



WKV20  
CONTROL VALVE



## WKV 20

sectional directional control valve

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## General Specifications

### Genel Özellikler

#### Product Features

- WKV20 is robust control valve for 150lpm nominal flow rate and up to 315 bar working pressure
- The valve is designed for high performance for open and closed center hydraulic systems
- Valve is equipped with an adjustable main relief valve and load hold check valves in each working section
- Wide range of auxiliary valves
- Available in parallel, series, tandem circuit
- Wide range of spool options
- Interchangeable Ø19 mm Spools
- Valve can be operated by manual, pneumatic, electro-pneumatic, hydraulic, electro-hydraulic and remote cable control
- Load sense option

#### Özellikler

- WKV20 serisi 150 lt/dk ve 315bar'a kadar maksimum performansı gösteren, gelişmiş özellikleriyle birçok mobil uygulama için ideal kontrol kumandasıdır
- Ayarlanabilir Ana Emniyet Valfi
- Her dilimde Yük Tutma Valfleri
- Yardımcı valfler
- Paralel, Seri, Tandem Devre İmkanı
- Çeşitli Sürgü Tipleri
- Değiştirilebilir Ø19 mm Sürgüler
- Manuel, Pnömatik, Elektro-Pnömatik, Hidrolik, Elektro-Hidrolik ve Halat kontrol
- LS opsiyonu

#### Standard Material Specifications Standard Malzeme Özellikleri

High Resistance Cast Iron Body *Döküm Gövde*  
Hard Chromium Plated Interchangeable Spools *Sertleştirilmiş Krom Kaplama Sürgüler*  
Steel spring caps *Çelik Yay Kapakları*  
Aluminium Lever Caps *Aluminyum Sap Kapakları*  
NBR Seals *NBR Sızdırmazlık Elemanları*

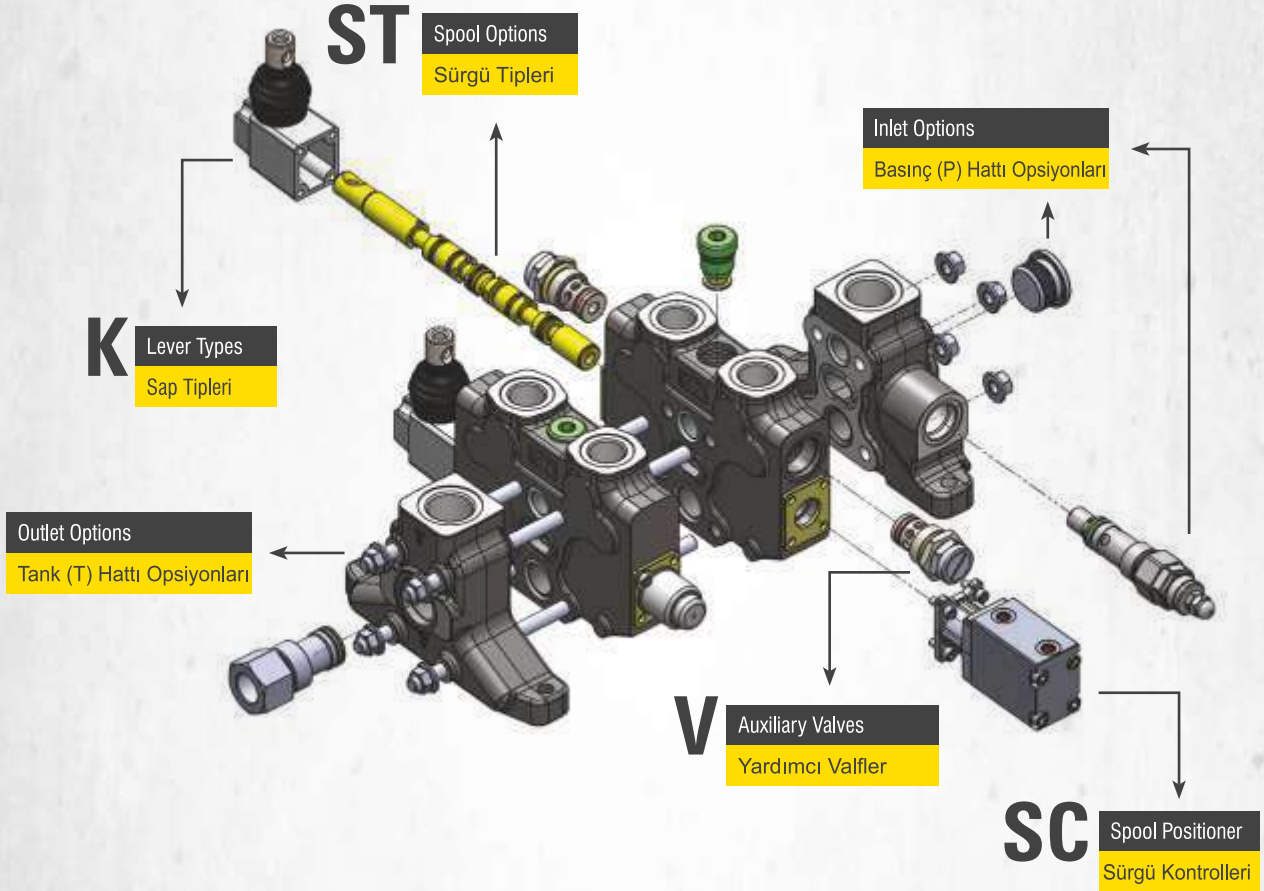
#### Working Conditions Çalışma Şartları

Recommended Oil Viscosity Range <i>Önerilen Yağ Viskozite Aralığı</i>	<b>10 cSt to 75 cSt</b>
Recommended Oil Filtering <i>Önerilen Yağ Filtrasyonu</i>	<b>β 10 ≥ 75</b>
Recommended Fluid Temperature Range <i>Önerilen Çalışma Sıcaklığı (°C)</i>	<b>-20 to +80</b>
Environmental Temperature Range <i>Önerilen Ortam Sıcaklığı (°C)</i>	<b>-35 to +60</b>
Maximum Contamination Level <i>Maksimum Kirlilik Seviyesi</i>	<b>Class 10 (NAS 1638) 19/16 (ISO 4406)</b>

#### Technical Specifications Teknik Özellikler

Nominal Flow <i>Debi</i>	<b>150 lpm</b>	<b>40 US gpm</b>
Number of Spools <i>Dilim Sayısı</i>	<b>1 - 9</b>	
Maximum Working Pressure <i>Maksimum Çalışma Basıncı</i>	<b>315 bar</b> 250 bar in Series Circuit	<b>4600 psi</b> 3600 psi in Series Circuit
Maximum Back Pressure <i>Maksimum Tank Hattı Basıncı</i>	<b>30 bar</b>	<b>430 psi</b>
Internal Leakage <i>İç Kaçak Değeri</i>	<b>4 cc - 9 cc</b> (100 Bar; 32 cSt, 40°C)	<b>0,24 - 0,54 in<sup>3</sup>/m</b> (1450 psi; 32 cSt, 104°F)

## Order Coding Sipariş Kodlama



WKV202 / C-R(180) / C SC4 ST11 V13 K3 / D - H

1 2 3 4

1

### Valve Type Valf Tipi

**WKV20** Valve Series Valf Serisi  
**2** Number of Spools Sürgü Sayısı

2

### Inlet Options Pompa (P) Hattı Opsiyonları

**C** Port Thread Port ölçüleri  
**R** Main Relief Valve Ana Emniyet Valfi  
**180** Pressure Setting Basınç Değeri

3

### Working Section Dilim

**C** Port Thread Port ölçüleri  
**SC4** Spool Positioners Sürgü Kontrolleri  
**ST11** Spool Options Sürgü Tipleri  
**V13** Auxiliary Valves Yardımcı Valfler  
**K3** Lever Types Sap Tipleri

4

### Outlet Options Tank (T) Hattı Opsiyonları

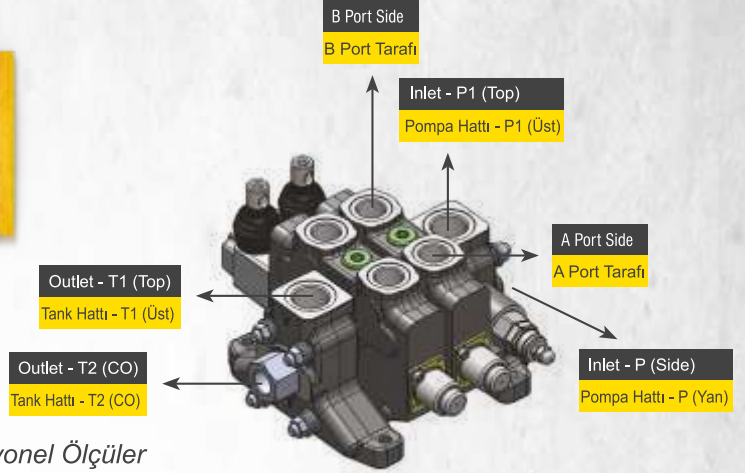
**D** Port Thread Port ölçüleri  
**H** Outlet Options Tank Hattı Opsiyonları

This part must be coded separately for each working section. If adjacent sections are identical then code the first section and put number of identical sections with a cross. Example for 3 identical sections; WKV204/C-R(180)/CSC1ST1V7(A160B160)K1/3XCSC4ST1V1(A140B150)K3/D-H

Bu bölümdeki kodlama her dilim için ayrı ayrı yapılmalıdır. Eğer birbirini takip eden ve aynı konfigürasyona sahip dilim isteniyorsa, aynı dilimler, dilim sayısı başa getirilip yanına çarpı konacak şekilde kodlanabilir. Örnek Kodlama; WKV204/C-R(180)/CSC1ST1V7(A160B160)K1/3XCSC4ST1V1(A140B150)K3/D-H

## Dimensional Data

### Ölçüsel Bilgi



### Standard & Optional Threads Standart ve Opsiyonel Ölçüler

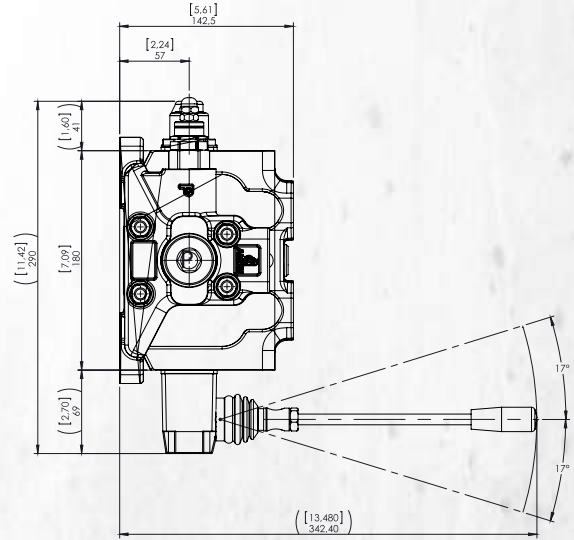
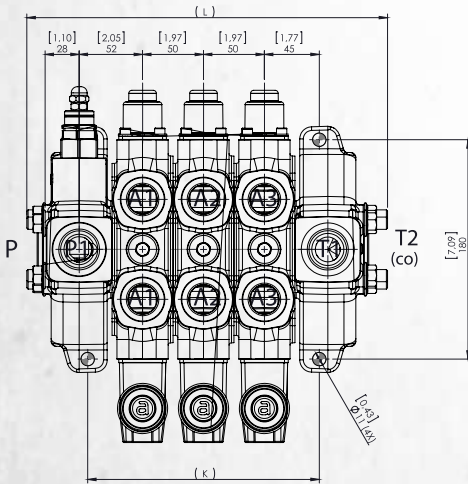
Thread	Code	P - P1	A/B	T1	T2(CO)
BSP(Standard)	C	G 3/4"	G 3/4"	G 3/4"	G 1"
	D	G 1"	G 1"	G 1"	G 1"
UN-UNF	N	1 1/16 – 12 (SAE 12)	1 1/16 – 12 (SAE 12)	1 1/16 – 12 (SAE 12)	G 1"
	Q	1 5/16 – 12 (SAE 16)	1 5/16 – 12 (SAE 16)	1 5/16 – 12 (SAE 16)	G 1"
METRIC	Z	M22x1,5	M22x1,5	M22x1,5	G 1"

BSP threads are standard threads. Its necessary to code the port thread in inlet, working and outlet section.

Example coding; WKV201/C-R(180)/CSC1ST1/D-H

Valflerimiz standart olarak BSP Diş üretilmektedir. Talep edilen port ölçüleri basınç kapağında, her dilimin başında ve dönüş kapağında kodlanır.

Örnek Kodlama; WKV201/C-R(180)/CSC1ST1/D-H



### Dimensions & Weight Ölçüler ve Ağırlık

Type / Tip	K		L		Weight Ağırlık	
	mm	inc	mm	inc	kg	lb
WKV201	90	3.54	196	7.71	14.80	32.62
WKV202	140	5.51	246	9.68	21.25	46.84
WKV203	190	7.48	296	11.65	27.70	61.06
WKV204	240	9.44	346	13.62	34.15	75.28
WKV205	290	11.41	396	15.59	40.60	89.50
WKV206	340	13.38	446	17.55	47.05	103.72
WKV207	390	15.35	496	19.52	53.50	117.95
WKV208	440	17.32	546	21.50	59.95	132.16
WKV209	490	19.29	596	23.46	66.40	146.38

Given weights are for standard configurations.  
Ağırlıklar standart konfigürasyon için verilmiştir.

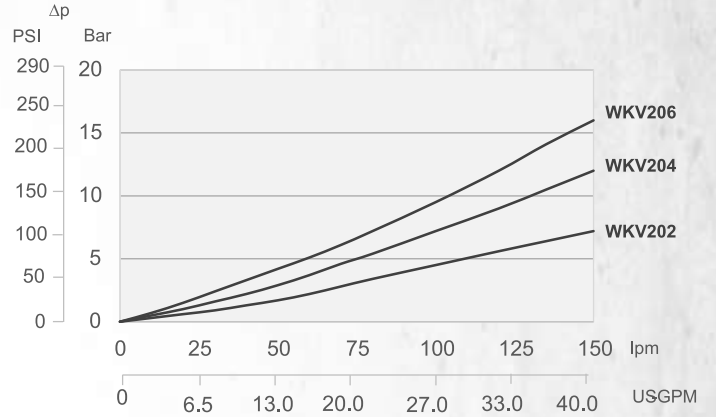
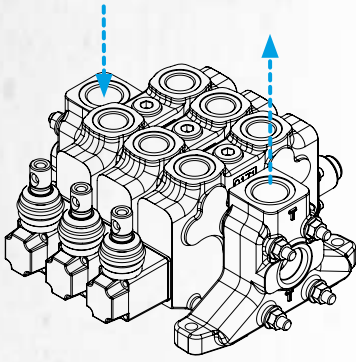


## Performance Data

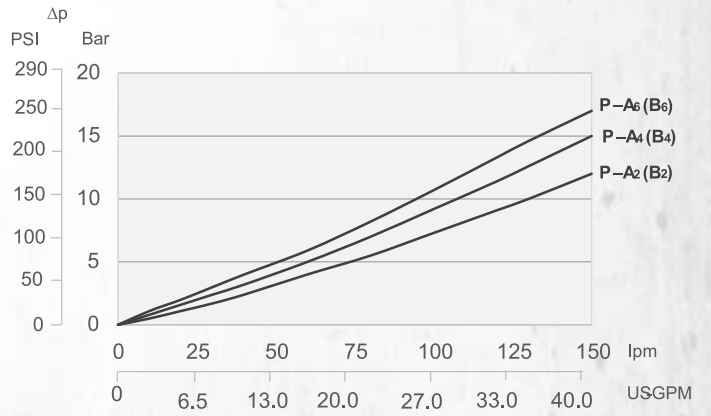
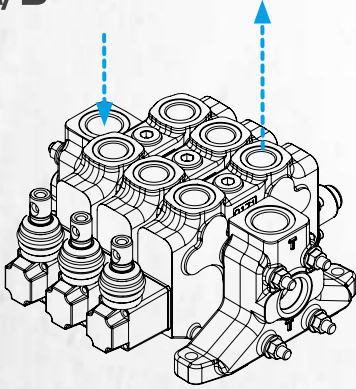
### Performans Eğrileri

#### Pressure Drop Curves Basınç Kayıp Eğrileri

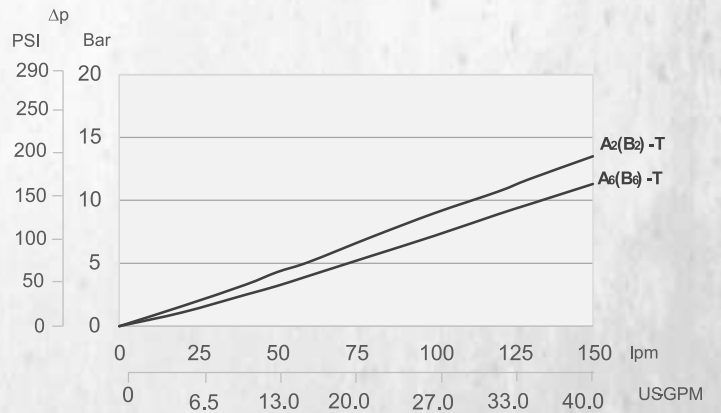
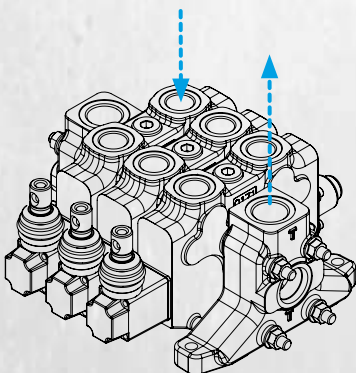
##### P - T



##### P - A/B



##### A/B - T



## Hydraulic Specifications

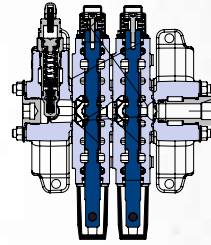
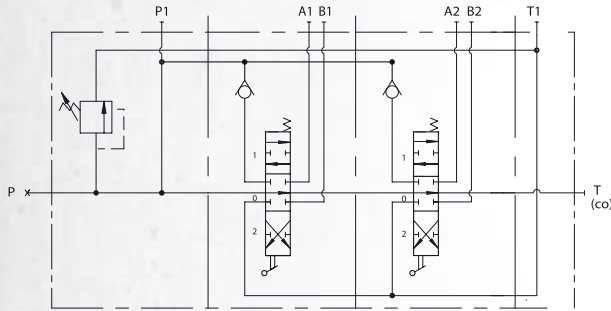
### Hidrolik Devre

#### Parallel Circuit Paralel Devre

Code / Kod

**NO  
CODE**

Standard configuration; Parallel circuit with upper inlet and outlet.  
Standart konfigürasyon; Paralel devre, P1 ve T3 açık, P2, T1 ve T2 kör şeklindedir.

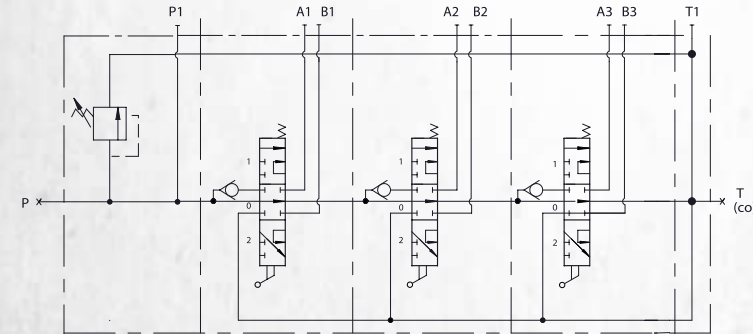


Parallel circuit is standard configuration.  
No need for coding.  
Standart üretimimiz paralel devredir.  
Ek bir kodlamaya gerek yoktur.

#### Series Circuit Seri Devre

Code / Kod

**S**



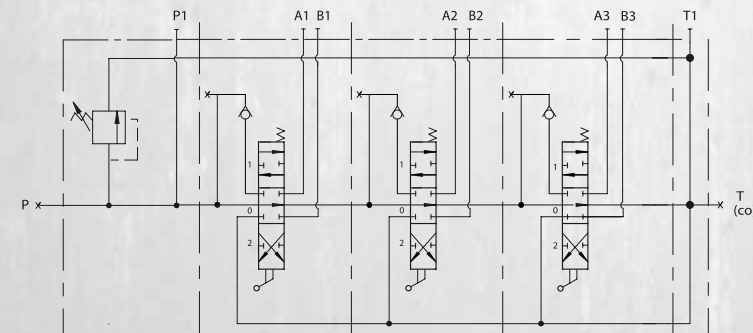
Series Circuit is coded with «S» before each series working section demanded.  
Example Coding; WKV201/C-R(180)/SCSC1ST1/SCSC1ST1/D  
Seri devre her seri dilimin önüne «S» gelecek şekilde kodlanır.  
Örnek Kodlama; WKV201/C-R(180)/SCSC1ST1/SCSC1ST1/D

Maximum working pressure is 250 bar.  
Maksimum çalışma basıncı 250 bar.

#### Tandem Circuit Tandem Devre

Code / Kod

**T**



Tandem Circuit is coded with «T» before each series working section demanded.  
Example Coding; WKV201/C-R(180)/TBSC1ST1/TBSC1ST1/B  
Seri devre her seri dilimin önüne «T» gelecek şekilde kodlanır.  
Örnek Kodlama; WKV201/C-R(180)/TBSC1ST1/TBSC1ST1/B

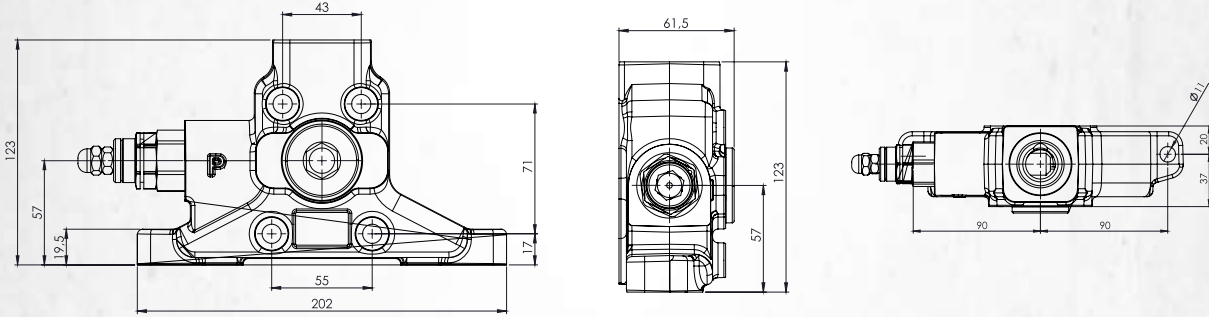
## Inlet Option

### Basınç (P) Hattı Opsiyonları

WKV201 / **C - R (180)** / B SC4 ST11 V13 K3 / B

- Pressure setting value (please indicate the necessary pressure in bar) *Basınç Ayar Değeri*
- Relief Valve Options *Ana Emniyet Valfi Opsiyonları*
- Port thread *Port Ölçüleri*

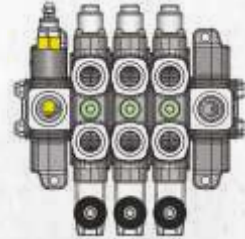
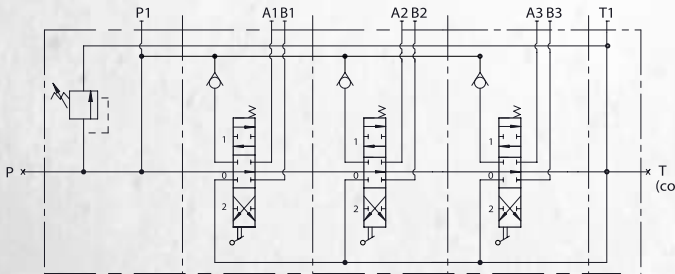
### Inlet Cover *Basınç Kapağı*



### Side of Inlet Section *Basınç Kapağı Yönü*

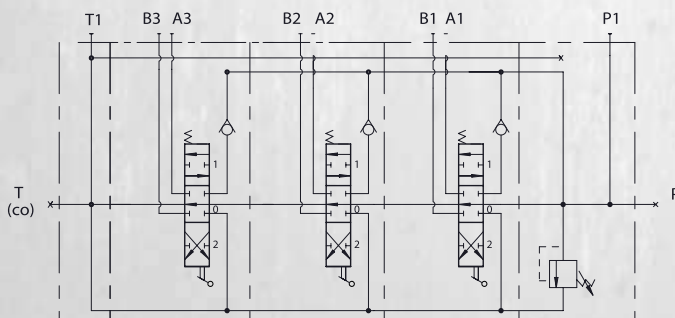
Code / Kod  
**NO  
CODE**

#### Valve with left inlet *Sol Basınç Kapağı*



Left inlet is standard onfiguration unless otherwise indicated.  
*Aksi belirtilmezse WKV20 serisi valfler sol basınç kapağı ile üretilir.*

#### Valve with right inlet *Sağ Basınç Kapağı*



Code / Kod  
**IR**

Example coding for left inlet  
*Sağ basınç kapağı örnek kodlama*

WKV201 / IR - C - R (180)

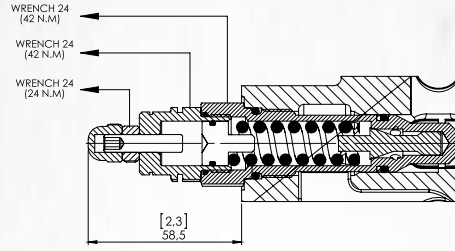
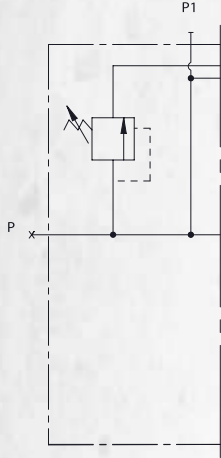


**Adjustable Direct Acting Main Relief Valve (MRV)**

*Ayarlanabilir Ana Emniyet Valfi (Direk Etkili)*

Code / Kod

**R**

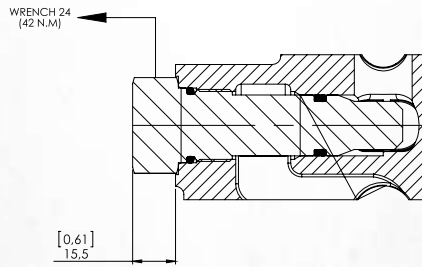
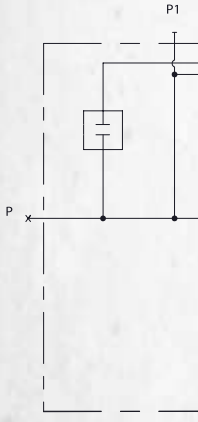


Please indicate the necessary pressure setting value. MRV is preset to 180 Bar at 15 lpm unless otherwise specified.  
*Lütfen ayarlanmasını istediğiniz basınç değerini bildiriniz. Ürünler standart olarak 15 lt/dk'da 180 Bara ayarlanır.*

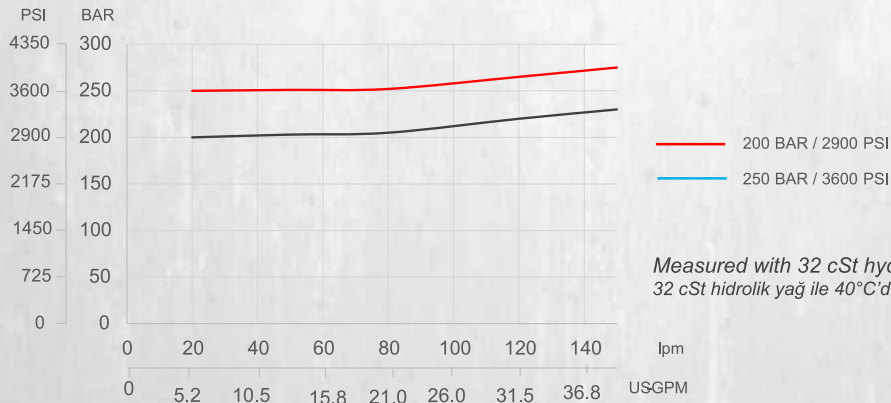
**Main Relief Valve Blanking Plug *Emniyet Valfsiz***

Code / Kod

**Y**



**Main Relief Valve Performance Data *Ana Emniyet Valfi Performans Eğrisi***

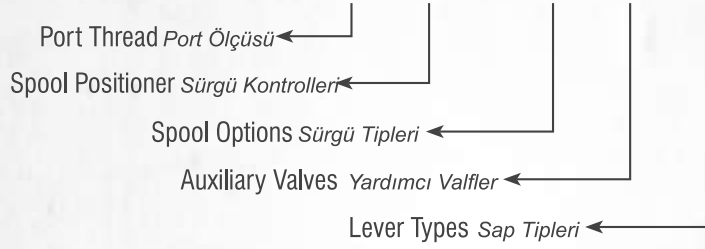


Measured with 32 cSt hydraulic oil @ 40°C and neglected tank line pressure.  
*32 cSt hidrolik yağ ile 40°C'de, tank hattı basıncı ihmal edilerek ölçülmüştür.*

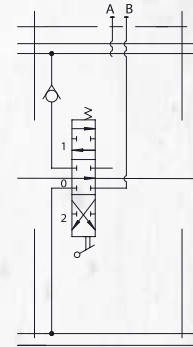
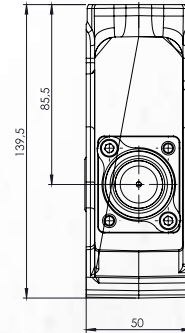
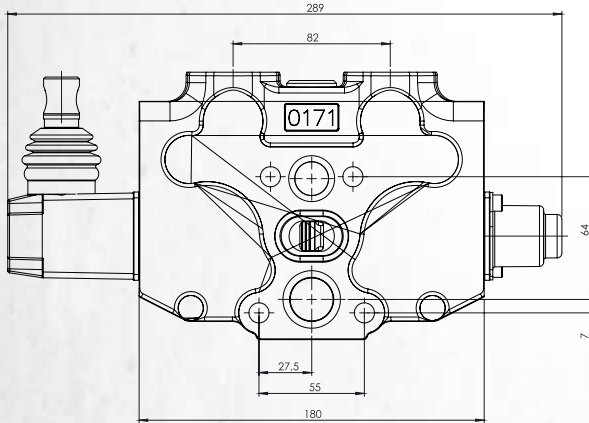
# Working Section

## Dilim

**WKV201 / C - R (180) / C SC4 ST11 V13 K3 / D**

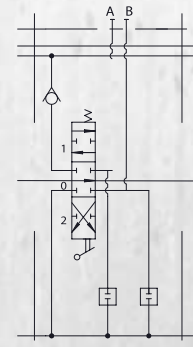
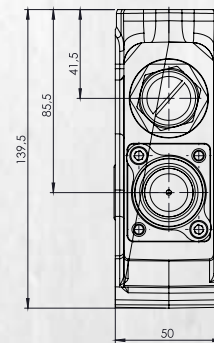
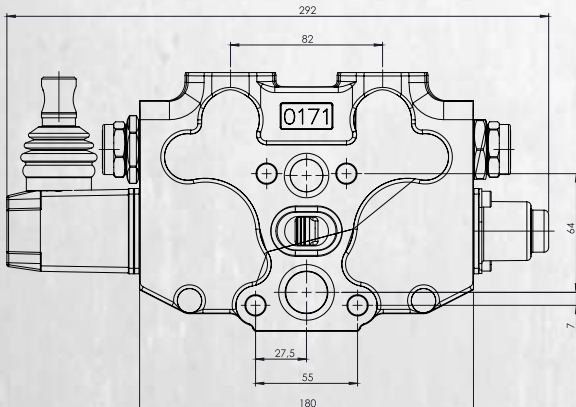


**Working section without port relief cavity** *Standart Dilim*



Hydraulic Circuit  
*HHidrolik Devre*

**Working section with port relief cavity** *Antişok portları işlenmiş dilim*



Hydraulic Circuit  
*HHidrolik Devre*

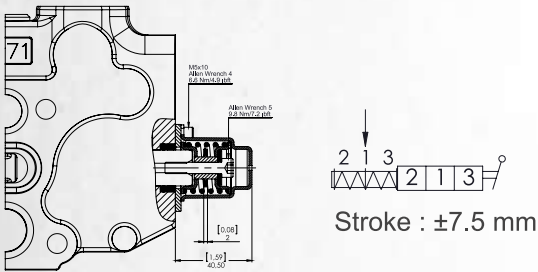
## Spool Positioners Sürgü Kontrolleri

WKV201 / C - R (180) / C **SC4** ST11 V13 K3 / D

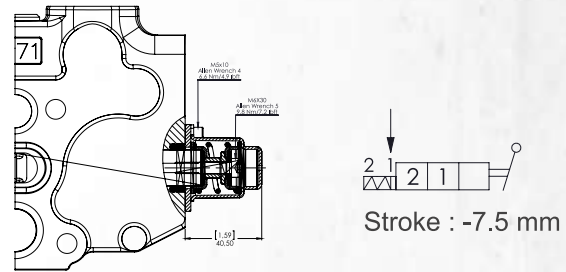
↳ A Side Spool Positioners A Tarafı Sürgü Kontrolleri

Spool Positioners with Spring Return Yay DönüŖlü Sürgü Kontrolleri

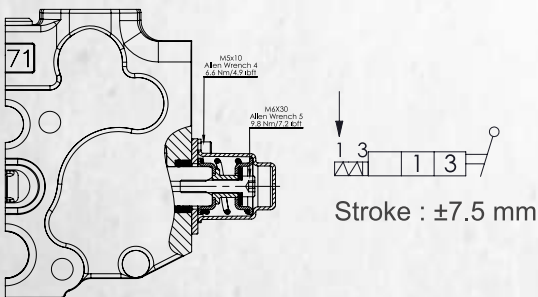
**SC1** 3 Positions Spring Return  
3 Pozisyon Yaylı



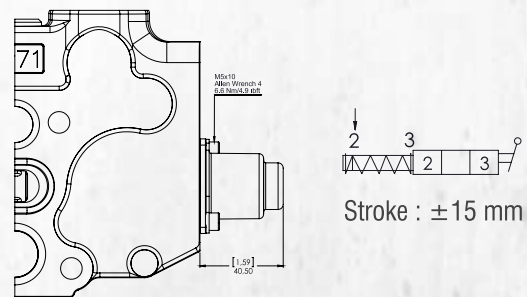
**SC5** 2 Positions Spring Return  
2 Pozisyon Yaylı



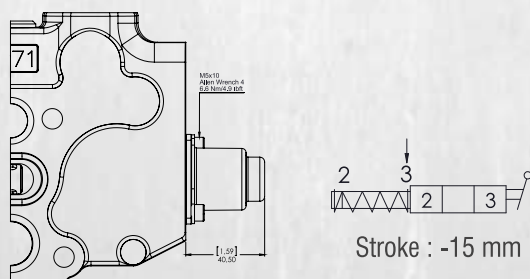
**SC6** 2 Positions Spring Return  
2 Pozisyon Yaylı



**SC11** 2 Positions Spring Return in 3rd Position  
2 Pozisyon, 3. Pozisyona Yaylı



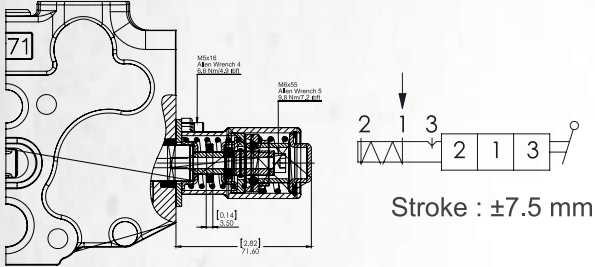
**SC12** 2 Positions Spring Return in 2nd Position  
2 Pozisyon, 2. Pozisyona Yaylı



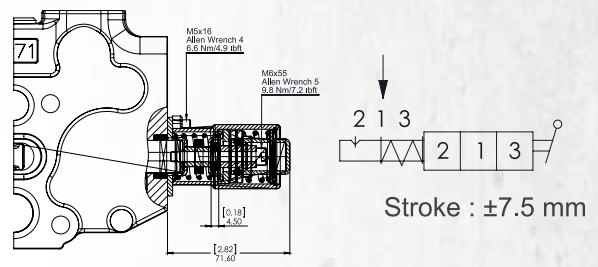


**Spool Positioners with Detent** *Detanlı Sürgü Kontrolleri*

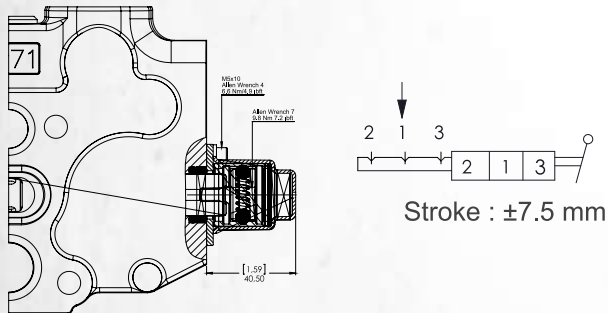
**SC2** 3 Position Spring Return, Detent in Pos. 3  
3 Pozisyon Yaylı, 3.Pozisyon Detanlı



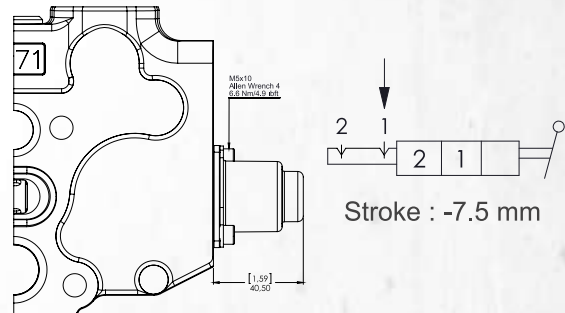
**SC3** 3 Position Spring Return, Detent in Pos. 2  
3 Pozisyon Yaylı, 3.Pozisyon Detanlı



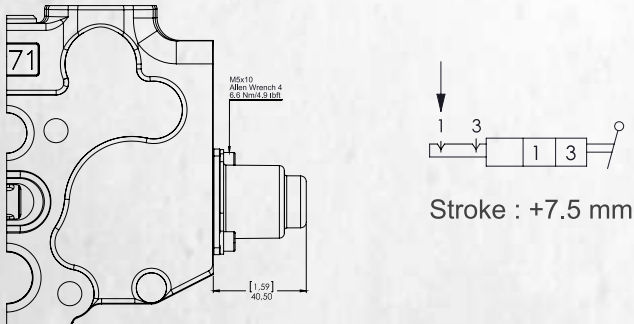
**SC4** 3 Position Detent in All Positions  
3 Pozisyon Detanlı



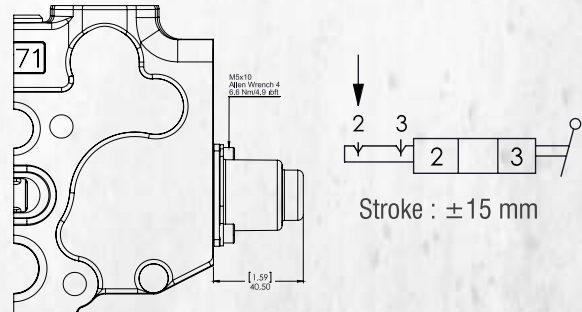
**SC7** 2 Position Detent  
2 Pozisyon Detanlı



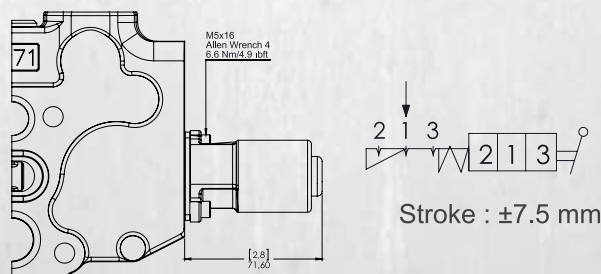
**SC8** 2 Position Detent  
2 Pozisyon Detanlı



**SC13** 2 Position Detent  
2 Pozisyon Detanlı

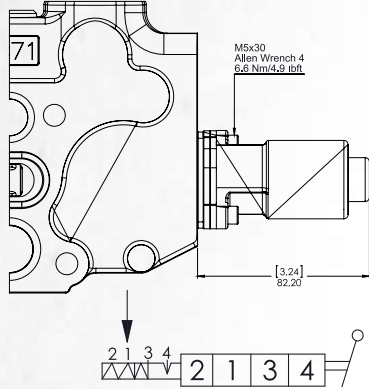


**SC28** 3 Position Spring Centered with Detent  
3 Pozisyon Yaylı ve Detanlı



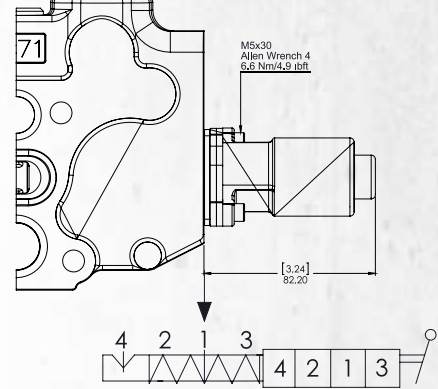
**4 Position a Side Spool Positioners 4 Pozisyon A Tarafı Sürgü Kontrolleri**

**SC9** 4 Position Spring Return, Detent in 4th Pos.  
4 Pozisyon Yaylı, 4.Pozisyon Detantlı



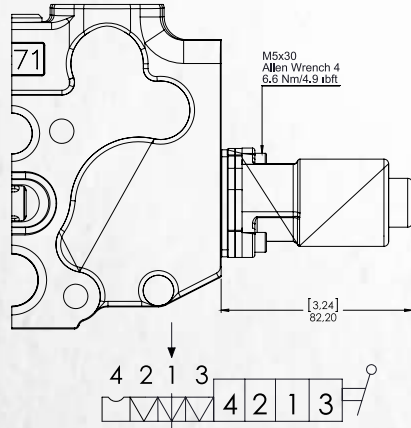
Used with Spool ST9B Stroke :  $\pm 7.5$  mm / +5.5 mm  
ST9B Sürgü ile kullanılır

**SC23** 4 Position Spring Return, Detent in 4th Pos.  
4 Pozisyon Yaylı, 4.Pozisyon Detantlı



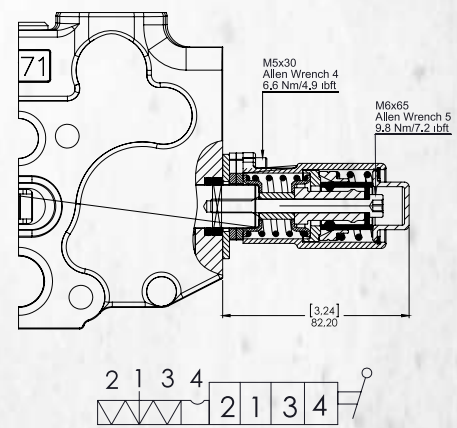
Used with Spool ST9A Stroke :  $\pm 7.5$  mm / -5.5 mm  
ST9A Sürgü ile kullanılır

**SC21** 4 Position Spring Return, Feel Detent in 4th Pos.  
4 Pozisyon Yaylı, 4.Pozisyon Hissetmeli Detantlı



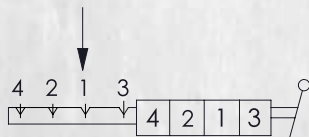
Used with Spool ST10A  
ST10A Sürgü ile kullanılır

**SC22** 4 Position Spring Return, Feel Detent in 4th Pos.  
4 Pozisyon Yaylı, 4.Pozisyon Hissetmeli Detantlı



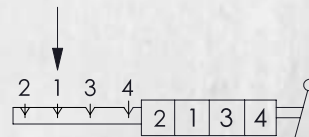
Used with Spool ST10B  
ST10B Sürgü ile kullanılır

**SC10** 4 Position Detent in All Positions  
4 Pozisyon Tüm Pozisyonlar Detantlı



Used with Spool ST9A Stroke :  $\pm 7.5$  mm / -5 mm  
ST9A Sürgü ile kullanılır

**SC24** 4 Position Detent in All Positions  
4 Pozisyon Tüm Pozisyonlar Detantlı



Used with Spool ST9B Stroke :  $\pm 7.5$  mm / +5.5 mm  
ST9B Sürgü ile kullanılır

# SC15

On-Off Pneumatic Control

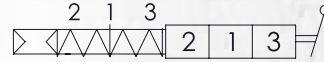
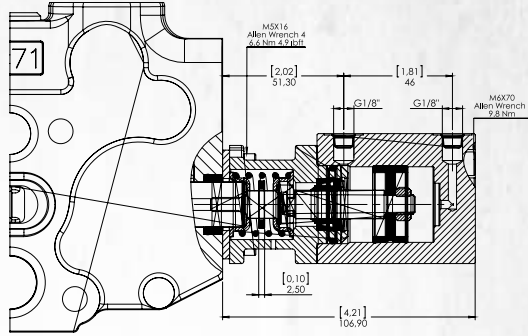
On-Off Pnömatik Kontrol

Pilot Pressure  
Pilot Basıncı

Min. 6 Bar / 85 PSI  
Max. 12 Bar / 170 PSI

Stroke (mm)  
Strok (mm)

±7.5 mm



# SC30

On-Off Electro-Pneumatic Control

On-Off Elektro-Pnömatik Kontrol

### Operation Characteristics

Pilot Pressure  
Pilot Basıncı

Min. 6 Bar / 85 PSI  
Max. 12 Bar / 170 PSI

### Coil Characteristics

Coil Connection Type  
Bobin Bağlantı Tipi

DIN 43650

Supply Voltage  
Voltaj

12VDC, 24VDC

Protection Type  
Koruma

IP65

Nominal Voltage Tolerance  
Nominal Voltaj Toleransı

±10%

Duty cycle  
Görev Çevrimi

100%

Absorbed Power  
Güç

DC 8W

Coil Insulation Class  
Yalıtım Sınıfı

Class "H" coil as from  
the IEC 85 standard.  
Class "H" wire (200° C).

Maximum Temperatures  
Maksimum Çalışma Sıcaklığı

Class "F" 155°C  
Class "H" 180°C

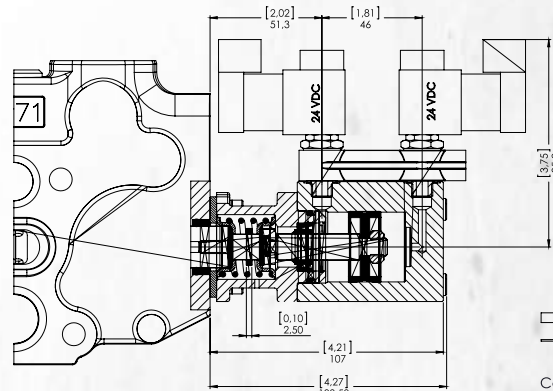
Stroke (mm)  
Strok (mm)

±7,5 mm

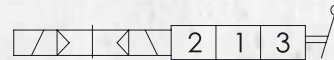
Kit Order Code  
Kit Sipariş Kodu

12VDC - 2005712000  
24VDC - 2005448000

Supply Voltage	Order Code
12VDC	<b>SC302</b>
24VDC	<b>SC304</b>



Coil with  
DIN 43650  
connector



# SC16

On-Off Hydraulic Control

On-Off Hidrolik Kontrol

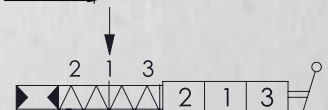
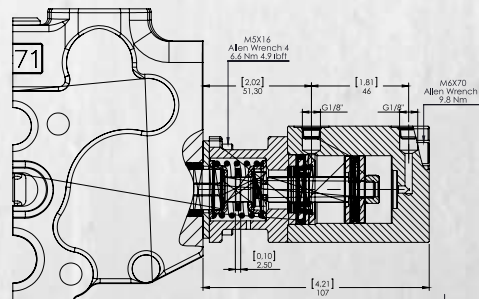
### Operation Characteristics

Pilot Pressure  
Pilot Basıncı

Min. 6 Bar / 85 PSI  
Max. 50 Bar / 720 PSI

Stroke (mm)  
Strok (mm)

±7.5 mm





# SC17

On-Off Electro-Hydraulic Control

On-Off Electro-Hydraulic Control

### Operation Characteristics

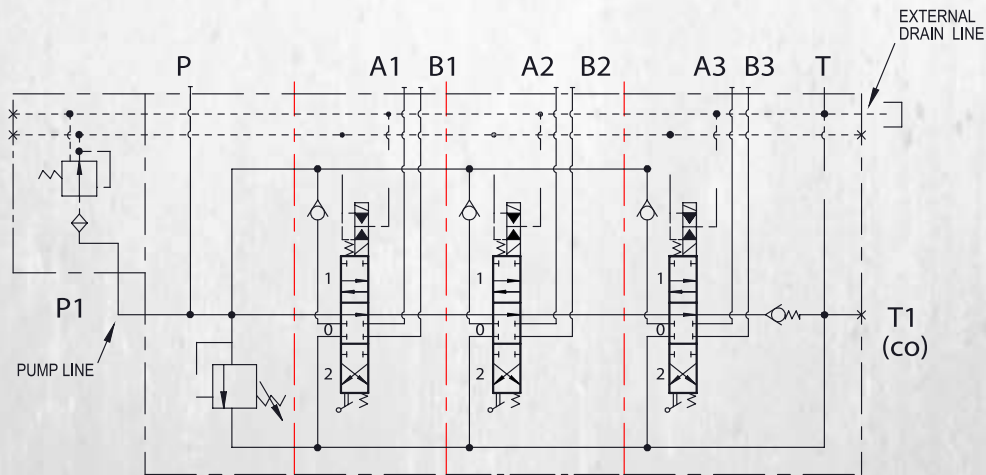
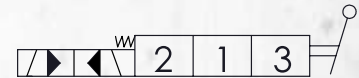
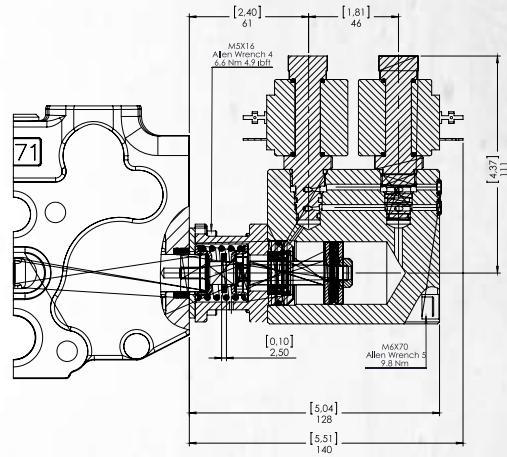
Pilot Pressure <i>Pilot Basıncı</i>	Min. 10 Bar / 145 PSI Max. 25 Bar / 360 PSI
Back Pressure <i>Tank Basıncı</i>	Max. 3 Bar

### Coil Characteristics

Coil Connection Type <i>Bobin Bağlantı Tipi</i>	DIN 43650
Supply Voltage <i>Voltaj</i>	12VDC, 24VDC
Protection Type <i>Koruma</i>	IP65
Nominal Voltage Tolerance <i>Nominal Voltaj Toleransı</i>	±10%
Duty cycle <i>Görev Çevrimi</i>	100%
Absorbed Power <i>Güç</i>	18W
Coil Insulation Class <i>Yalıtım Sınıfı</i>	Class "F" 155°C
Maximum Temperatures <i>Maksimum Çalışma Sıcaklığı</i>	100°C

Stroke (mm) <i>Strok (mm)</i>	±7.5 mm
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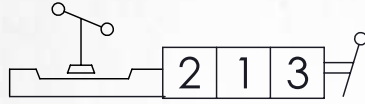
Supply Voltage	Order Code
12VDC	<b>SC172</b>
24VDC	<b>SC174</b>



## SC18

3 Positions, Microswitch Operation in both positions (NC)

3 Pozisyon, Çift Taraflı Mikrosviç Kontrol (NK)



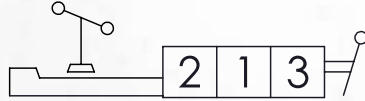
Stroke :  $\pm 7.5$  mm

Configuration with normally open (NO) circuit is available, please contact our sales department.  
*Normalde Açık (NA) konfigürasyon için lütfen satış departmanımızla bağlantıya geçiniz.*

## SC18A

3 Positions, Microswitch Operation in 3rd Position

3 Pozisyon, 3. Pozisyona Mikrosviç Kontrol

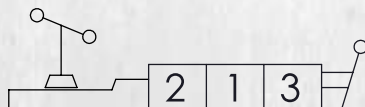


Stroke :  $\pm 7.5$  mm

## SC18B

3 Positions, Microswitch Operation in 2nd Position

3 Pozisyon, 2. Pozisyona Mikrosviç Kontrol



Stroke :  $\pm 7.5$  mm

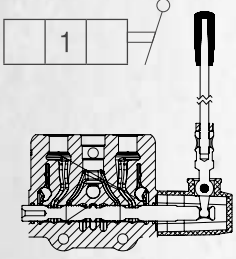
## Spool Options Sürgü Tipleri

WKV201 / C - R (180) / C SC4 **ST11** V13 K3 / D

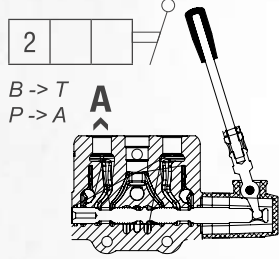
Spool Options  
Sürgü Tipleri

### Spool Positions Sürgü Pozisyonları

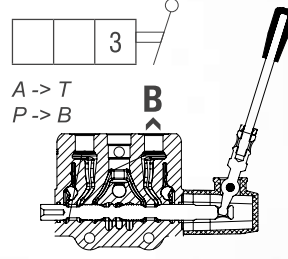
1st Position  
1. Pozisyon  
Spool Neutral Position  
Nötr



2nd Position  
2. Pozisyon  
Spool In Position  
Mil İçerde

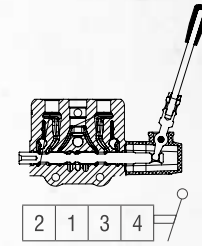


3rd Position  
3. Pozisyon  
Spool Out Position  
Mil Dışarda

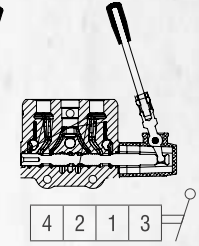


4th Position  
4. Pozisyon

4th Pos. Spool Out  
4. Pozisyon Mil Dışarda

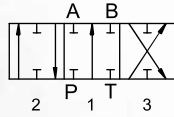


4th Pos. Spool In  
4. Pozisyon Mil İçerde



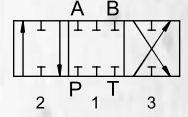
**ST1**

3 Position, Double Acting  
3 Pozisyon, Çift Etkili



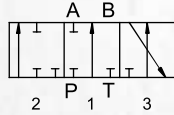
**ST4**

3 Position, Closed Center  
3 Pozisyon, Kapalı Merkez



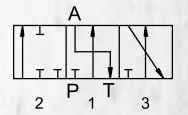
**ST2**

3 Position, A Port Single Acting  
3 Pozisyon, A Port Tek Etkili



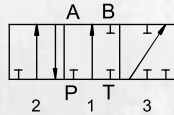
**ST5**

3 Position, A Port Single Acting and to Tank  
3 Pozisyon, A Port Tek Etkili ve Tank Açık



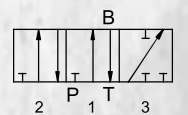
**ST3**

3 Position, B Port Single Acting  
3 Pozisyon, B Port Tek Etkili



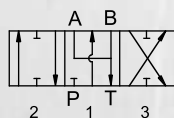
**ST6**

3 Position, B Port Single Acting and to Tank  
3 Pozisyon, B Port Tek Etkili ve Tank Açık



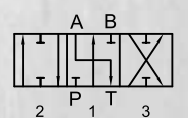
**ST11**

3 Position, Double Acting, A/B to Tank  
3 Pozisyon, Çift Etkili A ve B Tank Açık



**ST7**

3 Position, Double Acting A to Tank  
3 Pozisyon, Çift Etkili ve A Tank Açık

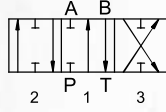




**ST8**

3 Position,  
Double Acting B to Tank

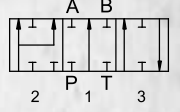
3 Pozisyon,  
Çift Etkili ve B Tanka Açık



**S12A**

3 Position, Double Acting With  
Regenerative in 3rd Position  
(2nd Position Spool In)

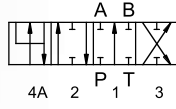
3 Pozisyon, Çift Etkili  
3. Pozisyonda Rejeneratif  
(Mil İçerde 2. Pozisyon)



**ST9A**

4 Position, Double Acting with  
Float in 4th Position  
(4th Position Spool In)

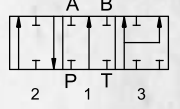
4 Pozisyon, 4. Pozisyonda Float  
(Mil İçerde 4. Pozisyon)



**ST12B**

3 Position, Double Acting With  
Regenerative in 2nd Position  
(3rd Position Spool Out)

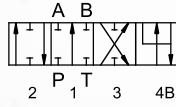
3 Pozisyon, Çift Etkili  
2. Pozisyonda Rejeneratif  
(Mil Dışarda 3. Pozisyon)



**ST9B**

4 Position, Double Acting with  
Float in 4th Position  
(4th Position Spool Out)

4 Pozisyon, 4. Pozisyonda Float  
(Mil Dışarda 4. Pozisyon)



**ST19**

3 Position, Series Spool

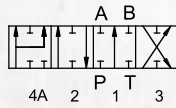
3 Pozisyon, Seri Sürgü



**ST10A**

4 Position, Double Acting with  
Regenerative in 4th Position  
(4th Position Spool In)

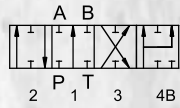
4 Pozisyon,  
4. Pozisyonda Rejeneratif  
(Mil İçerde 4. Pozisyon)



**ST10B**

4 Position, Double Acting With  
Regenerative in 4th Position  
(4th Position Spool Out)

4 Pozisyon,  
4. Pozisyonda Rejeneratif  
(Mil Dışarda 4. Pozisyon)



## Auxiliary Valves

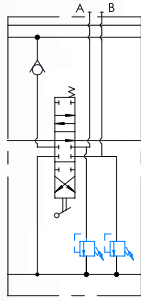
### Yardımcı Valfler

WKV201 / C - R (180) / C SC4 ST11 **V13** K3 / D

Auxiliary Valves  
Yardımcı Valfler

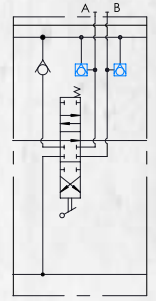
**V1**

Antishock valves on A & B ports  
A & B portlarında antişok valfi



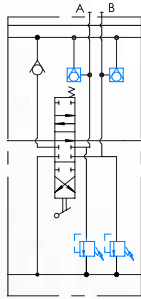
**V4**

Anticavitation valves on A & B ports  
A & B portlarında antikavitasyon valfi



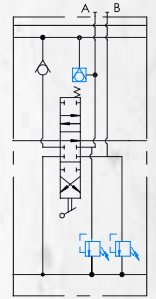
**V7**

Antishock & anticavitation valves on A & B ports  
A & B portlarında antişok & antikavitasyon valfi



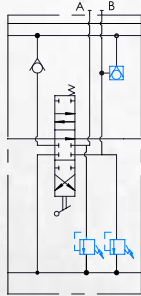
**V8**

Antishock & anticavitation valve on port A & antishock valve on port B  
A portunda antişok & antikavitasyon valfi & B portunda antişok valfi



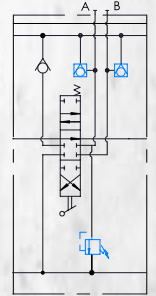
**V9**

Antishock valve on port A & antishock & anticavitation valve on port B  
A portunda antişok valfi & B portunda antişok & antikavitasyon valfi



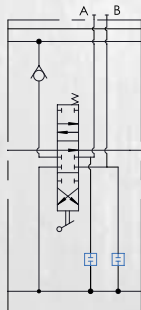
**V12**

Antishock & anticavitation valve on port A & anticavitation valve on port B  
A portunda antişok & antikavitasyon valfi & B portunda antikavitasyon valfi



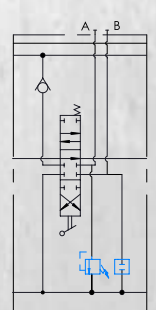
**V13**

Port relief cavity plug on A & B ports  
A & B portlarında kör tapa



**V17**

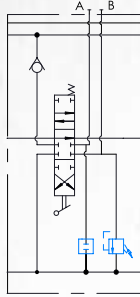
Antishock valve on port A & port relief cavity plug on port B  
A portunda antişok & B portunda kör tapa



**V18**

Port relief cavity plug on port A  
& antishock valve on port B

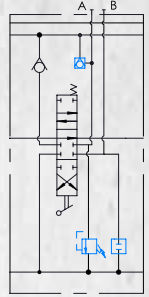
A portunda kör tapa  
& B portunda antişok valfi



**V19**

Antishock & anticavitation valve  
on port A & port relief cavity plug  
on port B

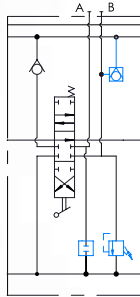
A portunda antişok  
& antikavitasyon valfi  
& B portunda kör tapa



**V20**

Port relief cavity plug on port A  
& antishock & anticavitation valve  
on port B

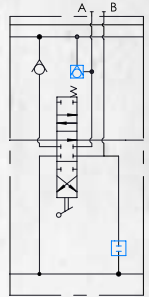
A portunda kör tapa  
& B portunda antişok  
& antikavitasyon valfi



**V21**

Anticavitation valve on port A  
& port relief cavity plug on port B

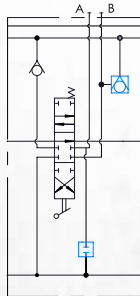
A portunda antikavitasyon valfi  
& B portunda kör tapa



**V22**

Port relief cavity plug on port A  
& anticavitation valve on port B

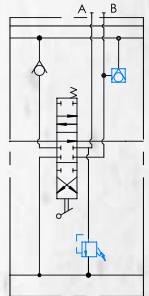
A portunda kör tapa  
& B portunda antikavitasyon valfi



**V27**

Antishock valve on port A  
& anticavitation valve on port B

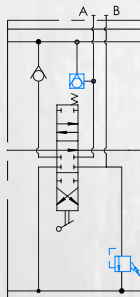
A portunda antişok  
& B portunda antikavitasyon valfi



**V28**

Anticavitation valve on port A  
& antishock valve on port B

A portunda antikavitasyon valfi  
& B portunda antişok valfi





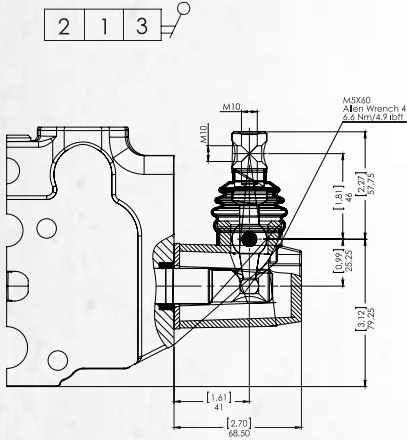
# Lever Types

## Sap Tipleri

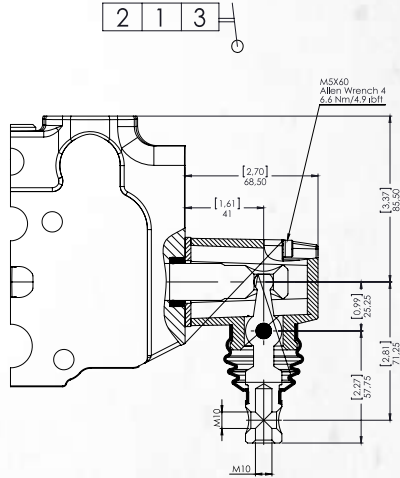
WKV201 / C - R (180) / C SC4 ST11 V13 **K3** / D

Lever Types  
Sap Tipleri

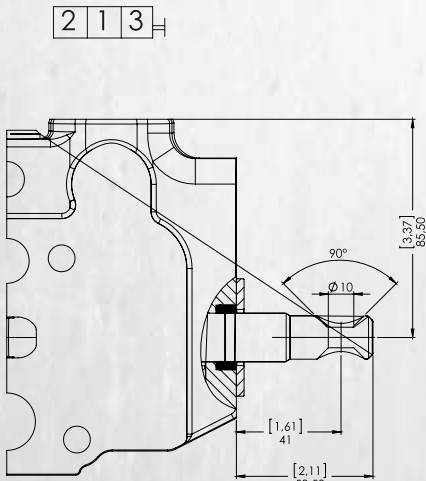
**NO** CODE  
Standard Lever Kit  
Standart Sap Kapađı



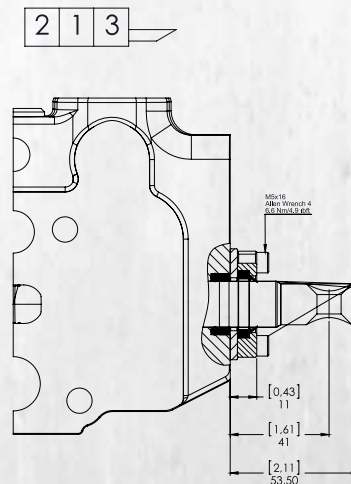
**K1** Reverse Lever Kit  
Ters montaj Sap Kapađı



**K2** No Lever  
Sap Kapaksız



**K3** Dust Proof Plate Kit  
Toz Kapaklı

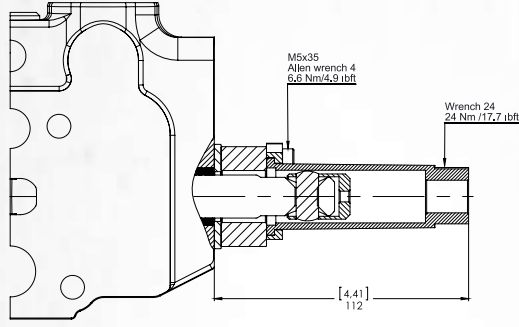


**KT**

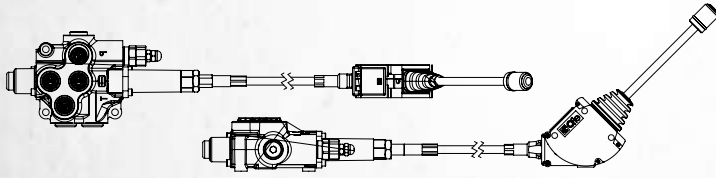
Cable Connection Kit

Kablo Bağlantı Kiti

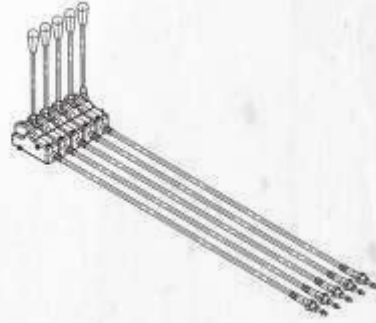
1 0 2 H



### Lever Cable Remote Control Halat Kontrol



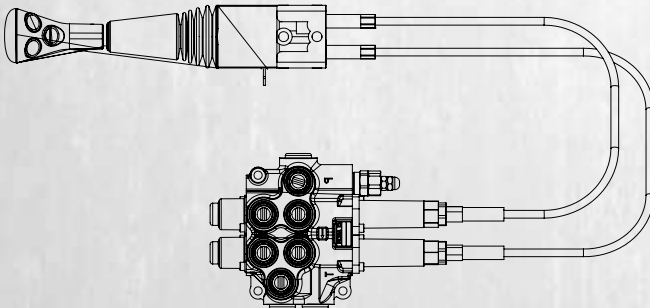
### Cable remote control for Group of Levers Halat Kontrol Grubu



Lever cable remote control and cable remote control for group of levers are a modular system offering unlimited number of levers together through screws, also with many different configurations and cables lengths. Assembled on the valve only on request and extra charge. Please contact our sales department for details.

Halat kontrol ve halat kontrol grubu için farklı uzunlukları mevcuttur. Halat Kontrol grubu ise talebe göre çeşitli dilim sayıları için ve çeşitli uzunluklarda temin edilir. Kontrol grubu birbirine saplamlarla bağlanmaktadır. Lütfen detaylı bilgi için satış departmanımızla bağlantıya geçiniz.

### Remote Joystick Control Joystik Halat Kontrol



Remote joystick control is available with several options. Please indicate the cable length demanded and contact our sales department for further demands.

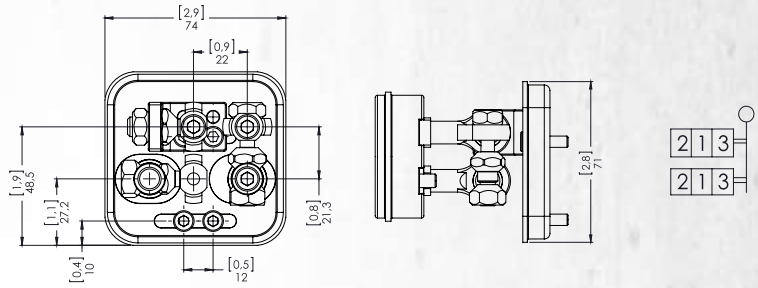
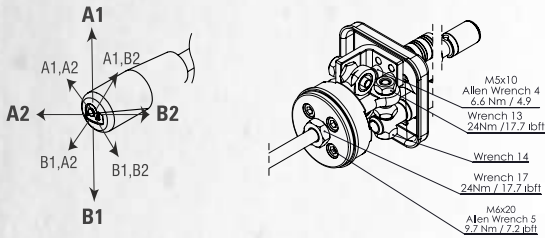
Joystik halat kontrol farklı çeşit ve uzunluklarda mevcuttur. Lütfen satış departmanımızla bağlantıya geçiniz.

# Joystick Control

## Joystik Kontrol

### K7 Manual Joystick with pivot on top left

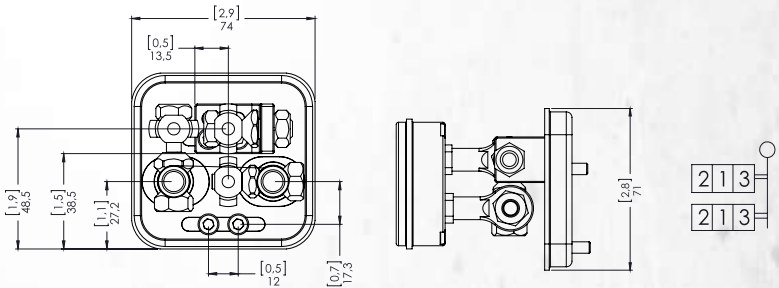
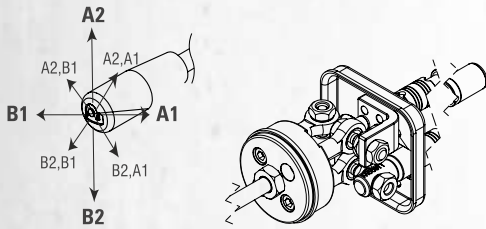
#### Manuel Joystick Kontrol (Pivot Sol Üst)



K7 is standard configuration unless otherwise specified.  
Aksi belirtilmedikçe K7 standart konfigürasyondur.

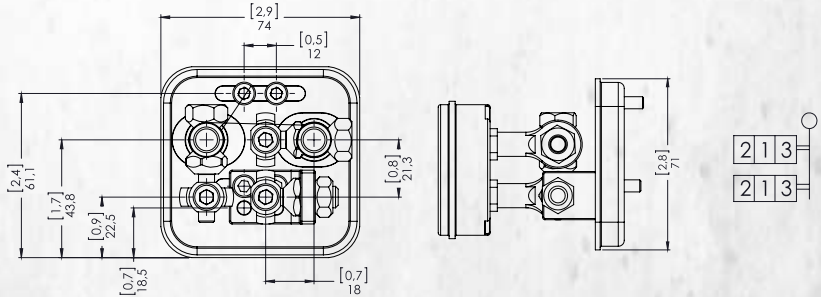
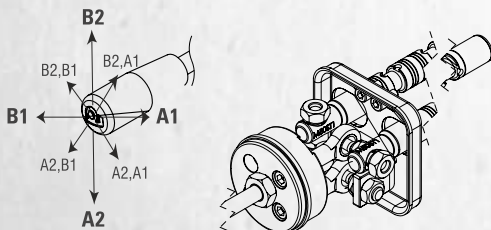
### K7B Manual Joystick with pivot on top right

#### Manuel Joystick Kontrol (Pivot Sağ Üst)



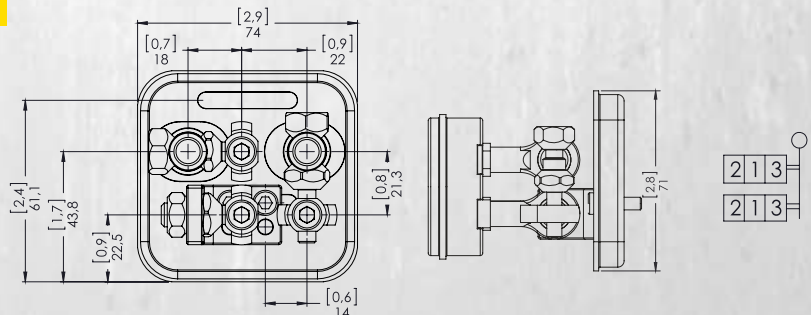
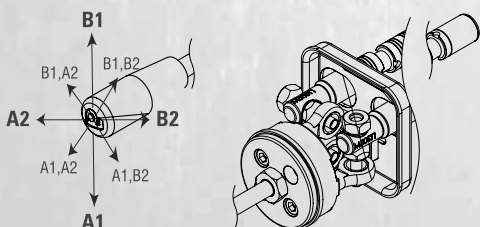
### K7C Manual Joystick with pivot on bottom right

#### Manuel Joystick Kontrol (Pivot Sağ Alt)



### K7D Manual Joystick with pivot on bottom left

#### Manuel Joystick Kontrol (Pivot Sol Alt)





## Outlet Options

### Tank (T) Hattı Opsiyonları

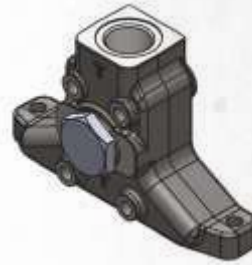
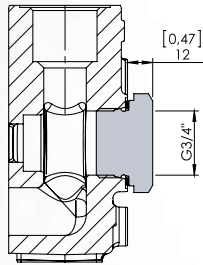
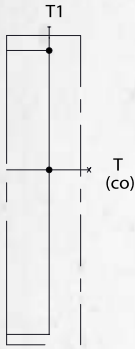
WKV201 / C - R (180) / C SC4 ST11 V13 K3 / D - H

Outlet Options  
Tank (T) Hattı Opsiyonları

#### Standard Open Center Upper Outlet

Standart Açık Merkez

Port Thread	Code / Kod
G 1"	<b>D</b>



Please contact our sales department for other outlet options.  
Özel talepleriniz için lütfen Satış Departmanımızla bağlantıya geçin.

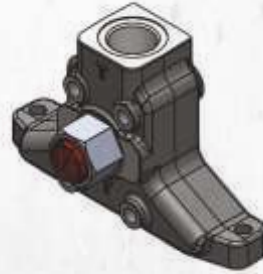
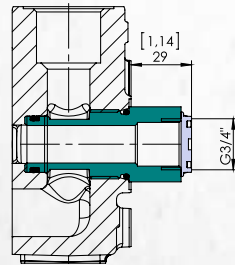
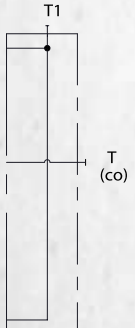
#### Outlet with Carry-Over

Carry-Over

When Carry-Over is used for series connection with another valve, T1 of the first valve must be connected to the tank.

Carry-over kullanıldığında, 1.valfin tank hattı (T1) mutlaka tanka bağlanmalıdır.

Port Thread	Code / Kod
G 1"	<b>D-H</b>

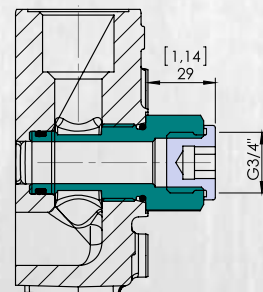
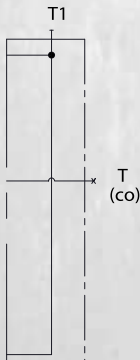


Carry-over is coded at the outlet options part. Ex; WKV201/C-R(180)/CSC1ST1KT/D-H  
Carry-over, dönüş kapağı bölümünde kodlanır. Örn; WKV201/C-R(180)/CSC1ST1KT/D-H

#### Outlet with Closed Center Plug

Kapalı Merkez

Port Thread	Code / Kod
G 1"	<b>D-K</b>



Closed Center is coded at the outlet options part. Ex; WKV201/C-R(180)/CSC1ST1KT/D-K  
Kapalı Merkez, dönüş kapağı bölümünde kodlanır. Örn; WKV201/C-R(180)/CSC1ST1KT/D-K

SERIES CIRCUIT  
PARALEL CIRCUIT

Pneumatic

Hydraulic

LEVER

CONTROL

REMOTE JOYSTICK

CABLE REMOTE

SPOOL

Directional  
SECTIONAL VALVE

Control

OIL VISCOSITY

BSP

COIL CONNECTION

MAIN RELIEF  
VALVE

CARRY-OVER  
Outlet

CLOSED CENTER PLUG

Inlet



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