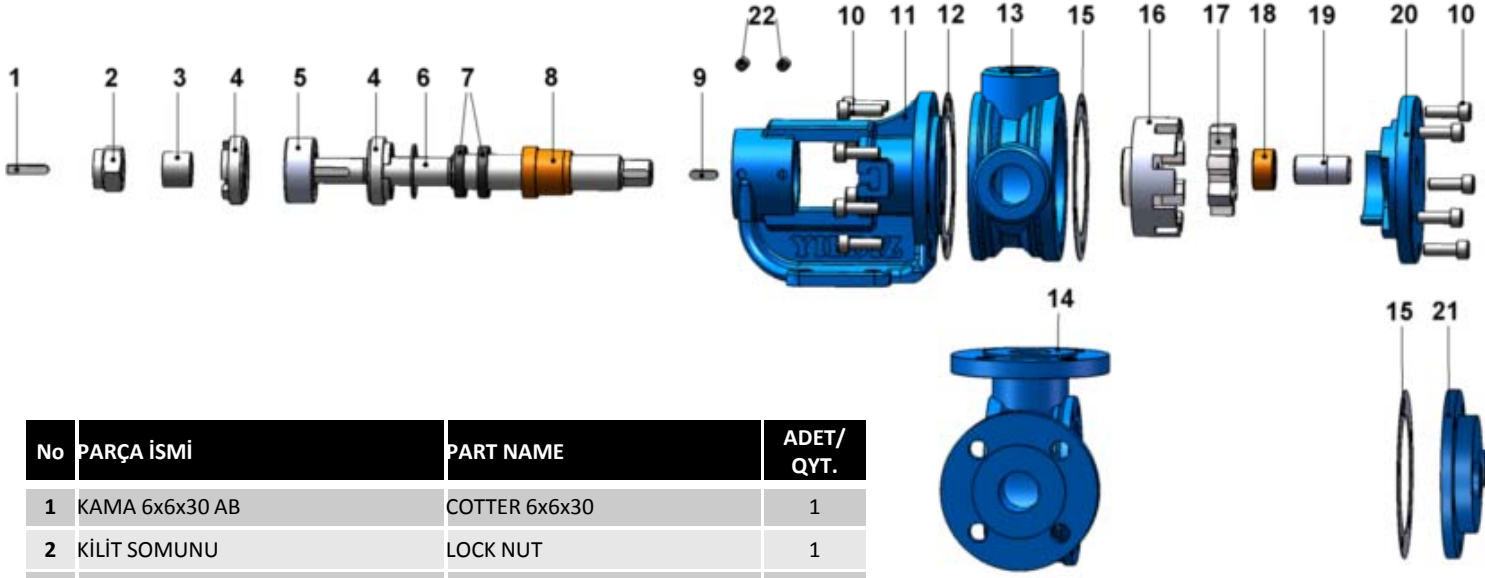


# YEDEK PARÇA LİSTESİ MEKANİK SALMASTRALI VE CEKETLİ - KÖRKAPAKLI/ SPARE PART LIST FOR PUMP WHICH WITH MECHANICAL SEAL AND JACKET - BLIND COVER



No	PARÇA İSMİ	PART NAME	ADET/ QYT.
1	KAMA 6x6x30 AB	COTTER 6x6x30	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	RING	1
4	AYAR SOMUNU	ADJUSTING	2
5	RULMAN (3204)	BEARING (3204)	1
6	İÇ SEGMAN (ø37)	INTERNAL CIRCLIP (ø37)	2
7	KEÇE ø25xø37x7	LIP SEAL ø25xø37x7	2
8	RULMAN (61805T)	BEARING (61805T)	2
9	MİL	SHAFT	1
10	MEKANİK SALMASTRA ø25	MECHANICAL SEAL ø25	1
11	KAMA 6x6x20 A	COTTER 6x6x20	1
12	IMBUS CIVATA M8x25	HEX SOCKET M8x25 FOR CASING, COVER, INTERNAL RELIEF VALVE BRACKET (FOR MECHANICAL SEAL)	13
13	KONSOL (MEKANİK SALMASTRALI)	BRACKET (FOR MECHANICAL SEAL)	1
14	KONSOL CONTASI	BRACKET GASKET	1
15	ARA GÖVDE (BORU DİŞLİ)	CASING (PIPE TOOTHED)	1
16	ARA GÖVDE (FLANŞLI)	CASING (FLANSCHED)	1
17	KAPAK CONTASI	HEAD GASKET	1
18	ÇEVRE DİŞLİ	ROTOR	1
19	AVARA DİŞLİ	IDLER	1
20	AVARA DİŞLİ BURCU	IDLER BUSHING	1
21	KAPAK MİLİ	COVER PIN	1
22	KAPAK (KÖR KAPAK)	COVER (FOR BLIND)	1
23	KAPAK (CEKET KAPAK)	COVER (FOR JACKET)	1
24	SETUSKUR M8x16	STAY BOLT M8x16	4

## YEDEK PARÇA LİSTESİ KEÇELİ VE CEKETLİ – KÖR KAPAKLI/ SPARE PART LIST FOR PUMP WHICH WITH LIP SEALS AND JACKET – BLIND COVER



No	PARÇA İSMİ	PART NAME	ADET/ QYT.
1	KAMA 6x6x30 AB	COTTER 6x6x30	1
2	KİLİT SOMUNU	LOCK NUT	1
3	BİLEZİK	RING	1
4	AYAR SOMUNU	ADJUSTING	2
5	RULMAN (3204)	BEARING (3204)	1
6	MİL	SHAFT	1
7	KEÇE (ø25xø37x7)	LIP SEAL (ø25xø37x7)	2
8	KONSOL BURCU	BRACKET BUSHING	1
9	KAMA 6x6x20 A	COTTER 6x6x20	1
10	IMBUS CİVATA M8x25	HEX SOCKET M8x25	13
11	KONSOL (YUMUŞAK SALMASTRALI)	BRACKET (FOR PACKING)	1
12	KONSOL CONTASI	BRACKET GASKET	1
13	ARA GÖVDE (BORU DİŞLİ)	CASING (PIPE TOOTHED)	1
14	ARA GÖVDE (FLANŞLI)	CASING (FLANSCHED)	1
15	KAPAK CONTASI	HEAD GASKET	1
16	ÇEVRE DİŞLİ	ROTOR	1
17	AVARA DİŞLİ	IDLER	1
18	AVARA DİŞLİ BURCU	IDLER BUSHING	1
19	KAPAK MİLİ	COVER PIN	1
20	KAPAK (KÖR KAPAK)	COVER (FOR BLIND)	1
21	KAPAK (CEKET KAPAK)	COVER (FOR JACKET)	1
22	SETUSKUR M8x16	STAY BOLT M8x16	4