



İŞLETMENİZE ÖZEL
DİNAMİK&STATİK
ÇÖZÜMLER

**LOW
COST
START-UP**

Easy pro
Installation



MAKINA & TASARIM Yalın Üretim Sistemleri

Cüneyt BİLGİN



MAKINA & TASARIM Yalın Üretim Sistemleri CRB Makina&Tasarım Yalın Üretim Sistemleri

Address : Beşevler Küçük Sanayi Sitesi
43. Blok No: 79 Nilüfer /BURSA

Telephone : +90 (544) 2725415

İş Tel : 0 224 441 79 27
443 39 93

Fax : +90 224 441 53 03

Web Adresi : www.crbmakina.com

e-mail : info@crbmakina.com

- Dinamik, Statik, Borulu, High (Ağır) raf sistemleri.
- Taşıma Arabaları, Çalışma Banko ve Hatları,
- S Konveyörler - Palet sürücüler, AGV Kitleri,
- Ergonomi- FIFO - Kara Kuri- Süpermarket uygulamaları
- Tasarım ve imalatı.
- Low-cost automation - C araba - Buffer araba ve kasaları -SS-Yalın Üretim Ekipmanları ve uygulamaları
- 3 Boyutlu Makina, Proje, Hat dengeleme, Ergonomi, NVA, Layout, Ekipman, Tasarım, Analiz ve imalatı.
- Malzeme ve Depo yük personel kaldırma asansörleri
- Alüminyum kreyn, manuel ve vakumlu manipülör tasarımı ve imalatı.
- Kimyasal taşıma tank havuzları, Big bag hammadde boşaltma sistemleri, Tekstil kumaş depolama kasa ve rafları.

REFERANSLARIMIZ / REFERENCES





**Ø 28 BORULAR
Ø 28 PIPES**



GPK 2815

PLASTİK KAPLI BORULAR (t=1.5)
ABS PLASTIC COATED PIPES (t 1,5)



GPK 2820

PLASTİK KAPLI BORULAR (t=2)
ABS PLASTIC COATED PIPES (t 2)



GTB 2815

ELEKTROSTATİK TOZ BOYALI BORULAR (t=1.5)
ELECTROSTATIC COATED PIPES (t 1,5)



GTB 2820

PLASTİK KAPLI BORULAR (t=2)
ABS PLASTIC COATED PIPES (t 2)



GKK 2812

KROM KAPLI BORULAR



ESD 2812

PLASTİK KAPLI BORULAR (ANTİSTATİK)

**Ø 25 BORULAR
Ø 25 PIPES**



GPK 2515

PLASTİK KAPLI BORULAR (t=1.5)
ABS PLASTIC COATED PIPES (t 1,5)



GTB 2515

ELEKTROSTATİK TOZ BOYALI BORULAR (t=1.5)
ELECTROSTATIC COATED PIPES (t 1,5)





BBE 06



BBE 07



BBE 08



BBE 09



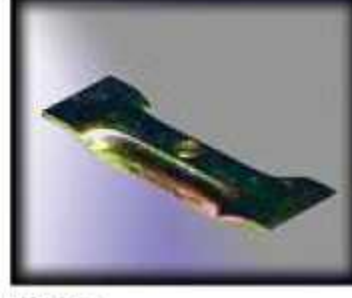
BBE 10



BBE 11



BBE 12



BBE 13



BBE 20



BBE 21



BBE 22



BBE 23





BBE 24



BBE 25



BBE 26



BBE 27



BBE 30A

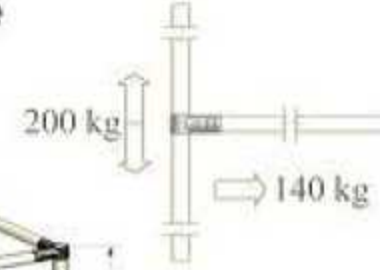
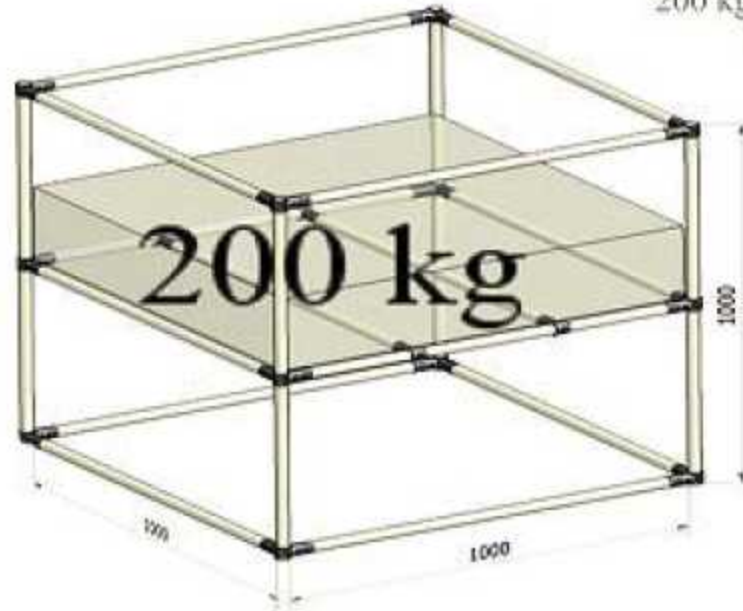
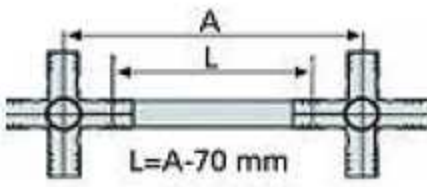


BBE 30B

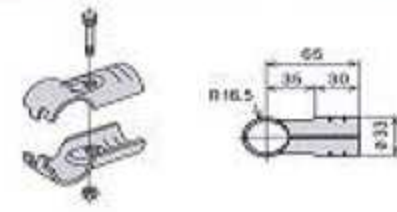
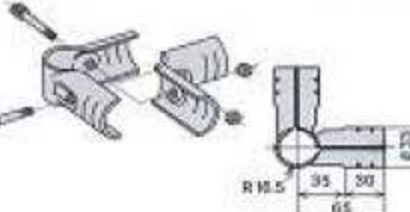
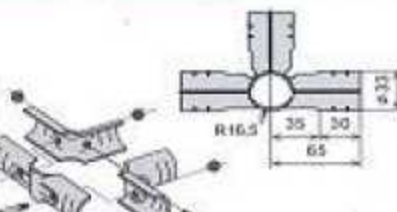
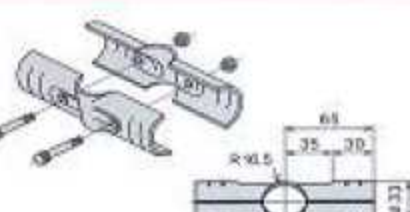
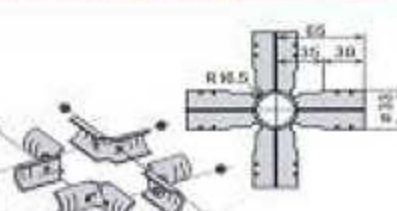
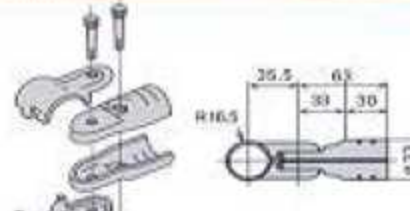


BBE 32

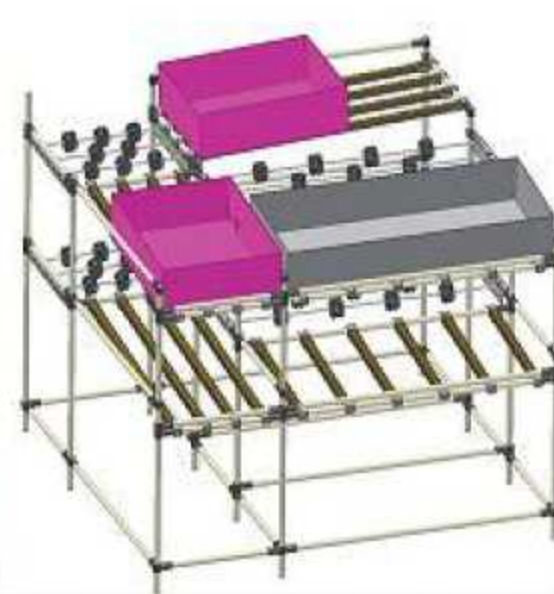
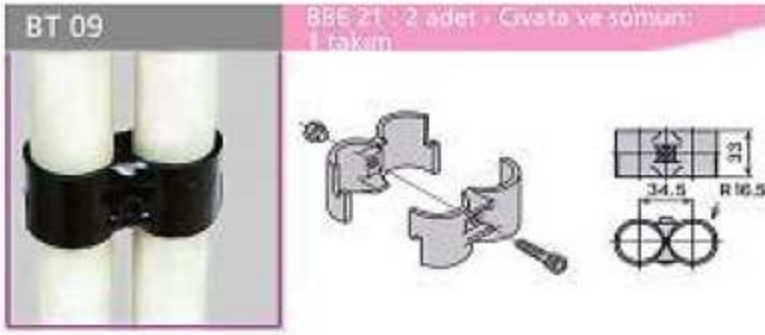
Ø 28 Boru Bağlama Tiplerine Göre
Boru Kesim Boyları





BT 01 	BBE 06 : 2 adet - Cıvata ve somun: 1 takım 	BT 02 	BBE 07-08 : 1 adet - Cıvata ve somun: 2 takım 
BT 03 	BBE 08 : 2 adet BBE 09: 1 adet Cıvata ve somun: 3 takım 	BT 04 	BBE 09 : 2 adet - Cıvata ve somun: 2 takım 
BT 05 	BBE 08 : 4 adet Cıvata ve somun: 4 takım 	BT 06 	BBE 10-11 : 2 adet - Cıvata ve somun: 2 takım 
BT 07 	BBE 12 : 1 adet BBE 13: 1 adet Cıvata ve somun: 1 takım 	BT 08 	BBE 20 : 2 adet - Cıvata ve somun: 1 takım 







BBE 01



BBE 02



BBE 03



BBE 04



BBE 05

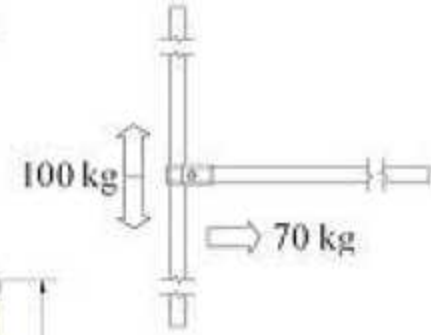
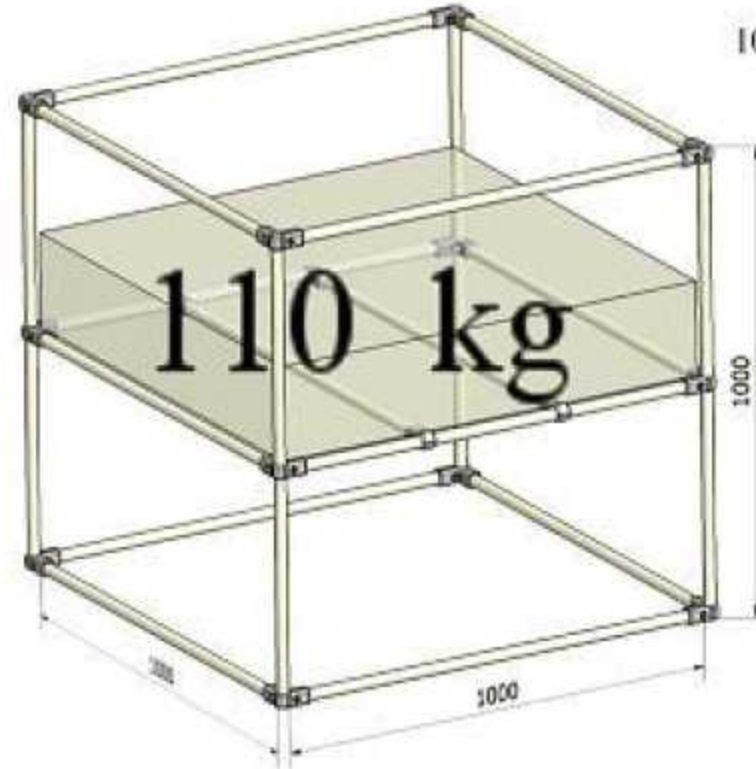
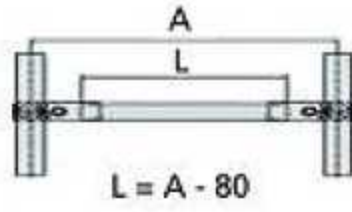


BBE 14

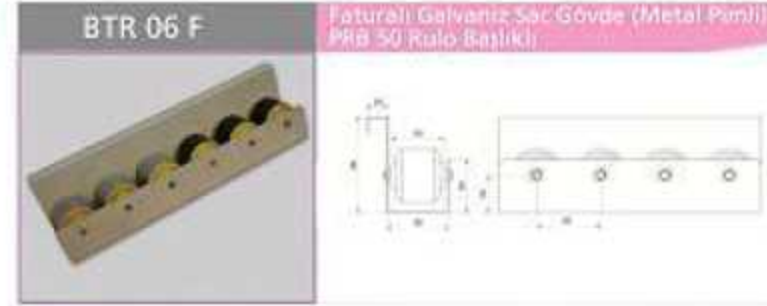
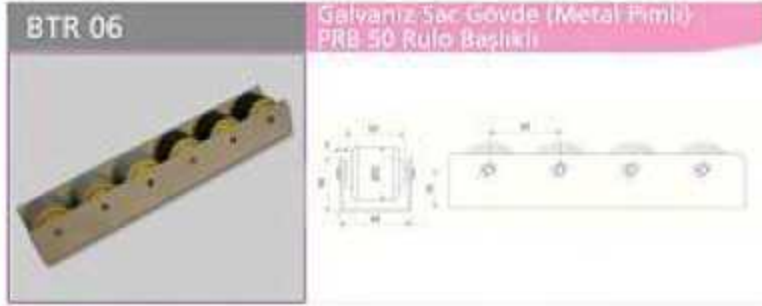
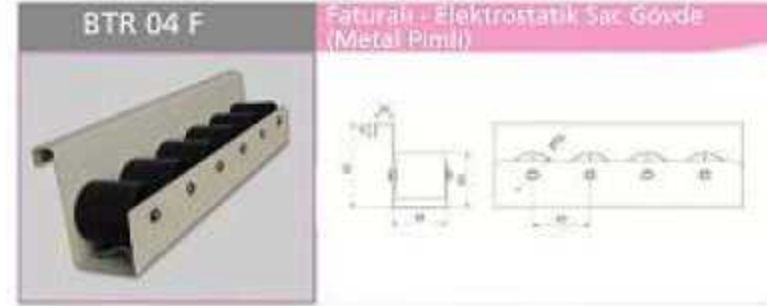
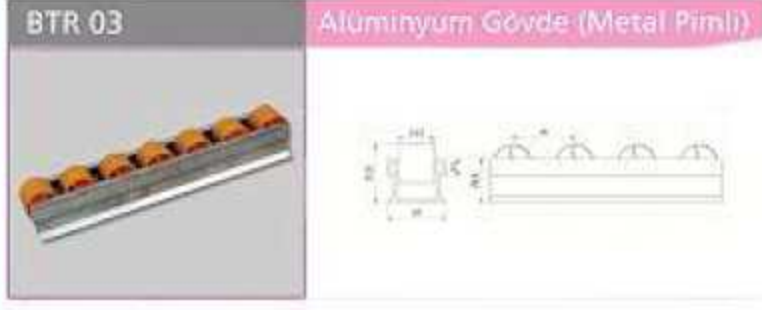


BBE 15

Ø 25 Boru Bağlama Tiplerine Göre
Boru Kesim Boyları





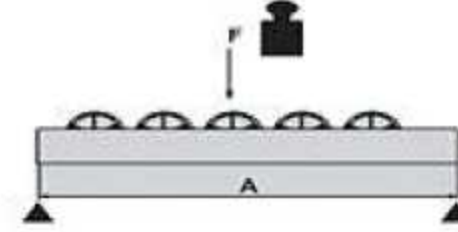




BTR TAŞIMA RAYLARININ KULLANILDIĞI YERLER

Üretim ve Montaj hatlarında malzemelerin çalışma noktasına ikmalinde, operasyonlar arası parti transferinde, hammadde mamul ve yarımamul ambarlarında, FIFO (FIRST IN FIRST OUT) prensibine göre stoklama işlemlerinde (vs) kullanılır.

These roller conveyors are suitable for material handling (of the manufacturing or assembly lines, transfer of the material to the work station or single point work bench finished material of the raw material, finiseh froduct and semi-product stores, storage according to FIFO principle)



TAŞIMA KAPASİTESİ / CAPACITY

BU YÜKLER: İKİ RAY ÜZERİNDE DAĞILMIŞ YÜKE GÖRE UYGULANIR.

Kod Co-de	BTR 03	BTR 03 F	BTR 04	BTR 04 F	BTR 05 D	BTR 05 B	BTR 06	BTR 07	BTR 10	BTR 11
A (mt)										
1	20 kg.	20 kg.	50 kg.	50 kg.	20 kg.	20 kg.	50 kg.	30 kg.	1000 kg.	40 kg.
1,5	15 kg.	15 kg.	35 kg.	35 kg.	15 kg.	15 kg.	35 kg.	20 kg.	750 kg.	30 kg.
2	10 kg.	10 kg.	25 kg.	25 kg.	10 kg.	10 kg.	25 kg.	15 kg.	500 kg.	20 kg.

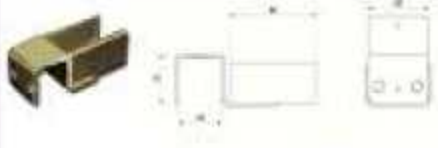




BTRT 05 (Ø28)
BTRT 13 (Ø25)



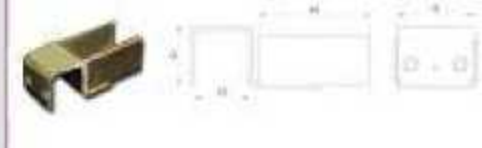
Ray Tutucu - BTR 05 Raya uygun



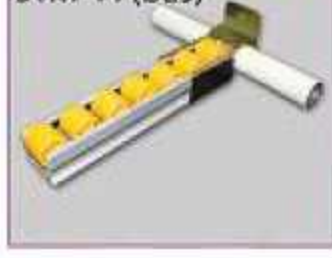
BTRT 01 (Ø28)
BTRT 09 (Ø25)



Ray Tutucu - BTR 03 Raya uygun



BTRT 06 (Ø28)
BTRT 14 (Ø25)



Ray Tutucu - BTR 05 Galvaniz Raya uygun



BTRT 02 (Ø28)
BTRT 10 (Ø25)



Ray Tutucu - BTR 03 Alüminyum Raya uygun



BTRT 07 (Ø28)
BTRT 15 (Ø25)



Ray Tutucu - BTR 05 Galvaniz Raya uygun



BTRT 03 (Ø28)
BTRT 11 (Ø25)



Ray Tutucu - BTR 03 Alüminyum Raya uygun



BTRT 08 (Ø28)
BTRT 16 (Ø25)



Ray Tutucu - BTR 05 Galvaniz Raya uygun



BTRT 04 (Ø28)
BTRT 12 (Ø25)



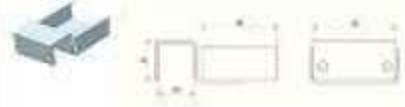
Ray Tutucu - BTR 03 Alüminyum Raya uygun



BTRT 20 (Ø28)



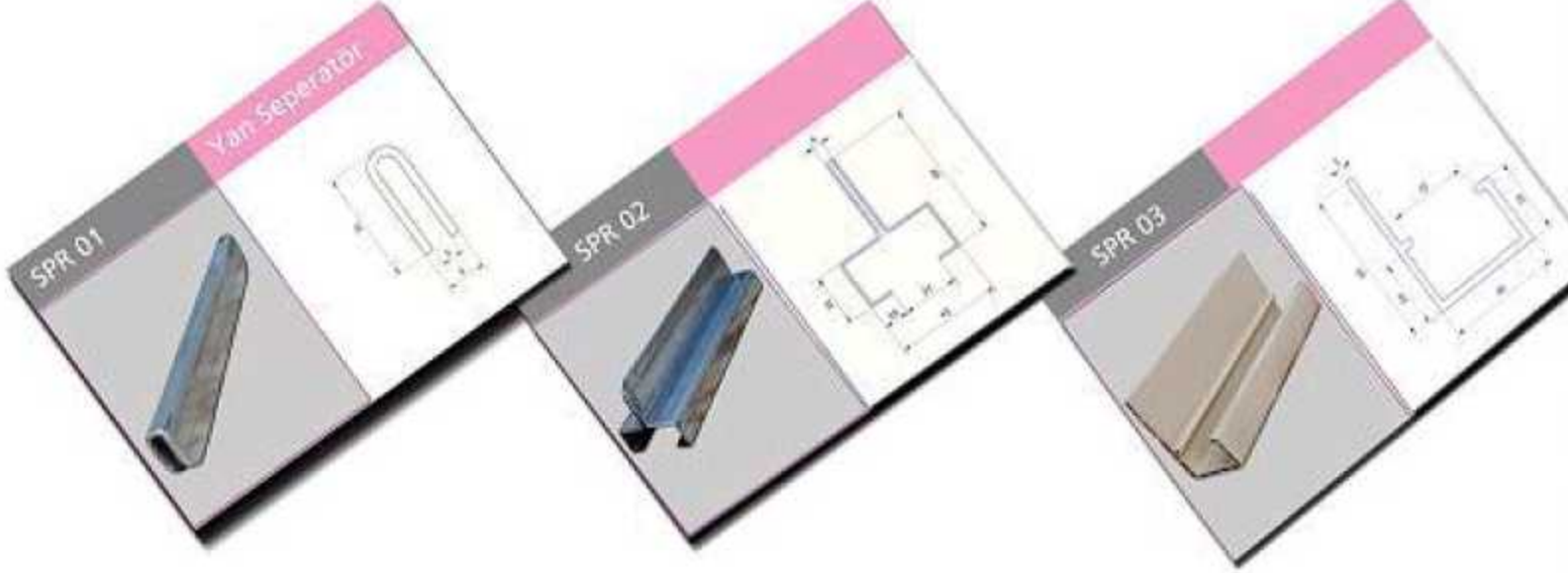
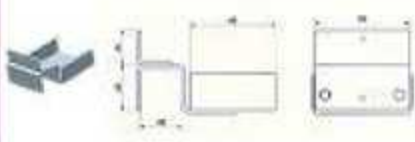
Ray Tutucu - BTR 11 Raya uygun



BTRT 21 (Ø28)



Ray Tutucu - BTR 11 Raya uygun



SP 04 (Ø28)



Yan Seperator Tutucu

BTRT 05 (Ø28)



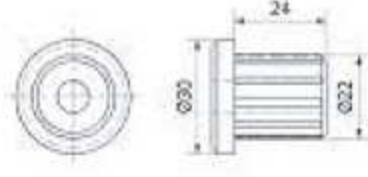
Ara Seperator Tutucu





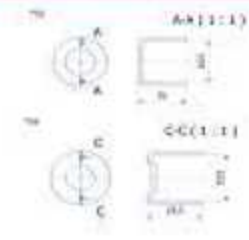
T 01

Ø 28 Plastik iç alt tapa



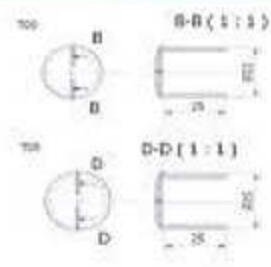
T 04 - T 02

Ø 28 Plastik dış tapa



T 05 - T 03

Plastik iç tapa



AY 01

M10 Taşıma Ayağı



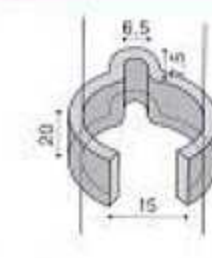
AY 02

M 14 Taşıma ayağı



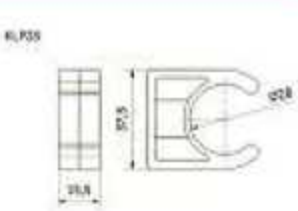
KLP 25 - KLP 28

Ø 28 Klips



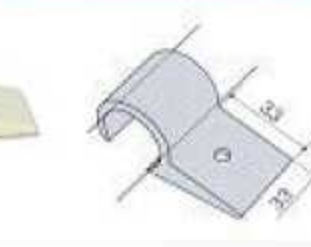
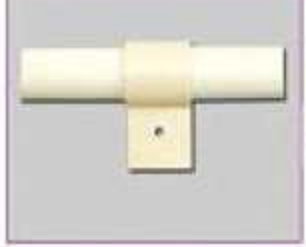
KLP 25 - KLP 28

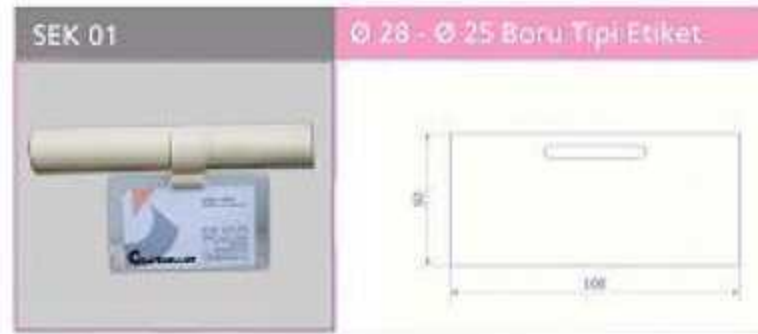
Klips

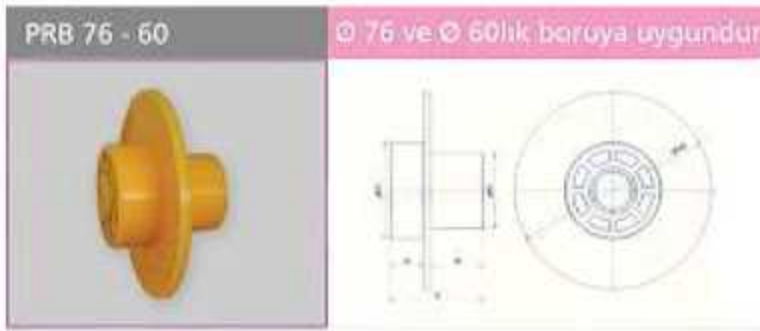
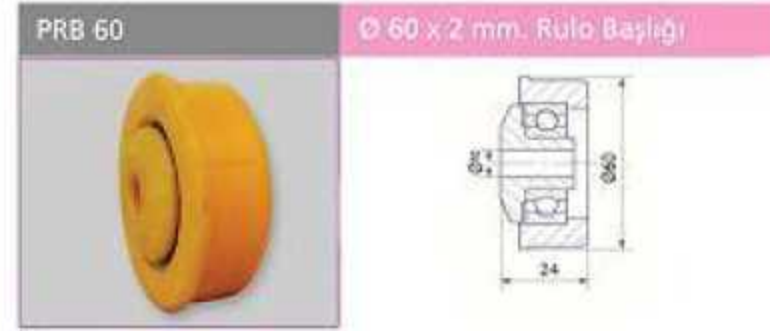
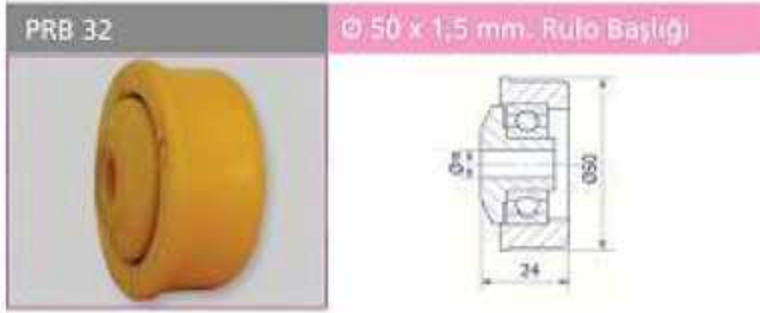
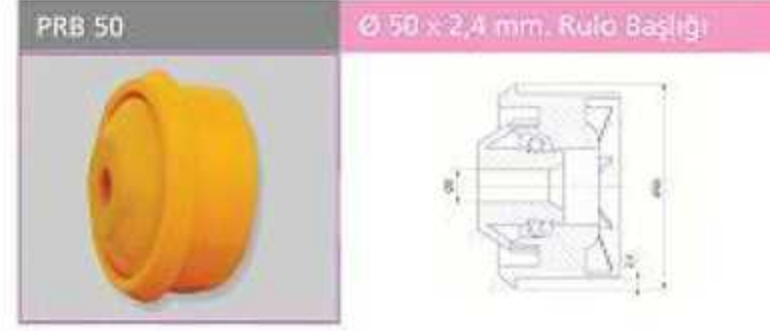
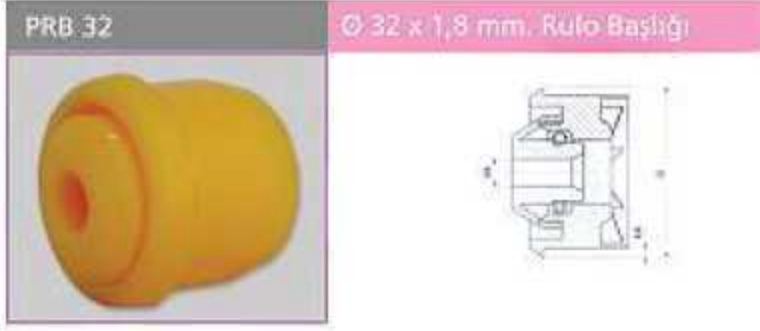


G 07

Bağlantı Klipsi







AÇIKLAMA :
Frenli Rulo $\varnothing 89 \times 3$ mm boruya uygundur.
Dinamik paletleme sistemlerinde kullanılır.



TEKLİ HASIR KONVEYÖR / MAT CONVEYOR - SINGLE

ÜRÜN KODU CODE	YÜK LOAD (kg/m)	GENİŞLİK WIDTH İç/dış	YÜKSEKLİK HIGH (mm)	ADIM STEP (mm)	AĞIRLIK WEIGHT (kg/m)
HK 01	150	455-497	75	100	5,4



HK01 - TEKLİ HASIR KONVEYÖR

ÇİFT HASIR KONVEYÖR / MAT CONVEYOR - DOUBLE

ÜRÜN KODU CODE	YÜK LOAD (kg/m)	GENİŞLİK WIDTH İç/dış	YÜKSEKLİK HIGH (mm)	ADIM STEP (mm)	AĞIRLIK WEIGHT (kg/m)
HK 02	300	455-497	75	100	6,8



HK02 - ÇİFTLİ HASIR KONVEYÖR





Ø 32 Metal Rulo

14



Ø 32 PVC Rulo

14



Ø 50 Metal Rulo

14



Ø 50 PVC Rulo

14



Ø 60 Metal Rulo

14



Ø 89 Metal Rulo

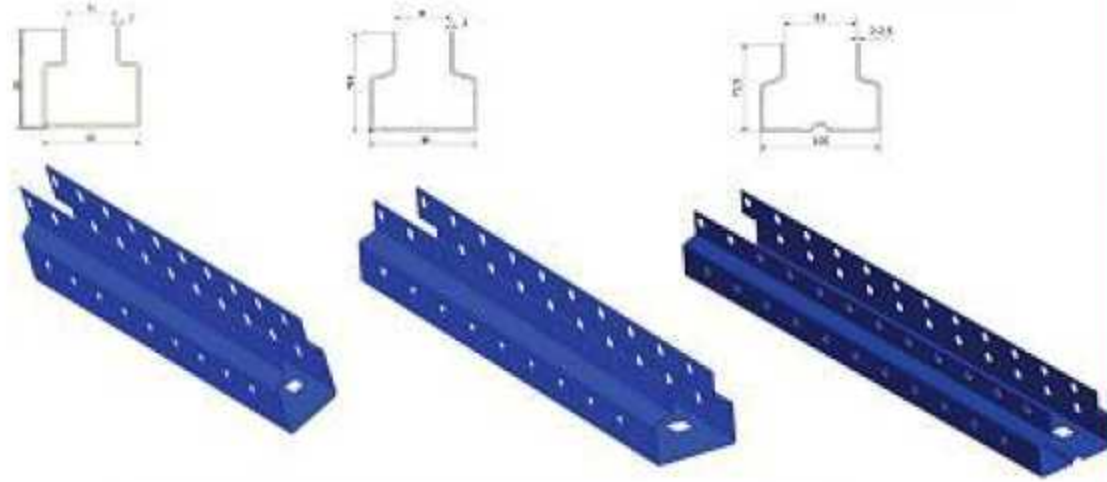
14



Ø 60 - 76 Metal Rulo

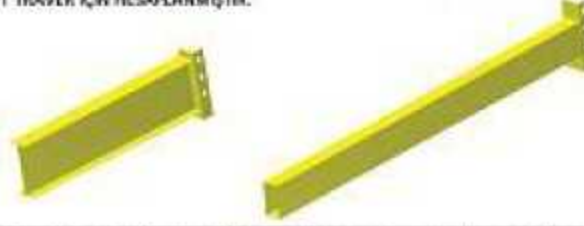
14





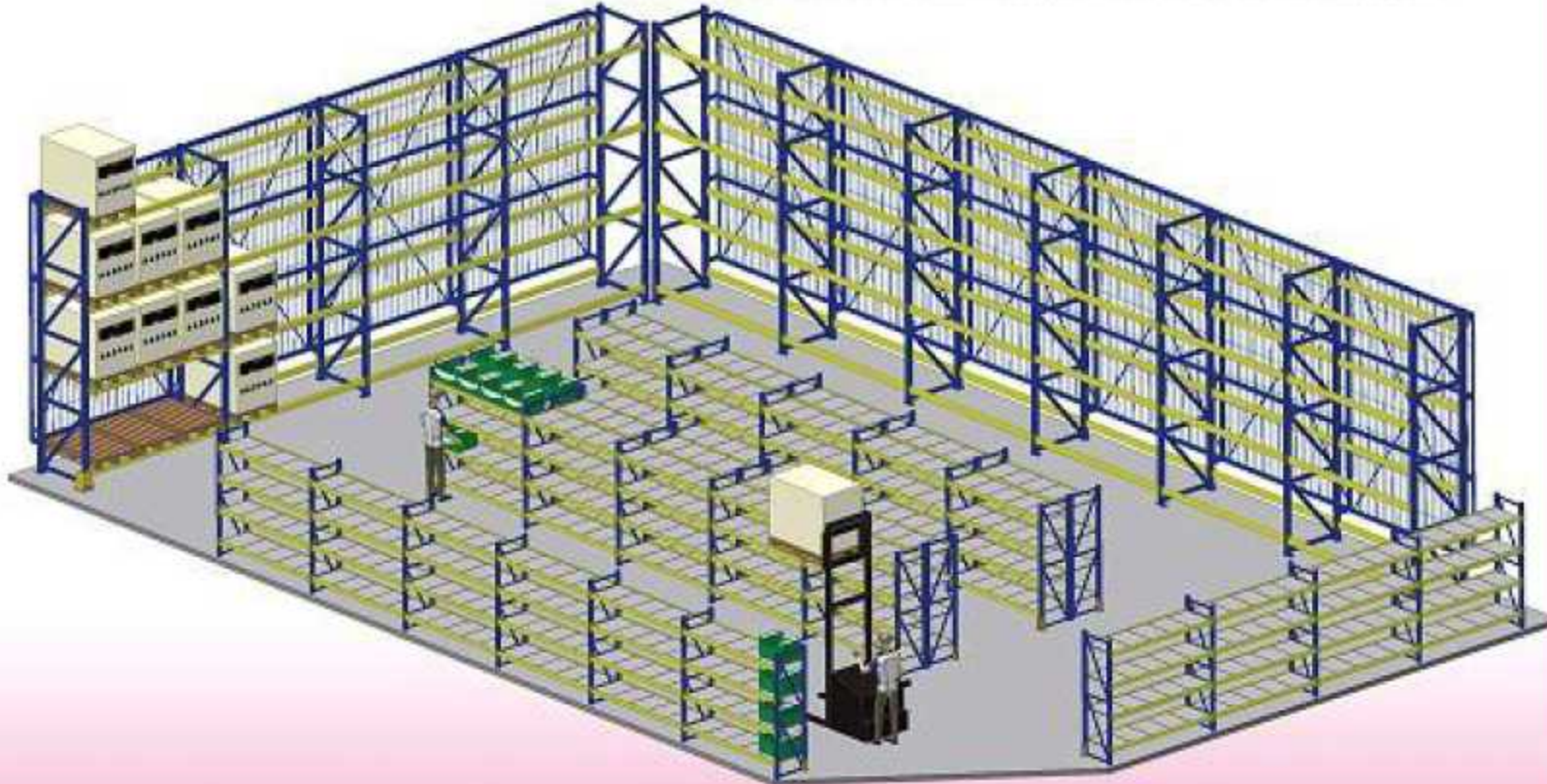
Taşıma Kapasitesi - Capacity Travers Açıklığı (mm.) Beam Space (mm.)	Taşıyabileceği Yük Load 2 mm.	Taşıyabileceği Yük Load 2,5 mm.
1000	13500 Kg	13500 Kg
1500	13750 Kg	13750 Kg
2000	14000 Kg	14000 Kg
2500	11500 Kg	11500 Kg
3000	8500 Kg	8500 Kg

NOT: TAŞIYAR KAPASİTELERİ L:2500 BOYDA TRAVERSLER ESAS ALINARAK HESAPLANMIŞTIR (P:1000mm).
TAŞIYAR KAPASİTELERİ BİR ÇİFT TRAVER İÇİN HESAPLANMIŞTIR.



Taşıma Kapasitesi Capacity	Ölçü (L) Travers Boyu	L:1000	L:1200	L:1500	L:2000	L:2500	L:2700	L:3000	L:3300
Kutu 40x80		3000 Kg	2500 Kg	2000 Kg	1500 Kg	1200 Kg	1065 Kg	860 Kg	710 Kg
Kutu 40x100		4230 Kg	3530 Kg	2820 Kg	2120 Kg	1695 Kg	1570 Kg	1415 Kg	1255 Kg
Kutu 40x120		5650 Kg	4710 Kg	3770 Kg	2825 Kg	2260 Kg	2095 Kg	1885 Kg	1715 Kg
Kutu 50x100		4920 Kg	4070 Kg	3260 Kg	2445 Kg	1955 Kg	1810 Kg	1630 Kg	1450 Kg
Kutu 60x120		7220 Kg	6020 Kg	4815 Kg	3610 Kg	2890 Kg	2675 Kg	2405 Kg	2190 Kg
NPI 80		5300 Kg	4420 Kg	3535 Kg	2650 Kg	2120 Kg	1880 Kg	1525 Kg	1260 Kg
NPI 100		9325 Kg	7720 Kg	6215 Kg	4655 Kg	3730 Kg	3455 Kg	3110 Kg	2765 Kg
NPI 120		14900 Kg	12420 Kg	9940 Kg	7455 Kg	5965 Kg	5520 Kg	4970 Kg	4515 Kg

NOT: TAŞIYAR KAPASİTELERİ 1 ÇİFT TRAVER ÜZERİNE YÜKÜN YAYILI OLARAK STOKLANACAĞI ŞEKLİDE HESAPLANMIŞTIR.

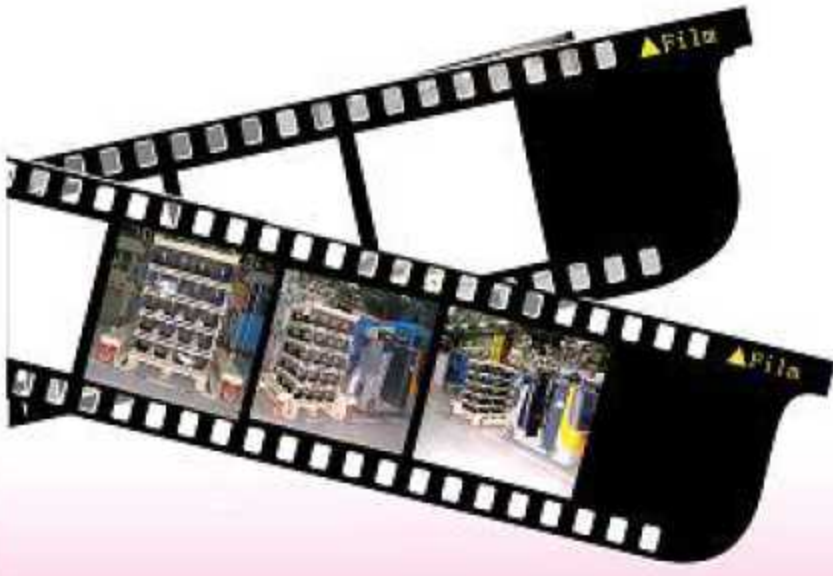






STATİK RAF UYGULAMA RESİMLERİ - STATIC SHELF APPLICATION PICTURES



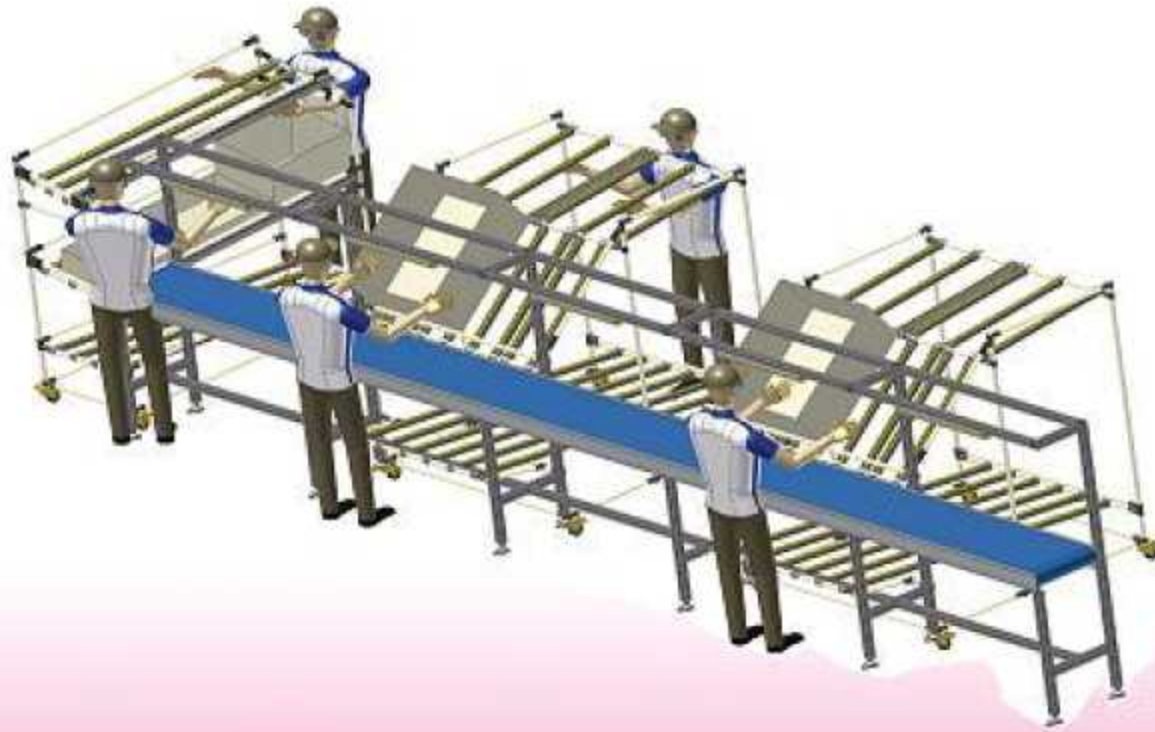
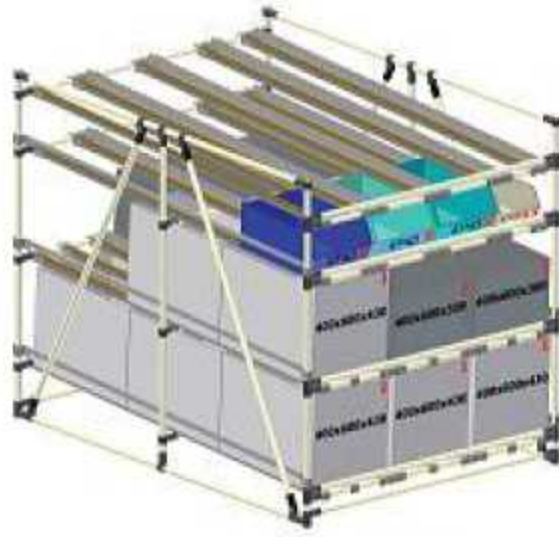


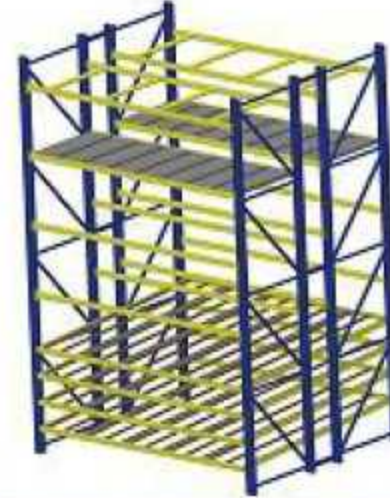
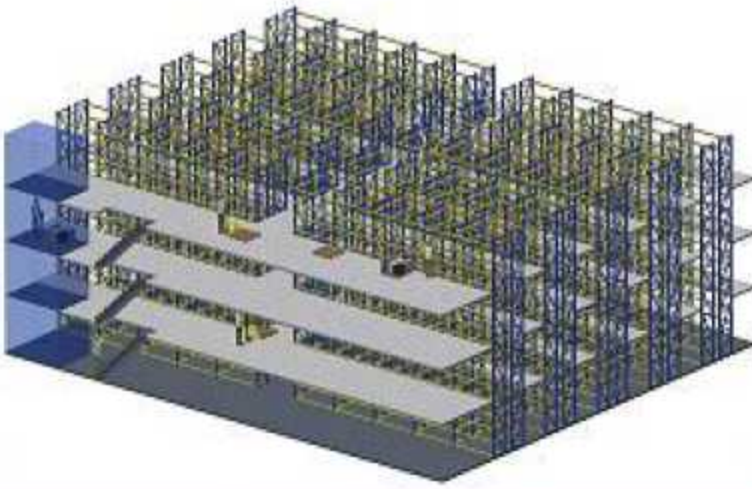
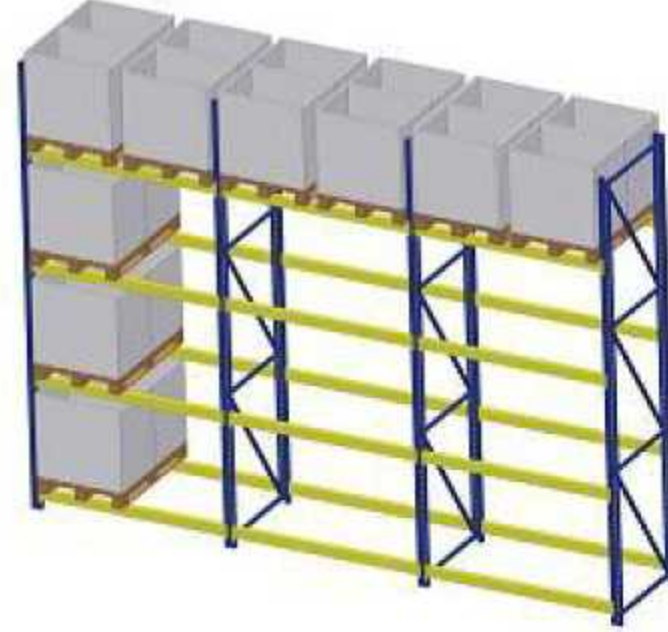
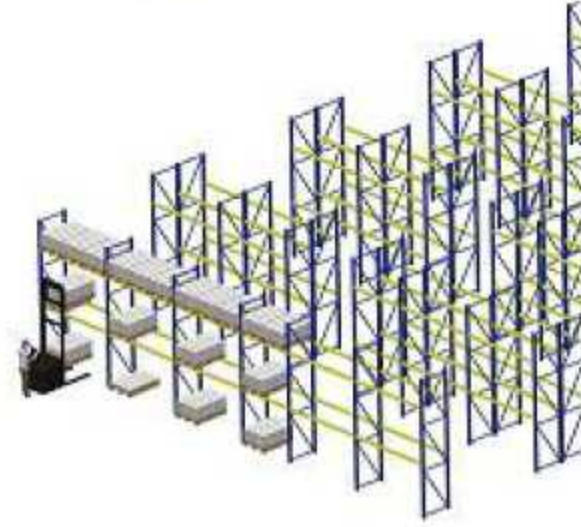
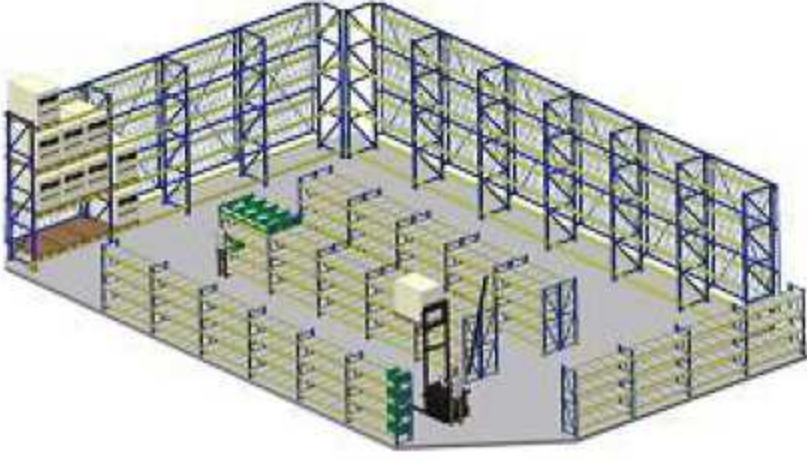
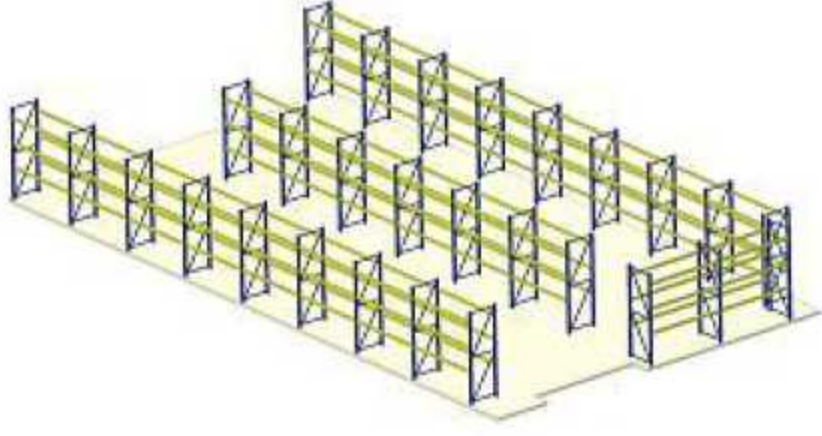


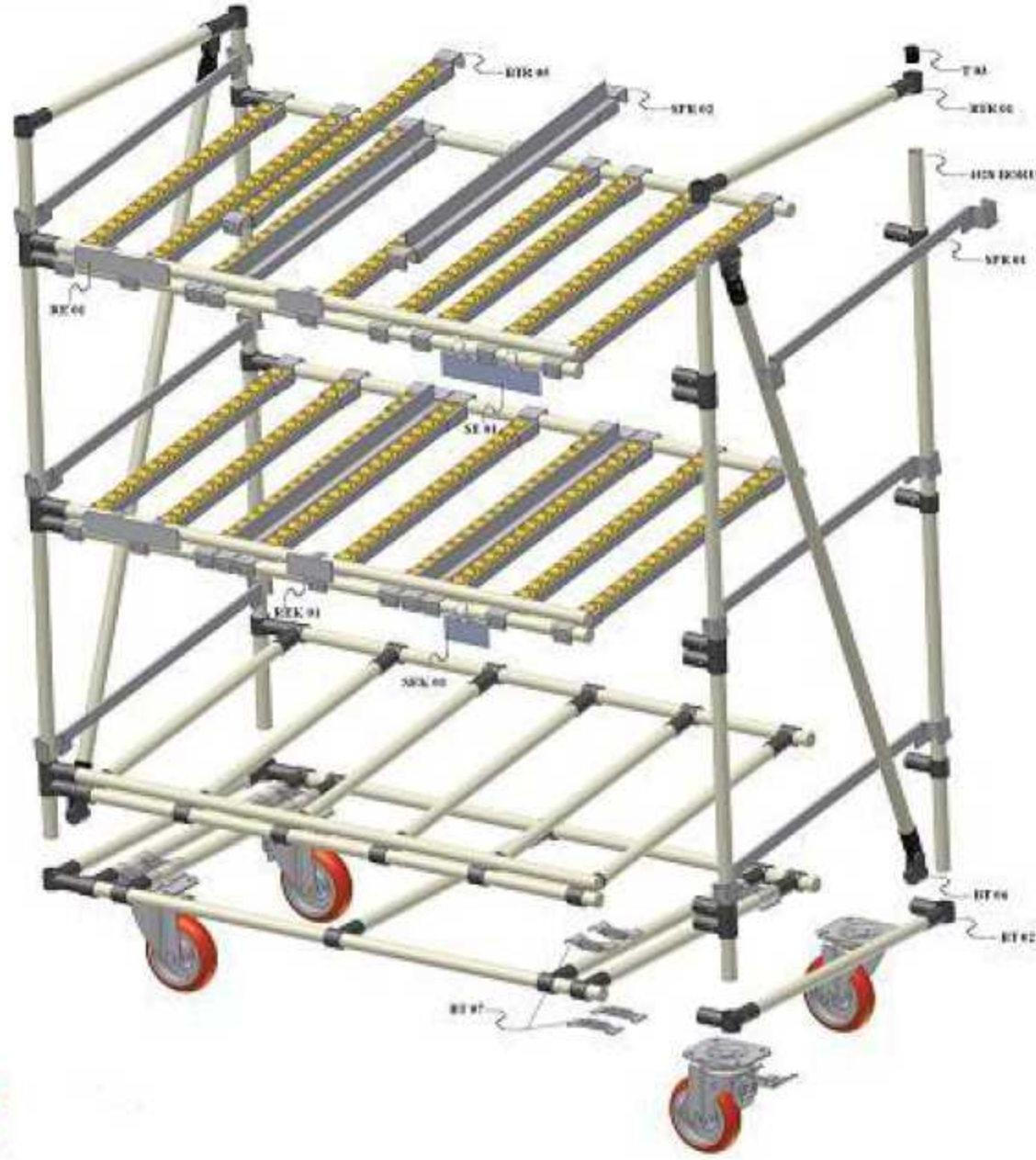














Cüneyt BİLGİN



MAKINA & TASARIM
Yalın Üretim Sistemleri

CRB Makina&Tasarım Yalın Üretim Sistemleri

Address : Beşevler Küçük Sanayi Sitesi
43. Blok No: 79 Nilüfer /BURSA

Telephone : +90 (544) 2725415

İş Tel : 0 224 441 79 27
443 39 93

Fax : +90 224 441 53 03

Web Adresi : www.crbmakina.com

e-mail : info@crbmakina.com