YUKEN 유압기기 작동원리도집

YUKEN
유압기기

일본유켄공업 Overseas Sales Department

Hamamatsucho Seiwa BLDG.
4-8, Shiba-Daimon 1-Chome, Minato-ku
Tokyo 105-0012 JAPAN

Tel +81-3-3432-2110
Fax +81-3-3436-2344
URL http://www.yuken.co.jp
E-mail int.bd@yuken.co.jp

한국유켄공업(주)

본 사 서울시 구로구 경인로 590 아주빌딩 210호 (〒08213)
Tel 02-2675-2110, 02-2665-2118 (물류) Fax 02-2675-2104

부산지점 부산시 사상구 광장로 20번길 58-16 (〒46977)
Tel 051-315-2110 Fax 051-315-2104

김해공장 경남 김해시 장유로 115번길 58-1 (〒50971)
Tel 055-312-2150 Fax 055-312-2107

한국유켄공업(주)
www.yuken.co.kr

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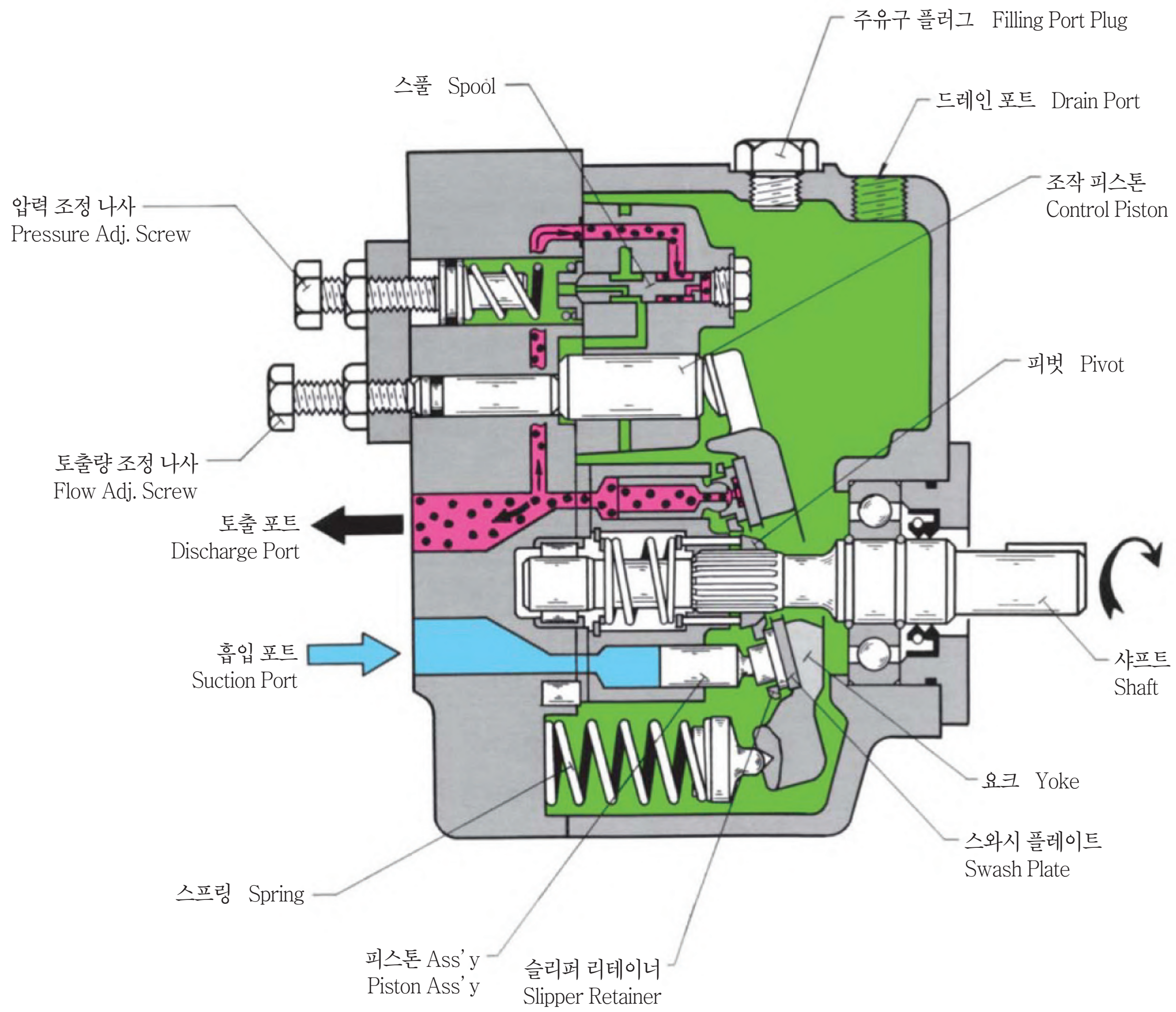
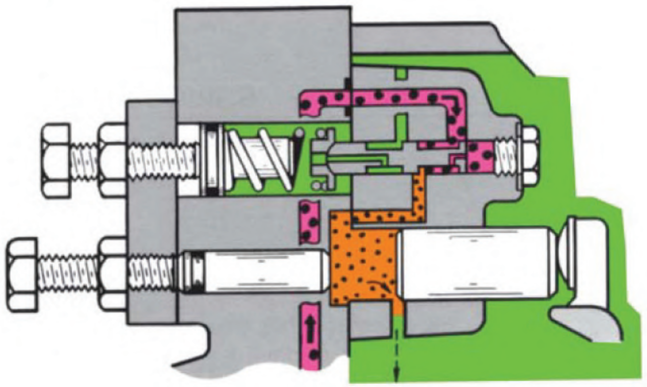
K 파워 패키지 POWER PACKAGES

L 액세서리 ACCESSORIES

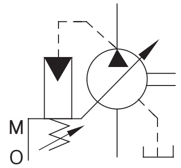
● 최대 토출량 At Full Flow

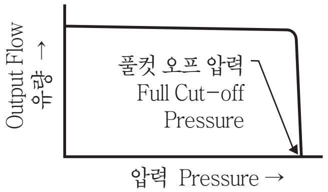


● 풀컷 오프일 때 At Full Cut-off

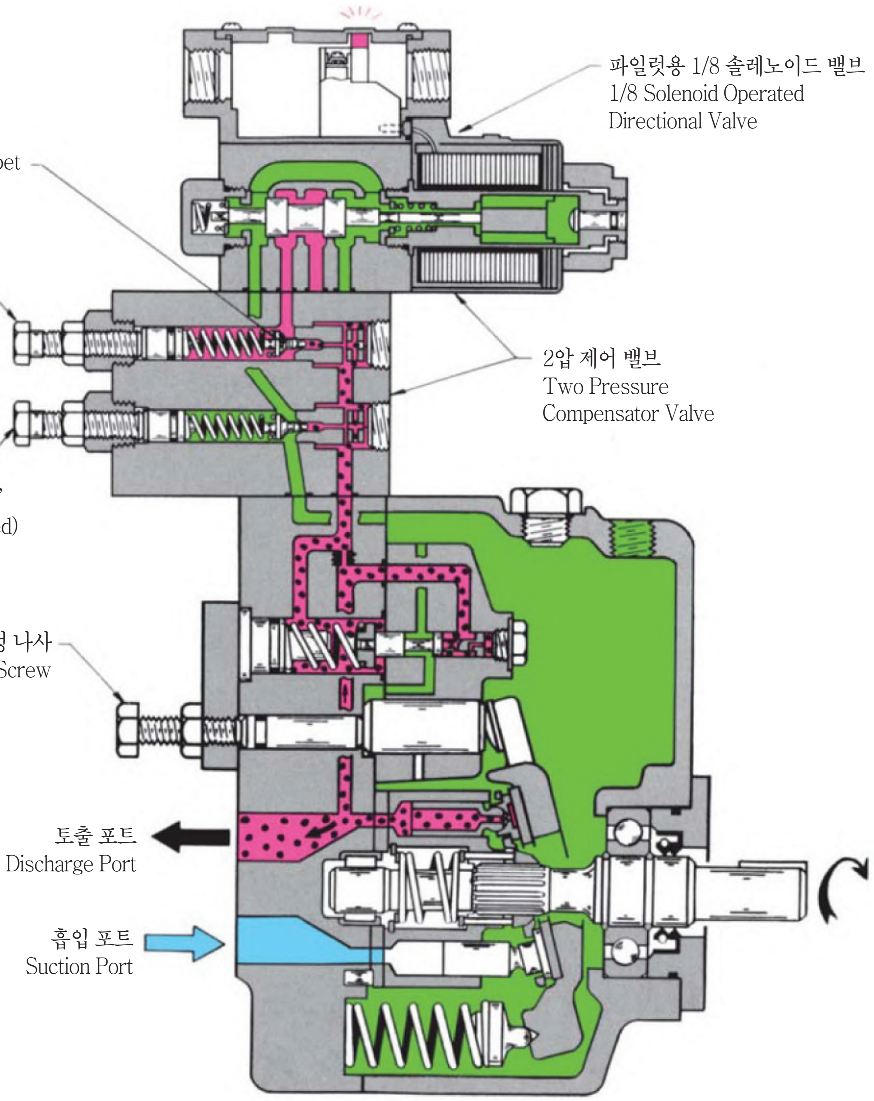


KS 유압기호
Graphic Symbol

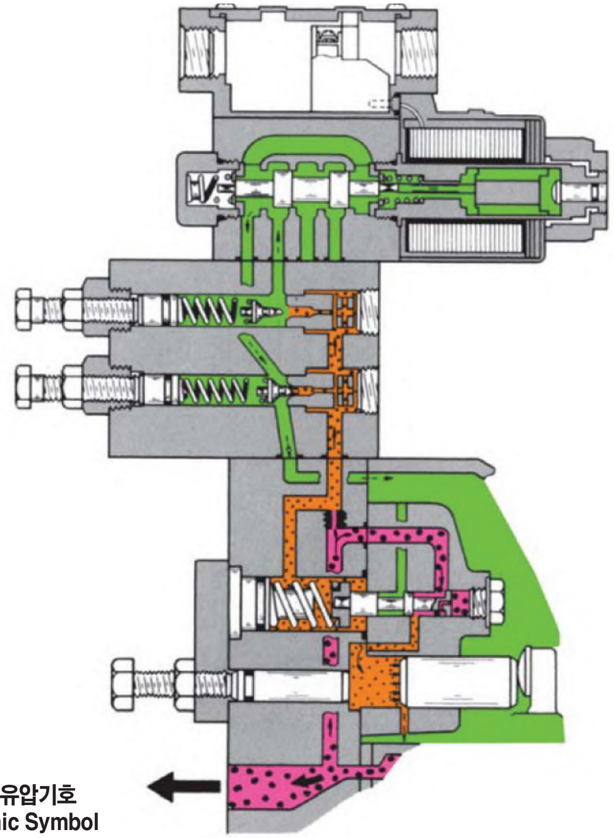




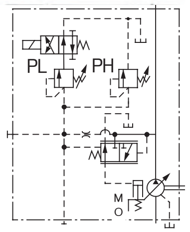
● 솔레노이드 'ON' 일 때 Solenoid Energized



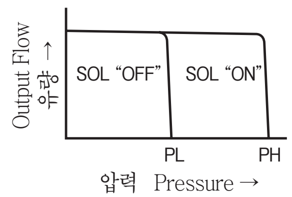
● 솔레노이드 'OFF' 일 때 Solenoid De-energized



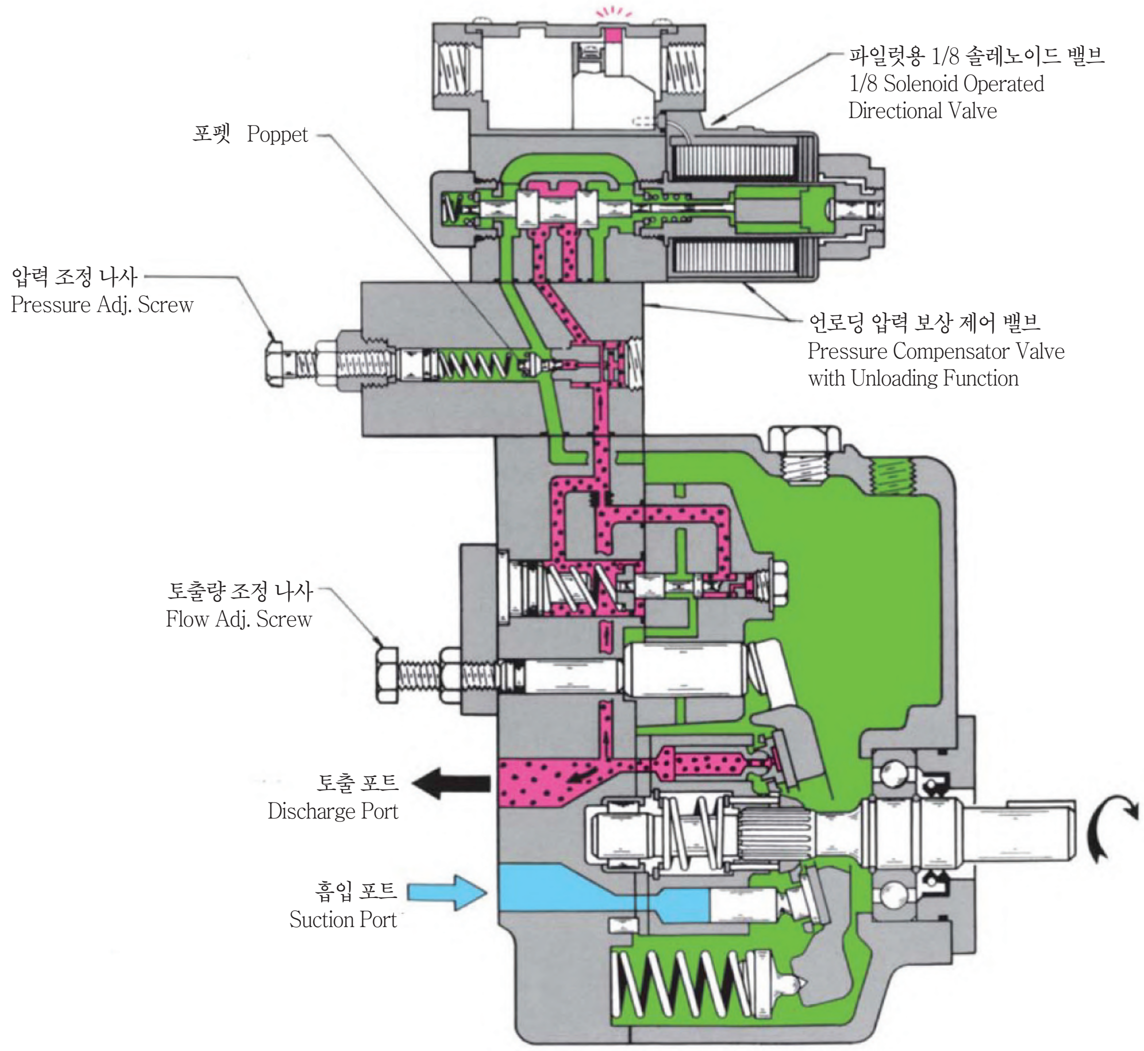
KS 유압기호
Graphic Symbol



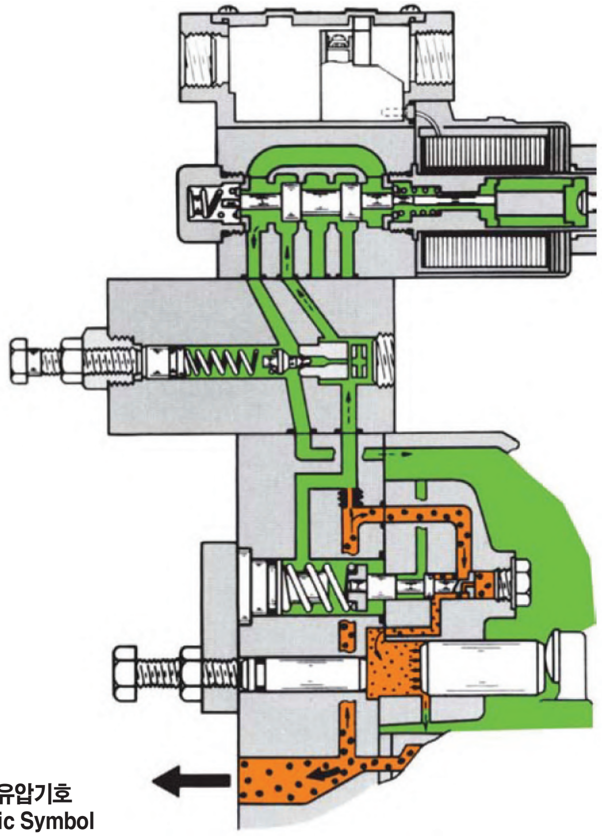
특성
Performance Characteristic



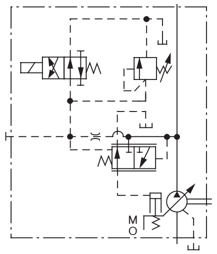
● 솔레노이드 "ON"일 때 Solenoid Energized



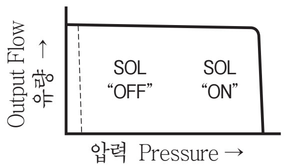
● 솔레노이드 "OFF"일 때 (언로딩시)
Solenoid De-energized (Unloading Condition)



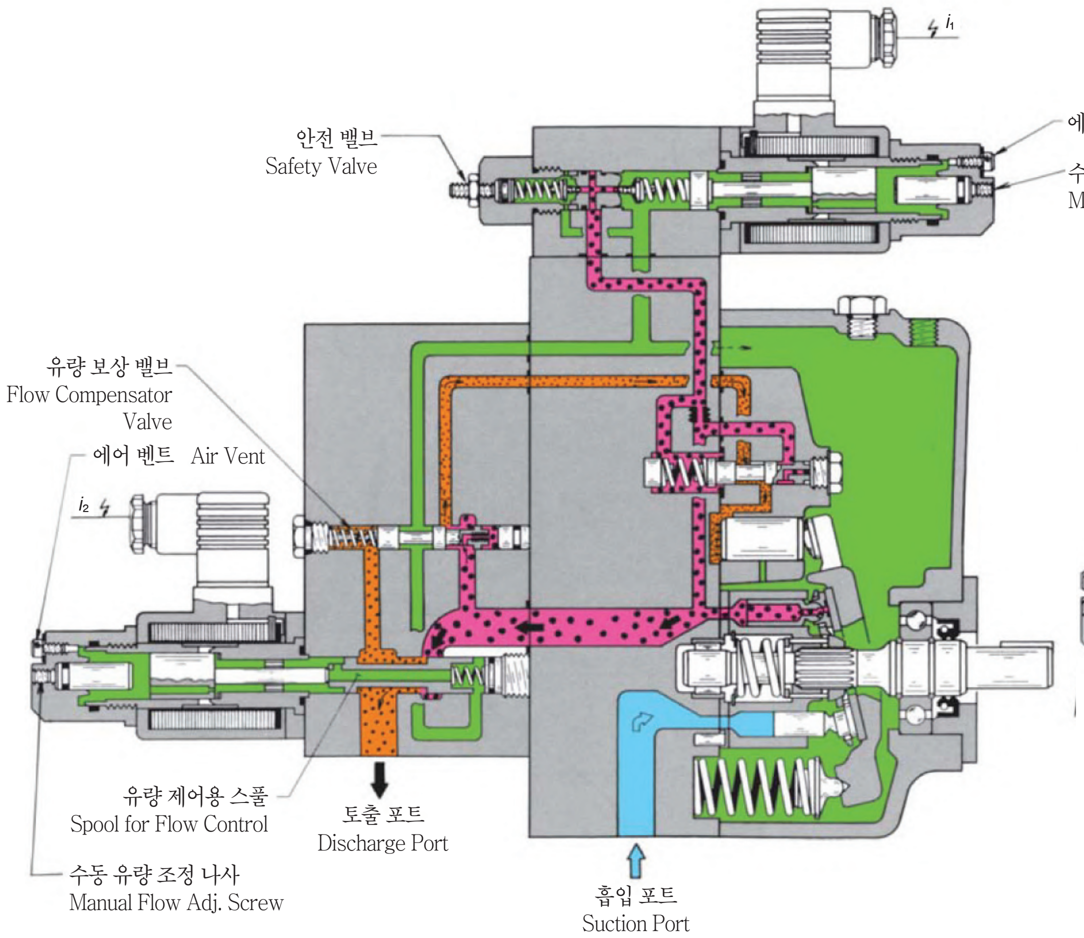
KS 유압기호
Graphic Symbol



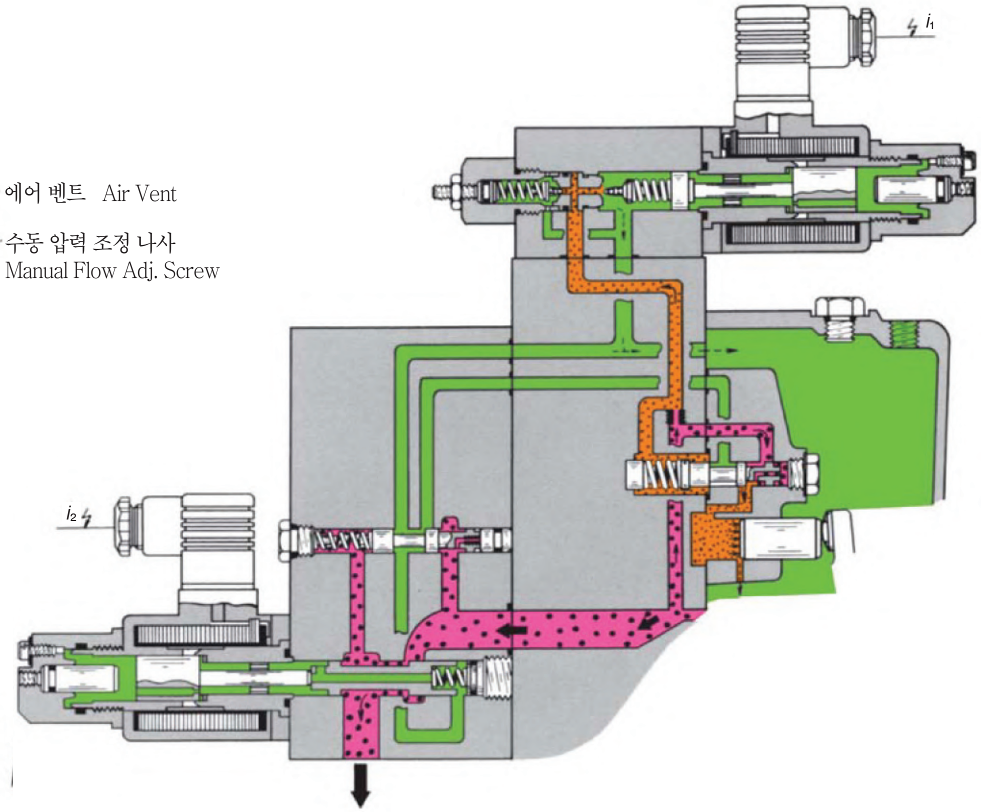
특성
Performance Characteristic



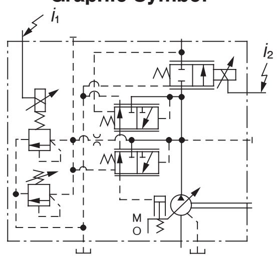
● 유량 제어일 때 At Flow Control



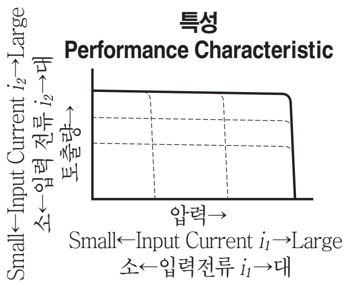
● 압력 제어일 때 At Pressure Control



KS 유압기호 Graphic Symbol

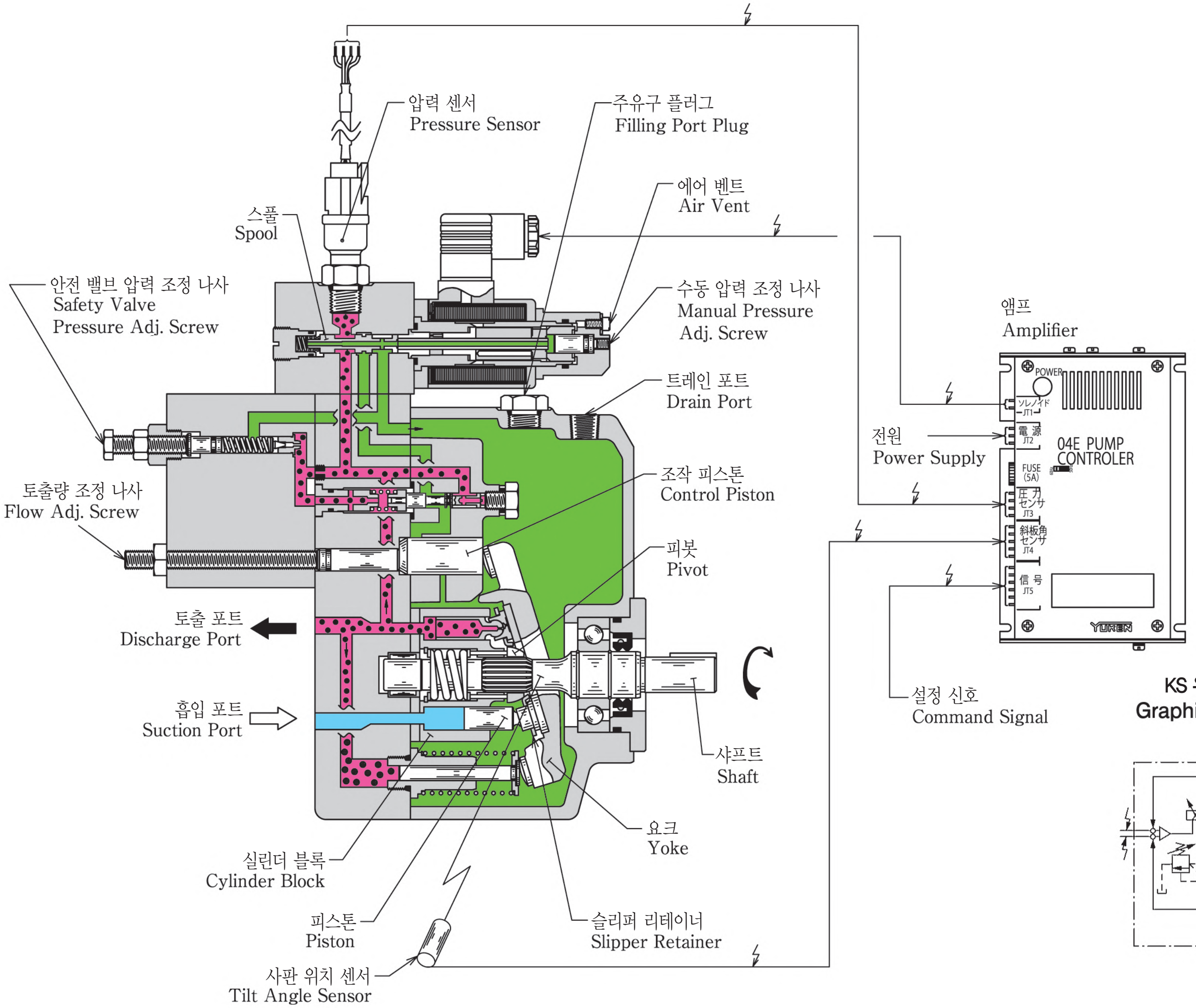


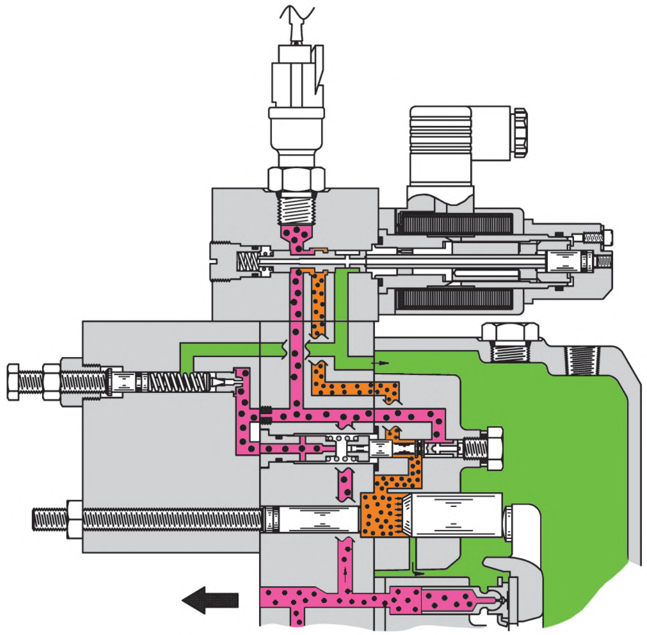
특성 Performance Characteristic



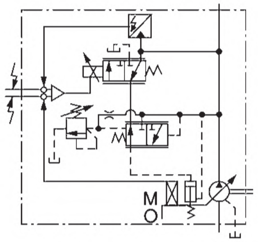
● 최대 토출량일 때 At Full Flow

● 압력 제어시 At Pressure Control

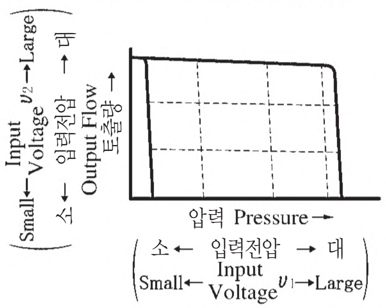




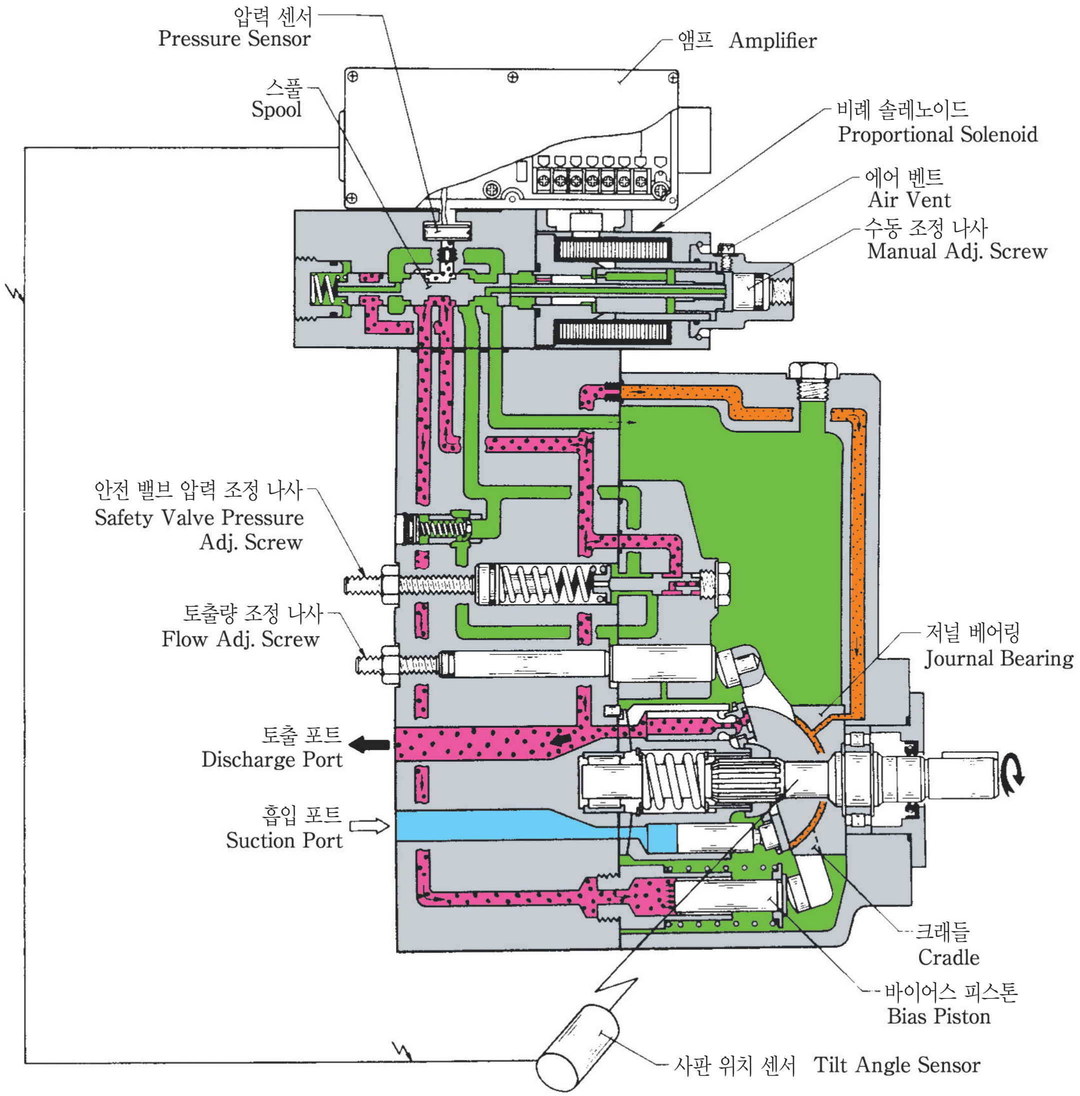
KS 유압기호
Graphic Symbol



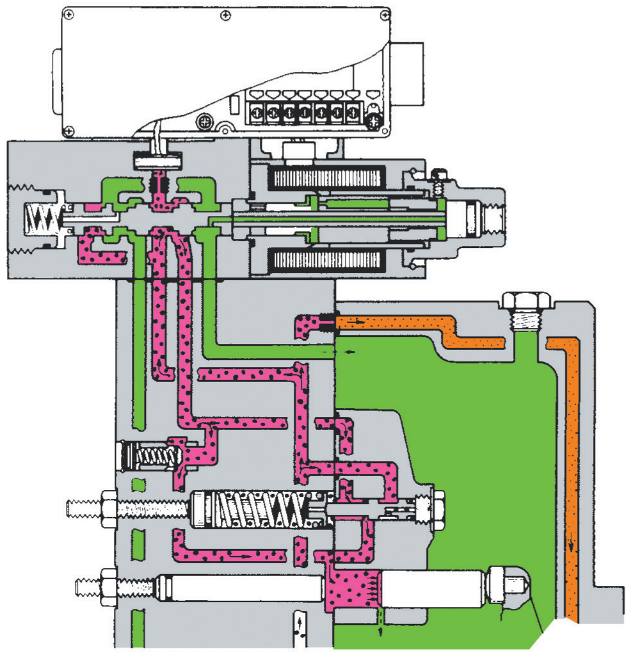
특성
Performance Characteristic



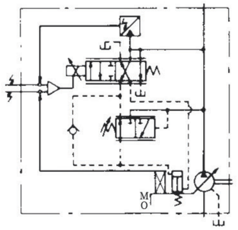
● 최대 유량일 때 At Full Flow



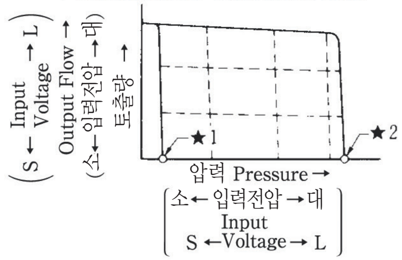
● 입력 신호 0V일 때 (언로딩시)
When Input Signal is 0V (Unloading Condition)



KS 유압기호
Graphic Symbol

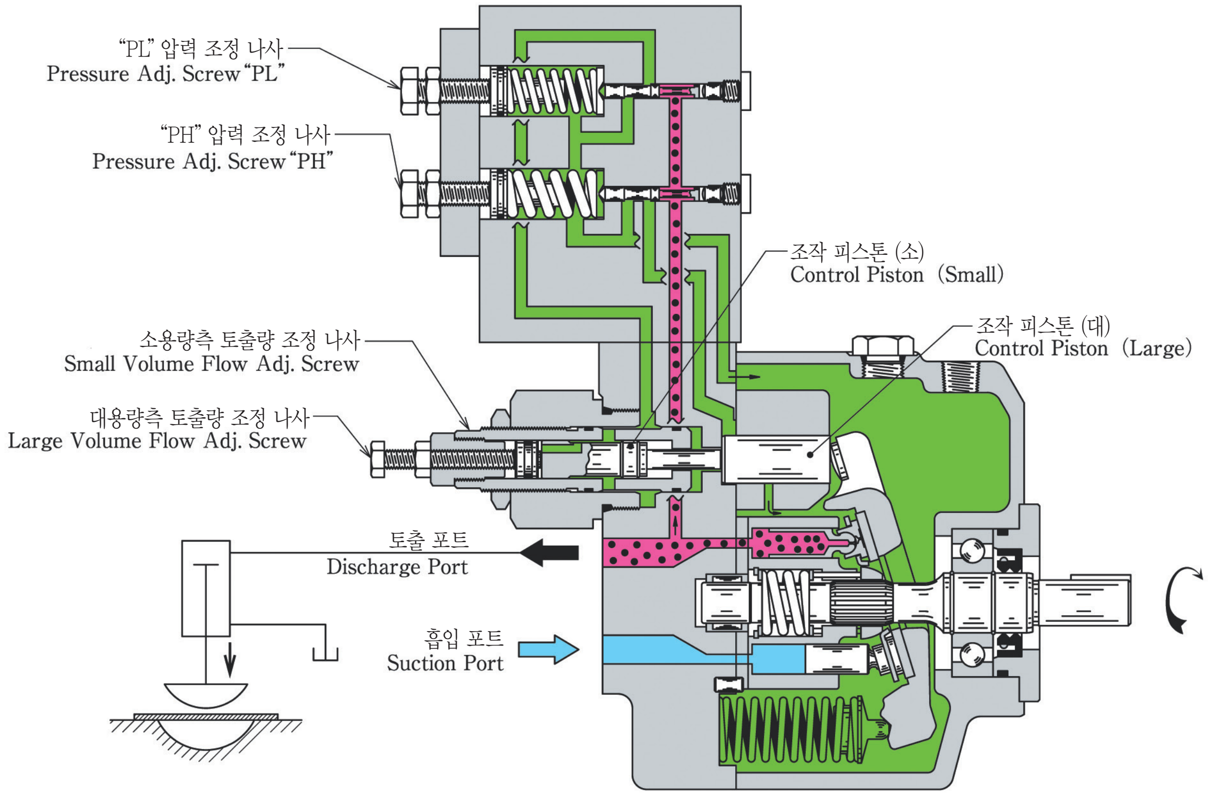


특성
Performance Characteristic

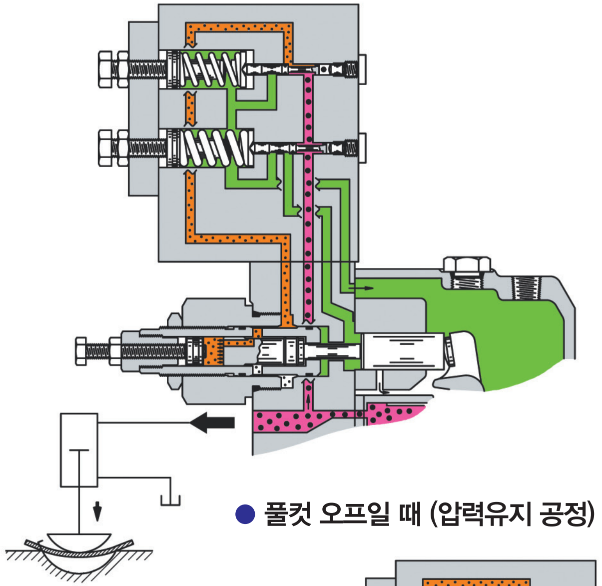


★1. 입력신호 0일 때 언로딩 압력
★2. 안전 밸브 설정 압력
★1. Unloading pressure when input signal is 0 V.
★2. Safety valve setting pressure

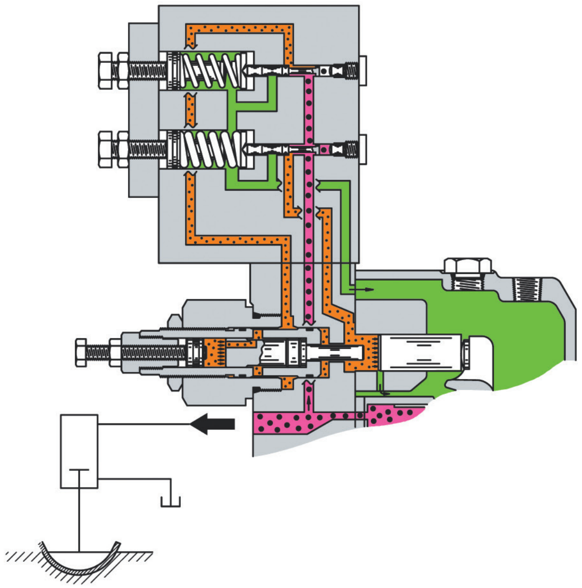
● 저압 대유량일 때 (빠른 공정) At Quick Feed



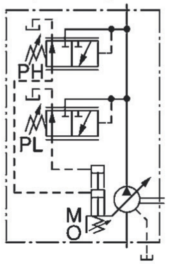
● 고압 소유량일 때 (가압성형 공정) At Pressure Forming



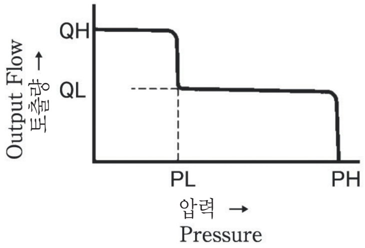
● 풀컷 오프일 때 (압력유지 공정) At Holding Pressure



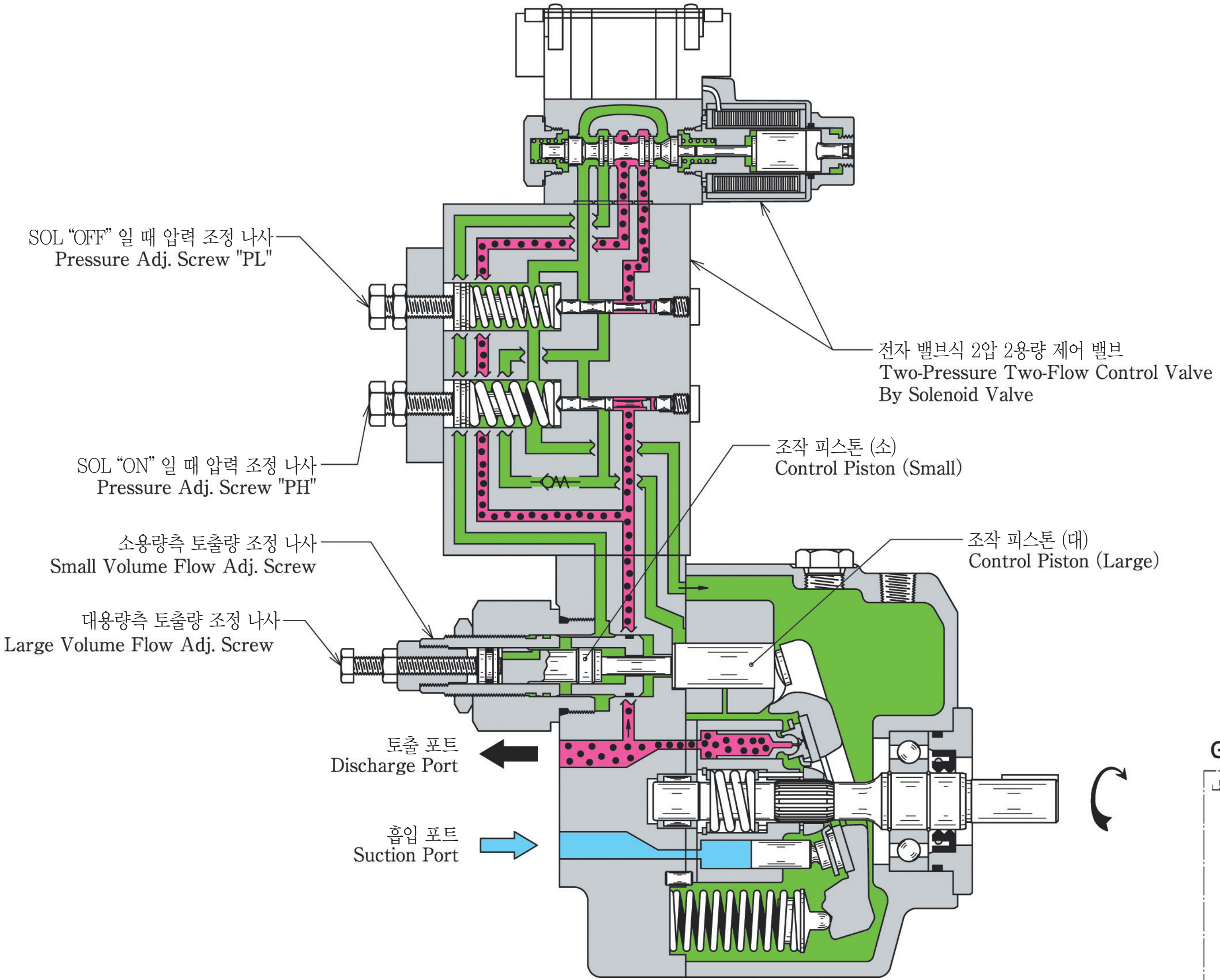
KS 유압기호
Graphic Symbol



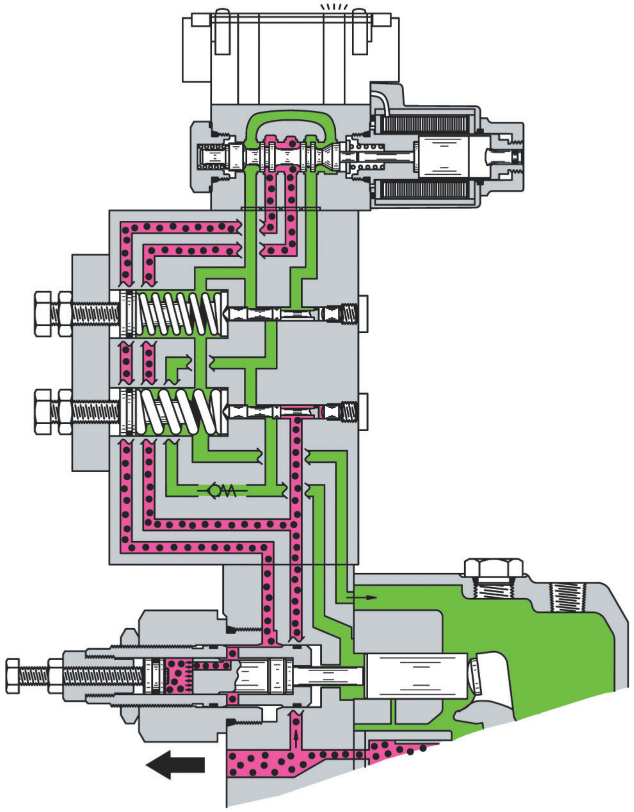
특성
Performance Characteristic



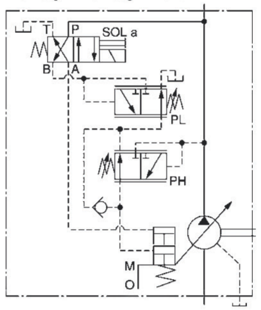
● 솔레노이드 "OFF"일 때 Solenoid De-energized
(저압 대유량일 때 At Low Pressure High Flow)



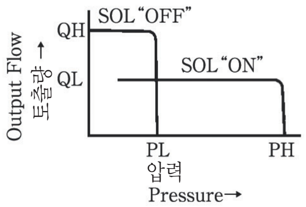
● 솔레노이드 "ON"일 때 Solenoid Energized
(고압 대소유량일 때 At High Pressure Low Flow)



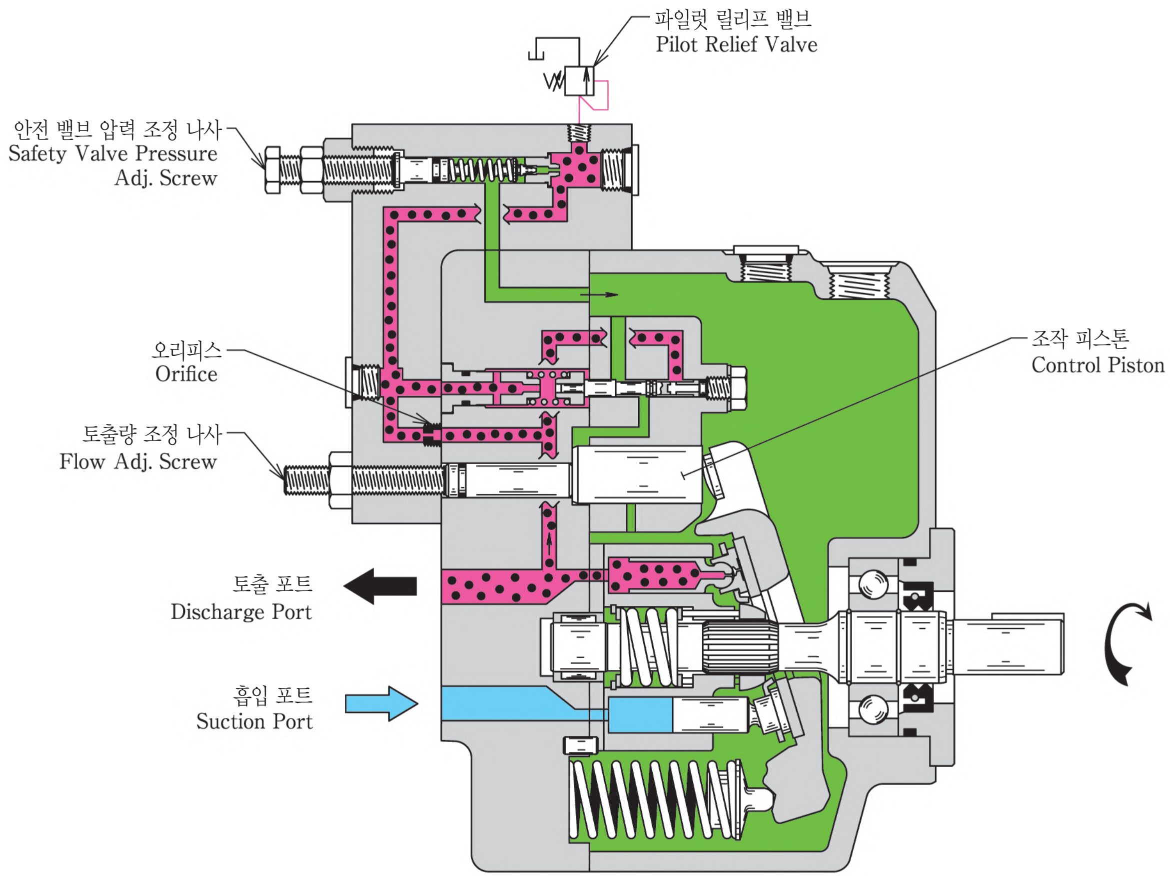
KS 유압기호
Graphic Symbol



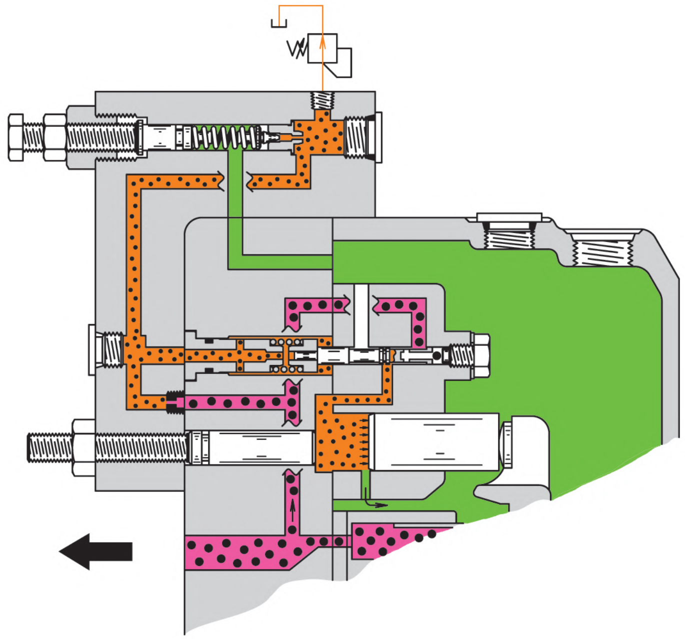
특성
Performance Characteristic



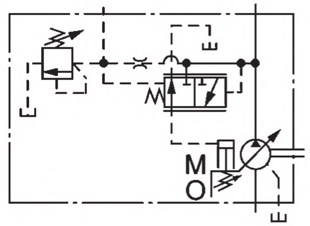
● 최대 토출량일 때 At Full Flow



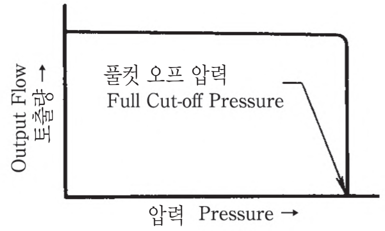
● 풀컷 오프일 때 At Full Cut-off



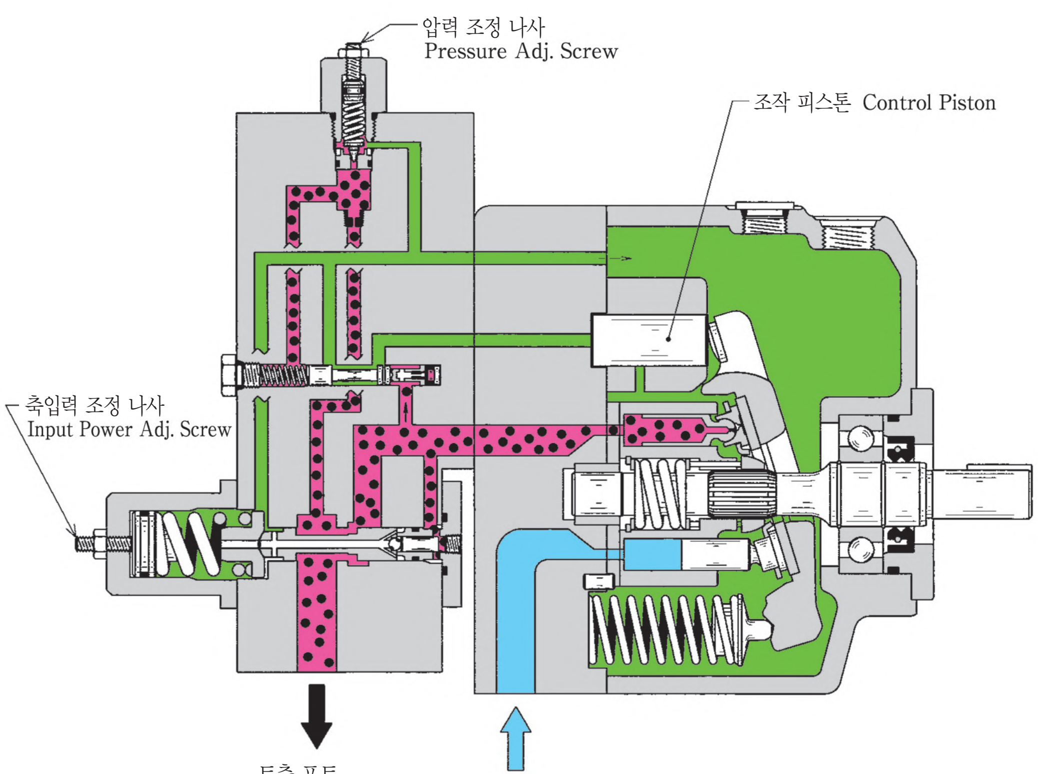
KS 유압기호
Graphic Symbol



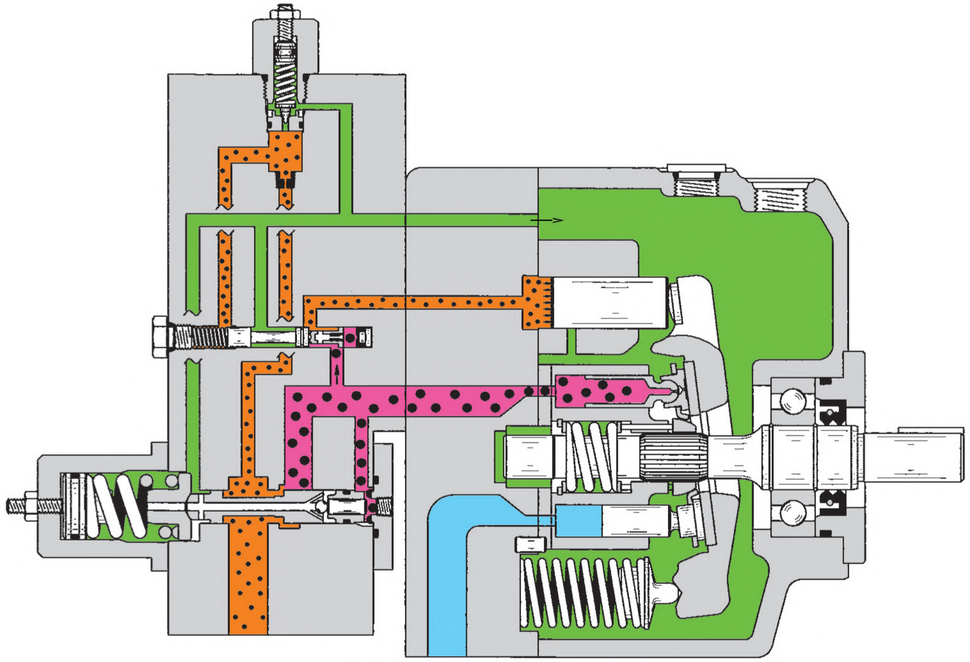
특성
Performance Characteristic



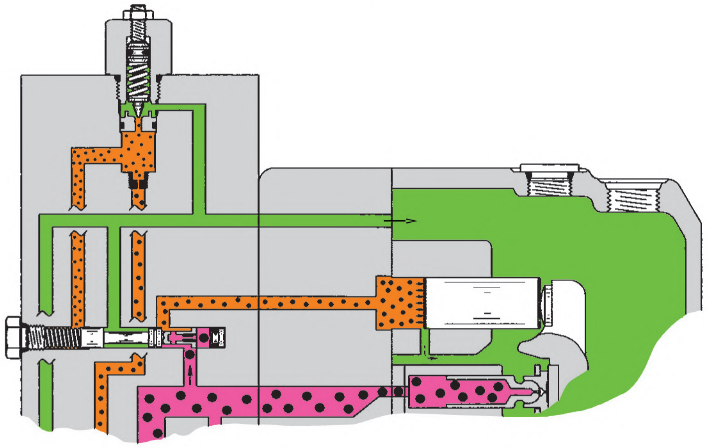
● 최대 토출량일 때 At Full Flow ①



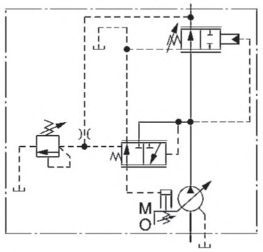
● 유량 제어시 At Flow Control ②



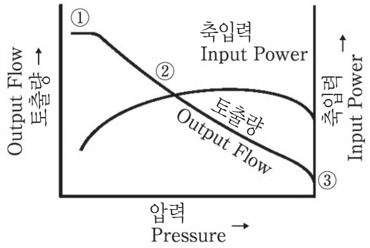
● 풀컷 오프일 때 At Full Cut-off ③



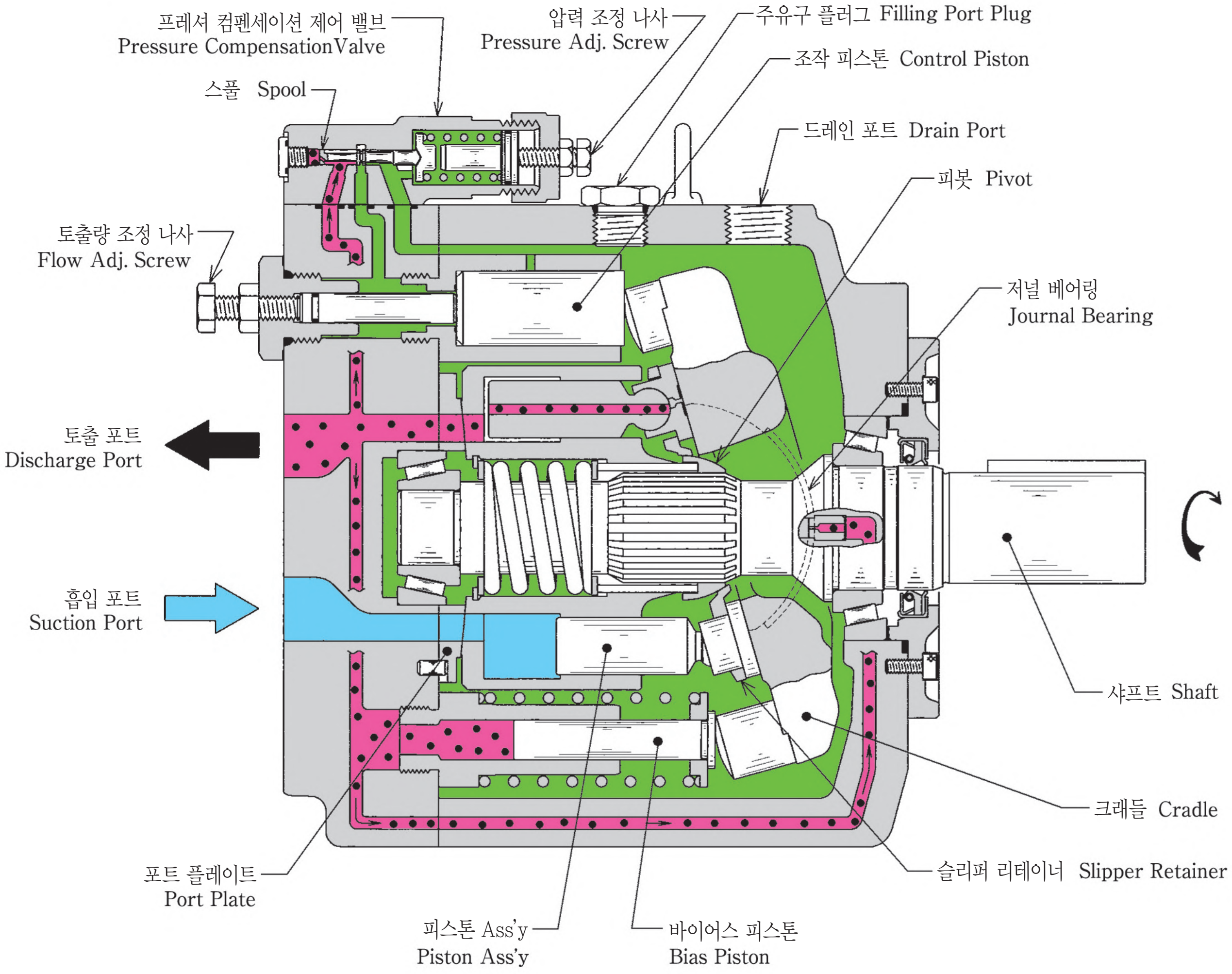
KS 유압기호
Graphic Symbol



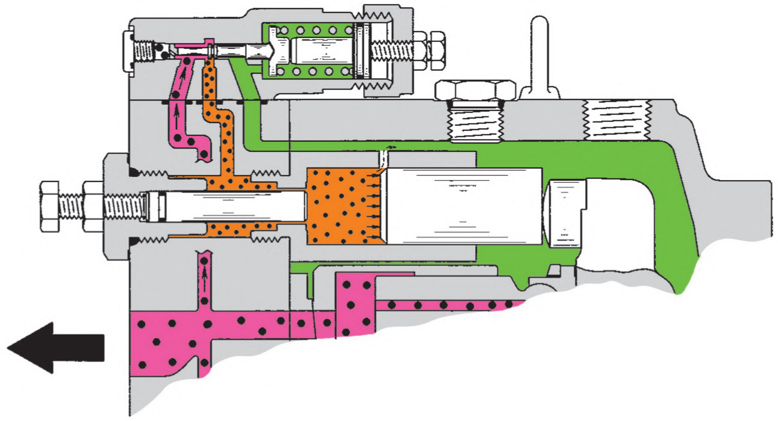
특성
Performance Characteristic



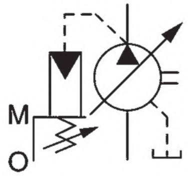
● 최대 토출량일 때 At Full Flow



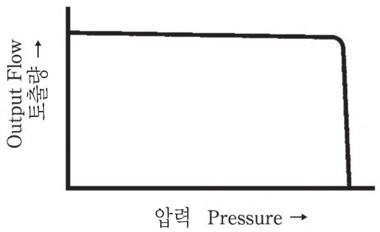
● 풀컷 오프일 때 At Full Cut-off



KS 유압기호
Graphic Symbol

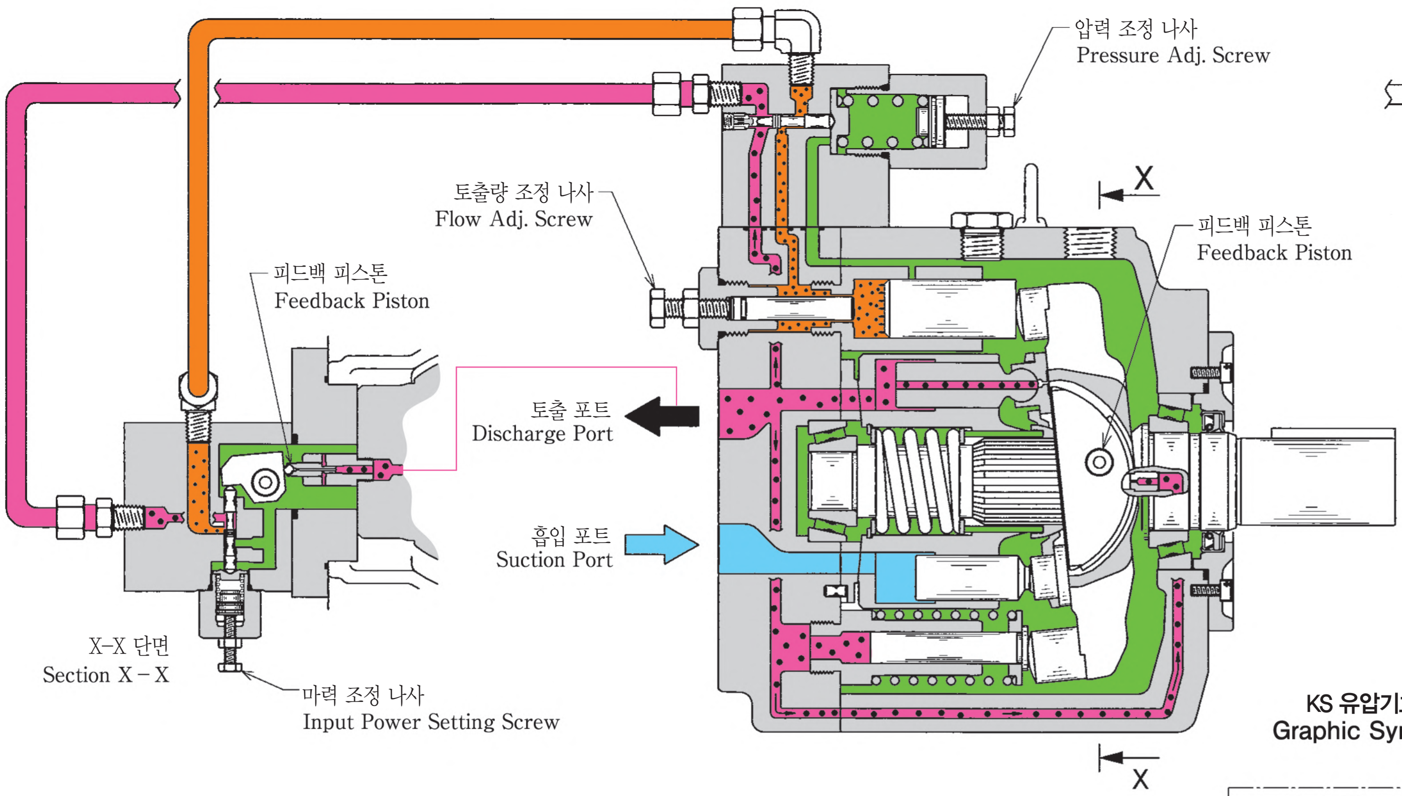


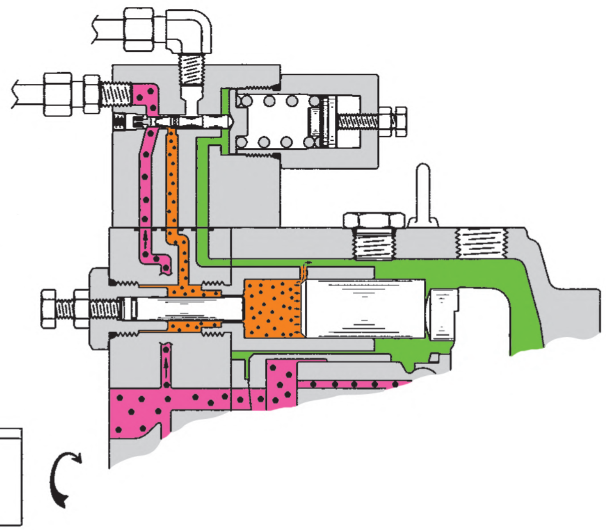
특성
Performance Characteristic



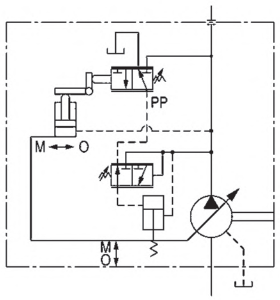
● 마력 (유량) 제어시 At Power (Flow) Control

● 압력 제어시 At Pressure Control



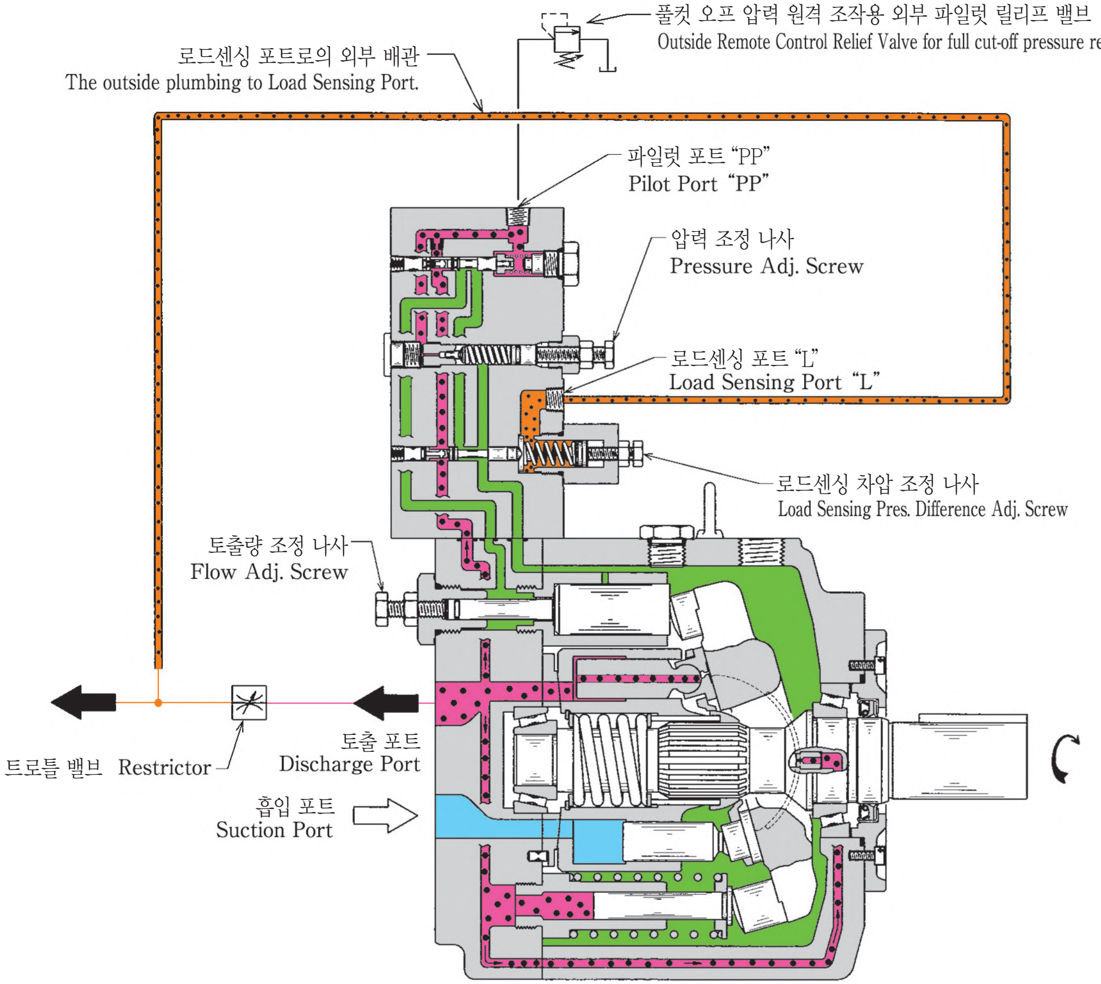


KS 유압기호
Graphic Symbol

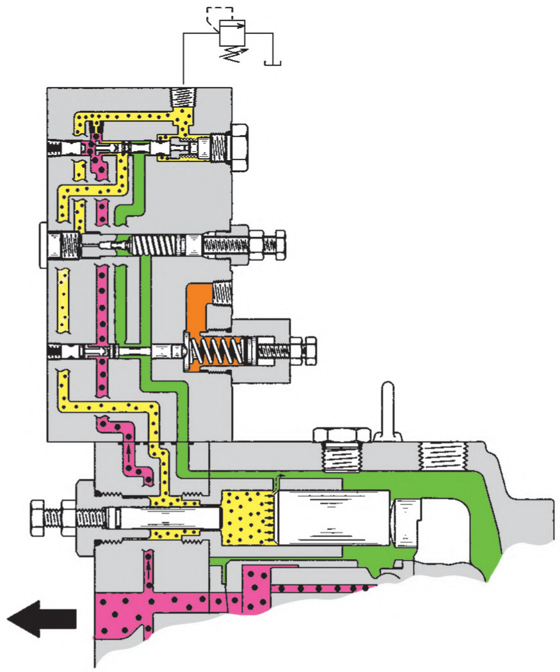


특성
Performance Characteristic

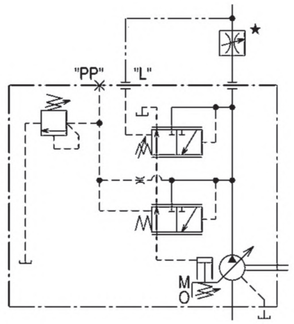
● 최대 토출량일 때 At Full Flow



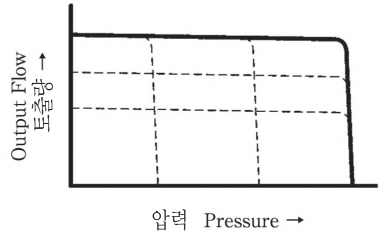
● 압력 제어시 At Pressure Control

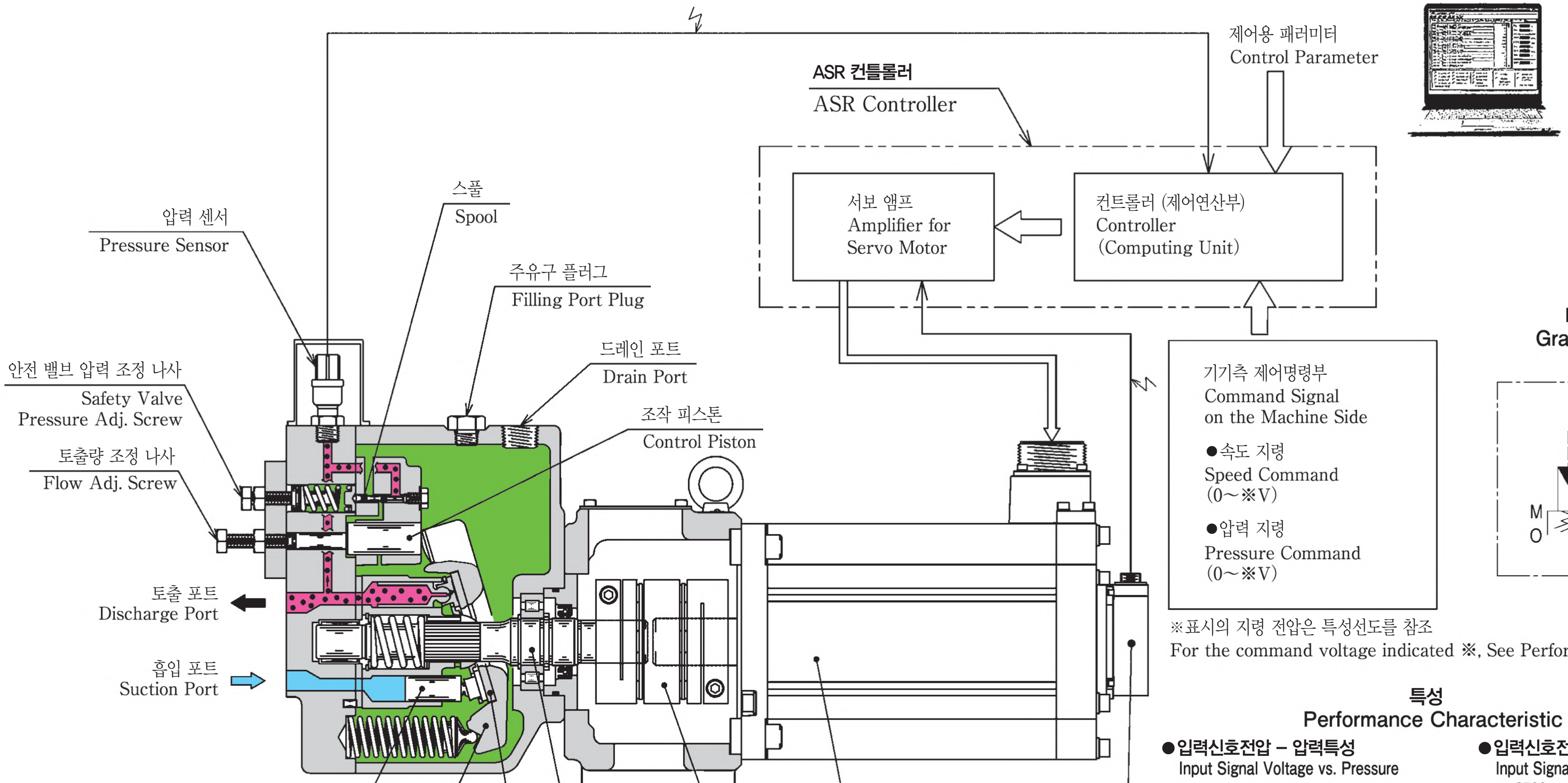


KS 유압기호 Graphic Symbol



특성 Performance Characteristic

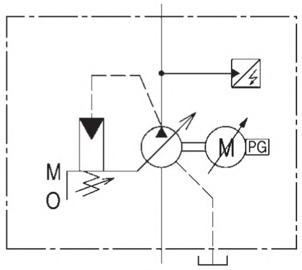




※표시의 지령 전압은 특성선도를 참조

For the command voltage indicated ※, See Performance characteristics.

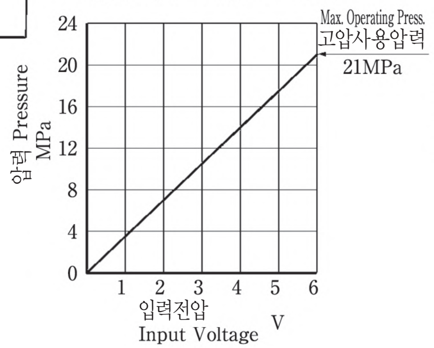
KS 유압기호
Graphic Symbol



특성
Performance Characteristic

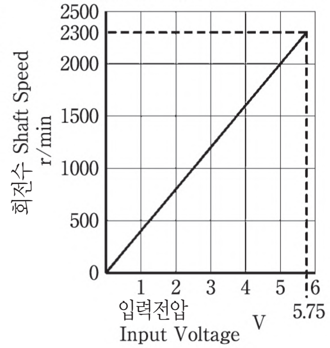
●**입력신호전압 – 압력특성**

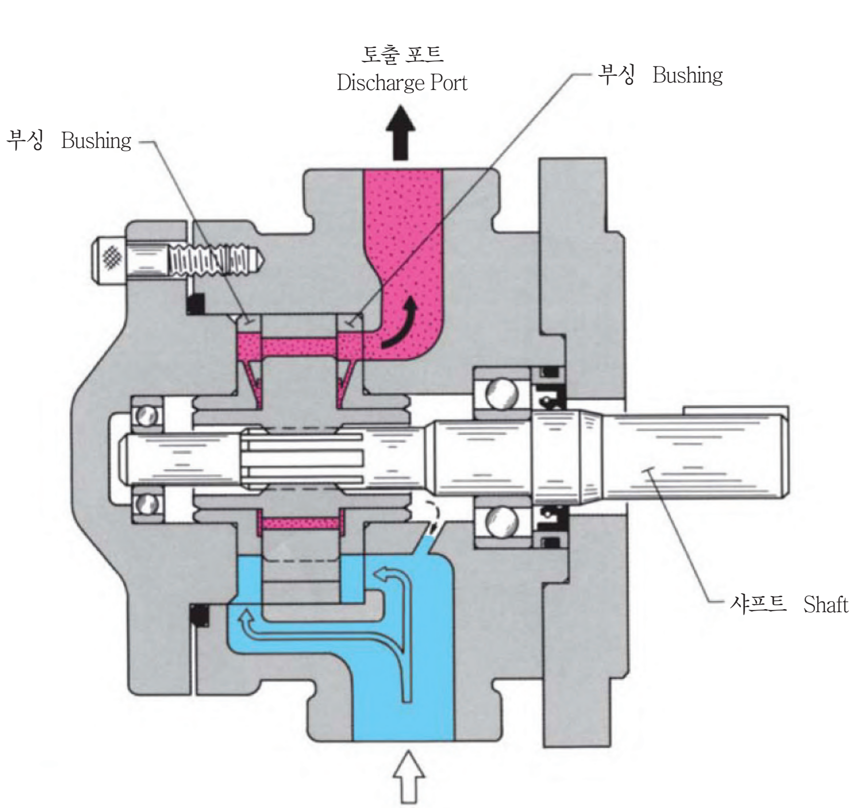
Input Signal Voltage vs. Pressure

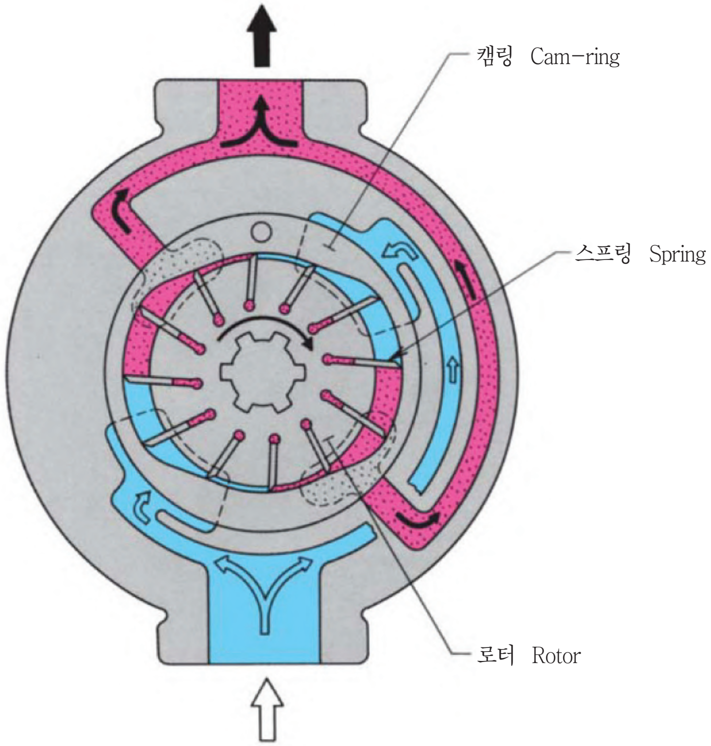


●**입력신호전압 – 회전수특성**

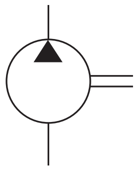
Input Signal Voltage vs. Shaft Speed

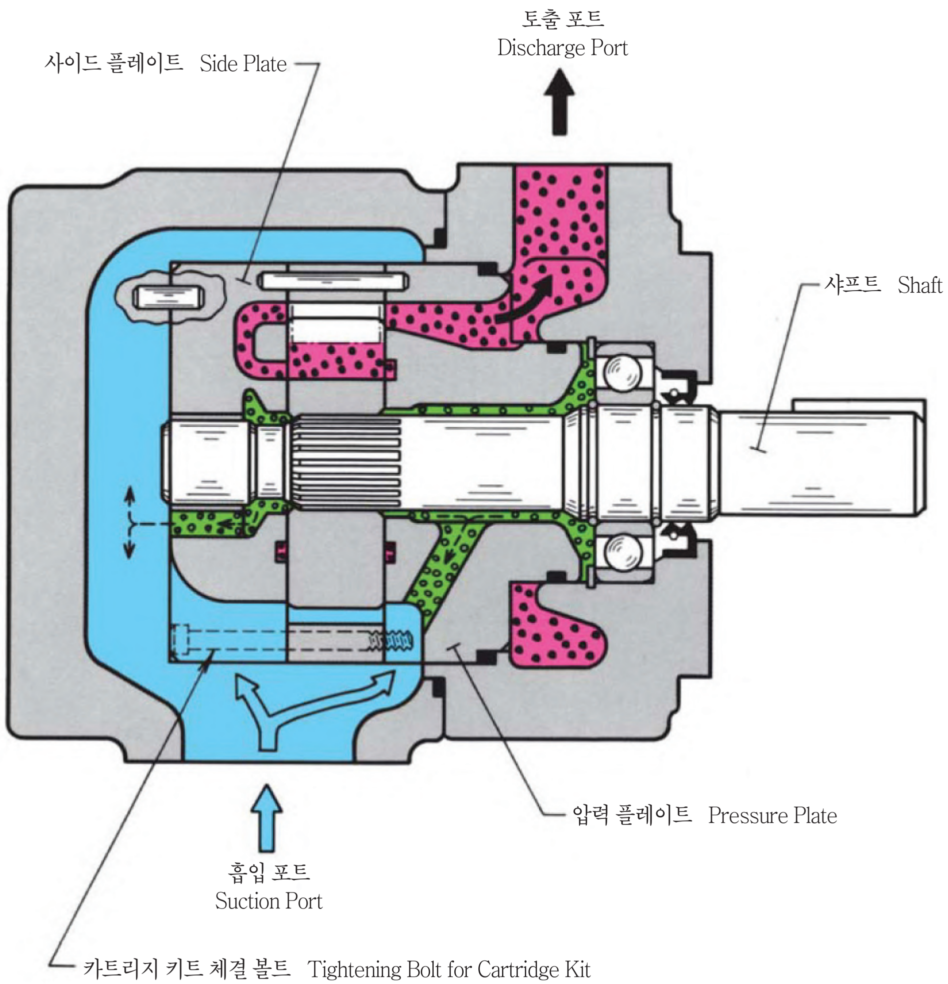


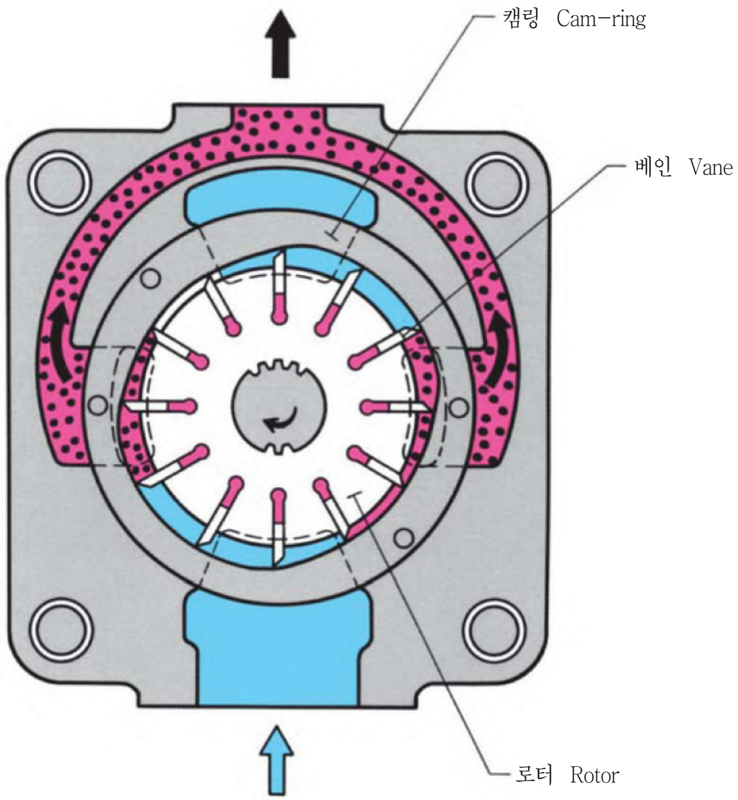




KS 유압기호
Graphic Symbol







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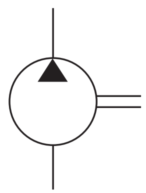

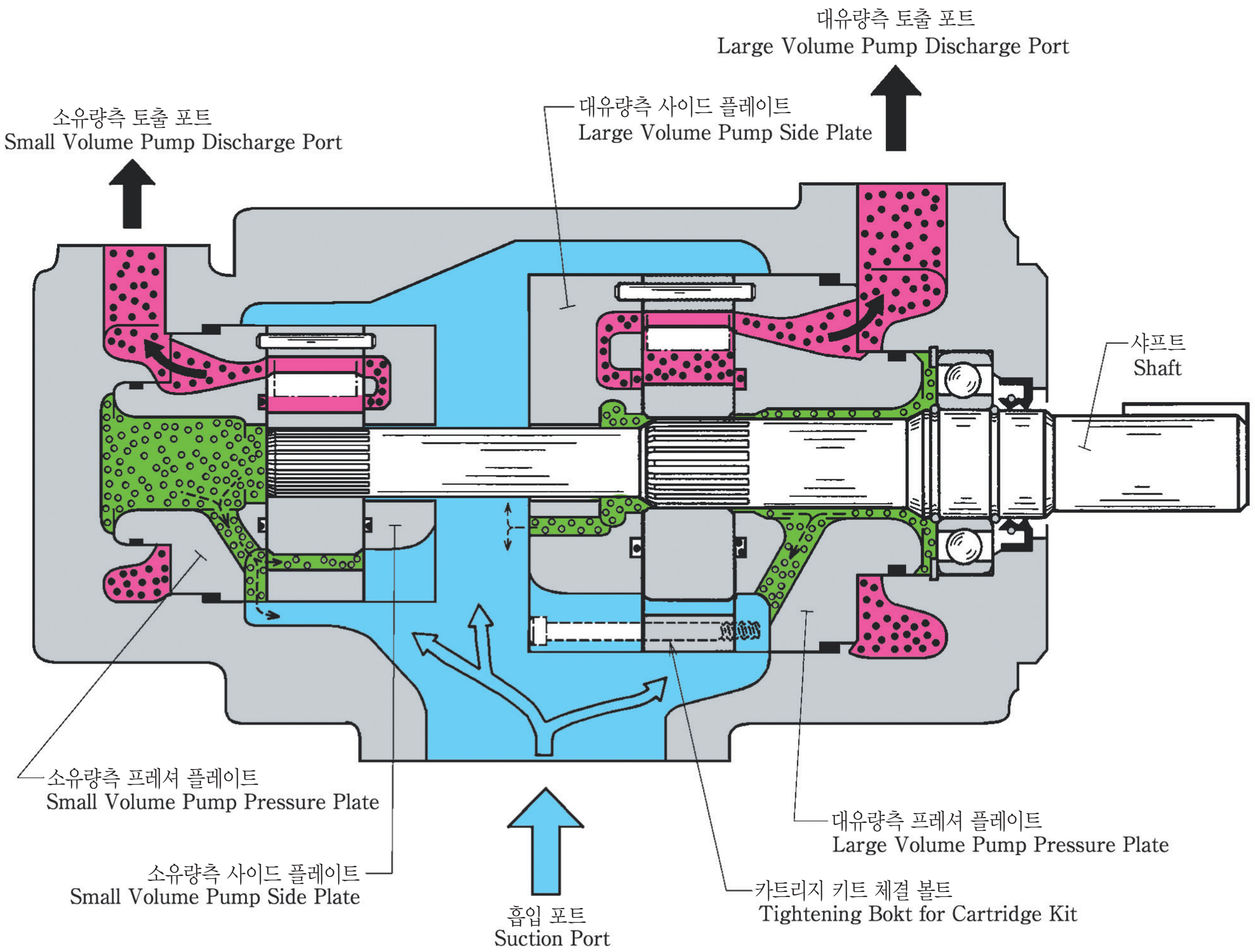

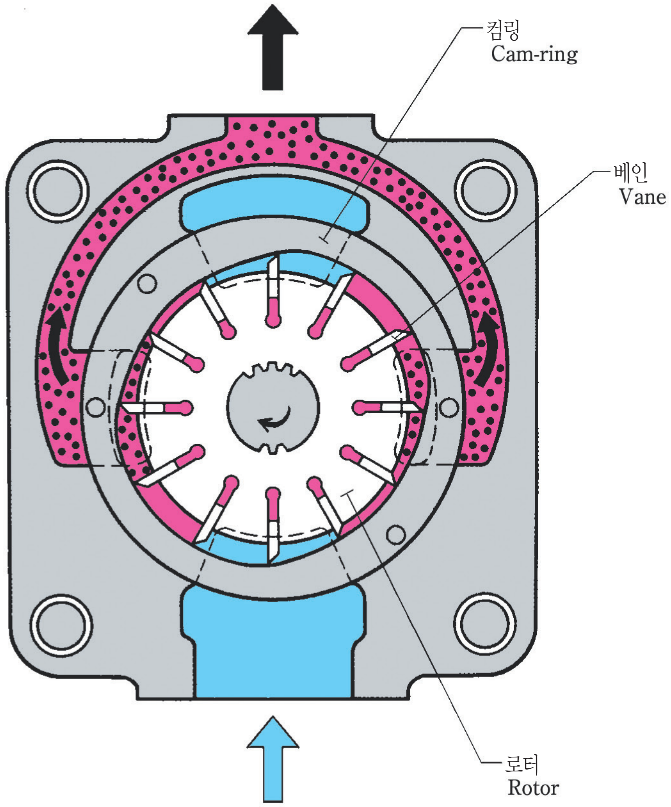

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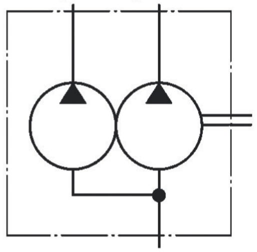

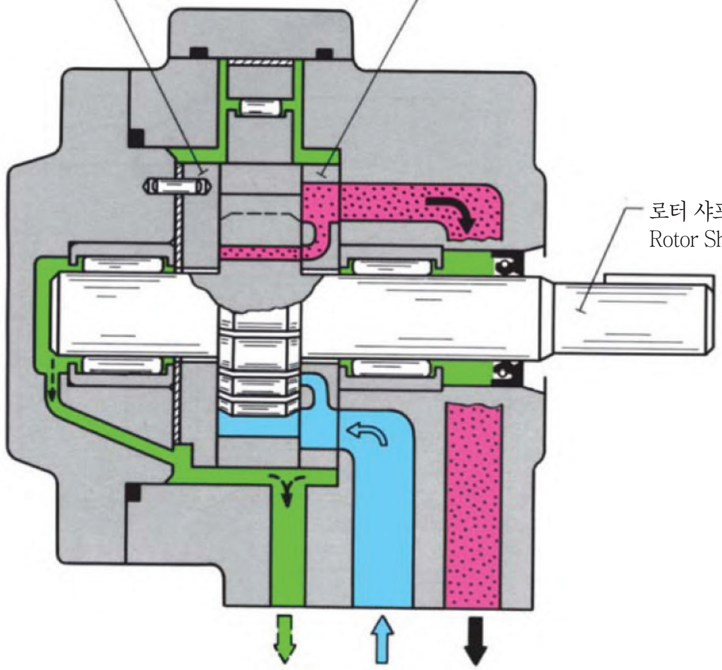

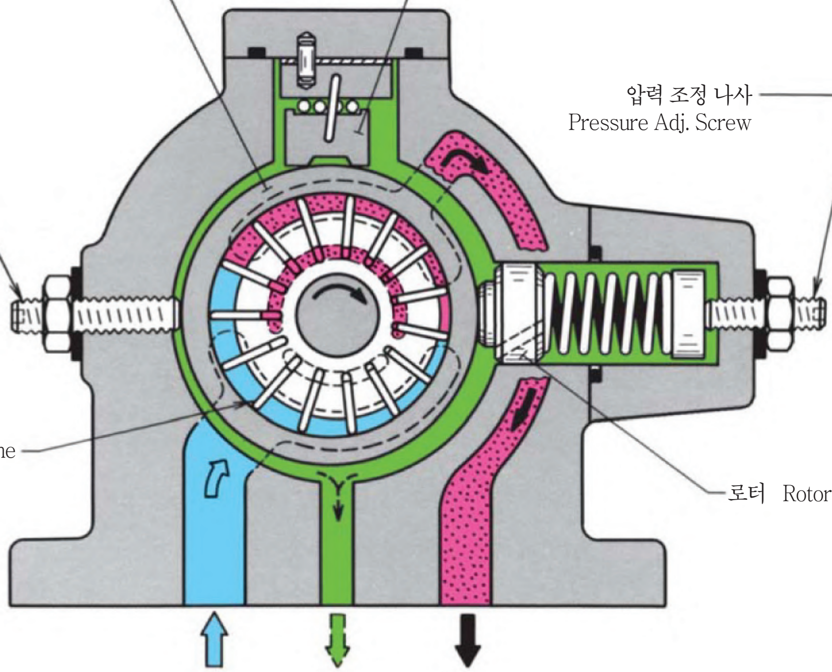

KS 유압기호
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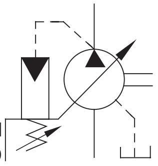
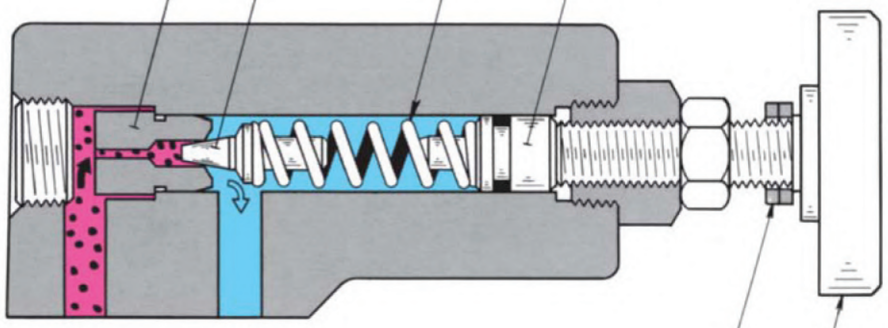
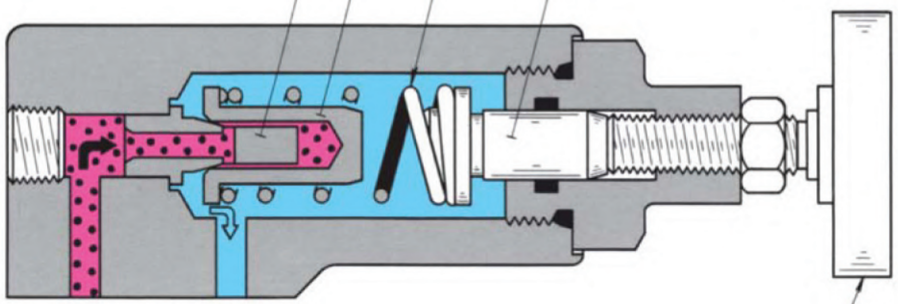


파일럿 릴리프 밸브 Remote Control Relief Valves



직동형 릴리프 밸브 Direct Type Relief Valves



KS 유압기호
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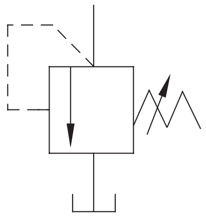
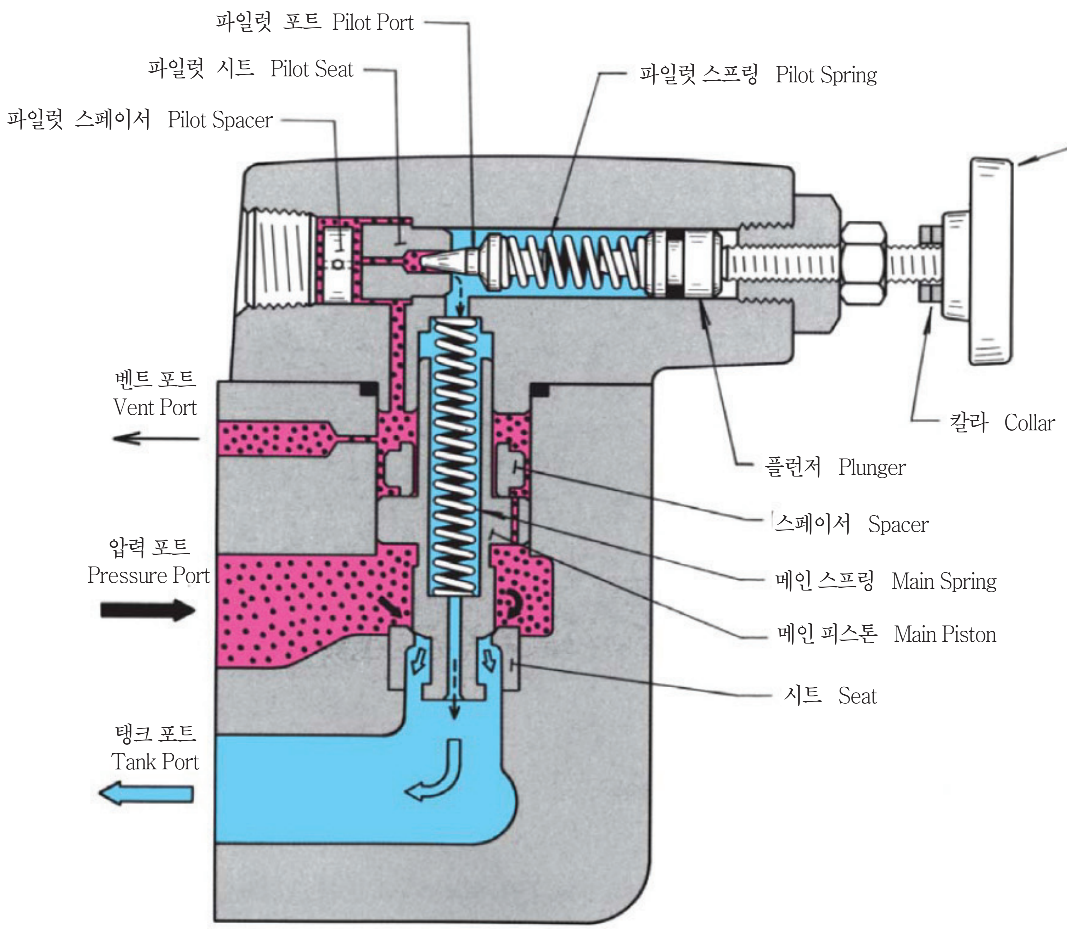
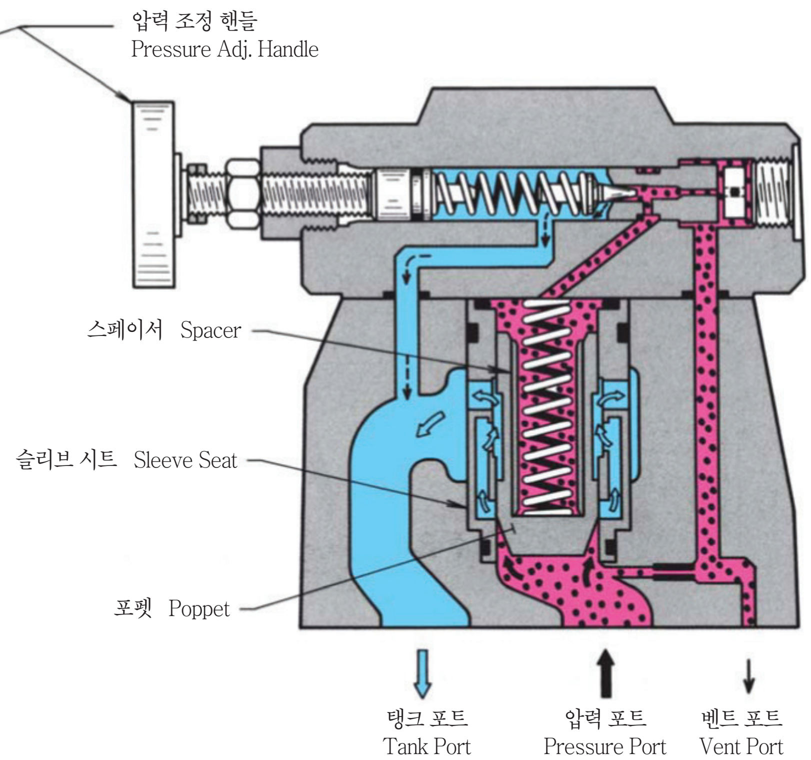


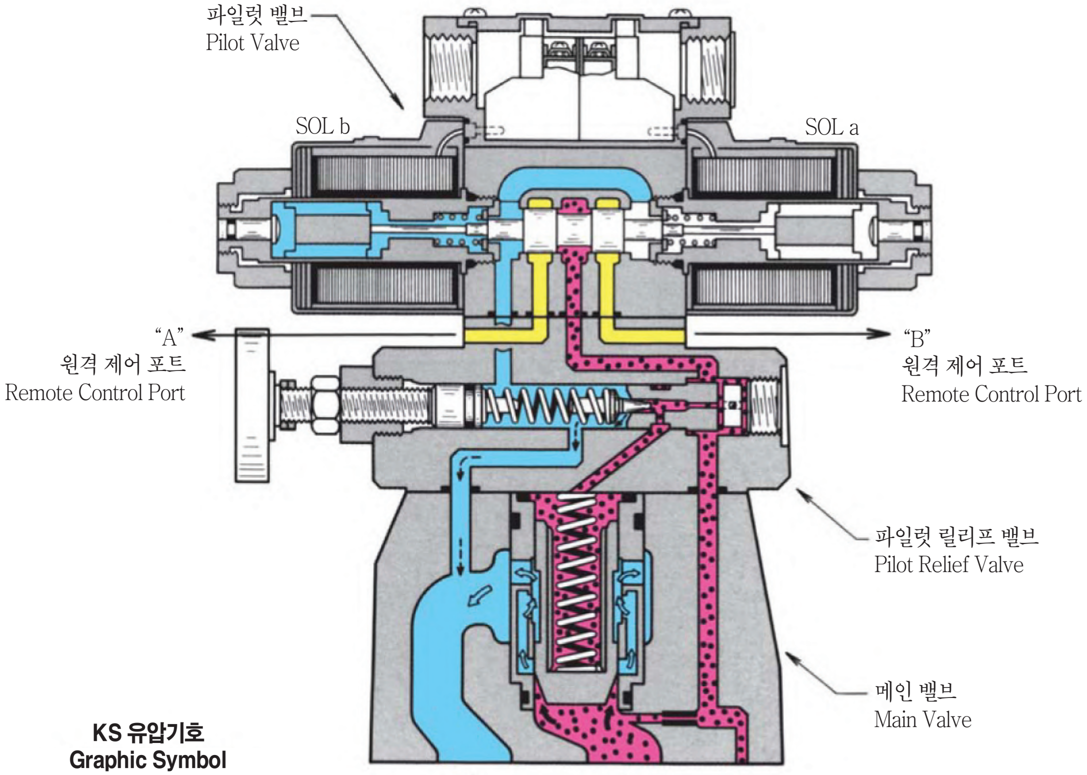
● 표준형 Standard Type



● 저소음형 Low Noise Type



KS 유압기호
Graphic Symbol



KS 유압기호
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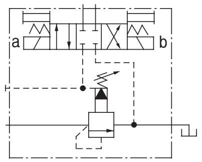
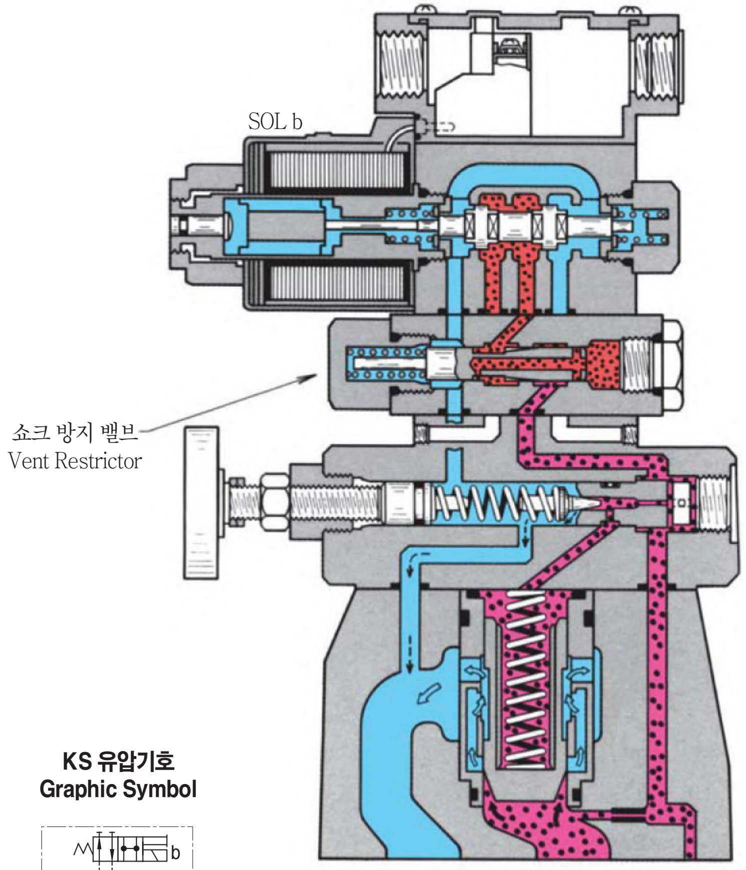
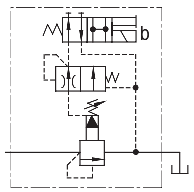


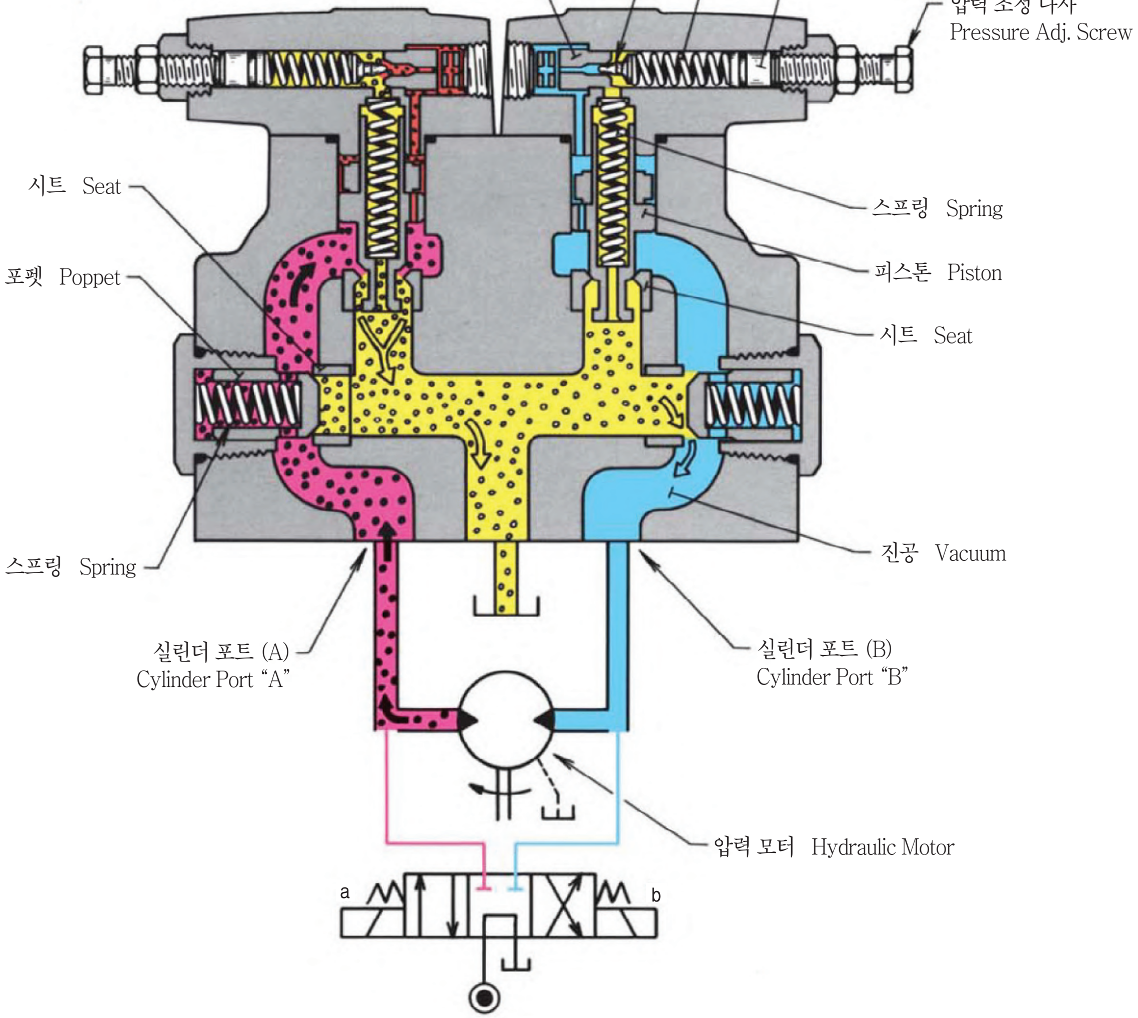
● 쇼크 방지 밸브 부착 Models with Vent Restrictor



KS 유압기호
Graphic Symbol

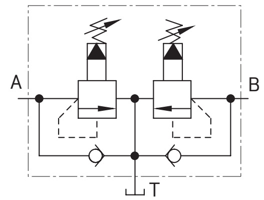


● **SOL b "ON" 위치 → 중립 위치로 절환시**
Position at "SOL b" is "ON" (Energized) → At spool is shifted to the center position

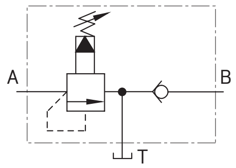


KS 유압기호
Graphic Symbol

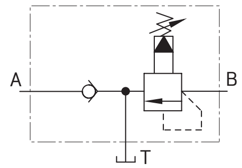
A-B 라인용
For "A & B-Lines"



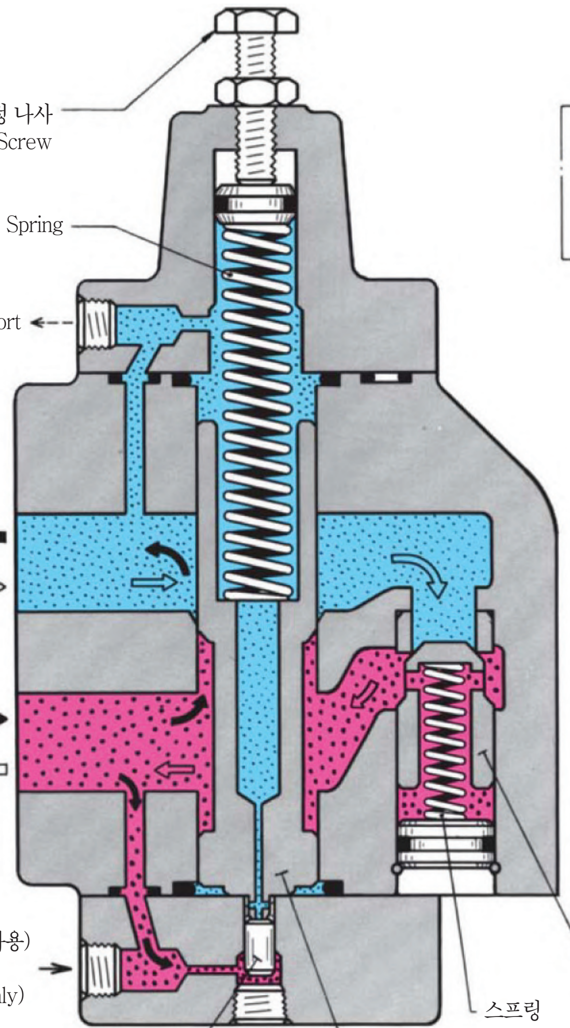
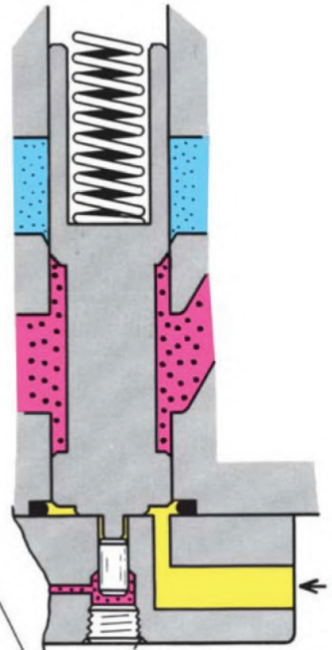
A 라인용
For "A-Line"



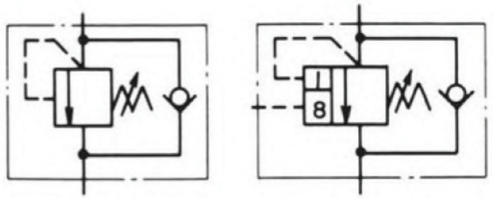
B 라인용
For "B-Line"



● 카운터 밸런스 밸브 Counterbalance Valve

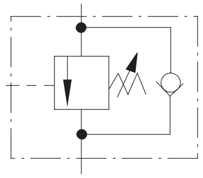
KS 유압기호 Graphic Symbol



보조 파일럿
With Auxiliary
Pilot Pres. Port

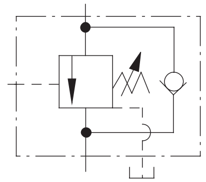
● 카운터 밸런스 밸브
Counterbalance Valve

외부 파일럿, 내부 드레인
(Ext. Pilot, Int. Drain)



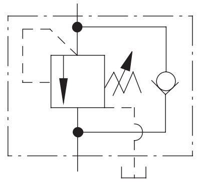
● 체크 밸브 부착 시퀀스 밸브
Sequence and Check Valve

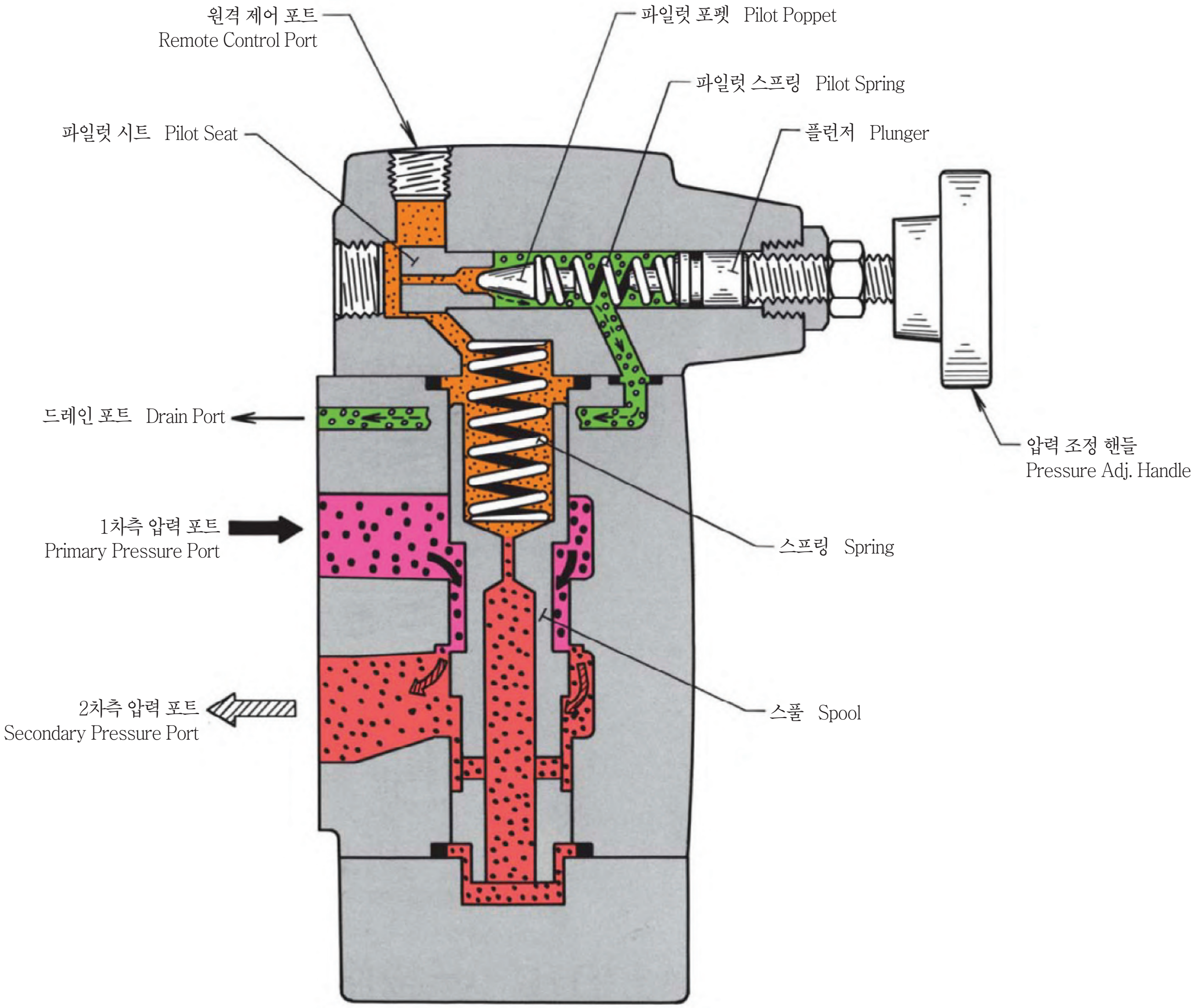
외부 파일럿, 외부 드레인
(Ext. Pilot, Ext. Drain)



● 체크 밸브 부착 시퀀스 밸브
Sequence and Check Valve

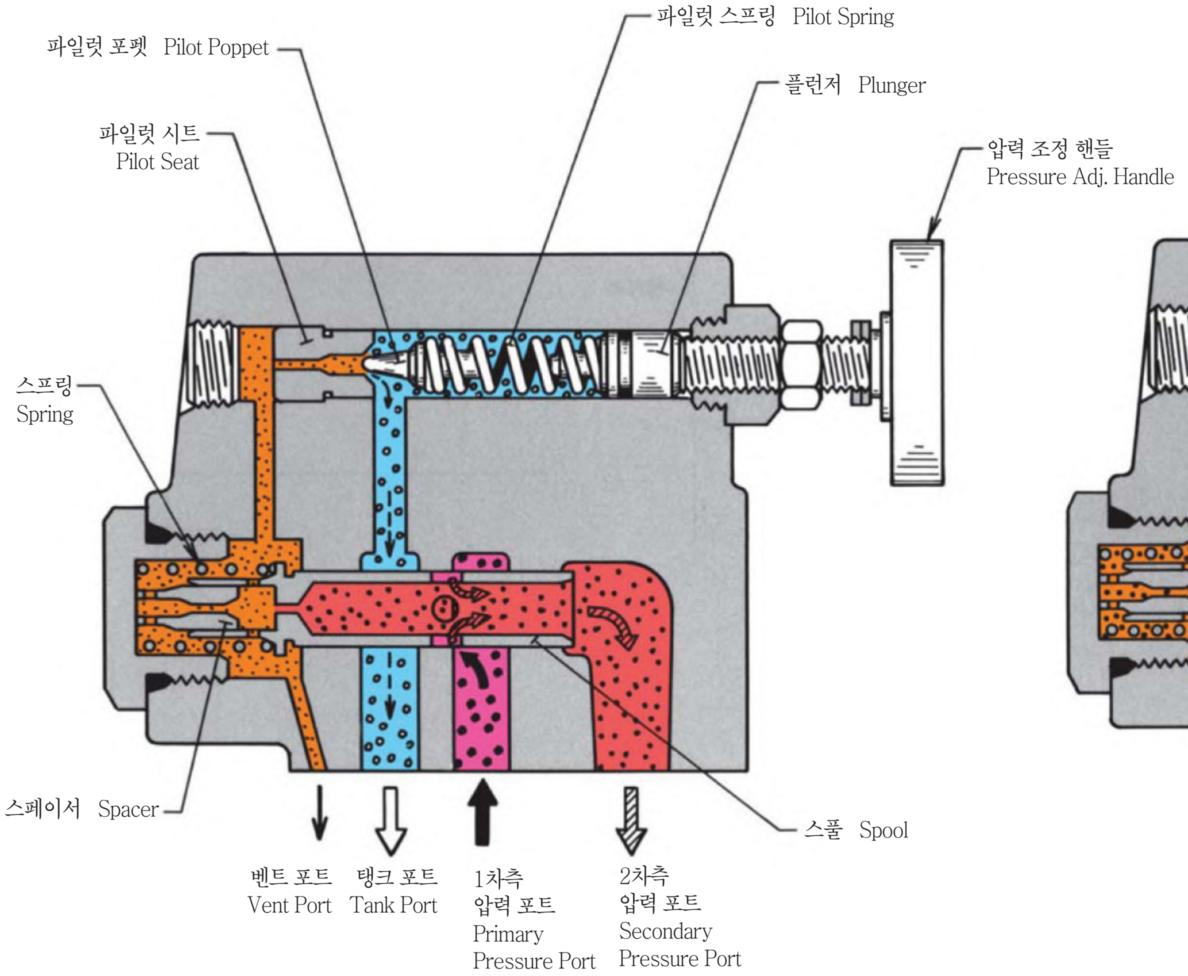
내부 파일럿, 외부 드레인
(Int. Pilot, Ext. Drain)



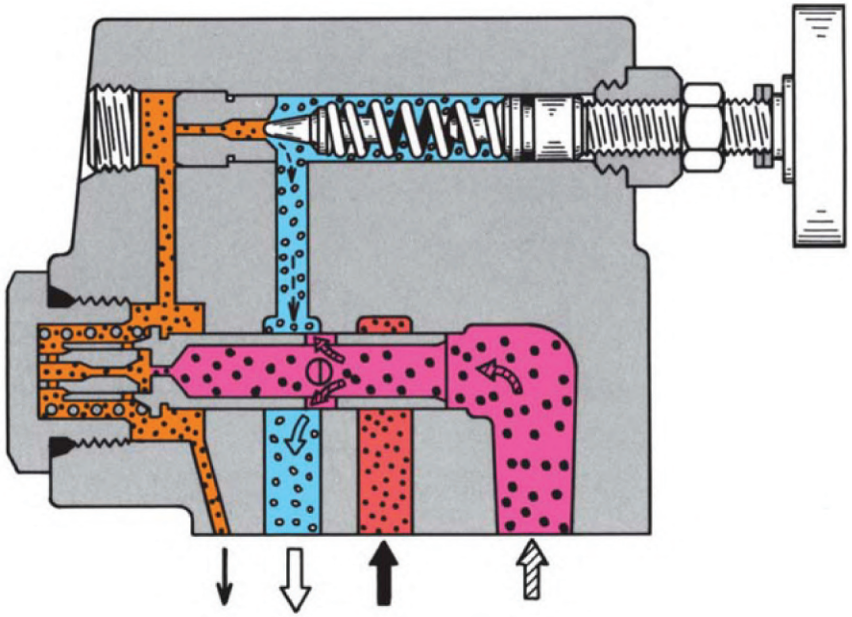


KS 유압기호
Graphic Symbol

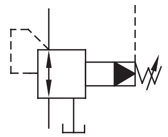
● 감압 작동시 Reducing Operation



● 릴리프 작동시 Relieving Operation

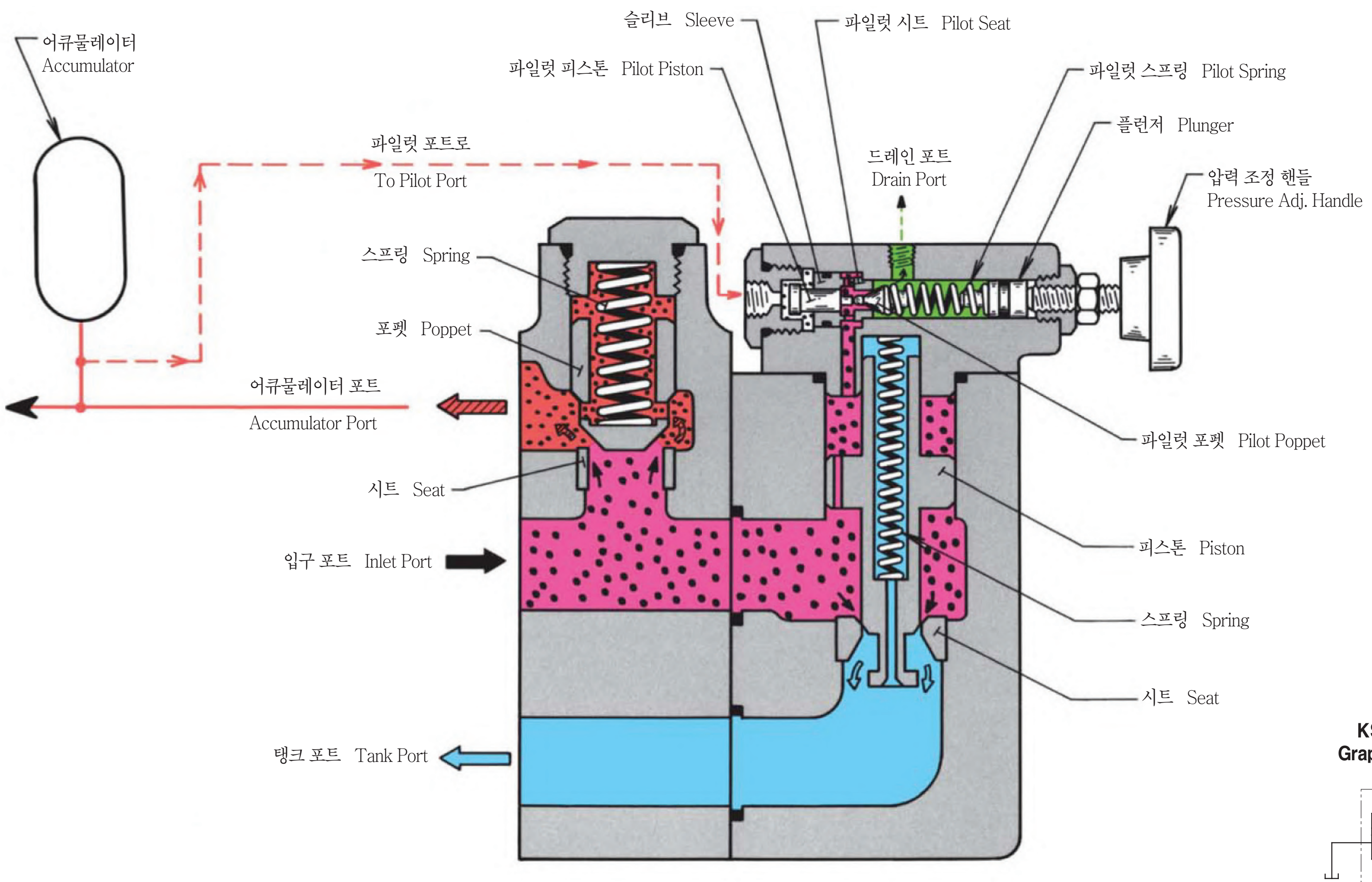


KS 유압기호
Graphic Symbol

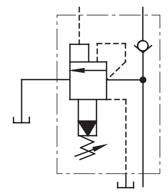


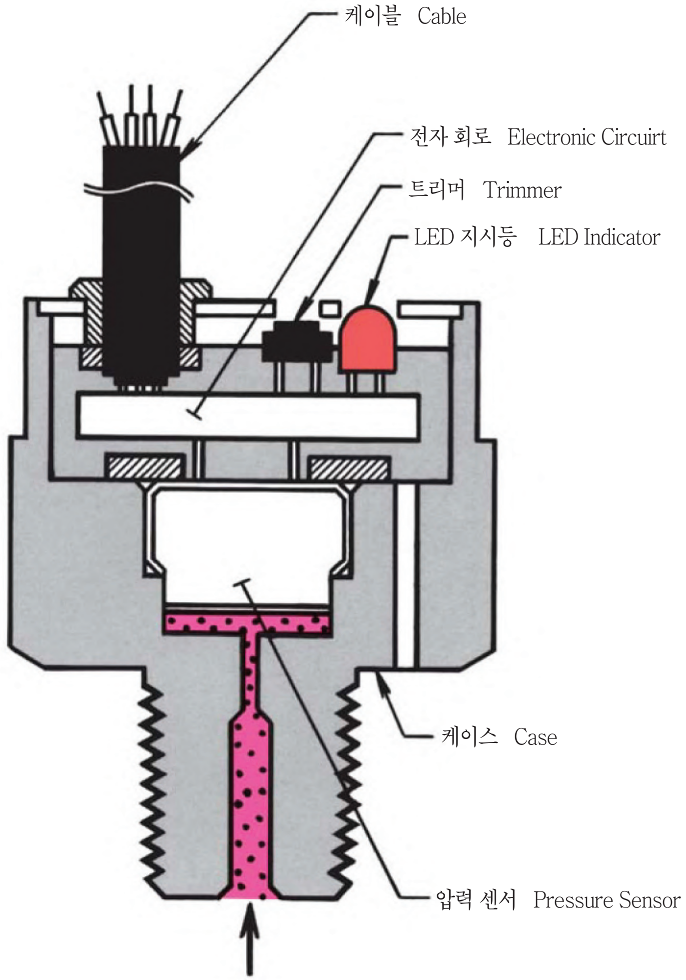
언로딩 릴리프 밸브

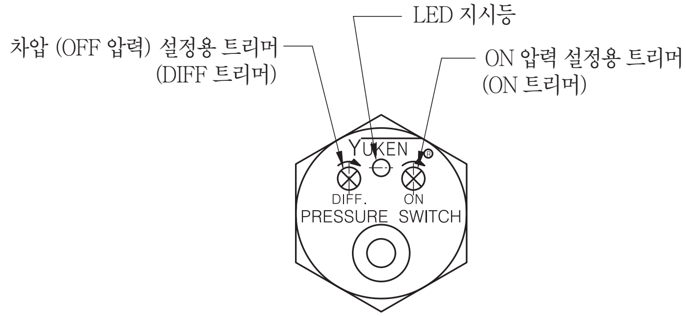
Unloading Relief Valves

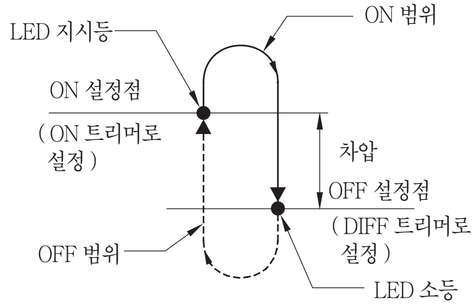


KS 유압기호
Graphic Symbol

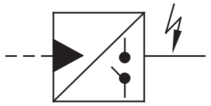


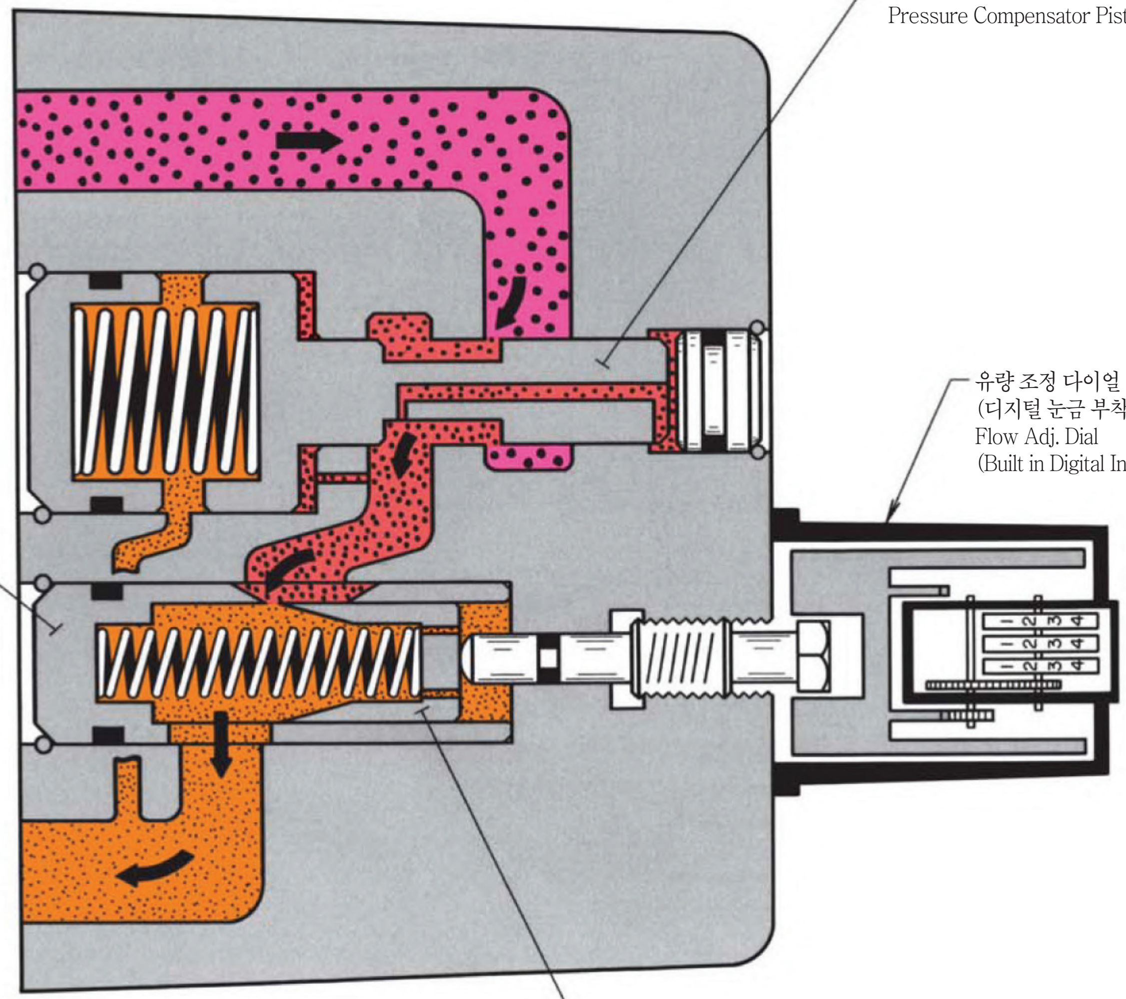






KS 유압기호
Graphic Symbol





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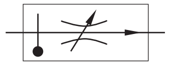
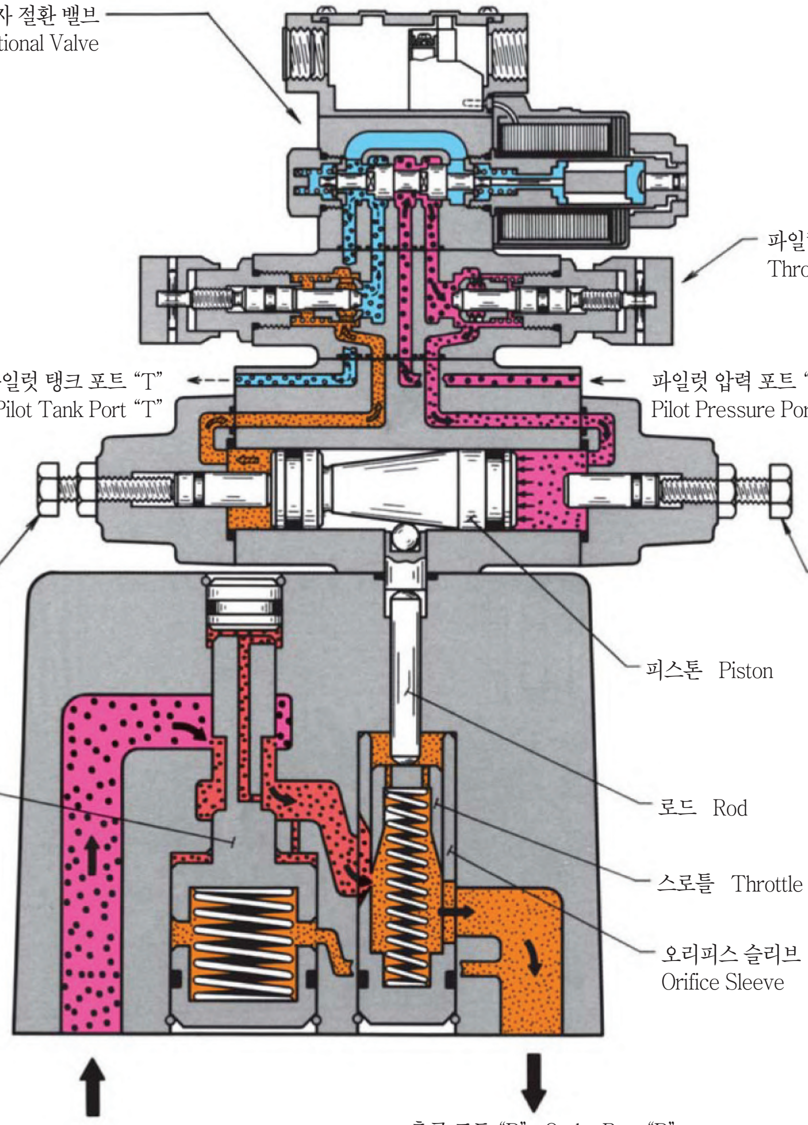


파일럿 조작 유량 조정 밸브

Pilot Operated Flow Control Valves



KS 유압기호
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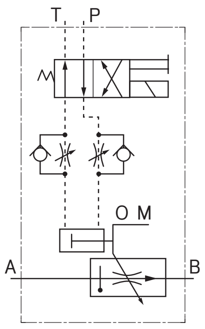
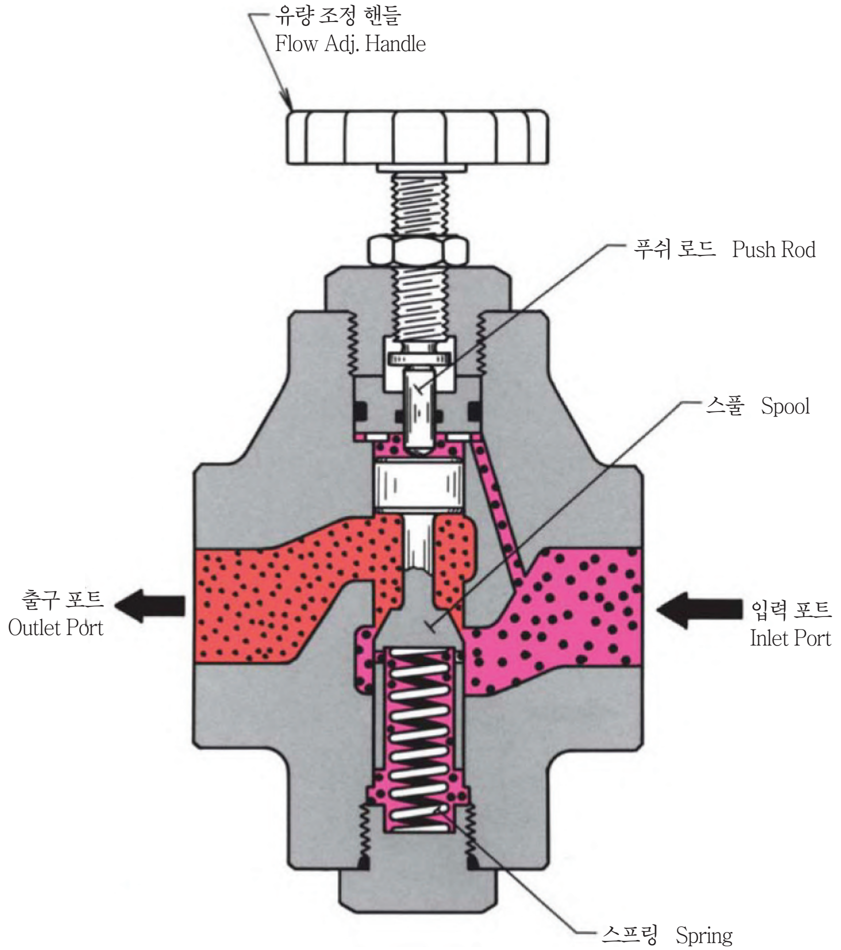


한 방향 스로틀 밸브 One Way Restrictors



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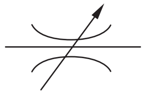

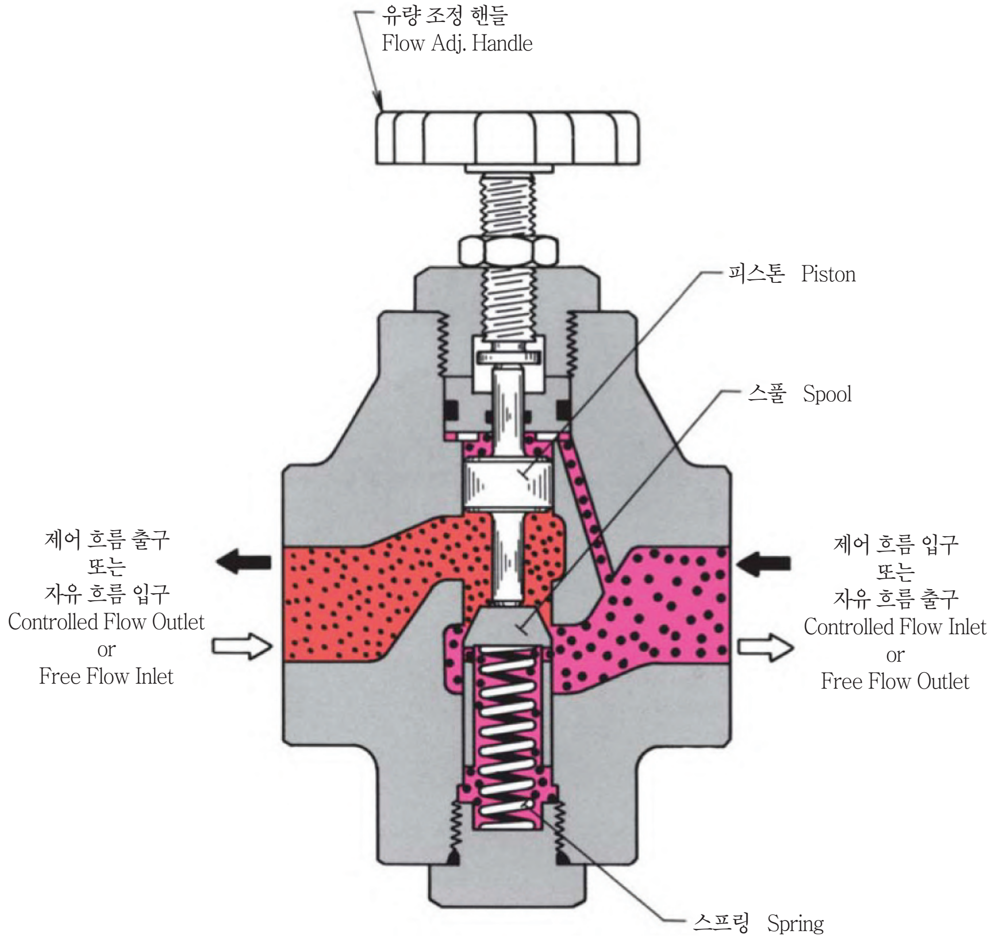

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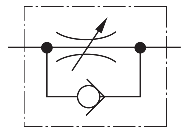
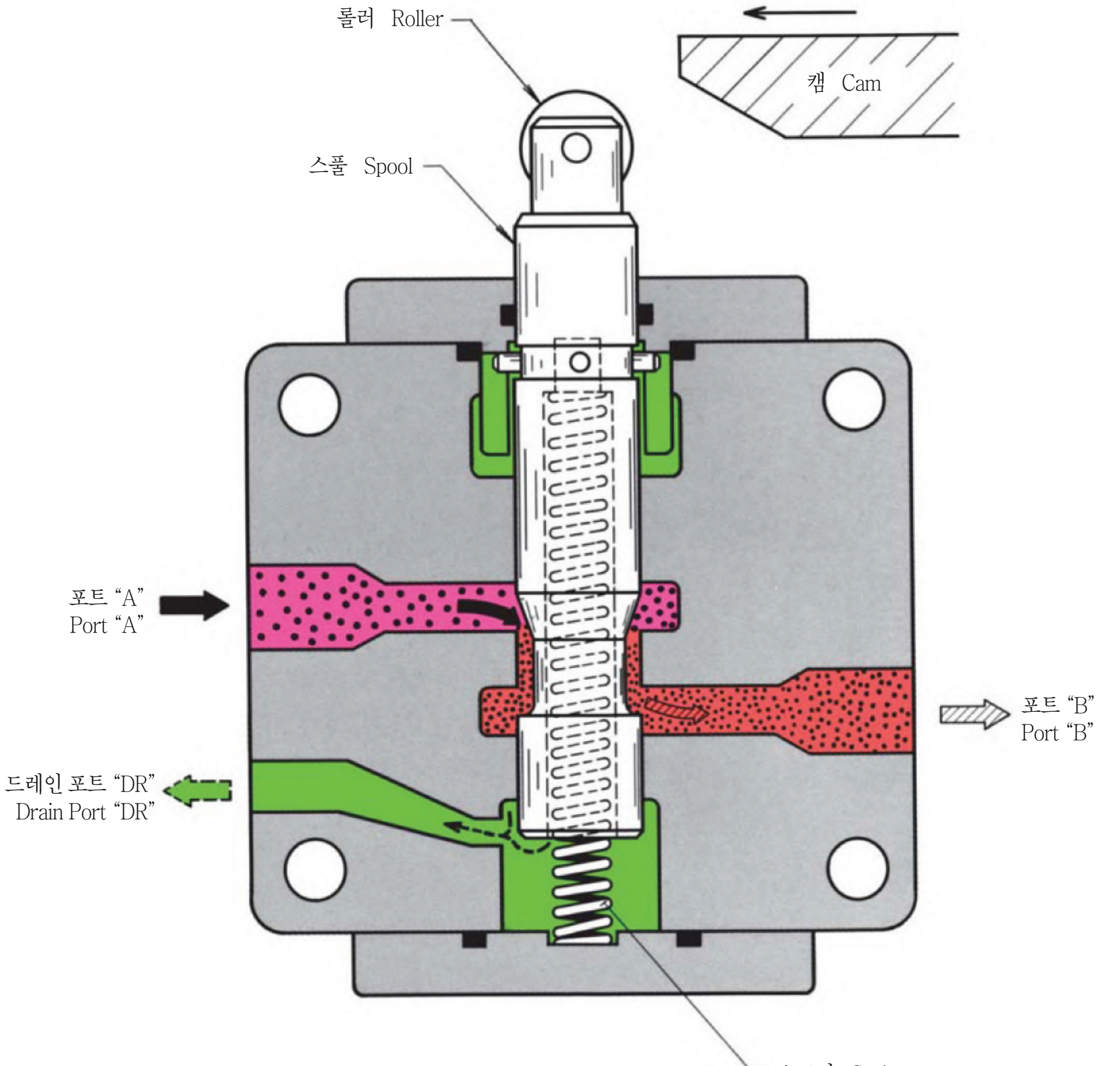
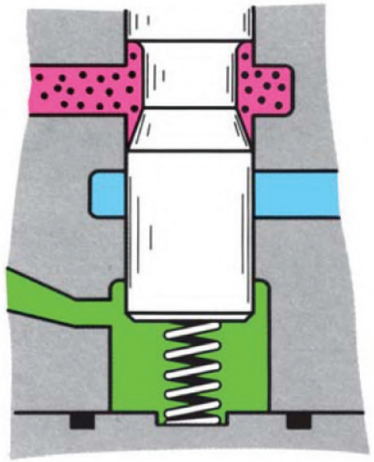


● 노멀 오픈형 Normally Open Type

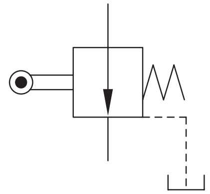


노멀 크로즈형
Normally Closed Type

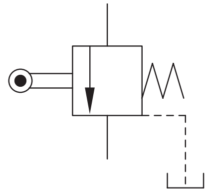


KS 유압기호
Graphic Symbol

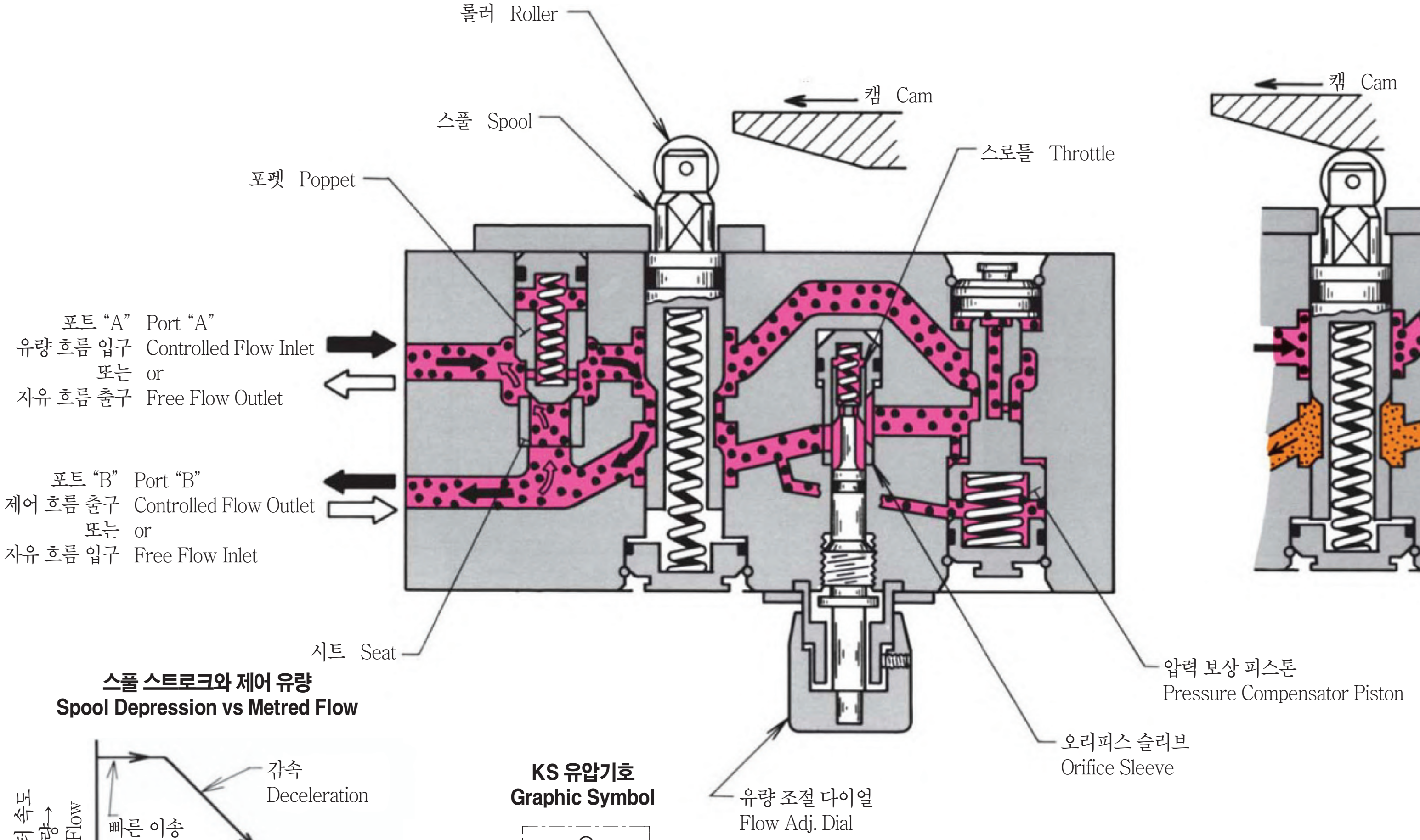
노멀 오픈형
Normally Open Type



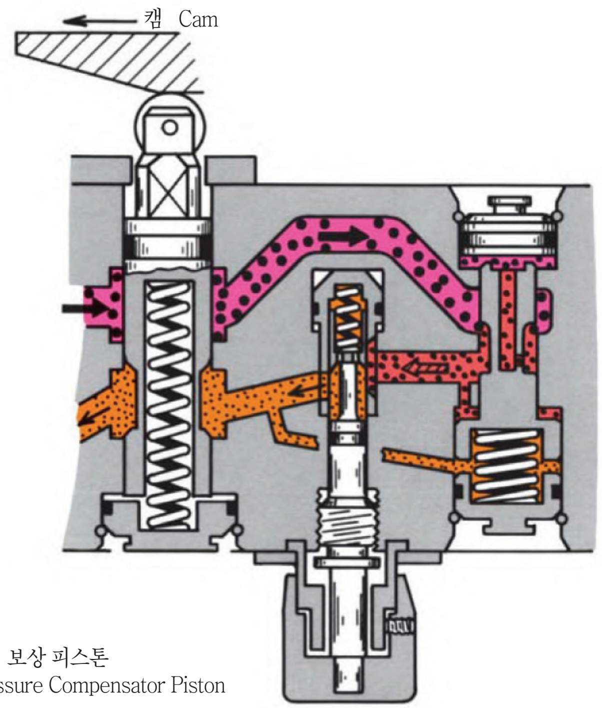
노멀 크로즈형
Normally Closed Type



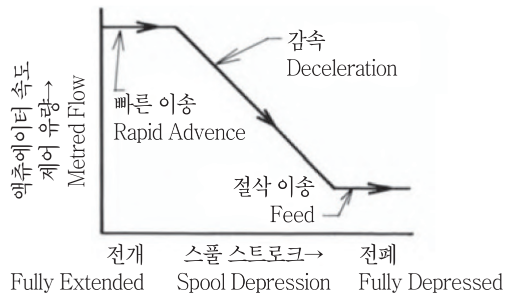
● 빠른 이송일 때 At Rapid Advance



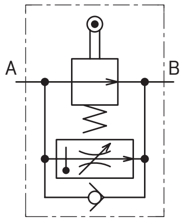
● 절삭 이송일 때 At Feed Control



스풀 스트로크와 제어 유량
Spool Depression vs Metred Flow

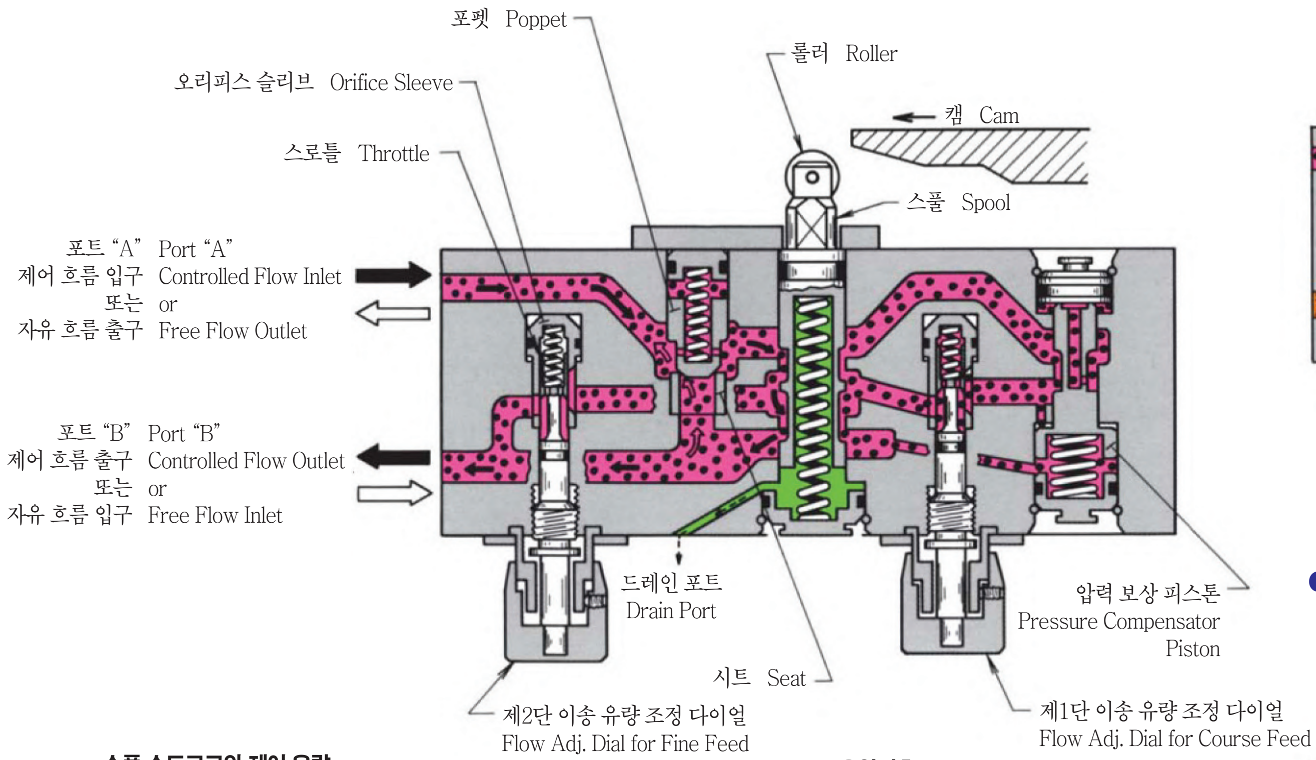


KS 유압기호
Graphic Symbol

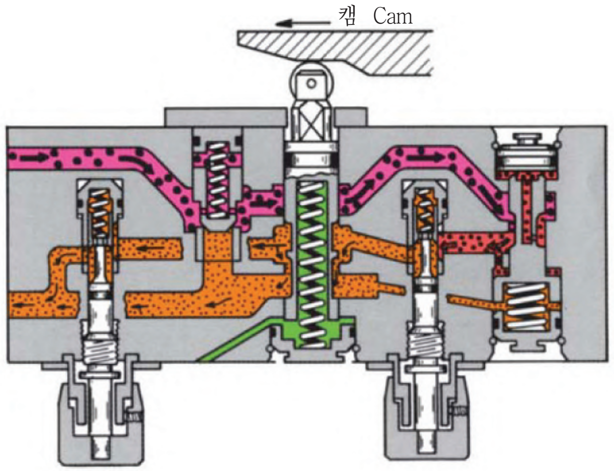


UCF2형 피드 컨트롤 밸브

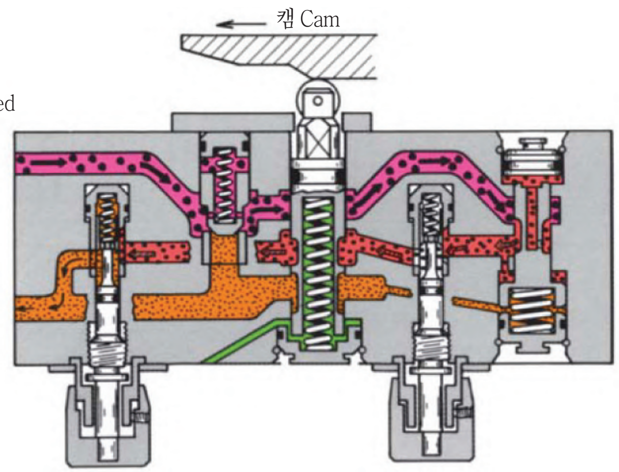
● 빠른 이송일 때   At Rapid Advance



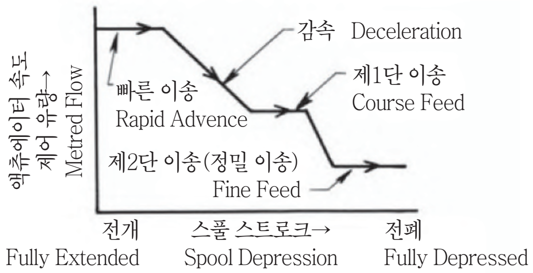
● 제1단 이송일 때   At Course Feed



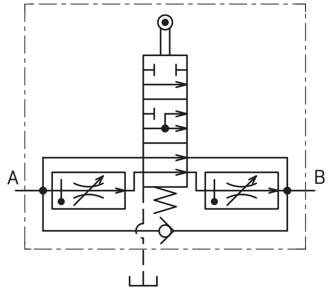
● 제2단 이송일 때   At Find Feed



스풀 스트로크와 제어 유량
Spool Depression vs Metred Flow

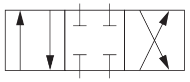
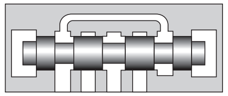
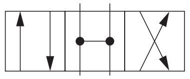
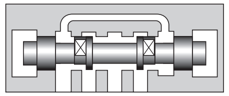
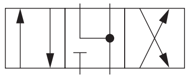
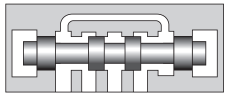
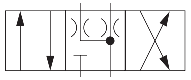
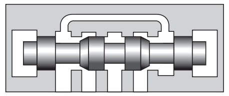
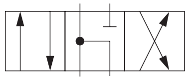
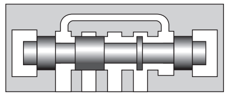
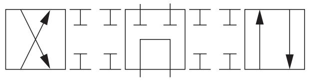
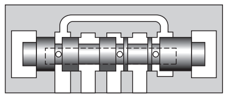
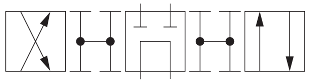
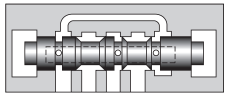
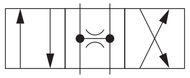
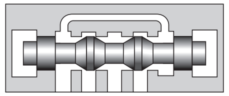
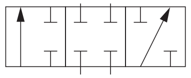
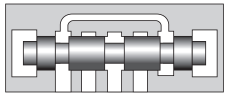
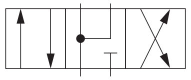
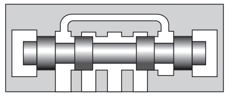
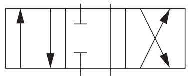
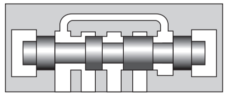
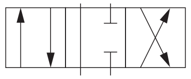
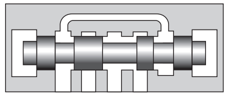
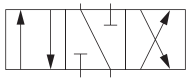
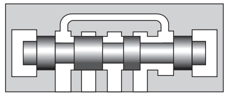


KS 유압기호
Graphic Symbol

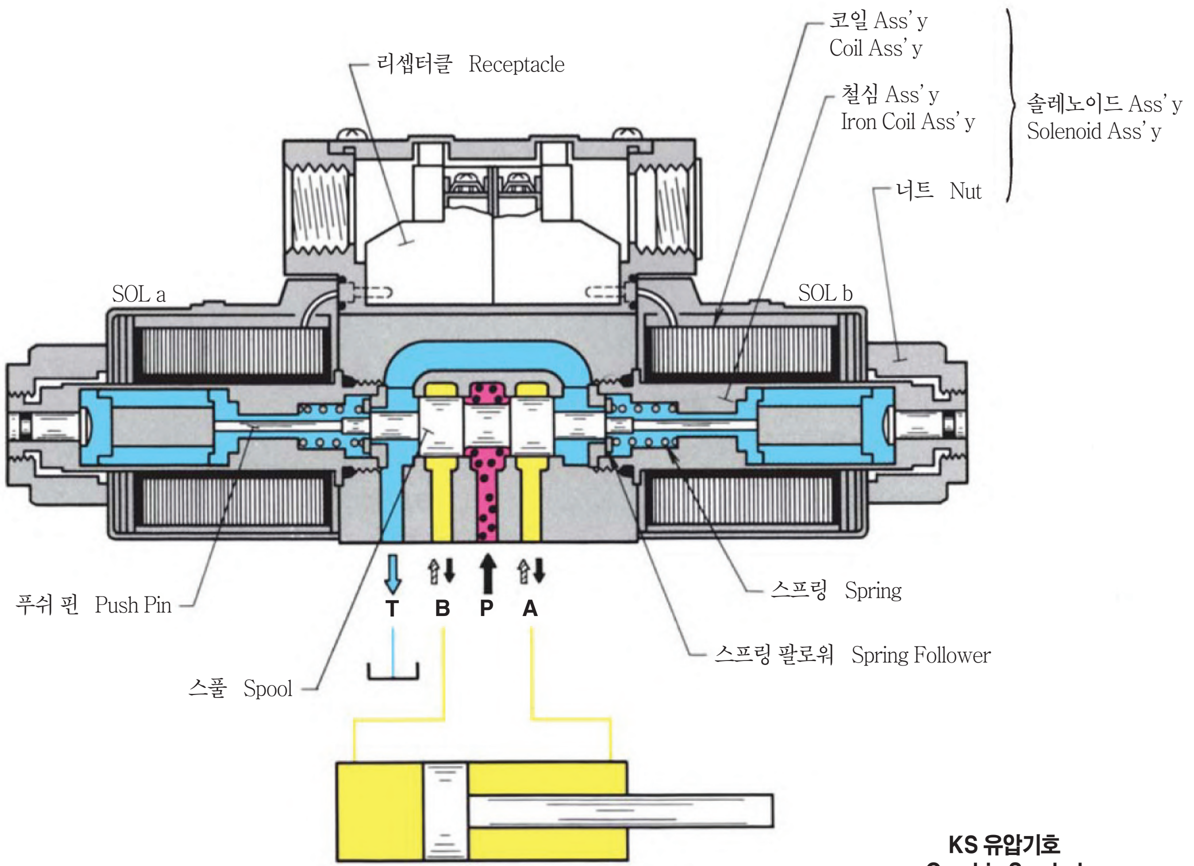


방향 절환 밸브 스풀 형식 일람표

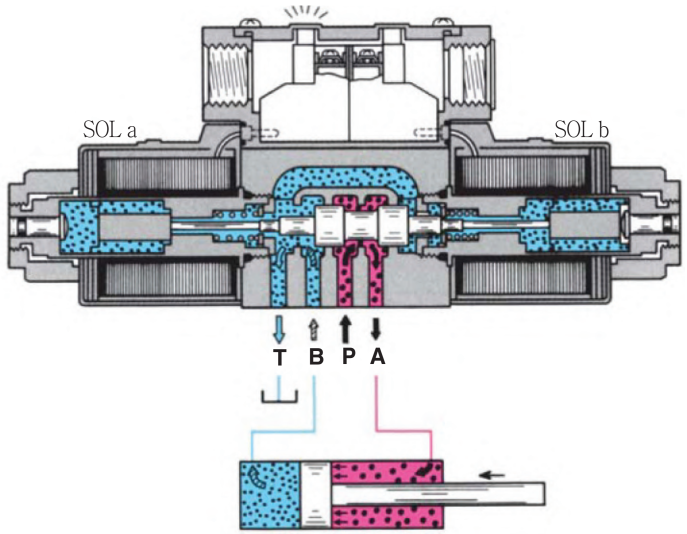
● **스풀 형식은, 중립 위치에 있는 밸브 내의 흐름 상태에 따라 하기표와 같이 분류됩니다.**
According to the condition of flow in the center position, spool types are classified as per the table below.

스풀 형식 Spool Type	유압기호 Graphic Symbols	스풀 관계도 (중립 위치) Schematic Drawing (Center Position)
2 클로즈 센터 Closed Center All Ports	A B  P T	 T B P A
3 오픈 센터 Open Center All Ports	A B  P T	 T B P A
4 A · B · T 접속 Open Center A · B & T	A B  P T	 T B P A
40 교축 A · B · T 접속 Open Center A · B & T Restricted Flow	A B  P T	 T B P A
5 P · A · T 접속 Open Center P · B & T	A B  P T	 T B P A
6 P · T 접속 Open Center P & T Close Crossover	A B  P T	 T B P A
60 P · T 접속 Open Center P & T Open Crossover	A B  P T	 T B P A
7 오픈 센터 Open Center All Ports Restricted Flow	A B  P T	 T B P A
8 2방향 2 Way	A B  P T	 T B P A
9 P · A · B 접속 Open Center P · A & B	A B  P T	 T B P A
10 B · T 접속 Open Center B & T	A B  P T	 T B P A
11 P · A 접속 Open Center P & A	A B  P T	 T B P A
12 A · T 접속 Open Center A & T	A B  P T	 T B P A

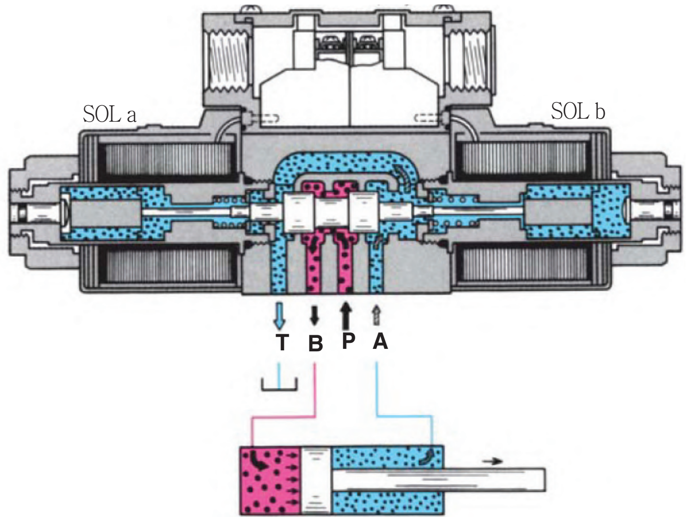
● 중립시 At Center Position



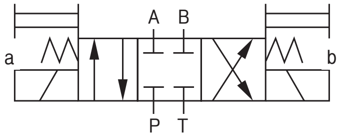
● SOL a ON일 때 SOL a is Energized



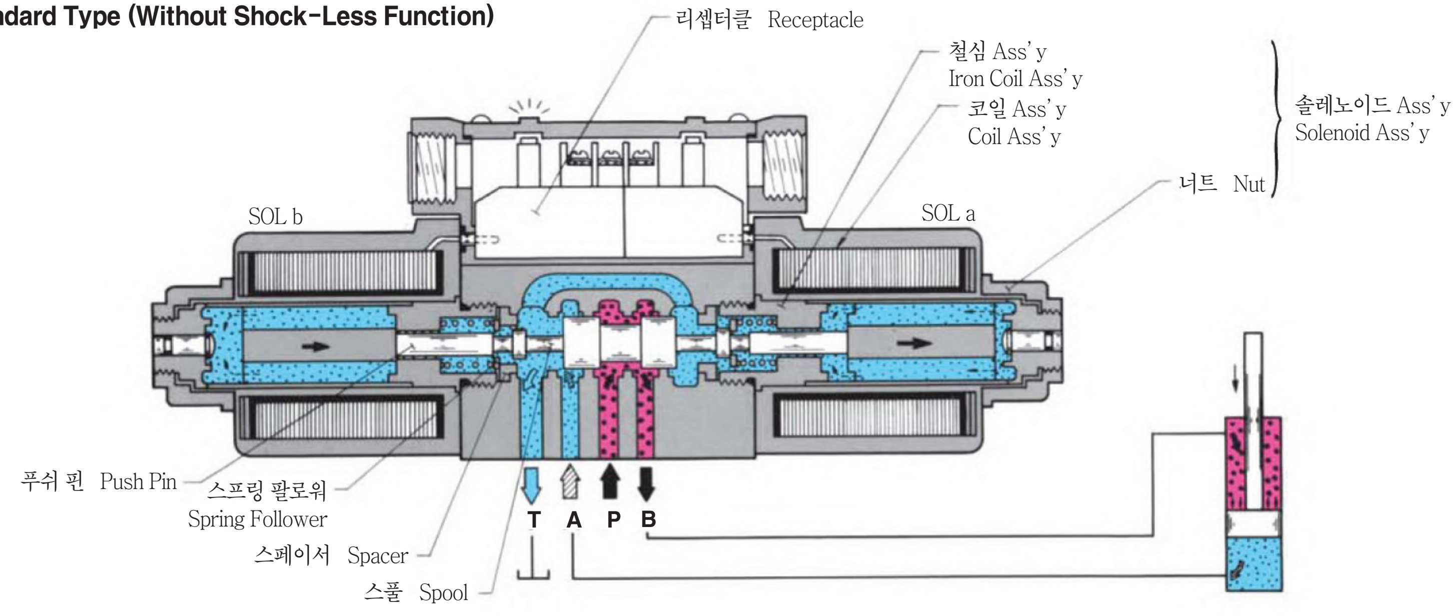
● SOL b ON일 때 SOL b is Energized



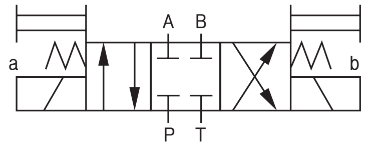
KS 유압기호
Graphic Symbol



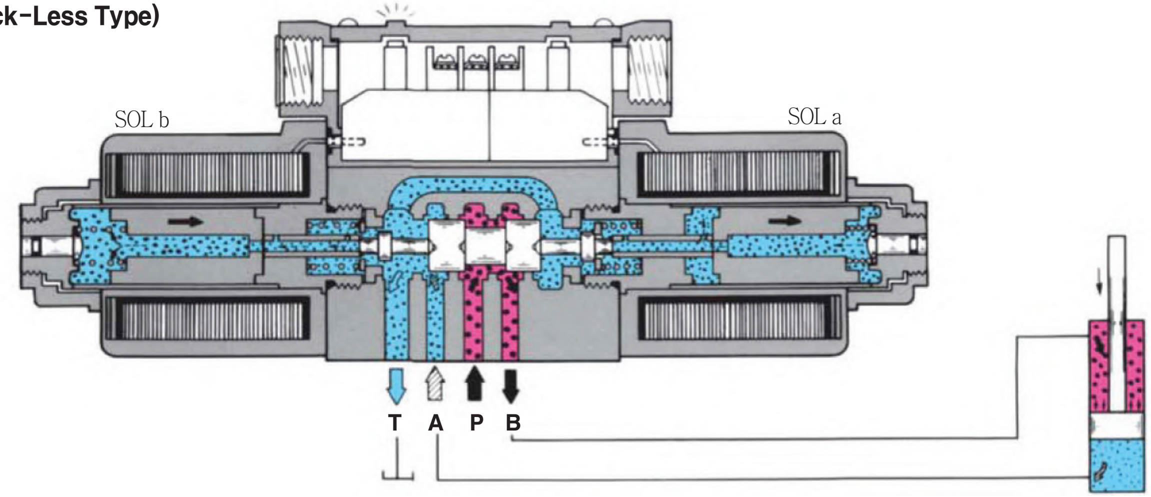
● 범용형 (쇼크레스 기능 없음)
Standard Type (Without Shock-Less Function)



KS 유압기호
Graphic Symbol

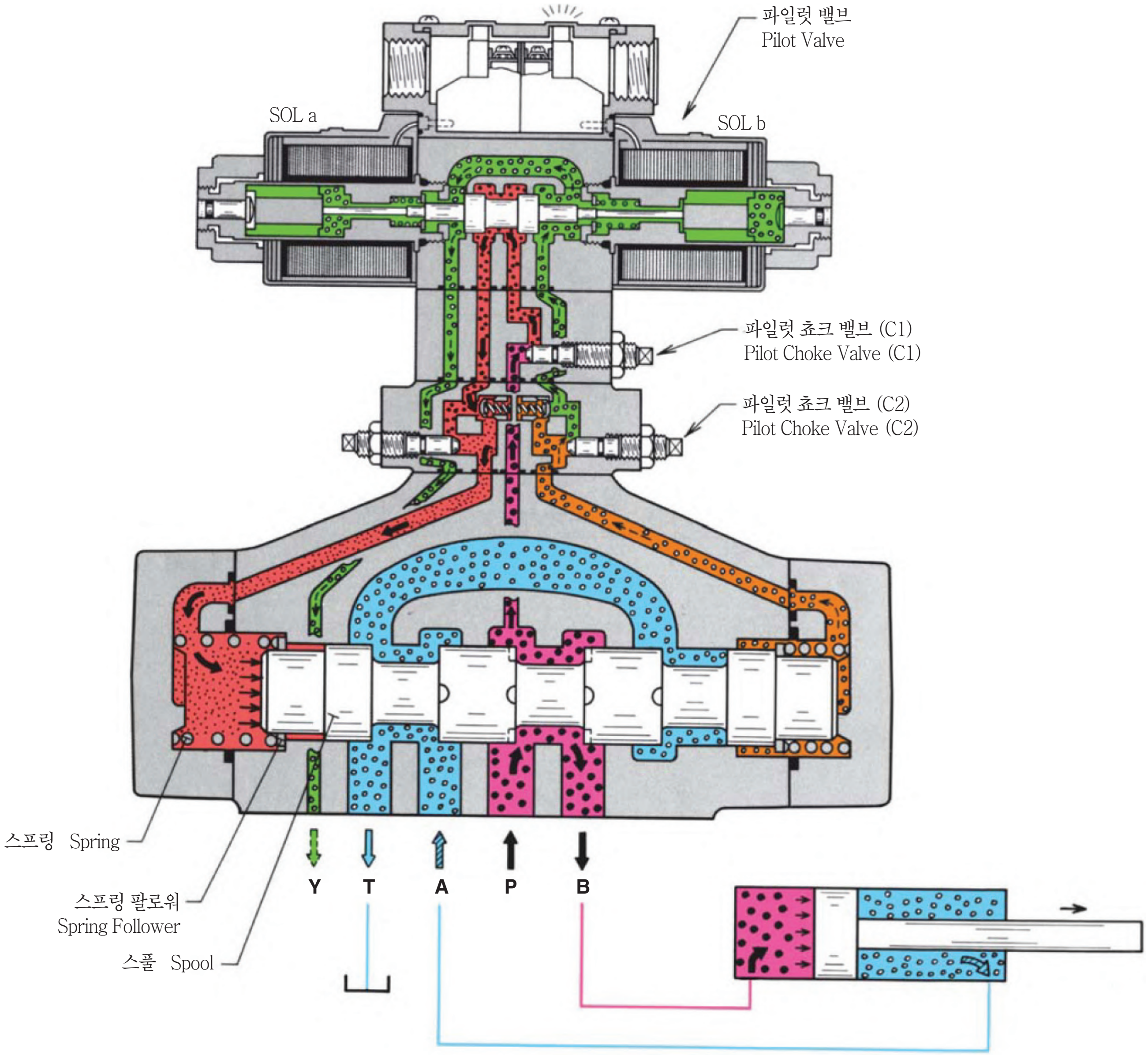


● 쇼크레스형 (Shock-Less Type)



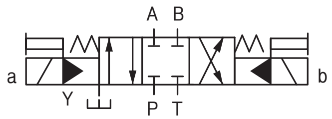
전자 파일럿 절환 밸브

Solenoid Controlled Pilot Operated Directional Valves

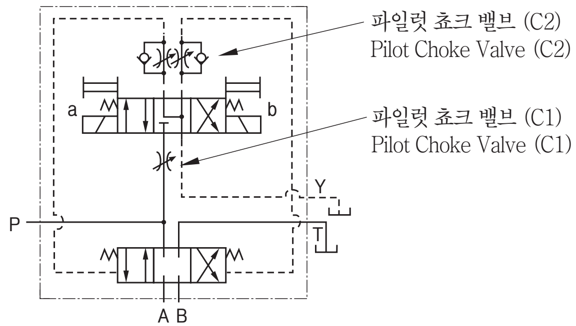


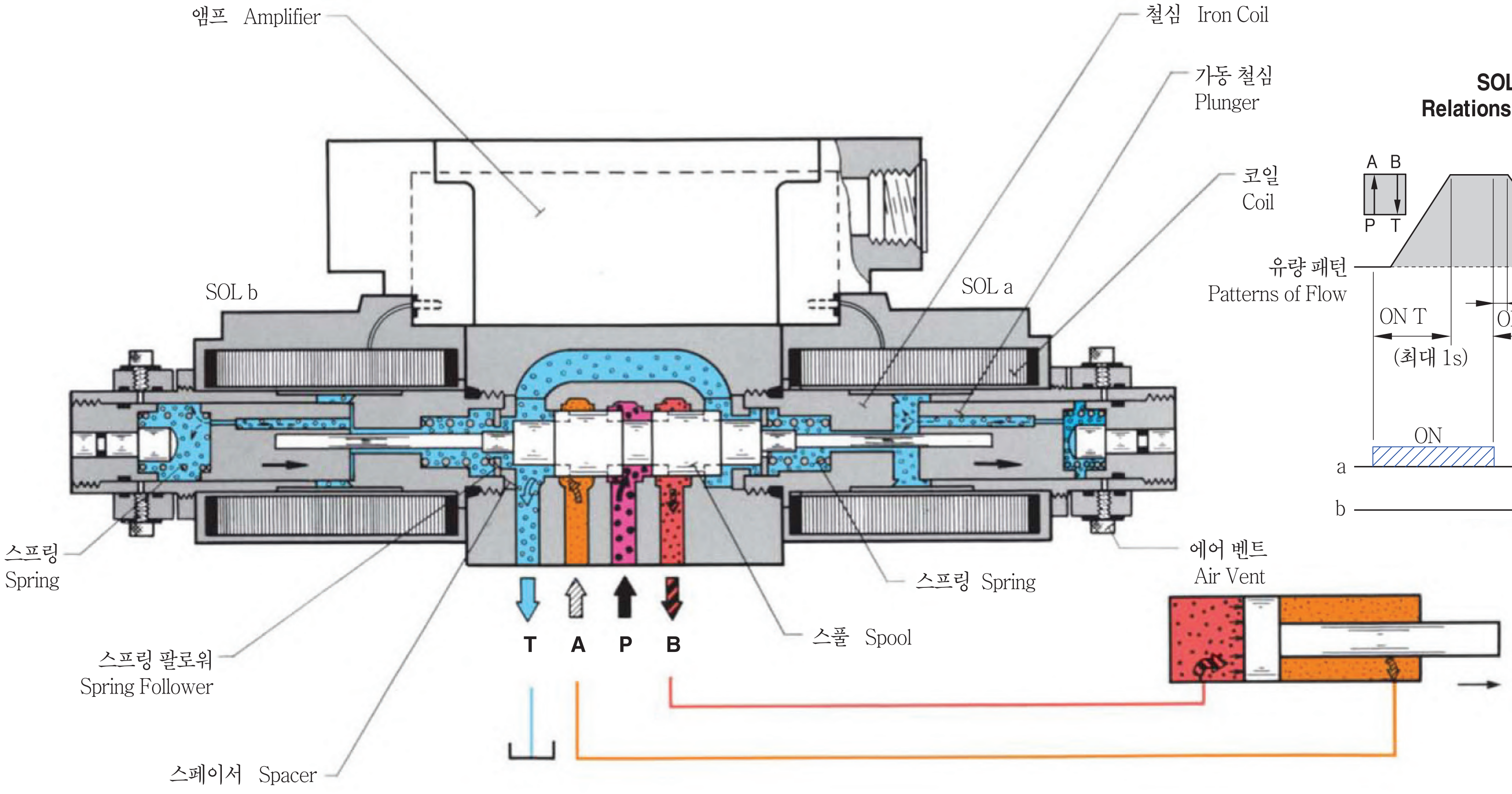
KS 유압기호
Graphic Symbol

● **간략 기호 Simplified**

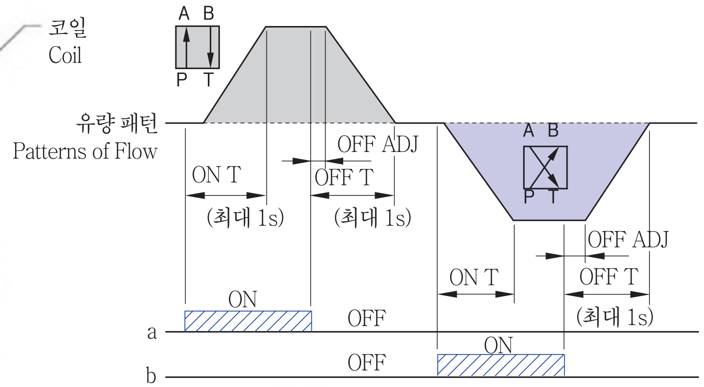


● **상세 기호 Detailed**

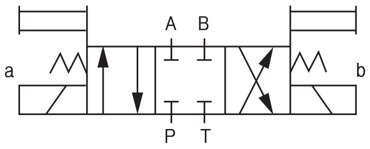




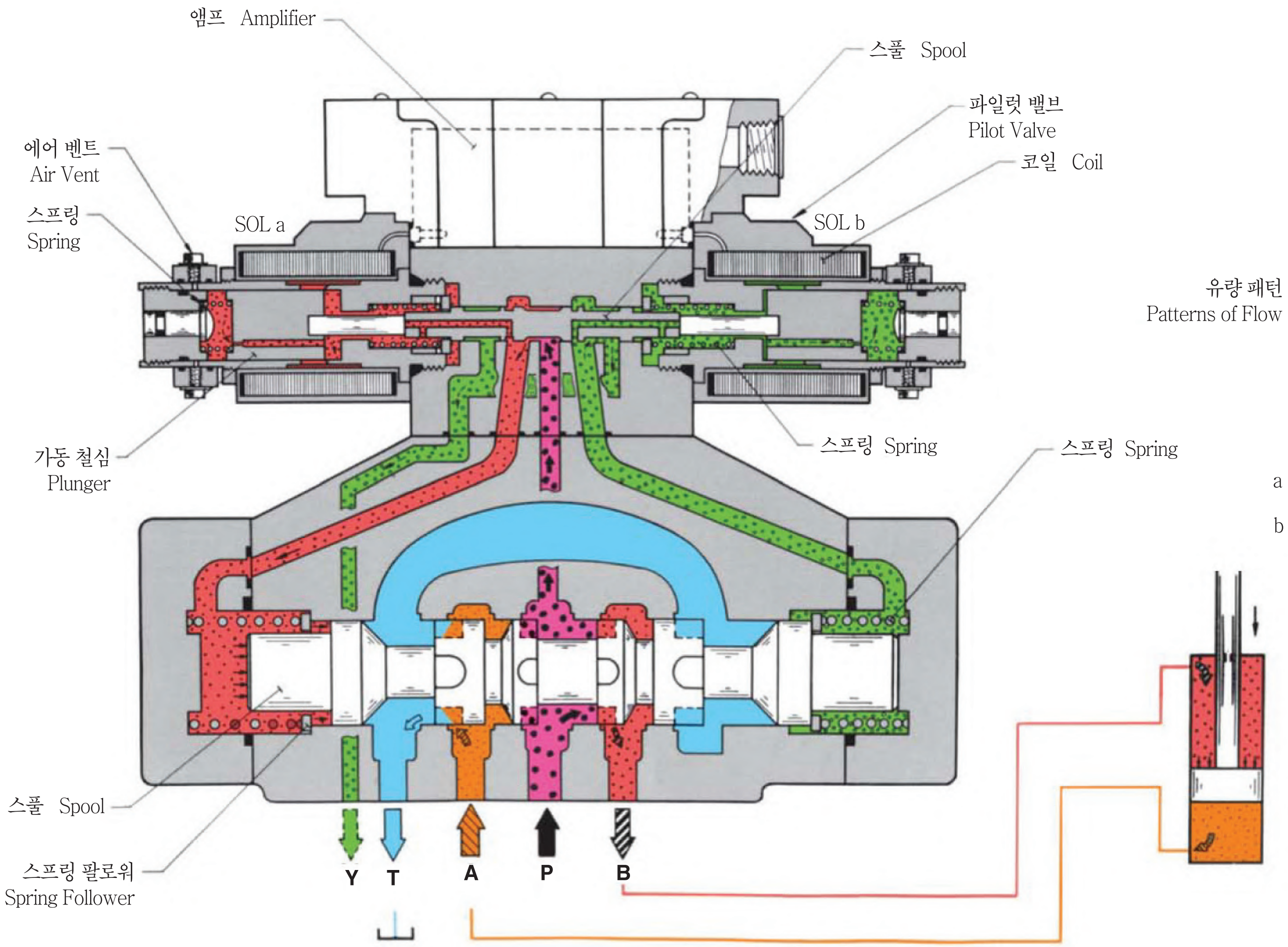
SOL 신호와 유량 패턴의 관계도
Relationships between SOL signals and flow patterns



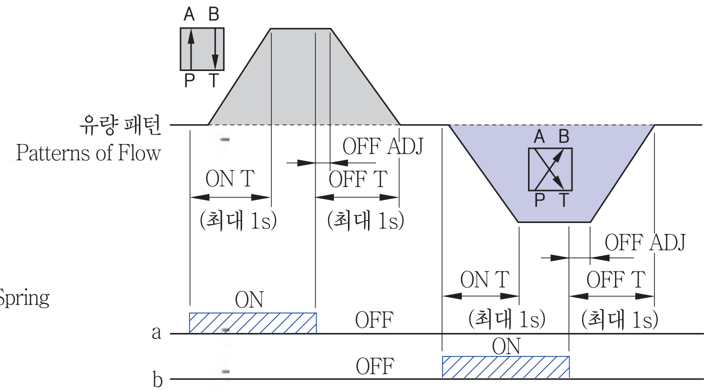
KS 유압기호
Graphic Symbol



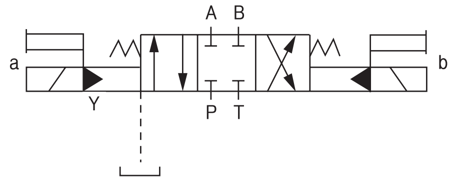
G시리즈 가변 쇼크레스형 전자 파일럿 절환 밸브



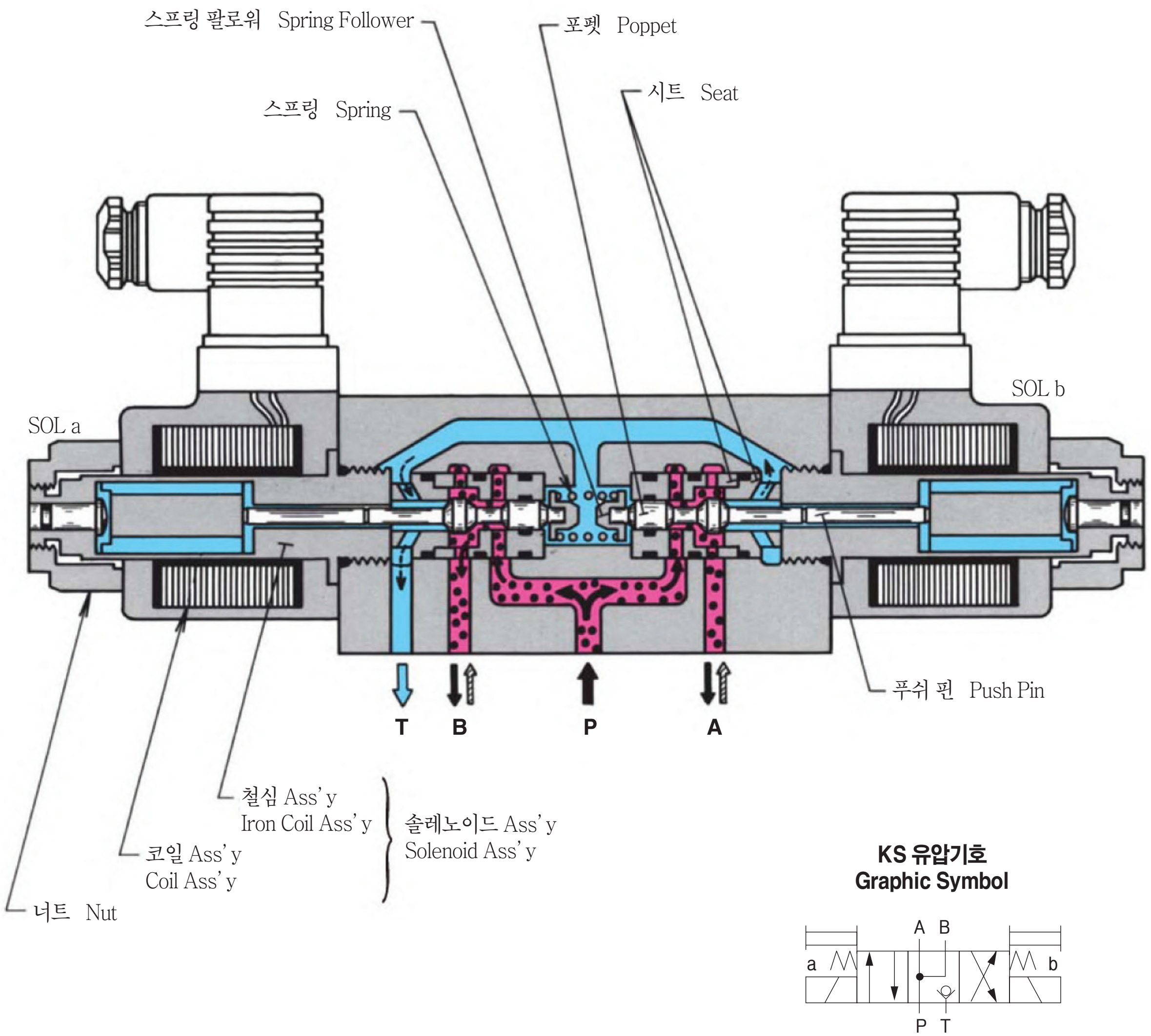
SOL 신호와 유량 패턴의 관계도
Relationships between SOL signals and flow patterns



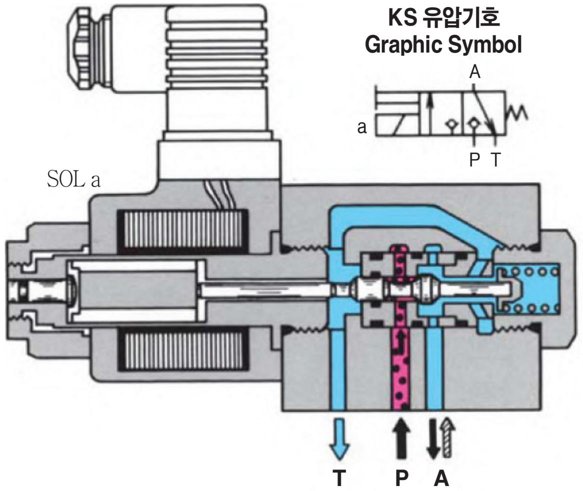
KS 유압기호
Graphic Symbol



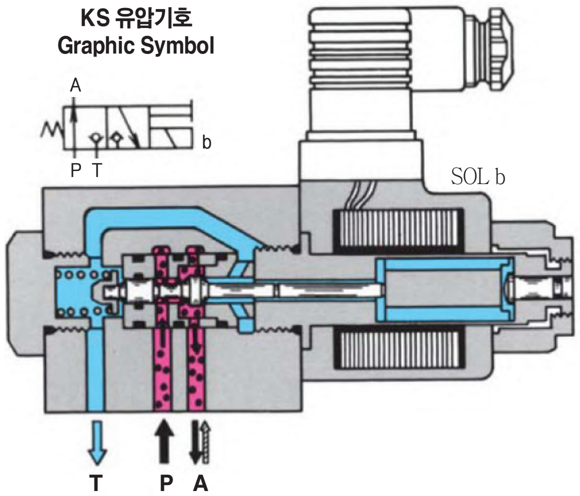
● 4포트 밸브, 노멀 오픈형
4Port Valve, Normally Open Type

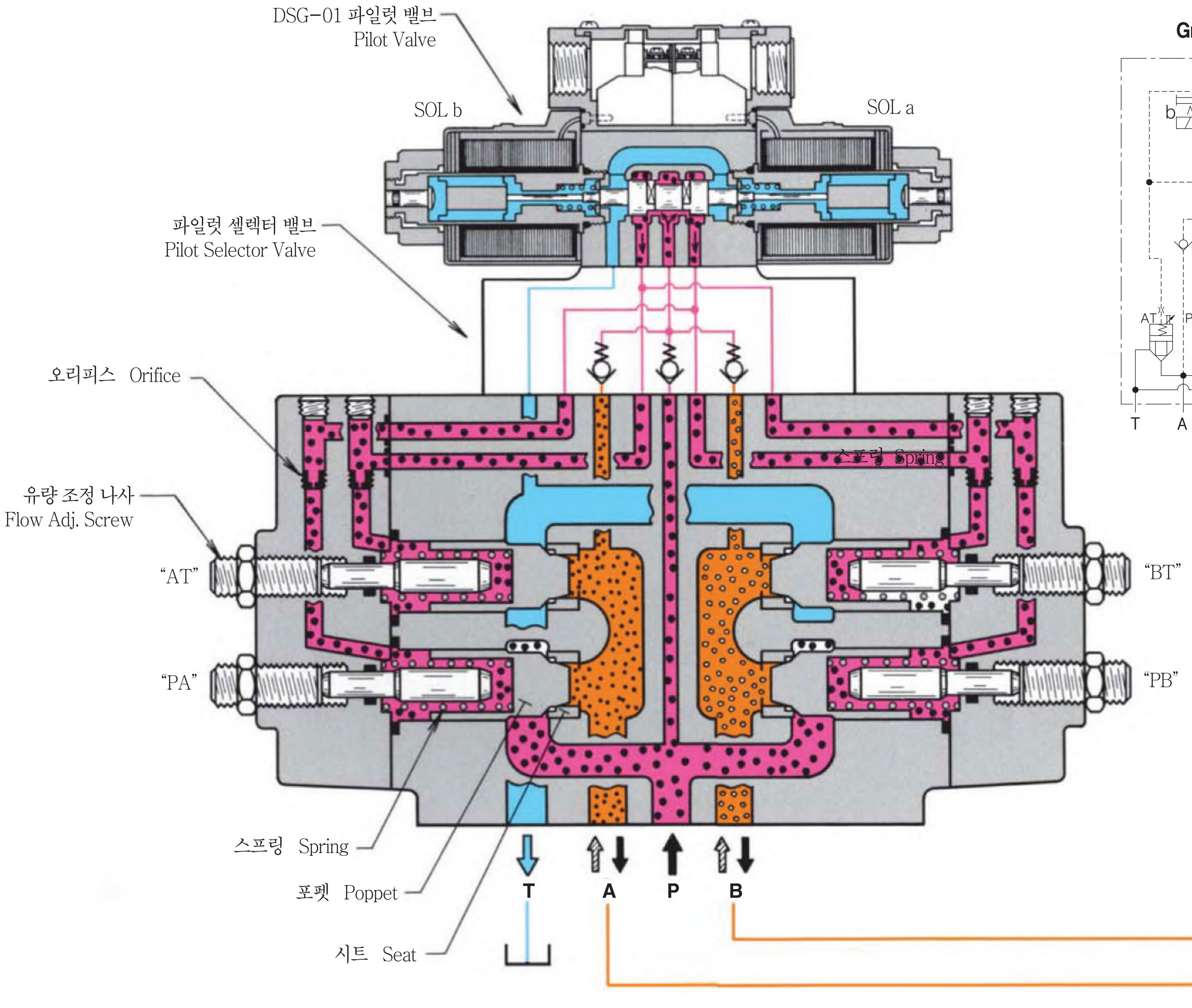


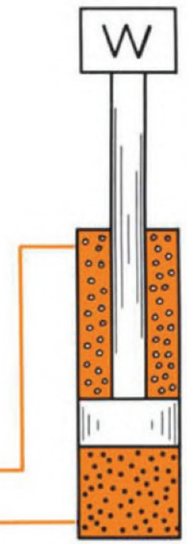
● 3포트 밸브, 노멀 클로즈형
3Port Valve, Normally Closed Type



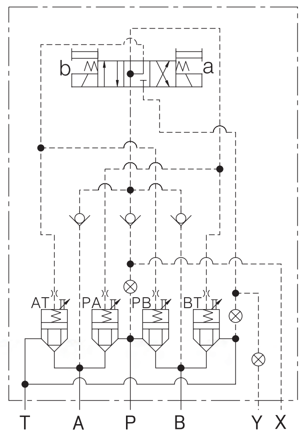
● 3포트 밸브, 노멀 오픈형
3Port Valve, Normally Open Type



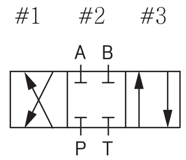




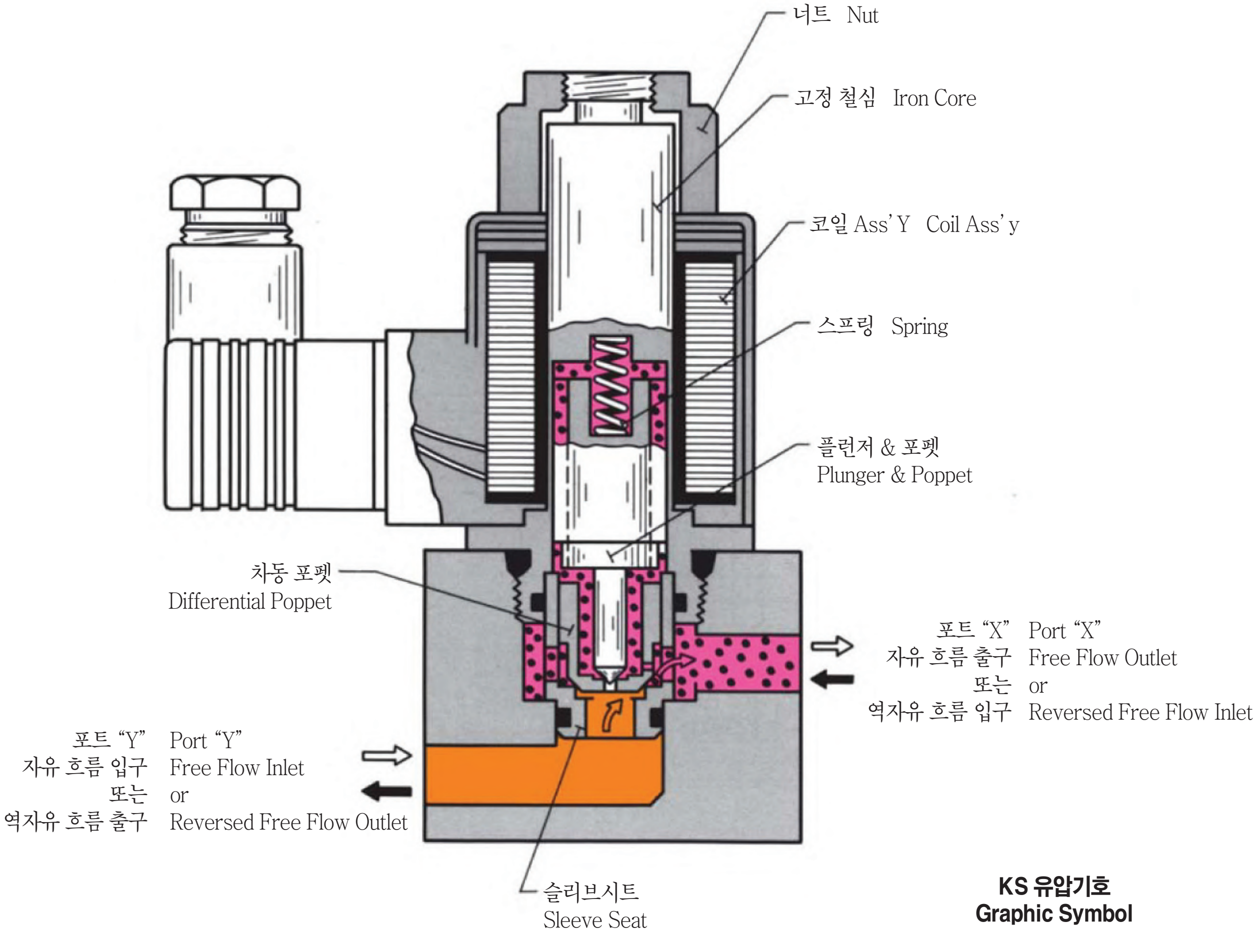
KS 유압기호
Graphic Symbol



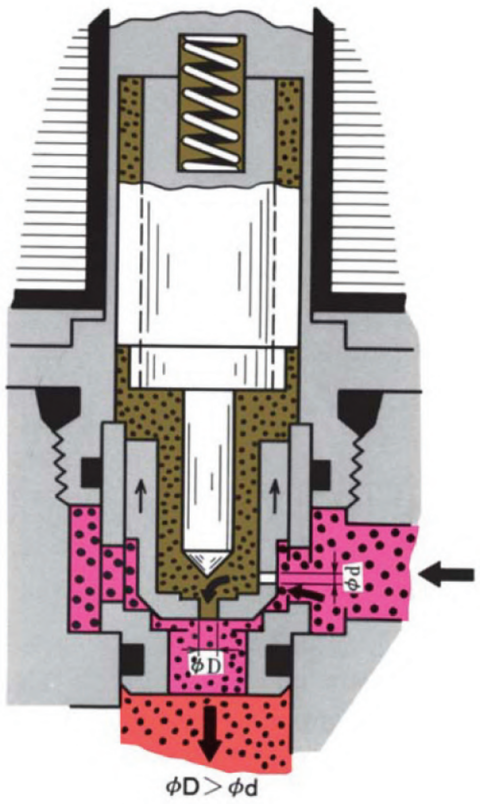
솔레노이드와 절환 위치
Solenoid Eneirigizing and
Chang Over Position



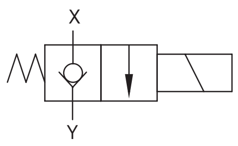
위치	#1	#2	#3
SOL a	ON	OFF	OFF
SOL b	OFF	OFF	ON



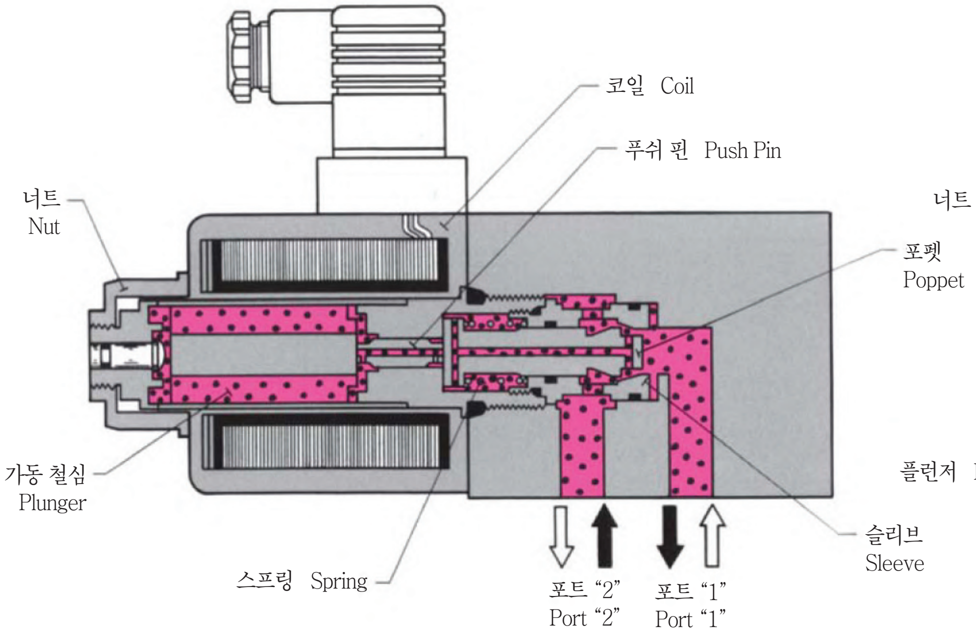
통전시 상태도 (절환 도중)
Picture of the condition when solenoid is energized
(When spool is shifting)



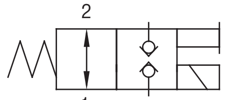
KS 유압기호
Graphic Symbol



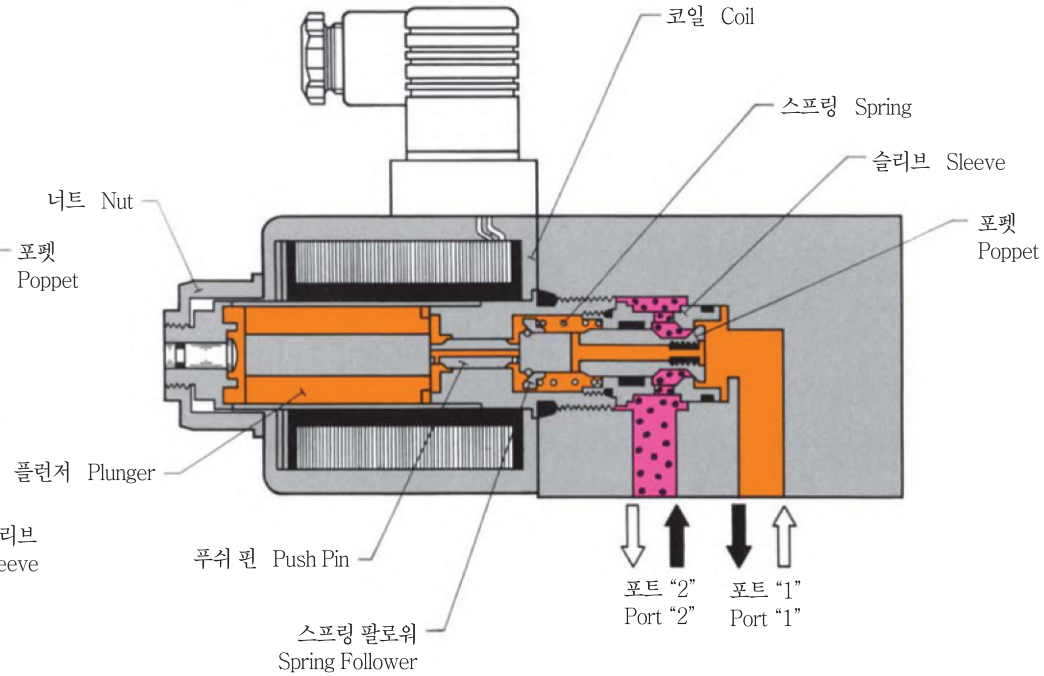
- **노멀 오픈형 (솔레노이드 "OFF"일 때)**
  Normally Open Type (Solenoid De-energized)



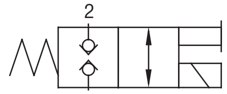
KS 유압기호
Graphic Symbol



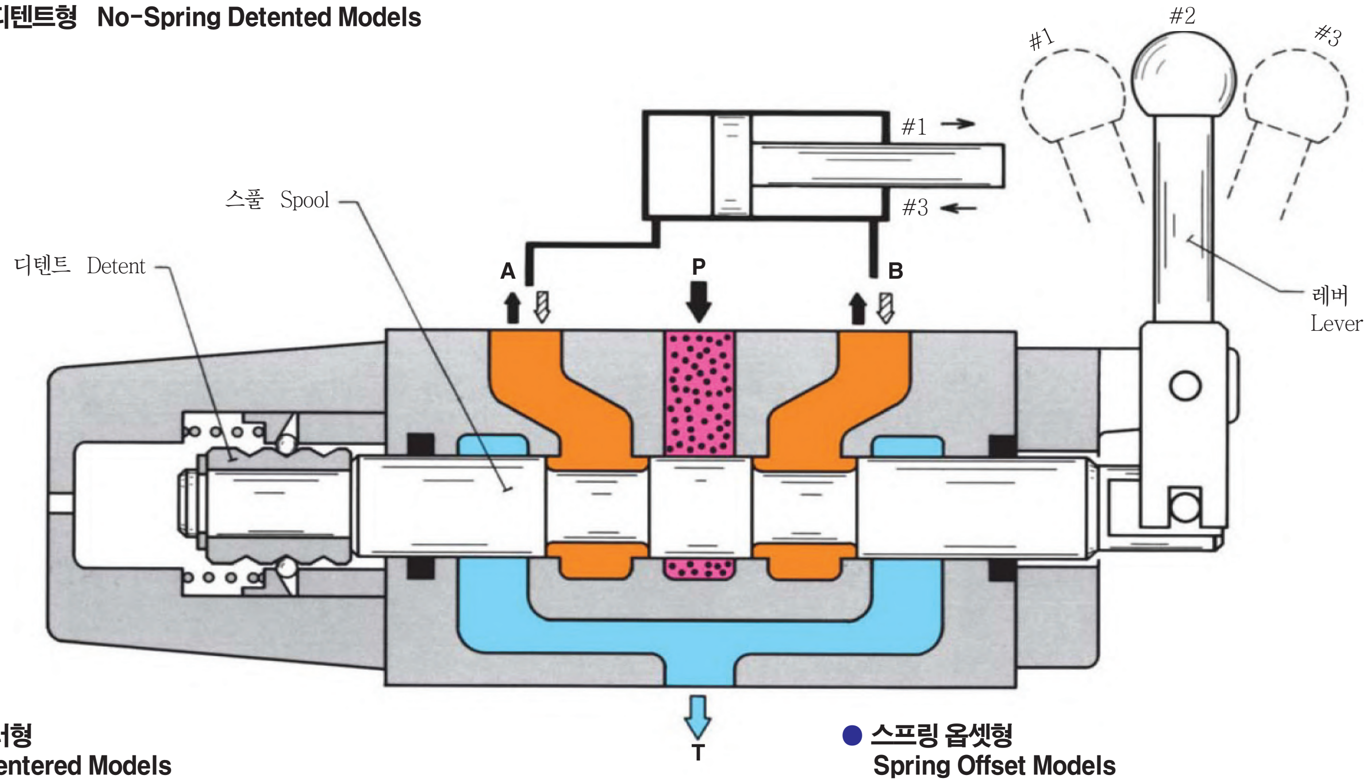
- **노멀 크로즈형 (솔레노이드 "OFF"일 때)**
  Normally Close Type (Solenoid De-energized)



KS 유압기호
Graphic Symbol

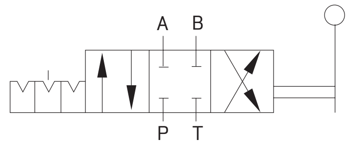


● 노스프링 디텐트형 No-Spring Detented Models

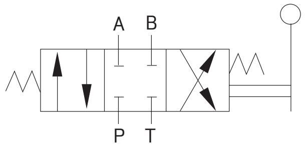


KS 유압기호
Graphic Symbol

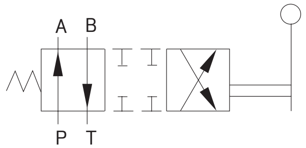
● 노스프링 디텐트
No-Spring Detented
#1 #2 #3



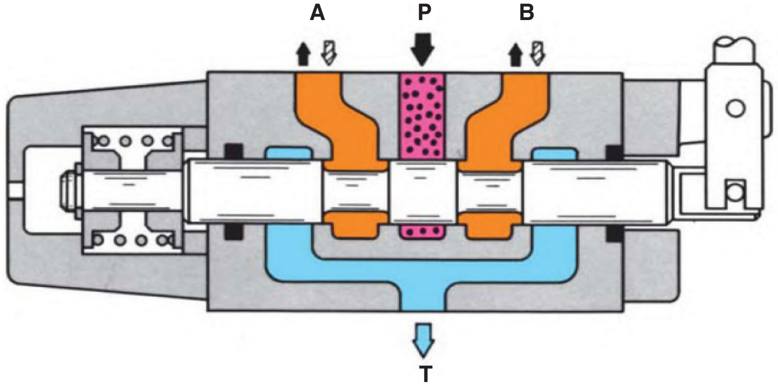
● 스프링 센터
Spring Centered
#1 #2 #3



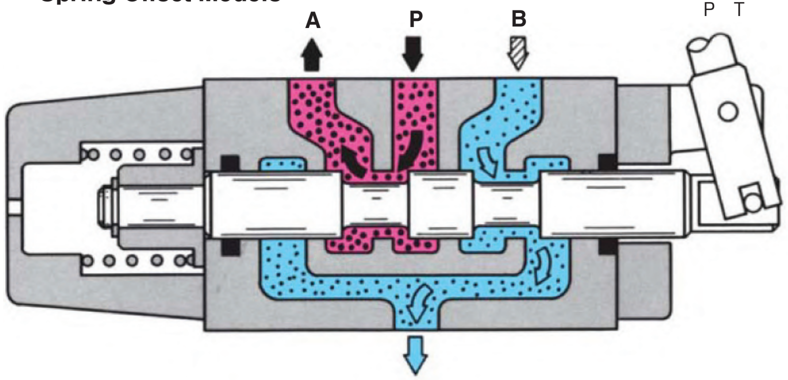
● 스프링 옵셋
Spring Offset
#1 #2 #3



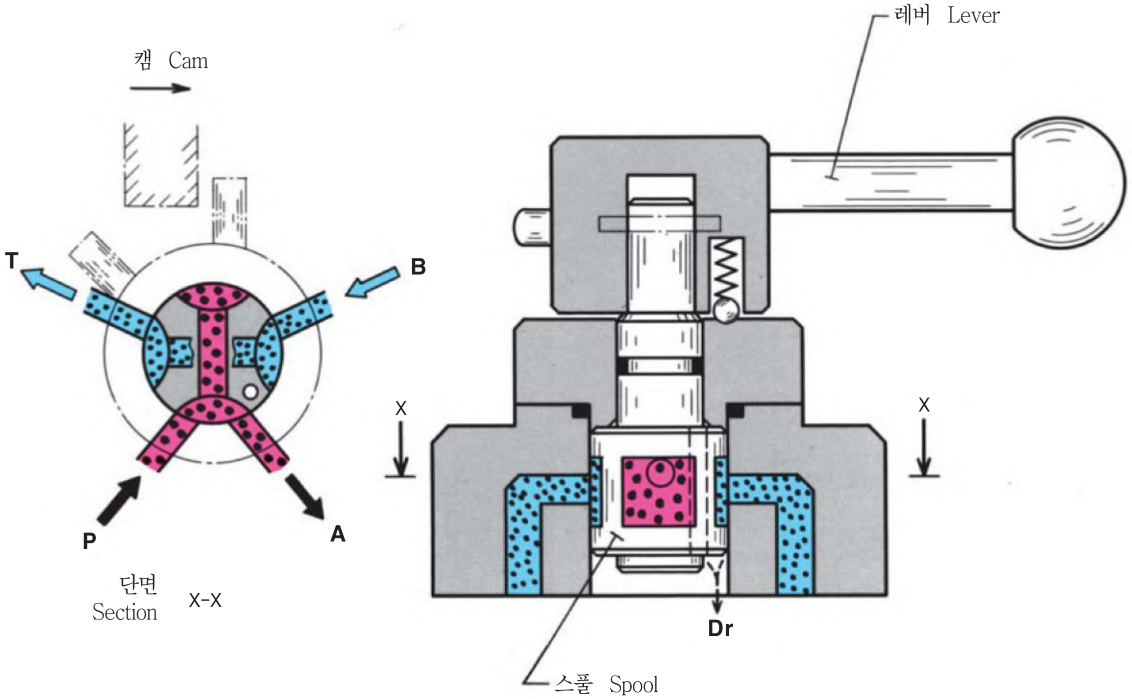
● 스프링 센터형 Spring Centered Models



● 스프링 옵셋형 Spring Offset Models

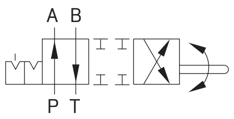


● 로터리형 Rotary Type

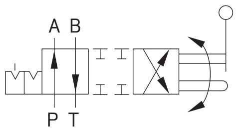


KS 유압기호
Graphic Symbol

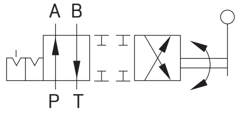
도그 절환형
Reversing Dog Operation



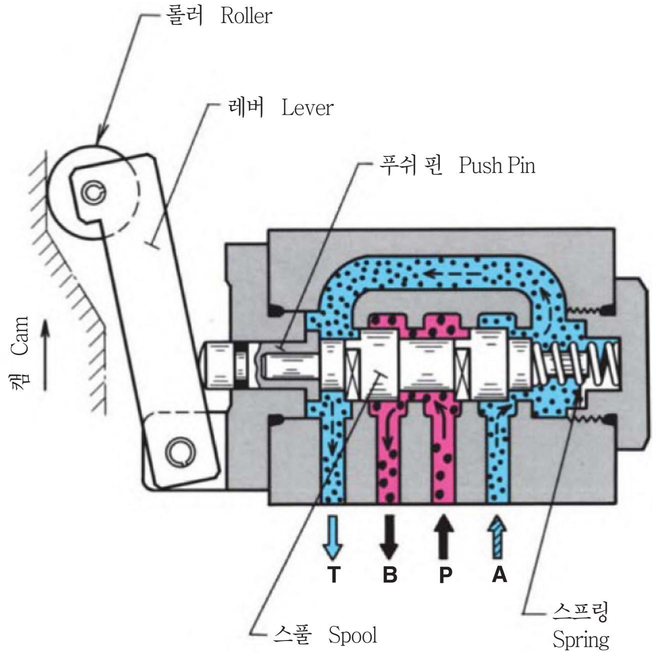
도그 레버 절환형
Reversing Dog & Manual Operation



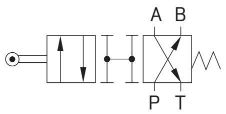
레버 절환형
Manual Operation



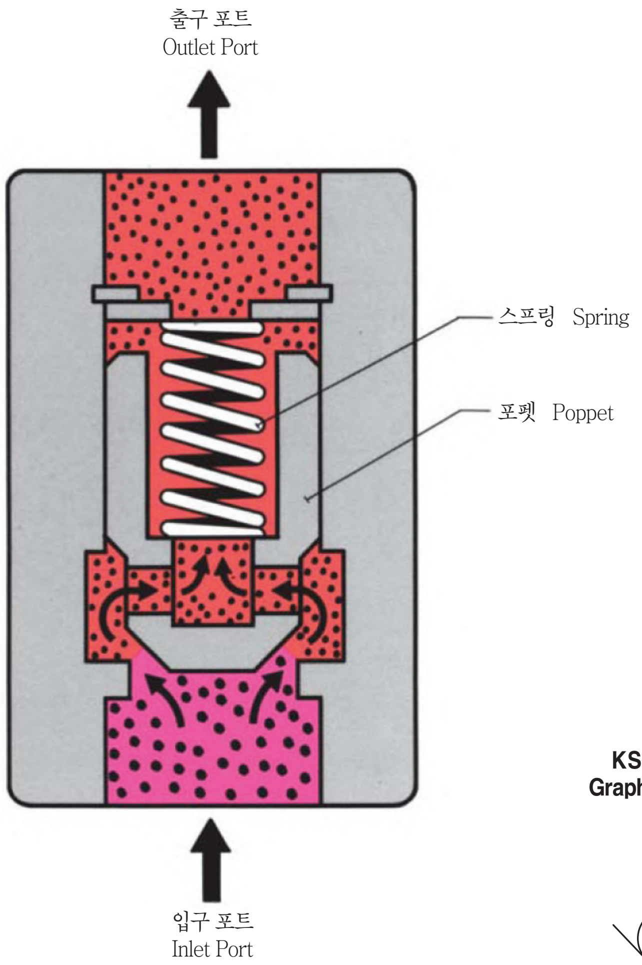
● 캠조작형 Cam Operated Type



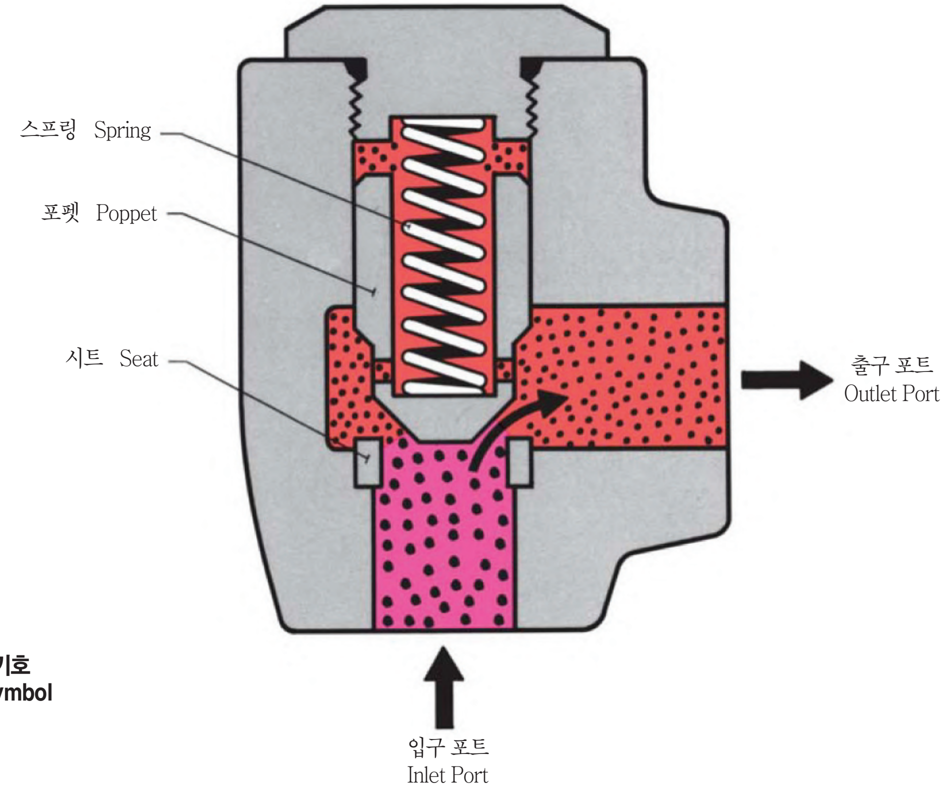
KS 유압기호
Graphic Symbol



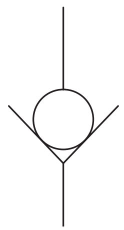
● 인라인형 In-Line Type



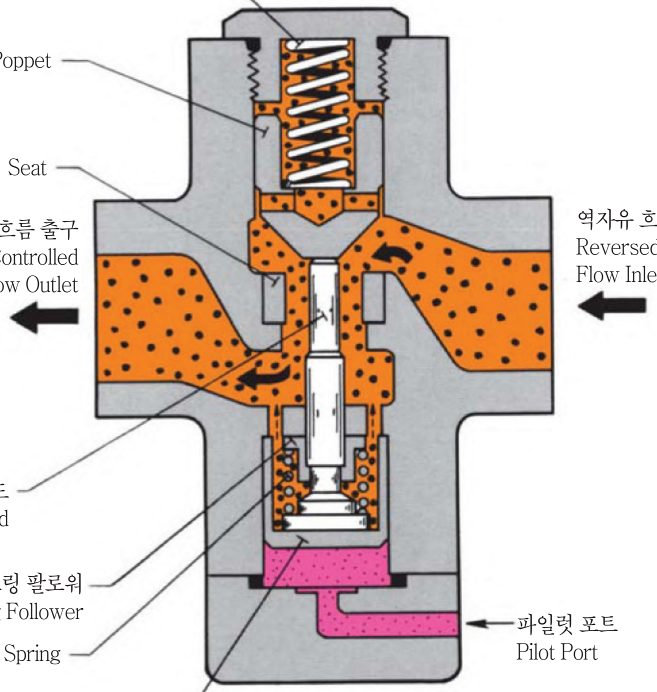
● 앵글형 Right Angle Type



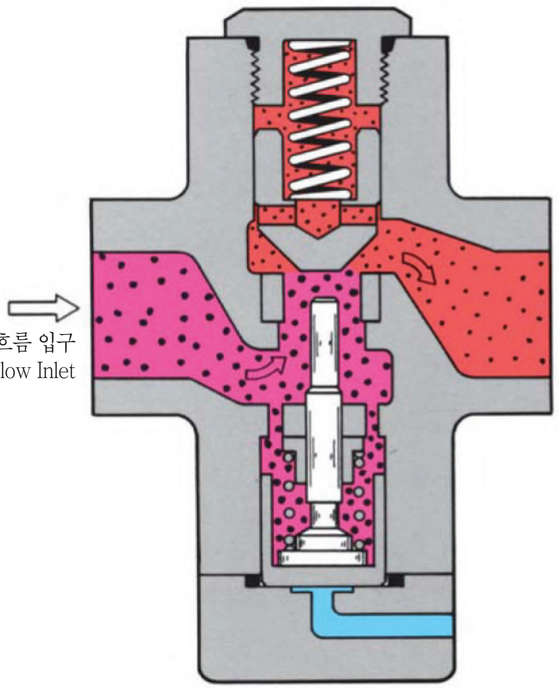
KS 유압기호
Graphic Symbol



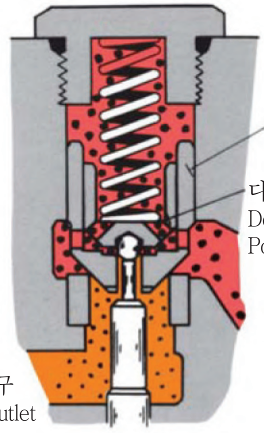
● 역자유 흐름일 때 At Reversed Controlled Flow



● 자유 흐름일 때 At Free Flow



디콤프레션형
Decompression Type

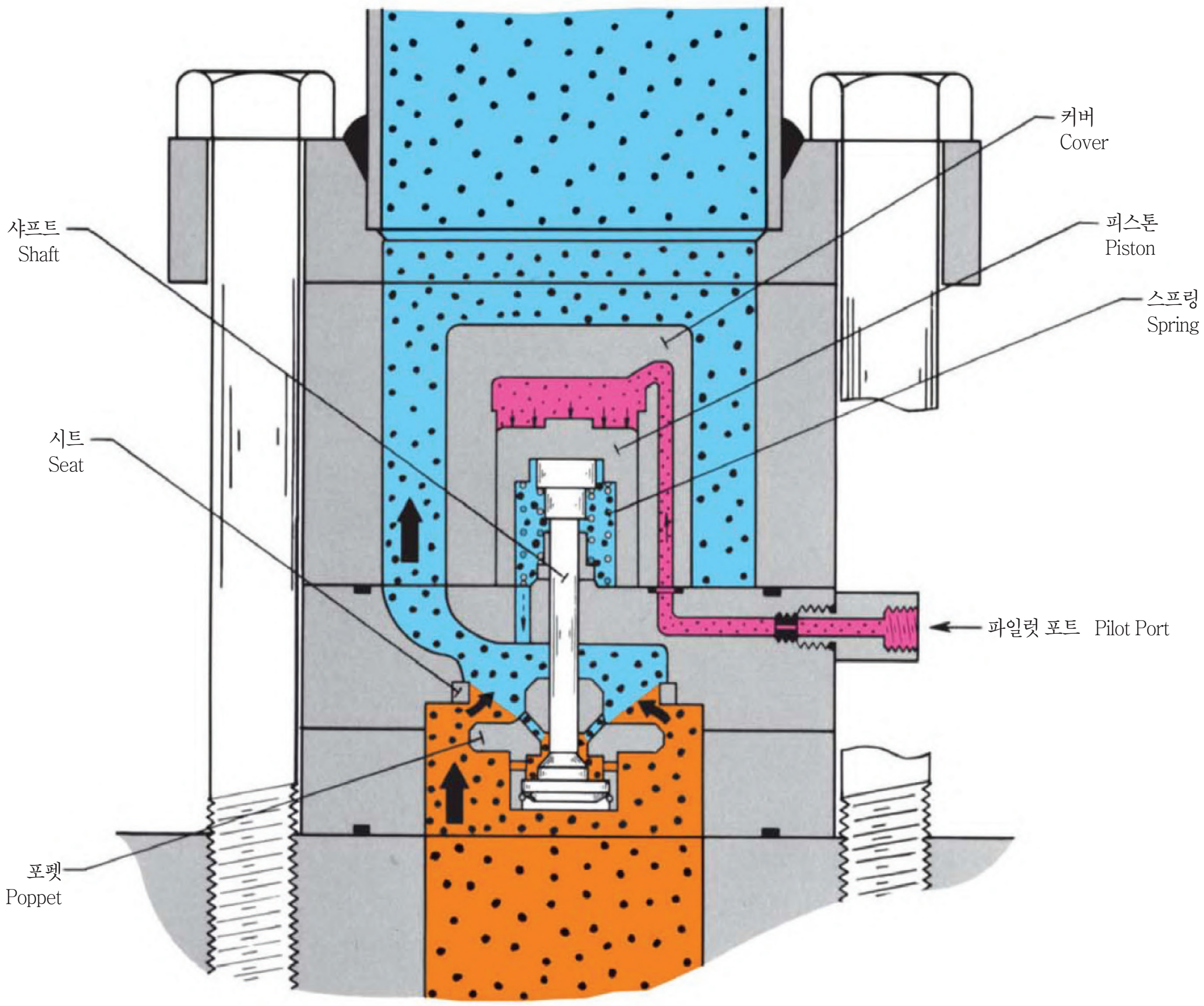


KS 유압기호
Graphic Symbol

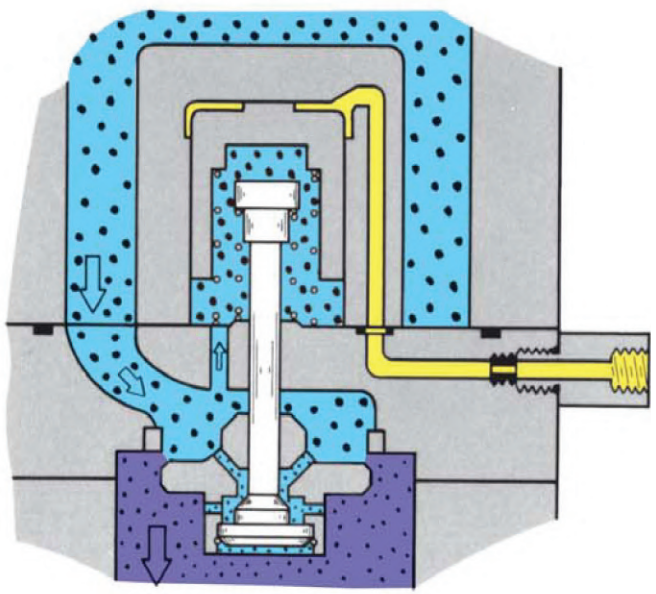
외부 드레인형
Ext. Drain

내부 드레인형
Int. Drain

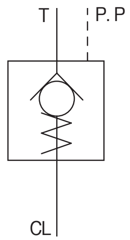
● 역자유 흐름일 때 At Reversed Controlled Flow



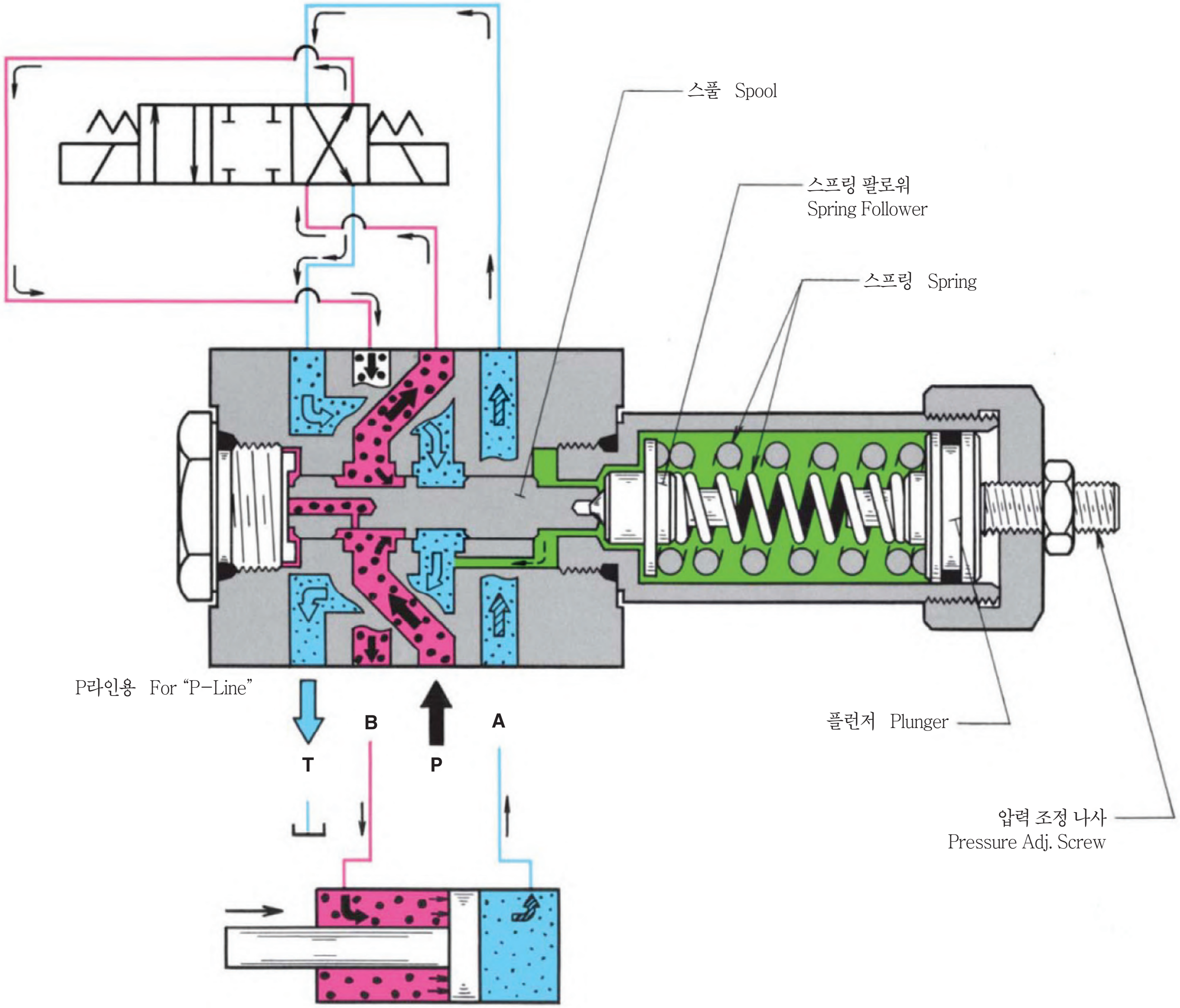
● 자유 흐름일 때 At Free Flow



KS 유압기호
Graphic Symbol

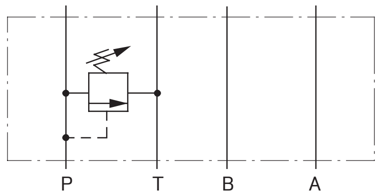


1/8 릴리프 모듈러 밸브

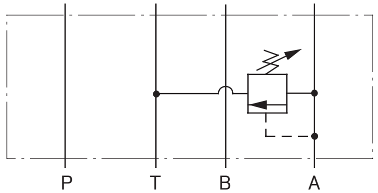


KS 유압기호
Graphic Symbol

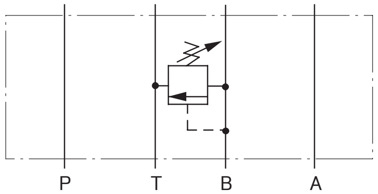
P라인용 For "P-Line"



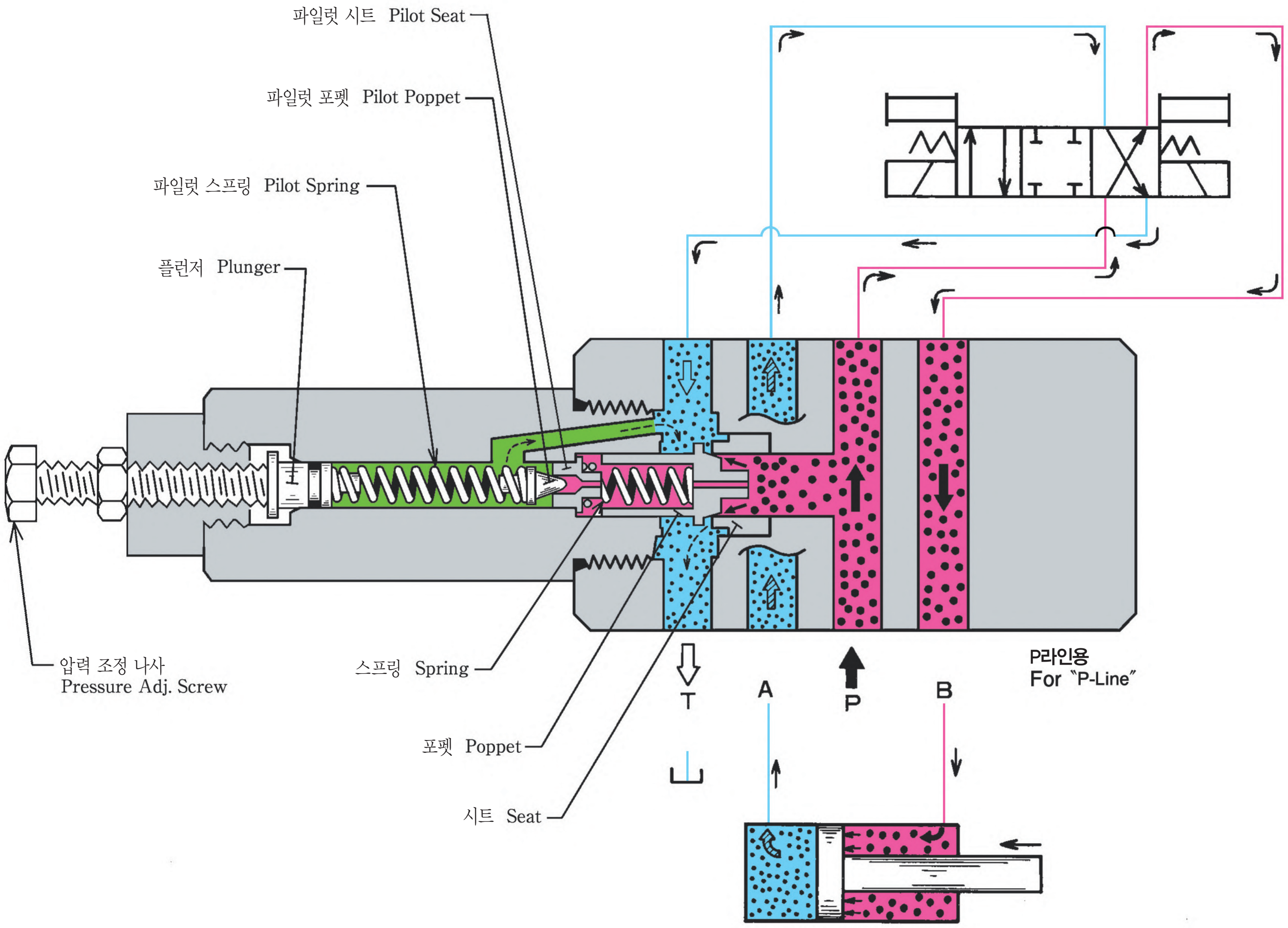
A라인용 For "A-Line"



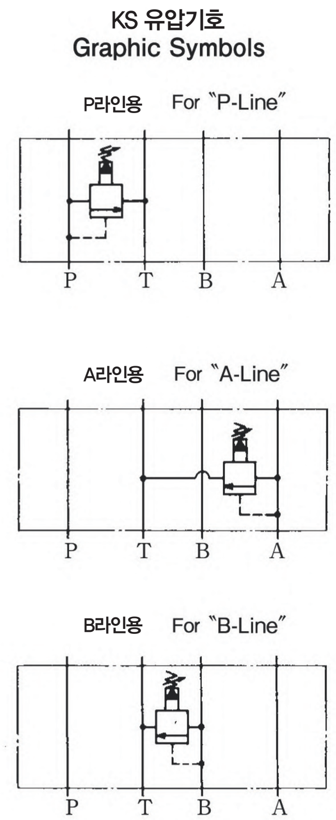
B라인용 For "B-Line"



3/8 릴리프 모듈러 밸브

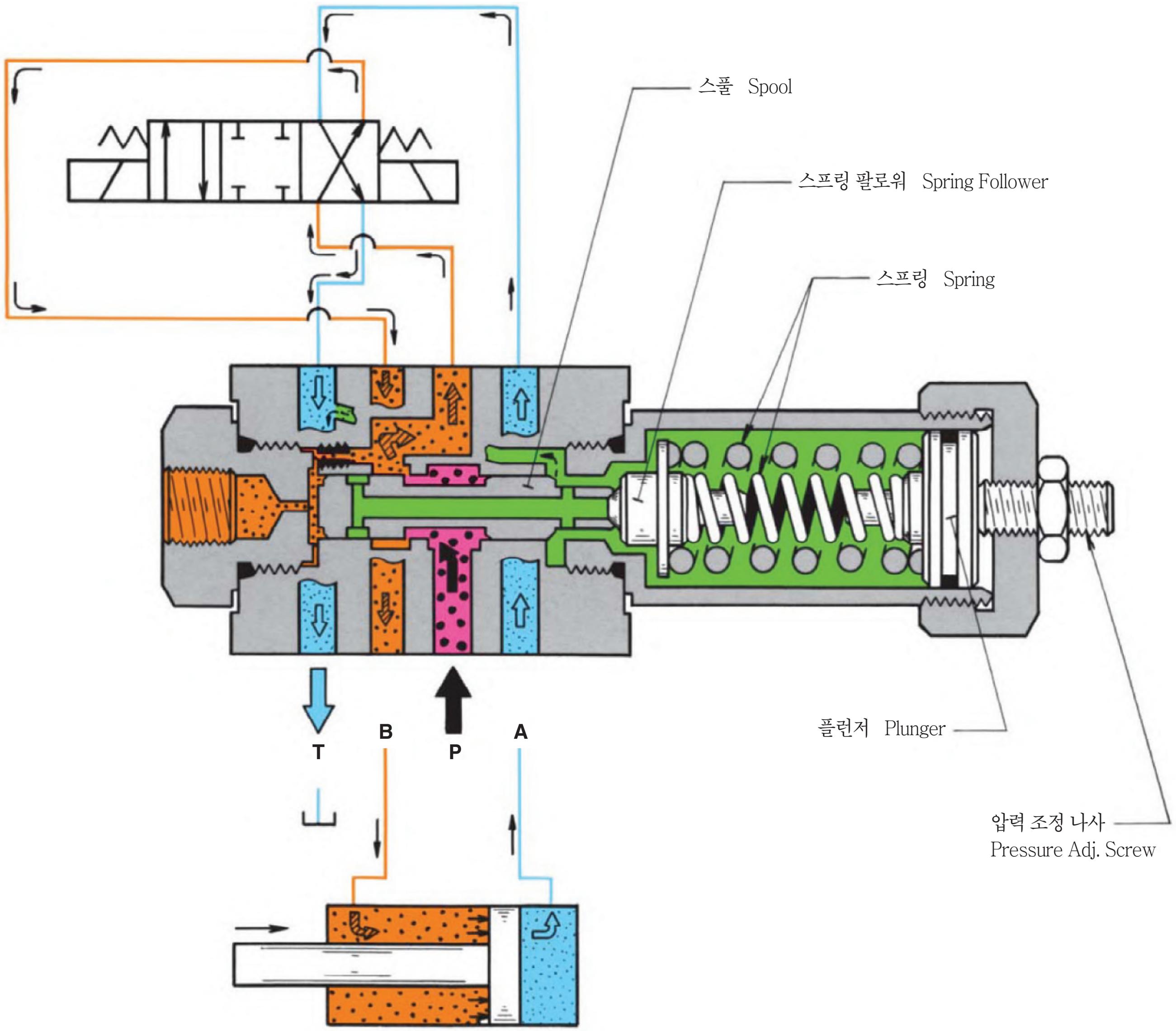


파일럿 시트 Pilot Seat
파일럿 포펫 Pilot Poppet
파일럿 스프링 Pilot Spring
플런저 Plunger
압력 조정 나사
Pressure Adj. Screw
스프링 Spring
포펫 Poppet
시트 Seat
T
A
P
B
P라인용
For "P-Line"

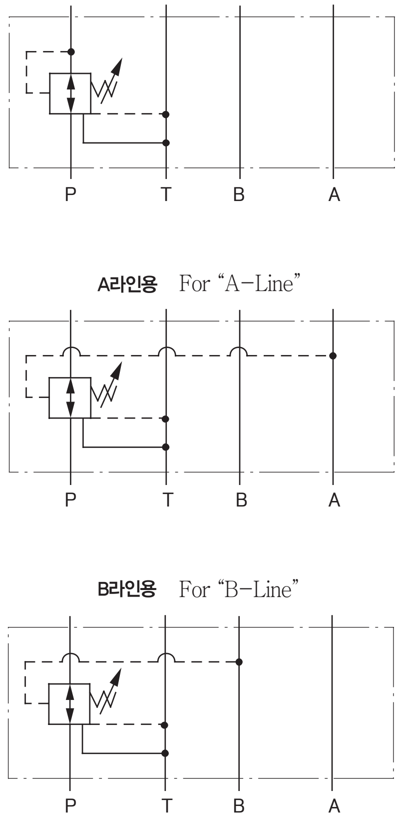


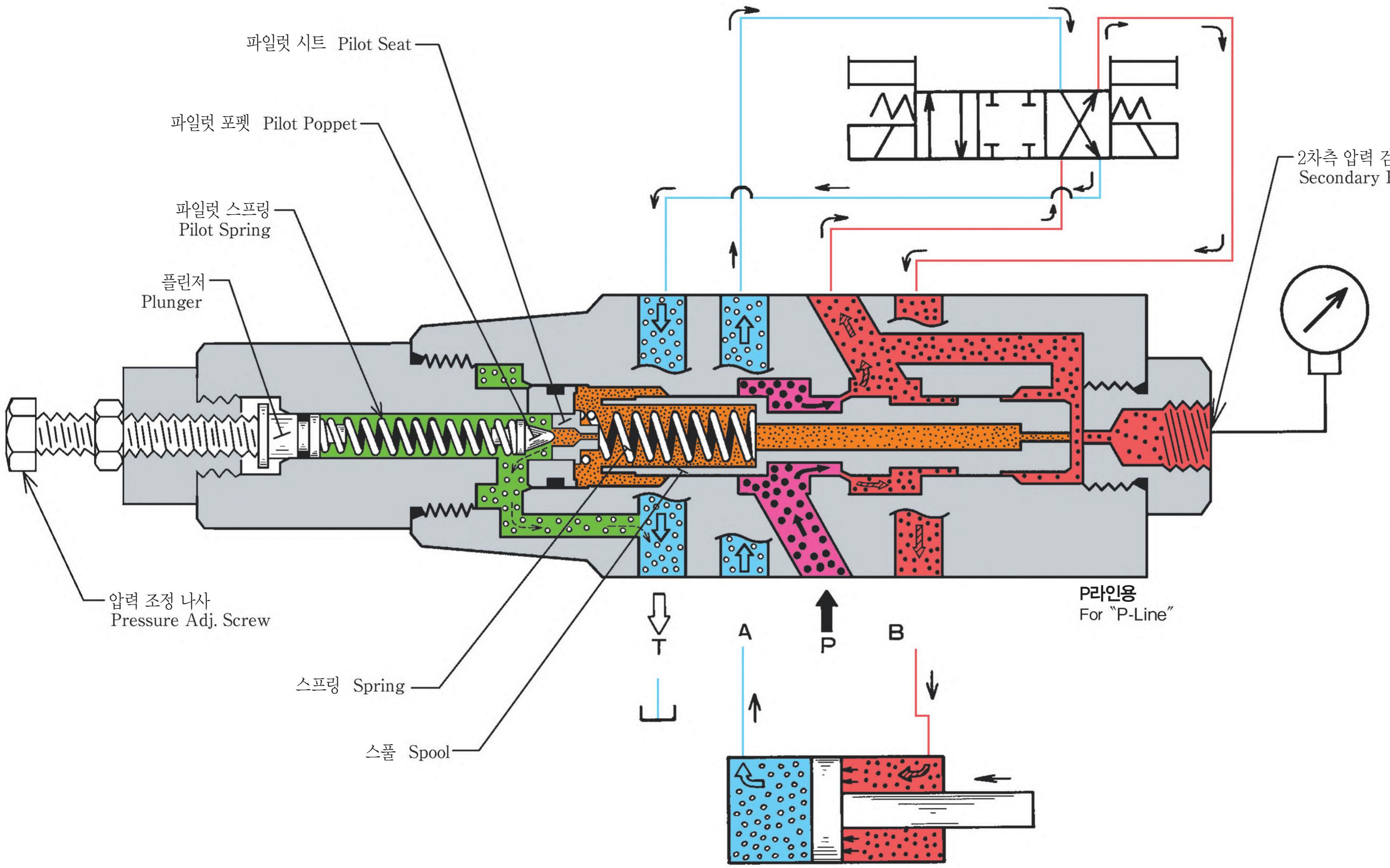
KS 유압기호
Graphic Symbols
P라인용 For "P-Line"
P T B A
A라인용 For "A-Line"
P T B A
B라인용 For "B-Line"
P T B A

1/8 리듀싱 모듈러 밸브

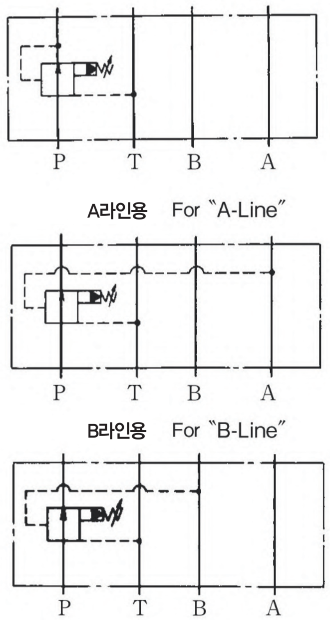


KS 유압기호
Graphic Symbol

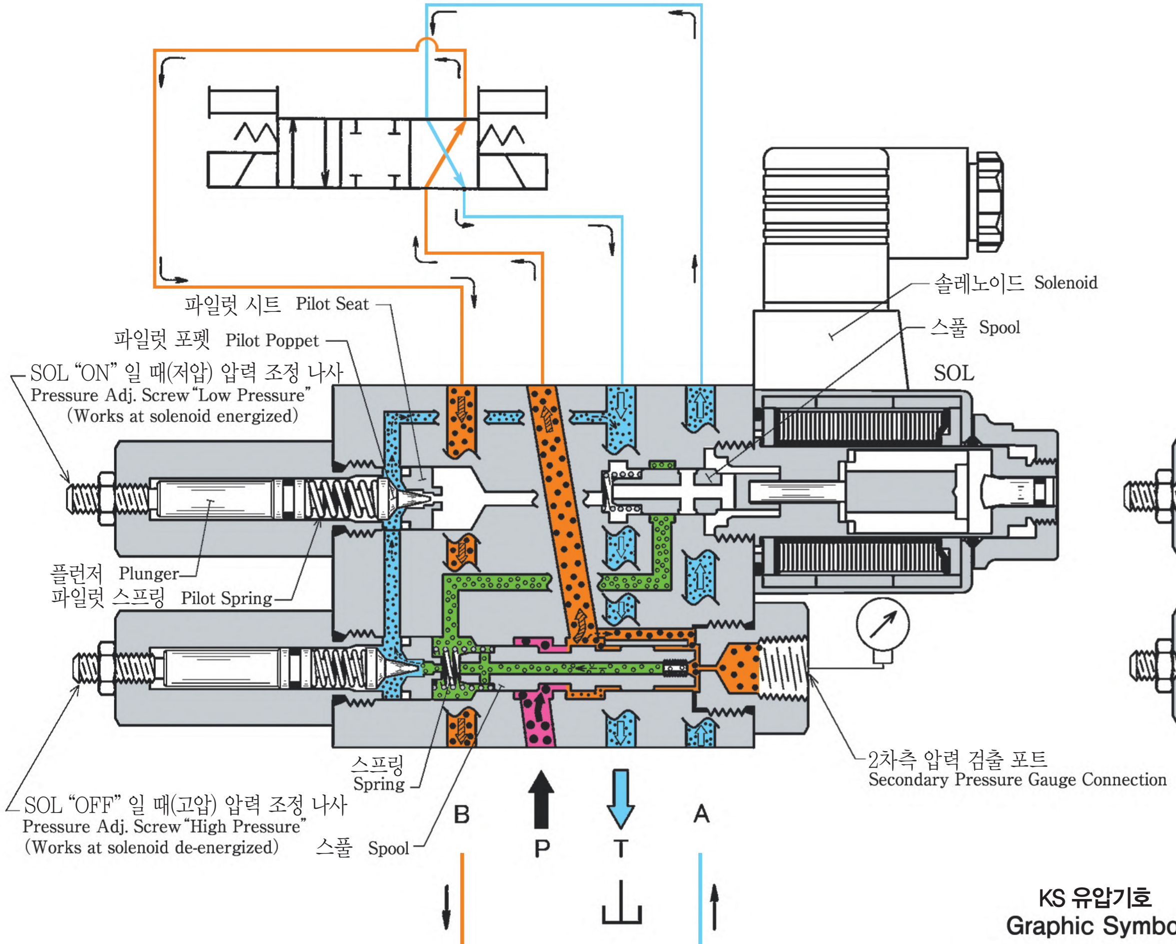




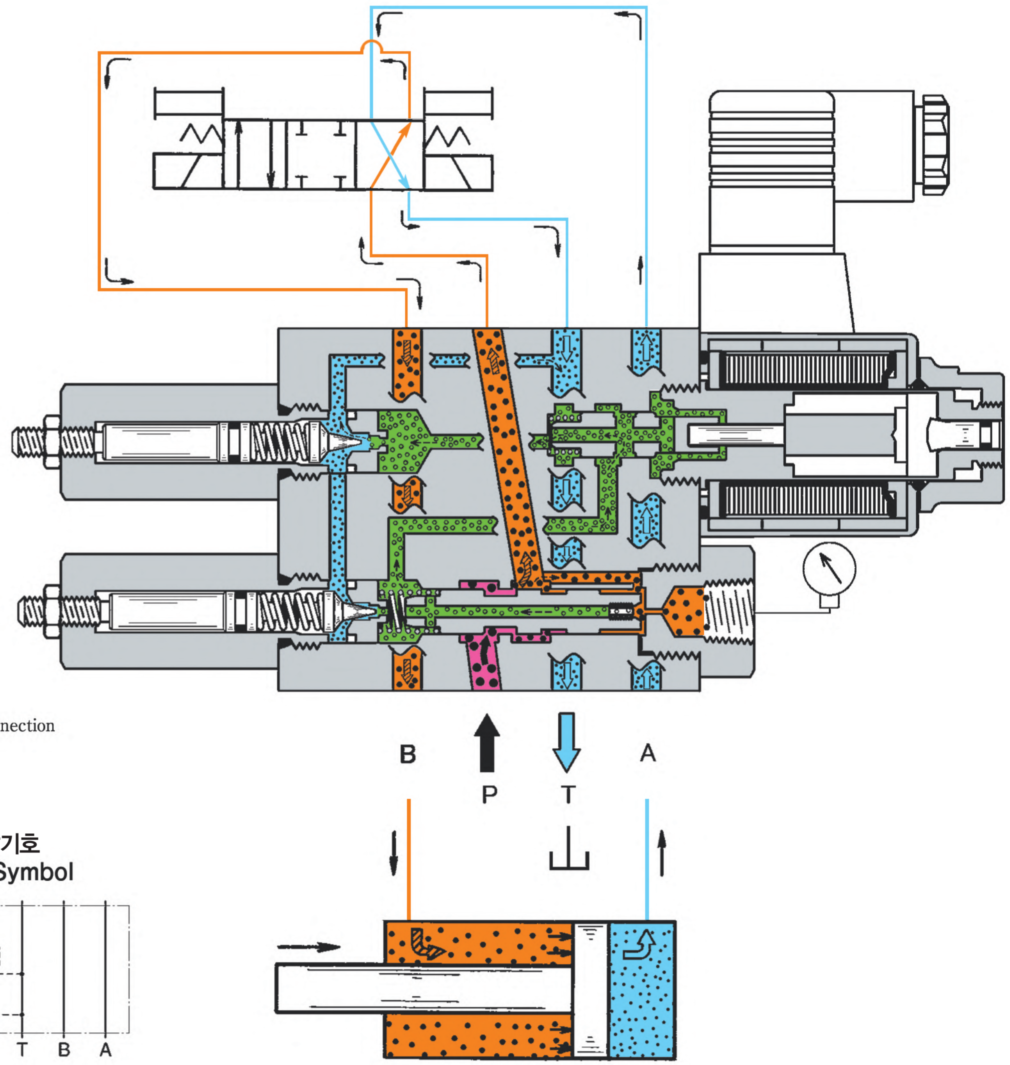
KS 유압기호
Graphic Symbols



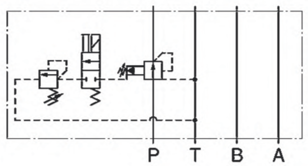
● 고압설정 High Pressure Setting
(솔레노이드 "OFF"일 때 Solenoid De-energized)

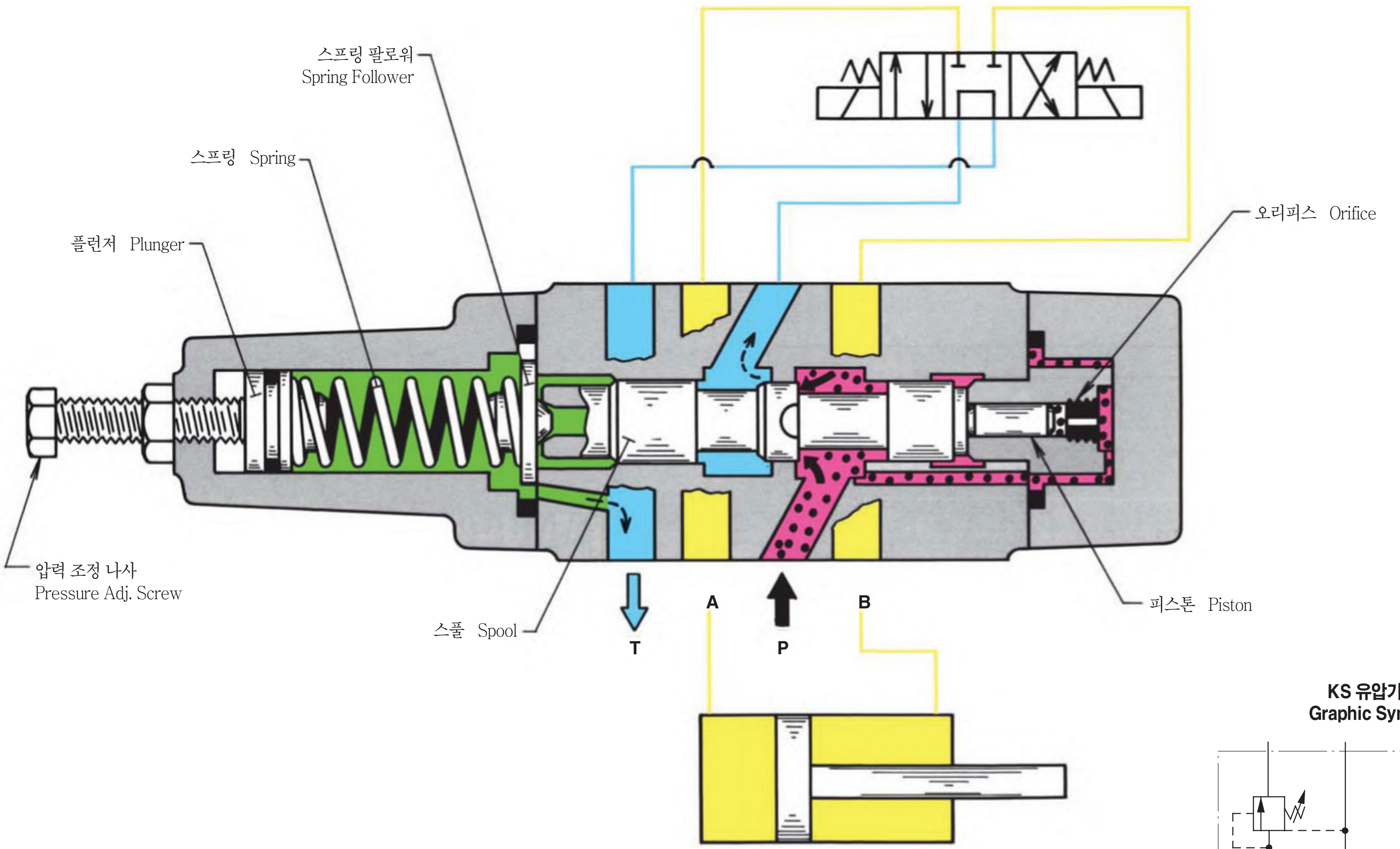


● 저압설정 Low Pressure Setting
(솔레노이드 "ON"일 때 Solenoid Energized)

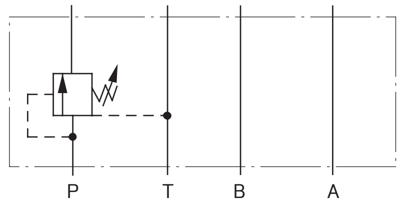


KS 유압기호
Graphic Symbol

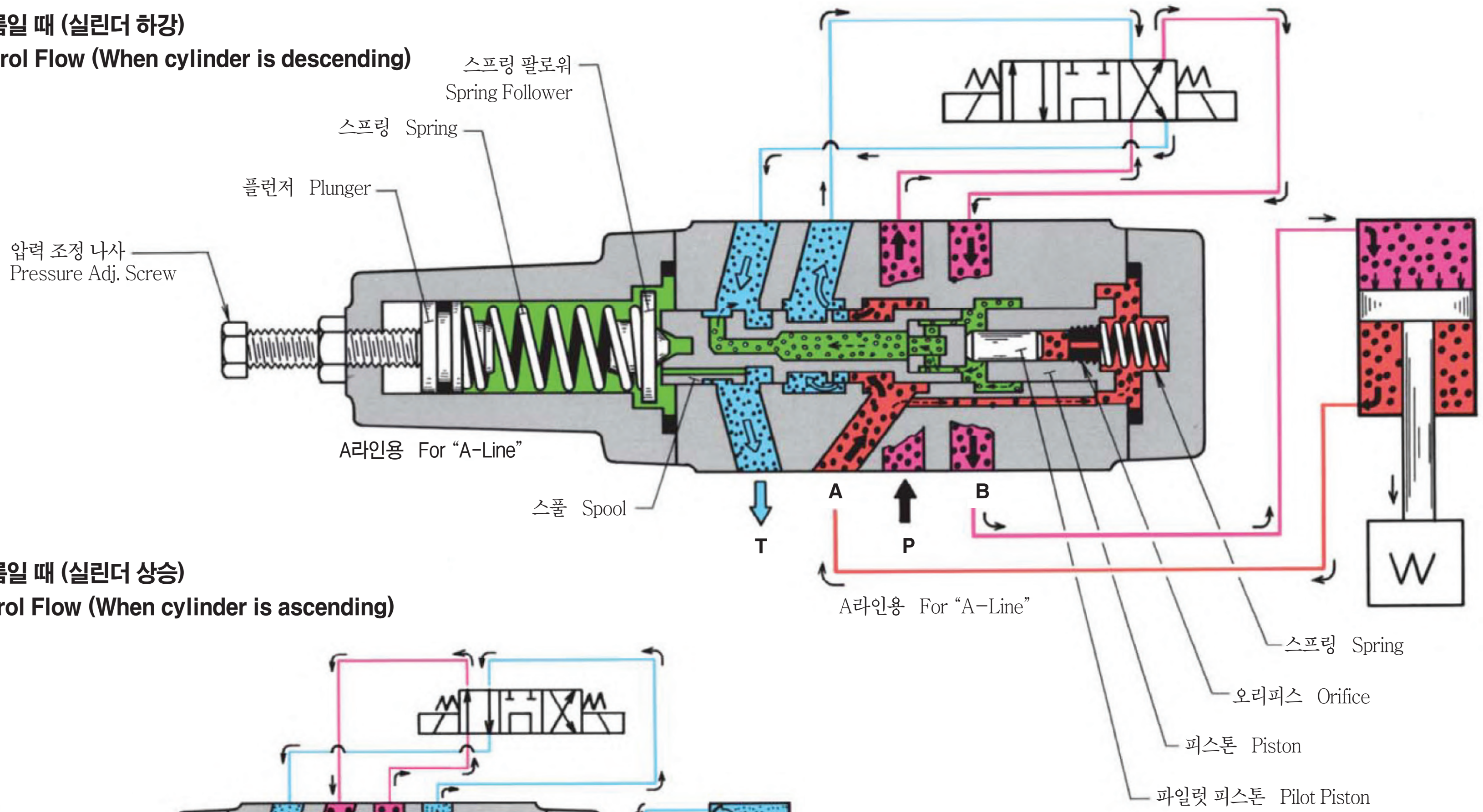




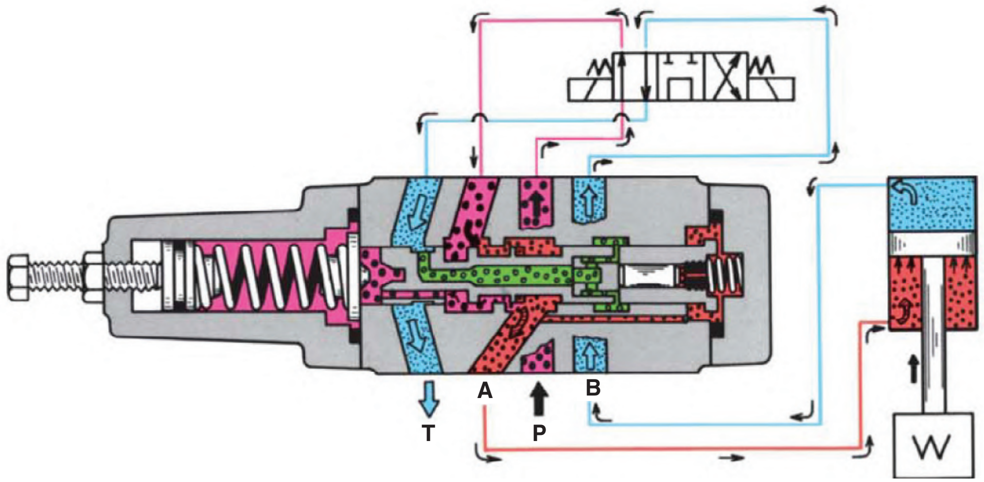
KS 유압기호
Graphic Symbol



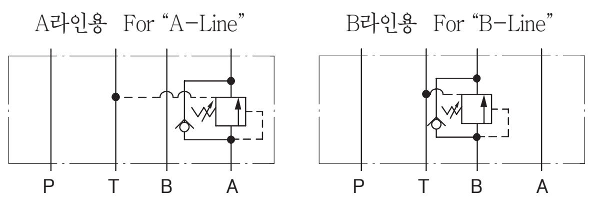
● 제어 흐름일 때 (실린더 하강)
At Control Flow (When cylinder is descending)

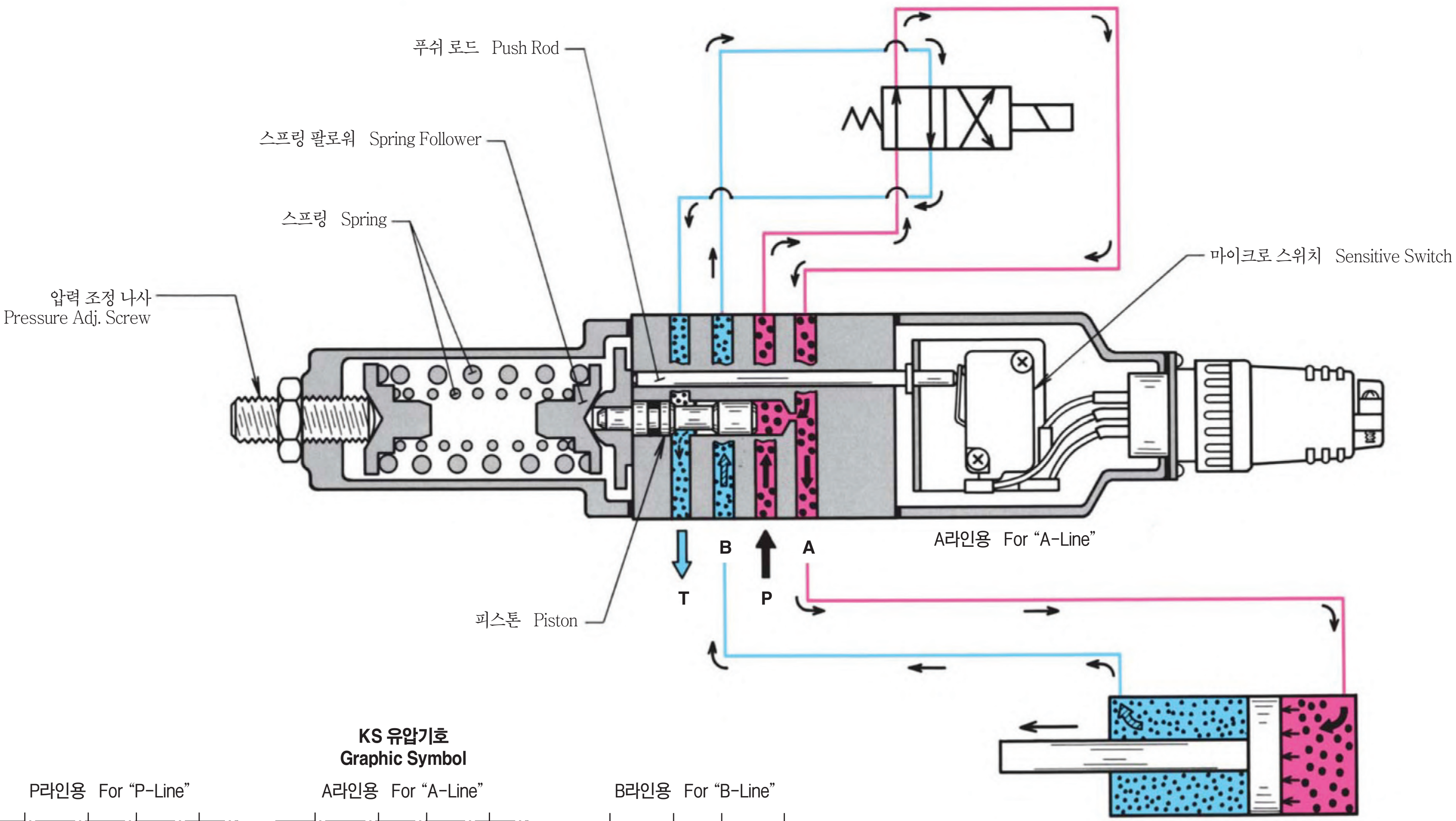


● 자유 흐름일 때 (실린더 상승)
At Control Flow (When cylinder is ascending)



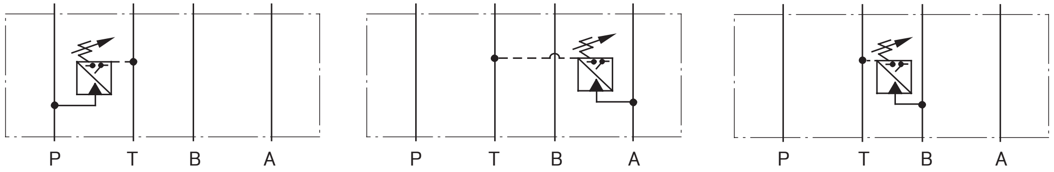
KS 유압기호
Graphic Symbol

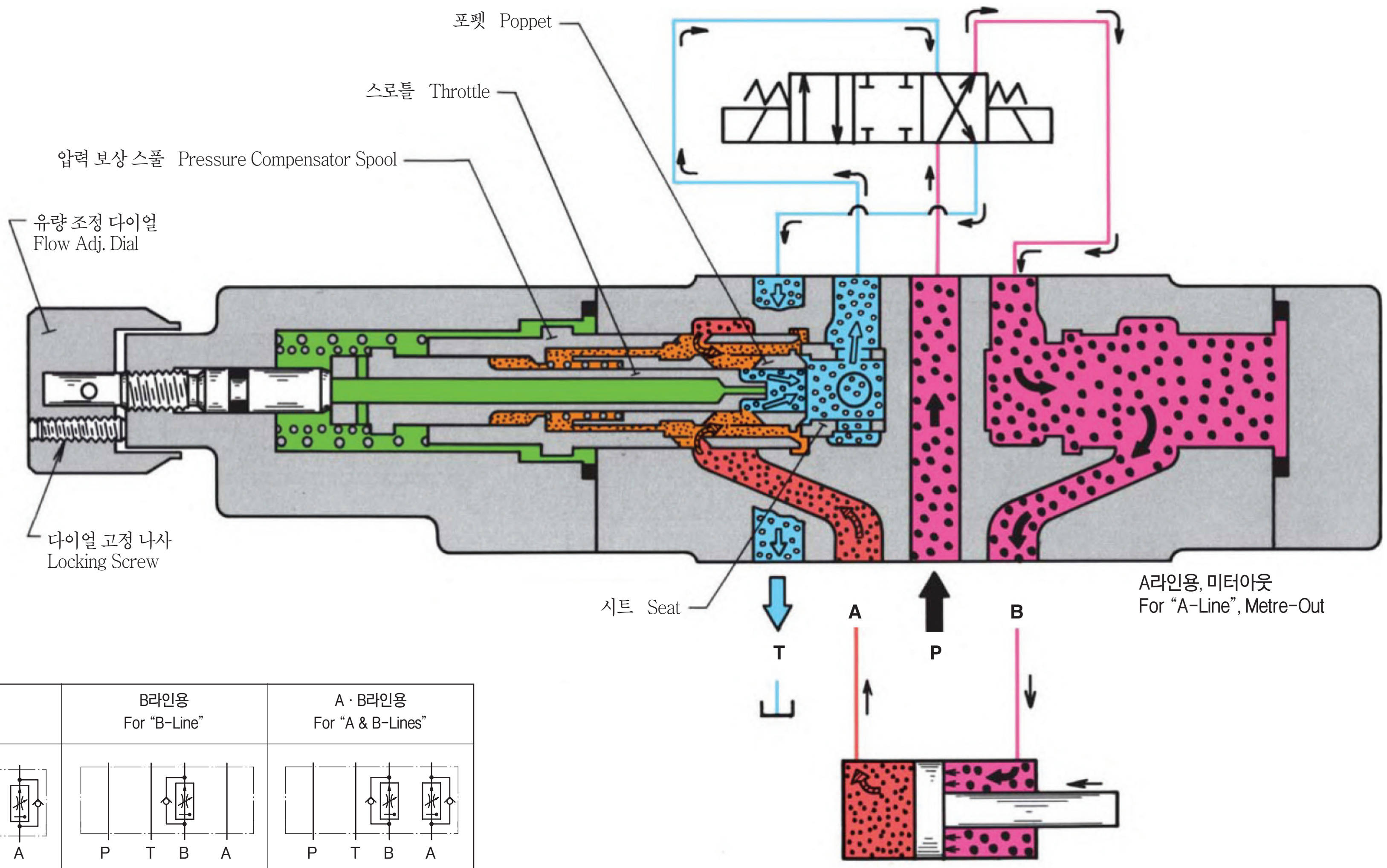




KS 유압기호
Graphic Symbol

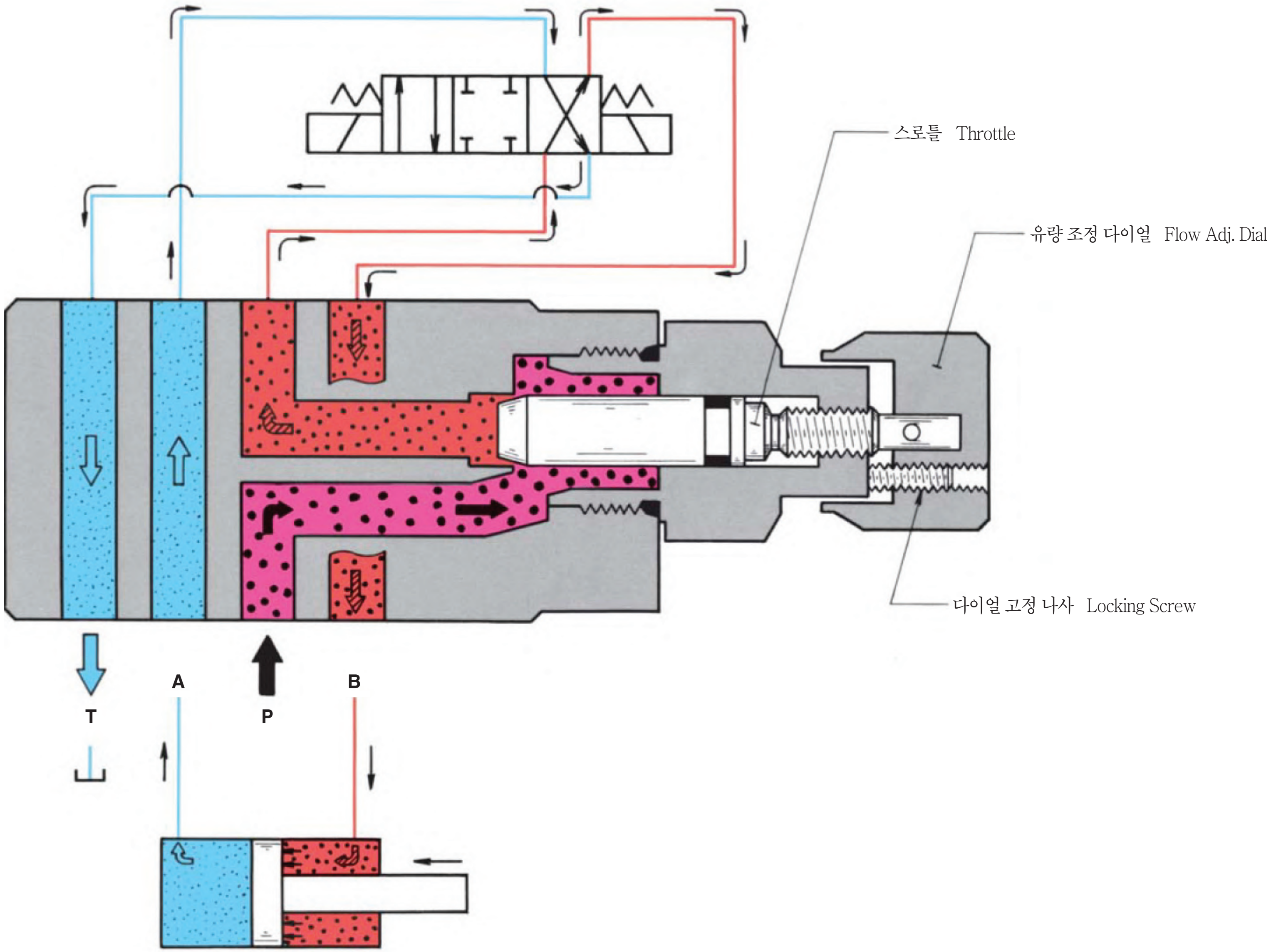
P라인용 For “P-Line” A라인용 For “A-Line” B라인용 For “B-Line”



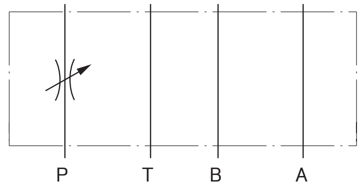


KS 유압기호 Graphic Symbol

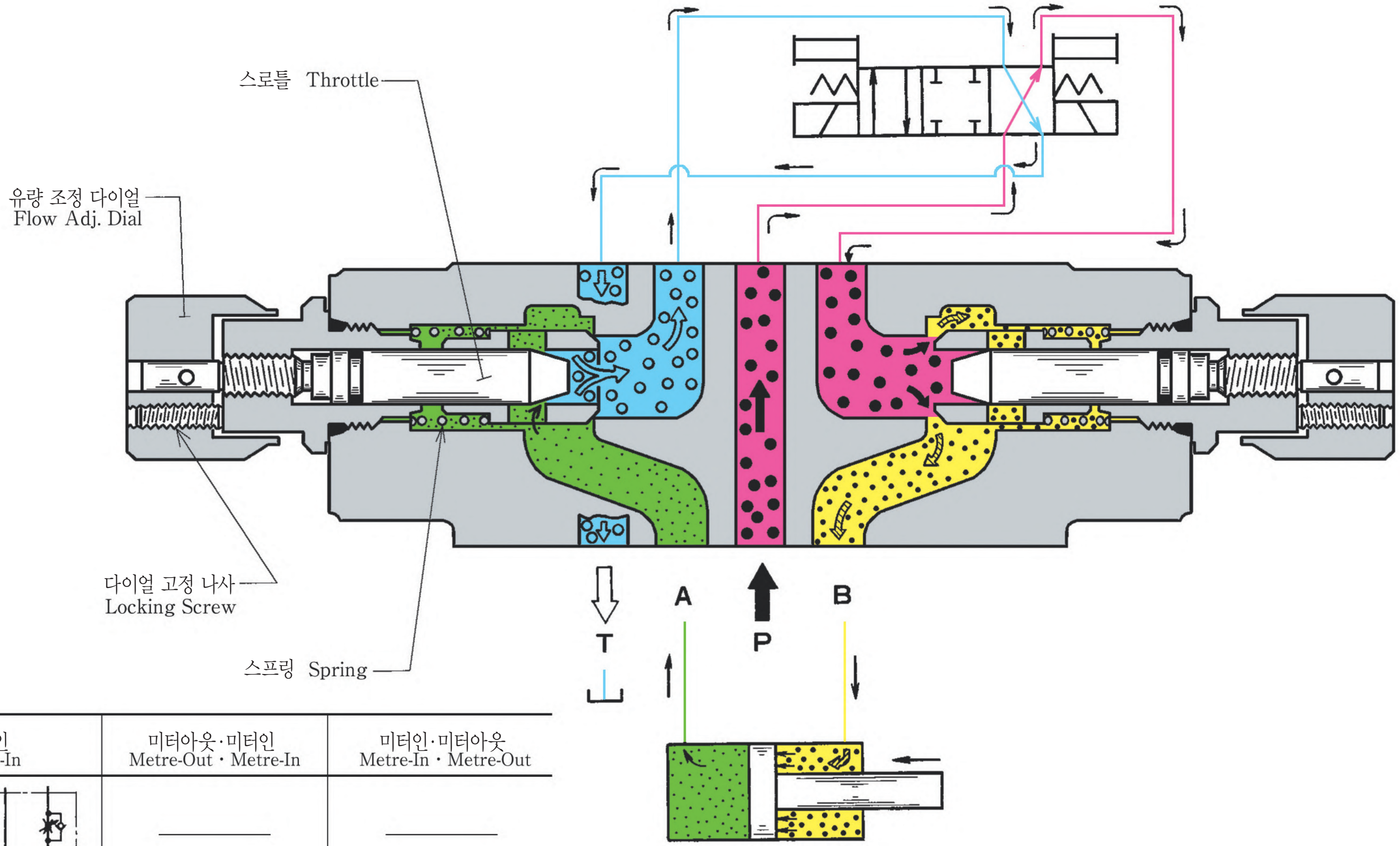
제어 방향 Direction of Flow	A라인용 For "A-Line"	B라인용 For "B-Line"	A · B라인용 For "A & B-Lines"
미터아웃 Metre-Out	P T B A	P T B A	P T B A
미터인 Metre-In	P T B A	P T B A	P T B A



KS 유압기호
Graphic Symbol

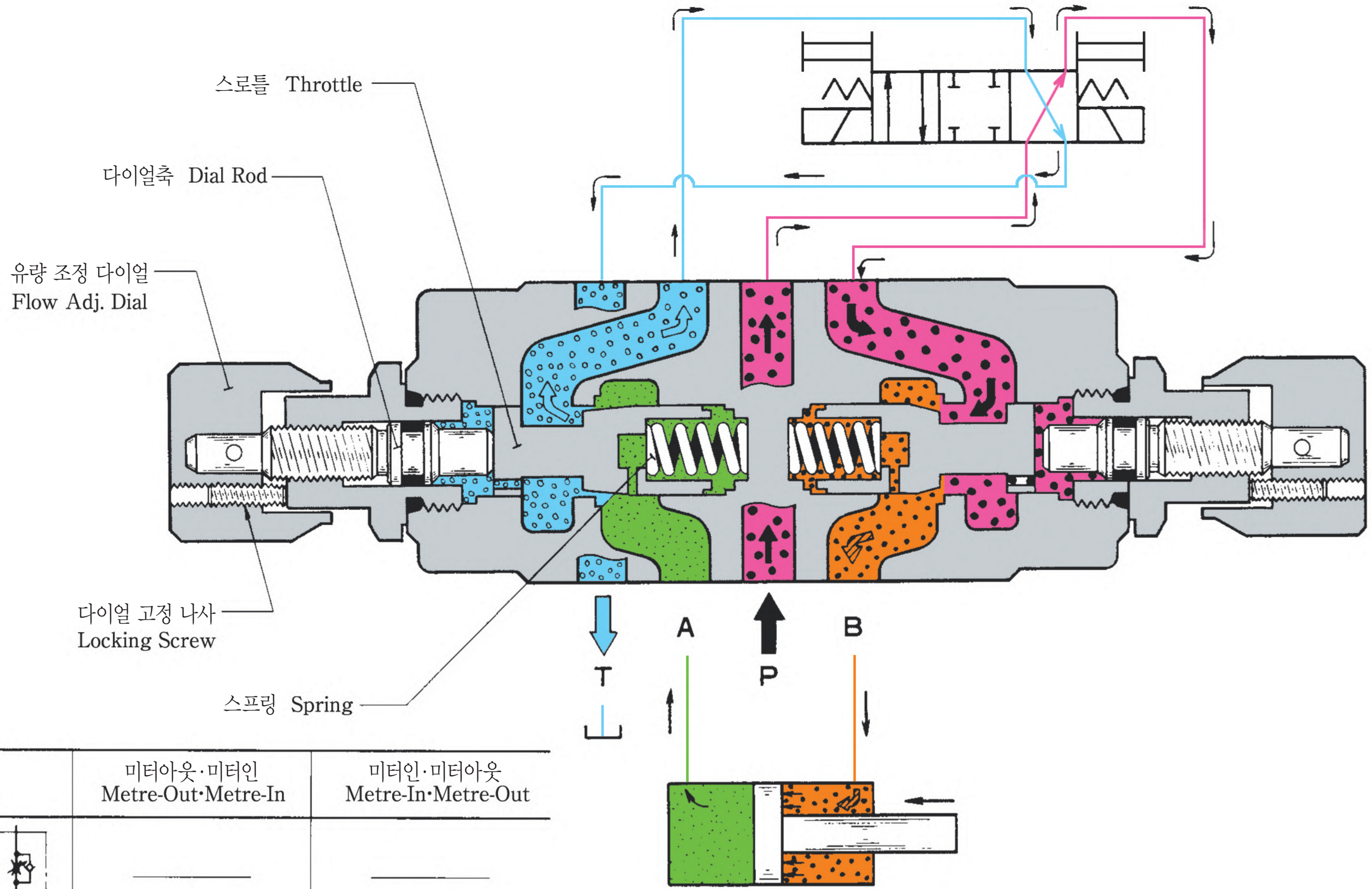


1/8 스로틀 체크 모듈러 밸브



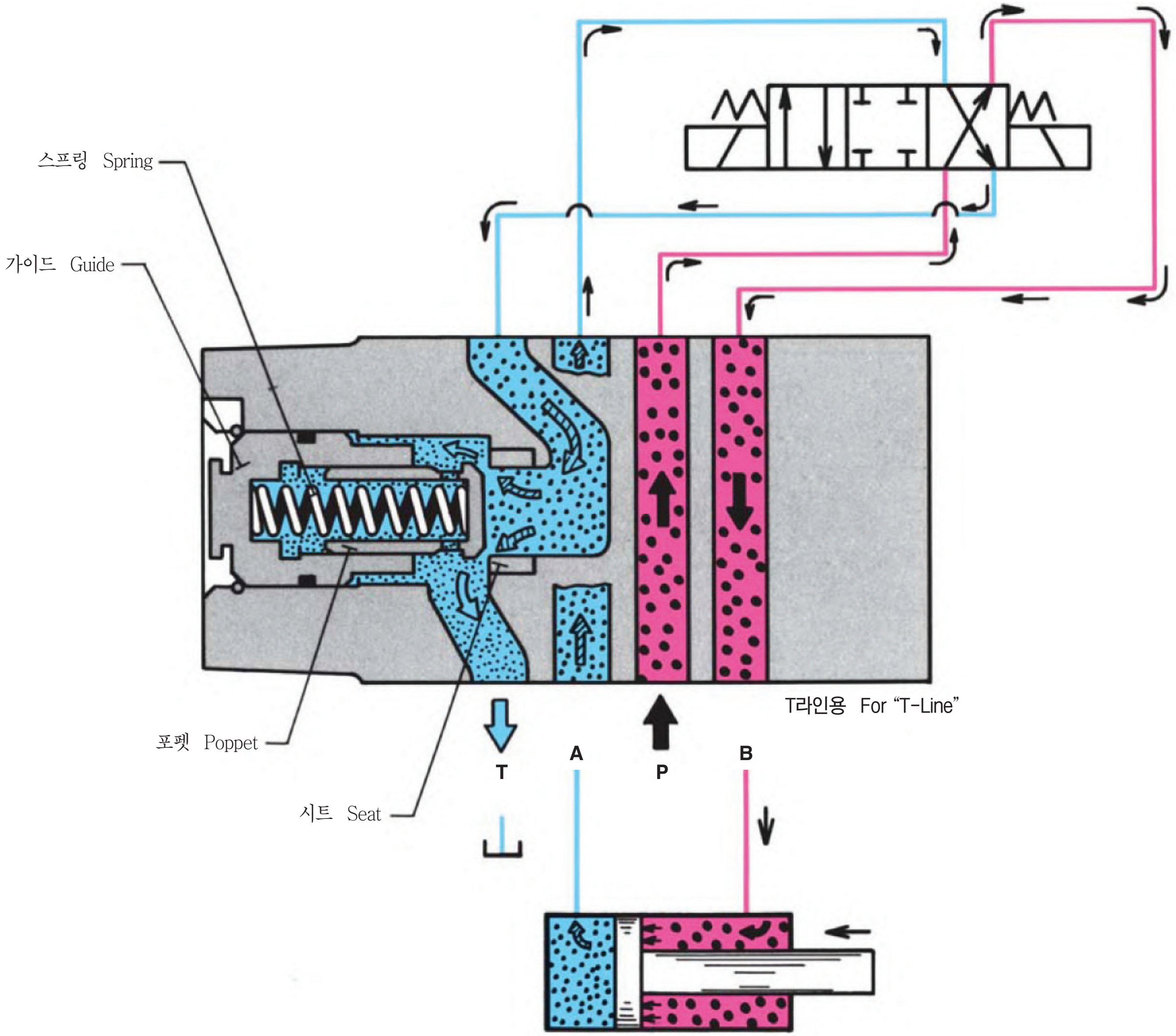
KS 유압기호 Graphic Symbols

제어방식 Direction of Flow	미터아웃 Metre-Out	미터인 Metre-In	미터아웃·미터인 Metre-Out · Metre-In	미터인·미터아웃 Metre-In · Metre-Out
A라인용 For "A-Line"	P T B A	P T B A	—	—
B라인용 For "B-Line"	P T B A	P T B A	—	—
A·B라인용 For "A & B-Lines"	P T B A	P T B A	P T B A	P T B A

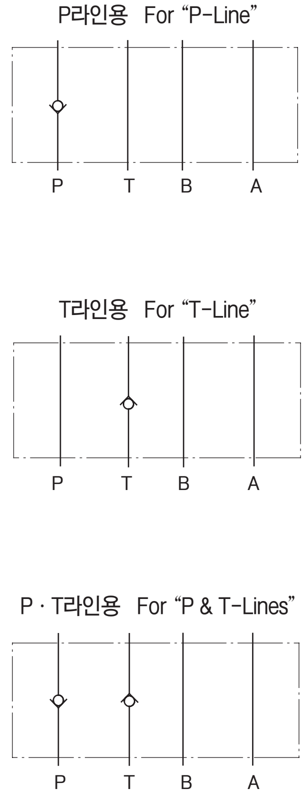


KS 유압기호 Graphic Symbols

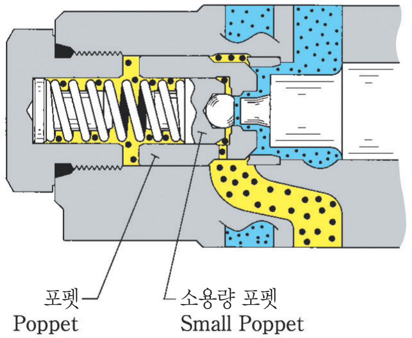
제어방식 Direction of Flow	미터아웃 Metre-Out	미터인 Metre-In	미터아웃·미터인 Metre-Out·Metre-In	미터인·미터아웃 Metre-In·Metre-Out
A라인용 For "A-Line"	P T B A	P T B A	—	—
B라인용 For "B-Line"	P T B A	P T B A	—	—
A·B라인용 For "A&B-Lines"	P T B A	P T B A	P T B A	P T B A



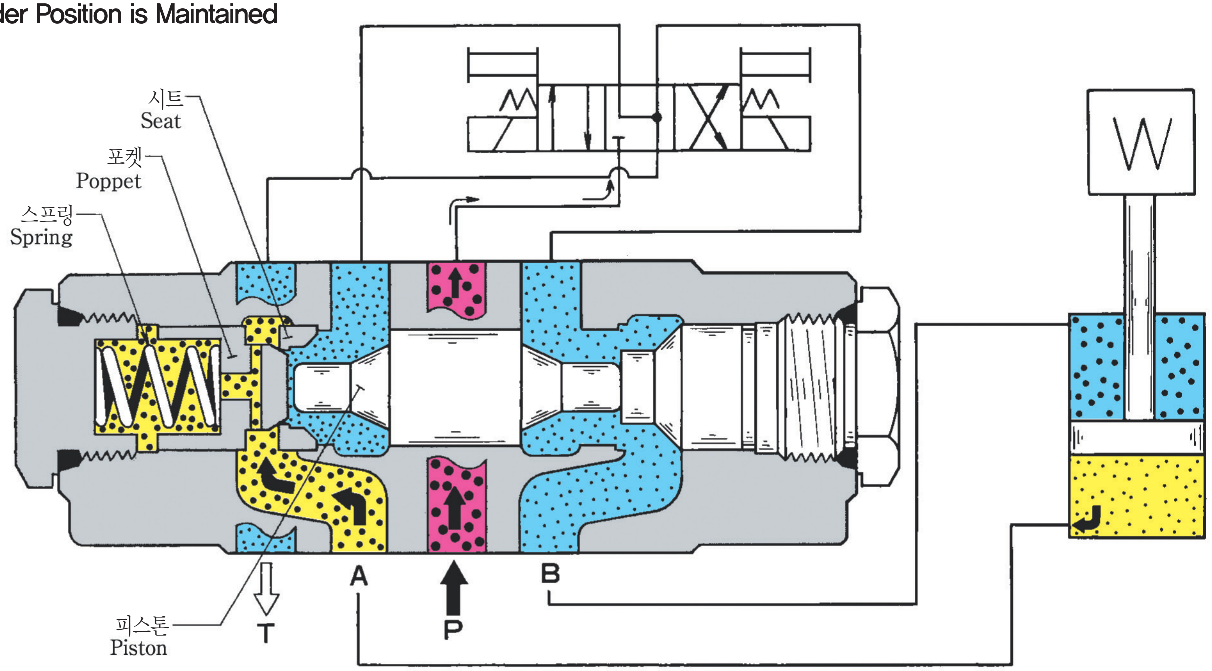
KS 유압기호
Graphic Symbol



저파일럿조작형
Low Pilot Pressure Control Type

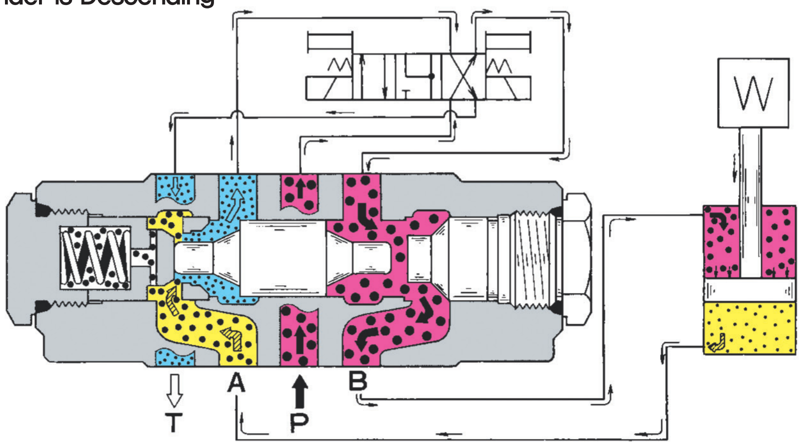


● 실린더 위치 고정시
When Cylinder Position is Maintained

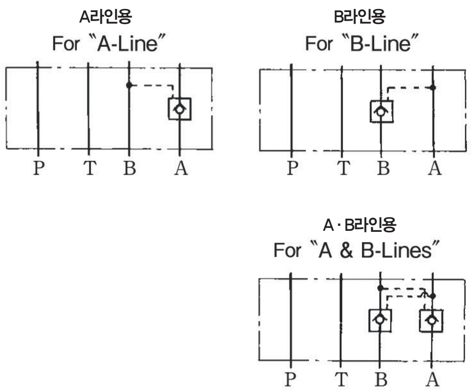


A라인용
For "A-Line"

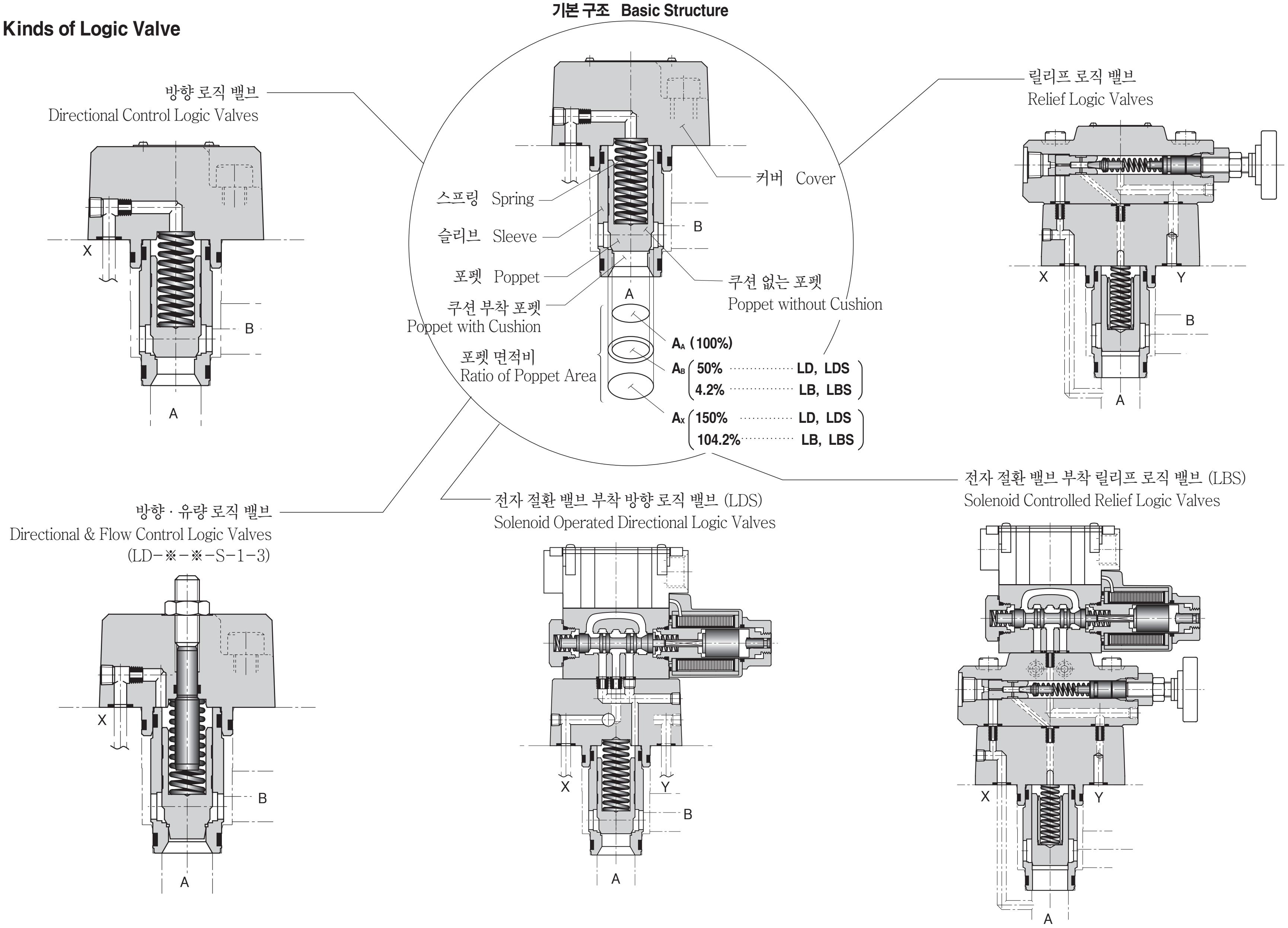
● 실린더 하강시
When Cylinder is Descending



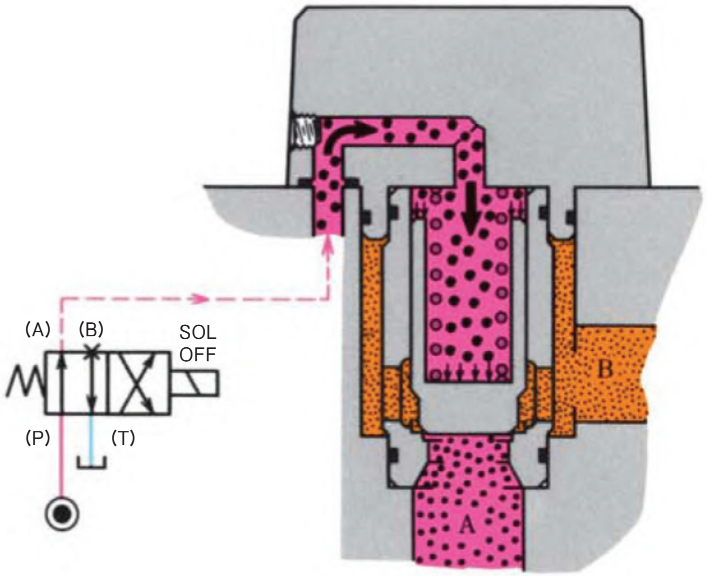
KS 유압기호
Graphic Symbols

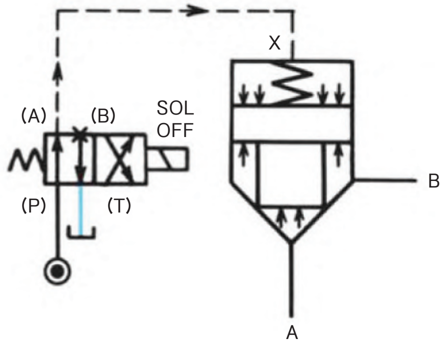


● 기종 Kinds of Logic Valve

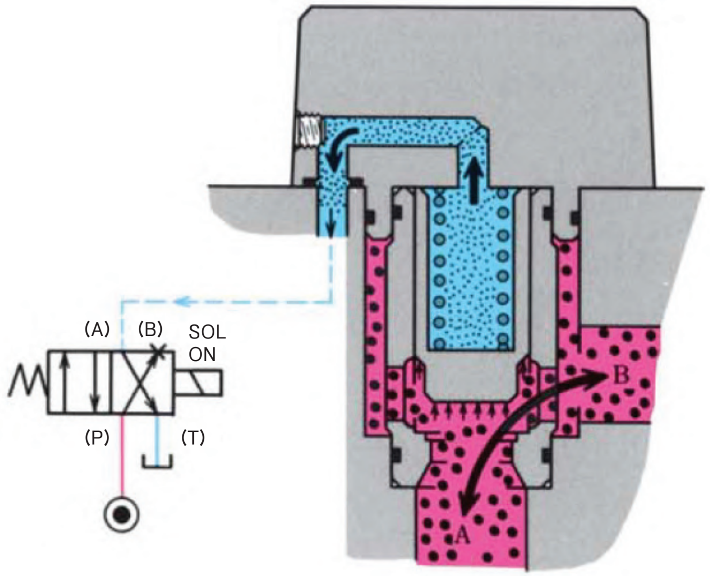


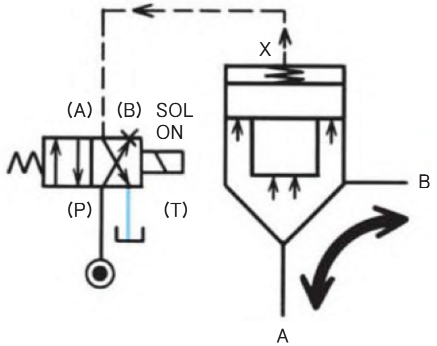
● 폐작동 Closed Operation



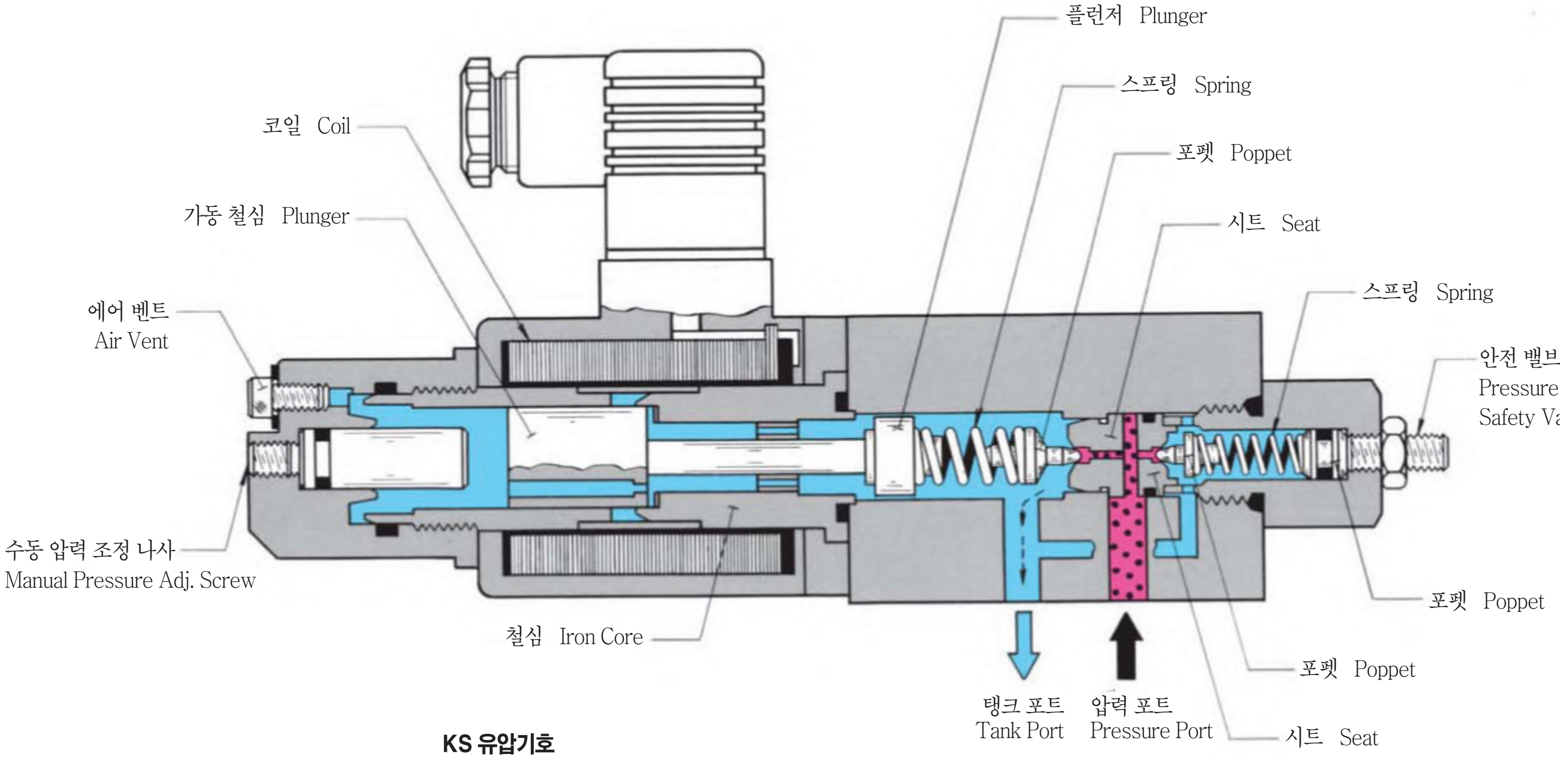


● 개작동 Open Operation

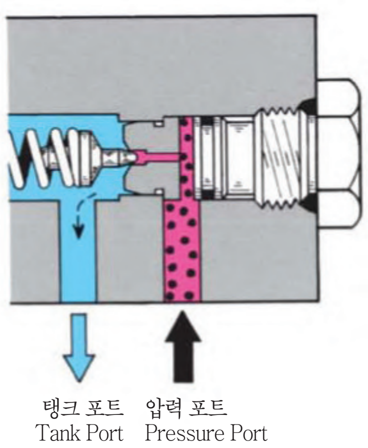




● 안전 밸브 부착 With Safety Valve

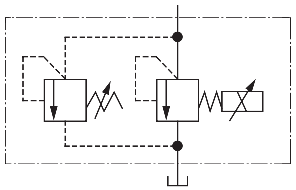


● 안전 밸브 없음
Without Safety Valve

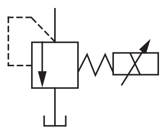


KS 유압기호
Graphic Symbol

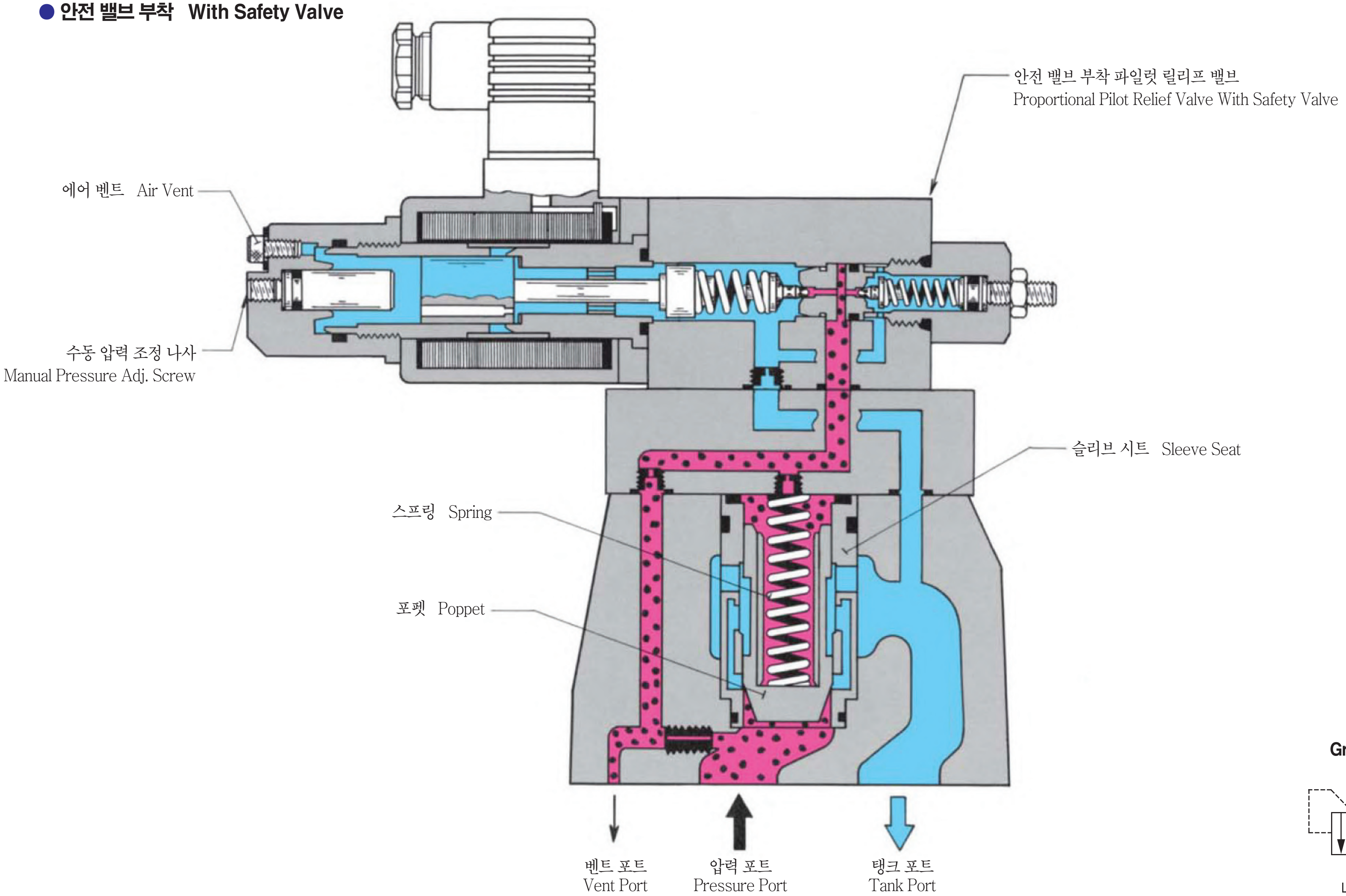
● 안전 밸브 부착 With Safety Valve



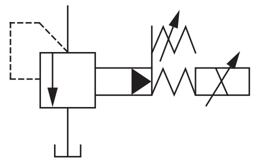
● 안전 밸브 없음 Without Safety Valve



● **안전 밸브 부착 With Safety Valve**

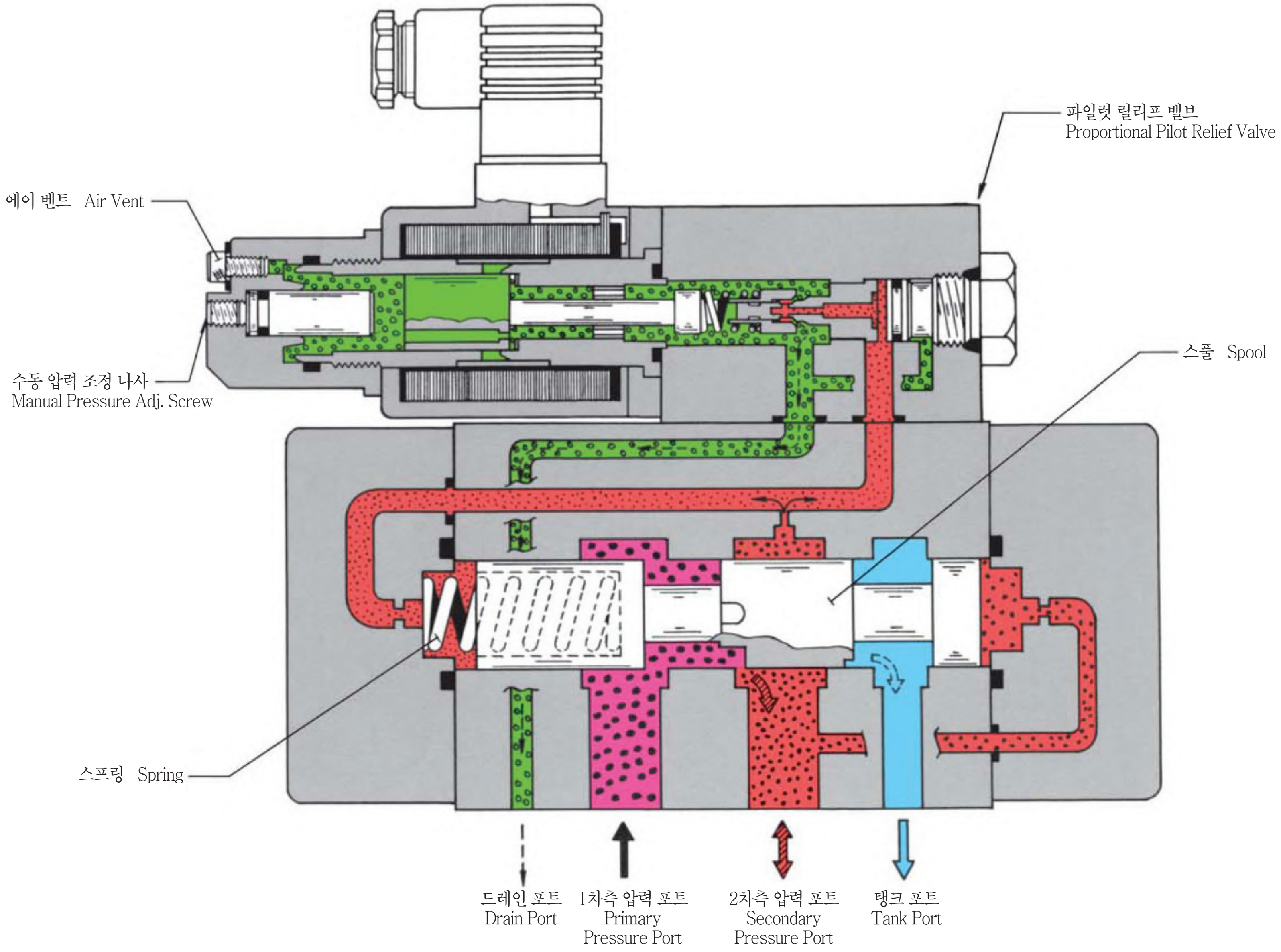


KS 유압기호
Graphic Symbol

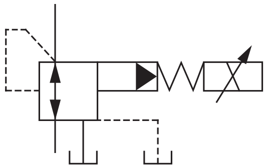


E시리즈 비례전자식 릴리프 부착 감압 밸브

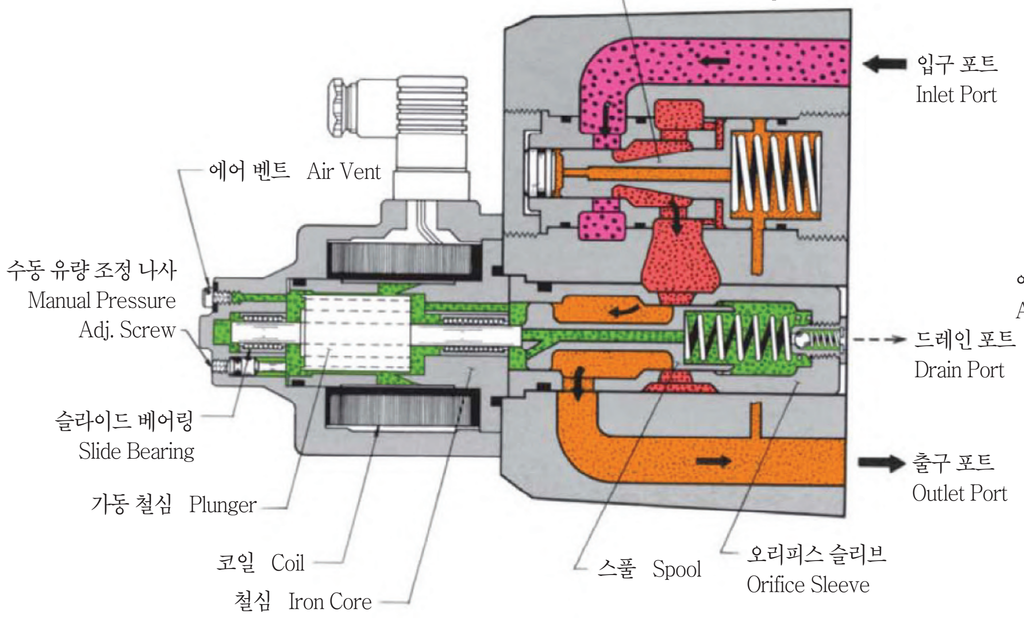
"E" Series Proportional Electro-Hydraulic Relieving & Reducing Valves



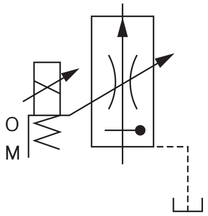
KS 유압기호
Graphic Symbol



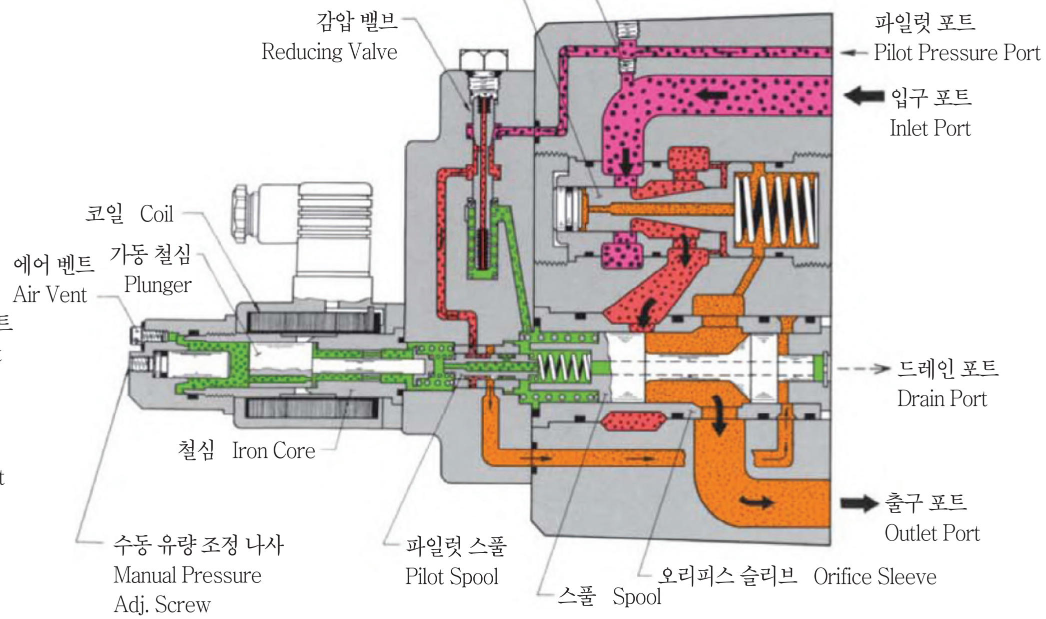
● **40Ω 시리즈 (직동형)**
40Ω Series (Direct Type)



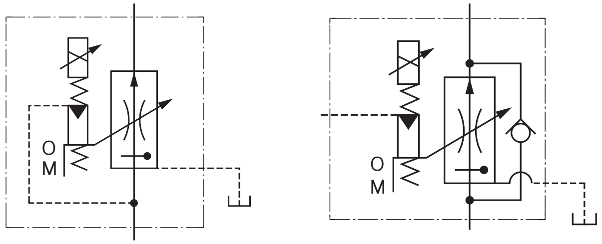
KS 유압기호
Graphic Symbol



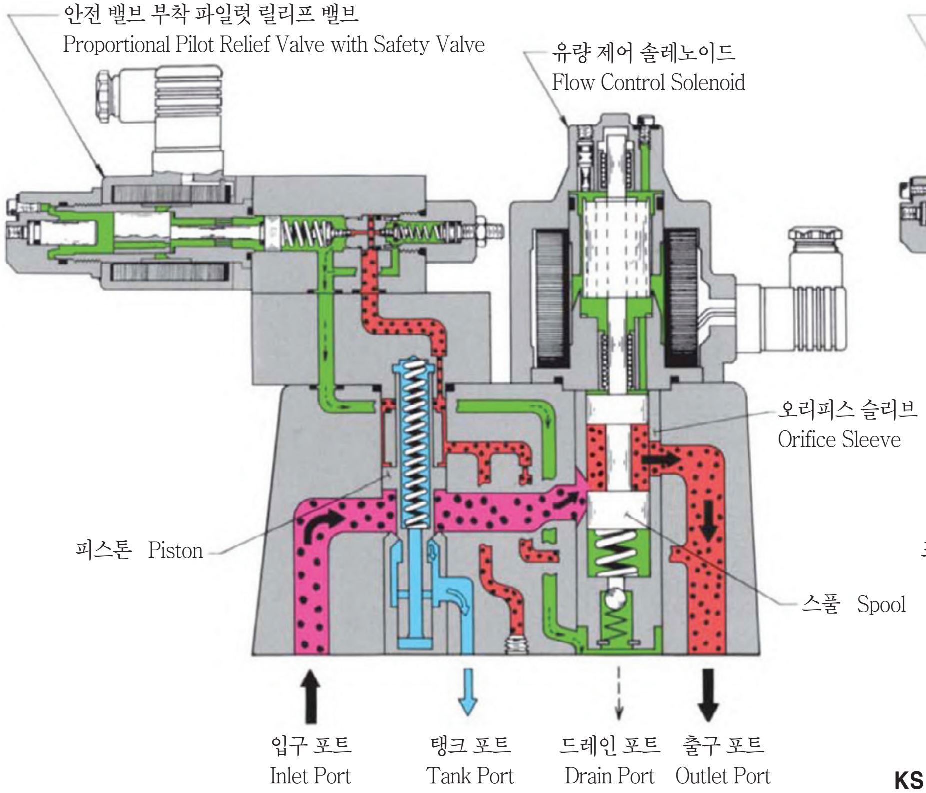
● **10Ω 시리즈 (파일럿 조작형)**
10Ω Series (Pilot Operated Type)



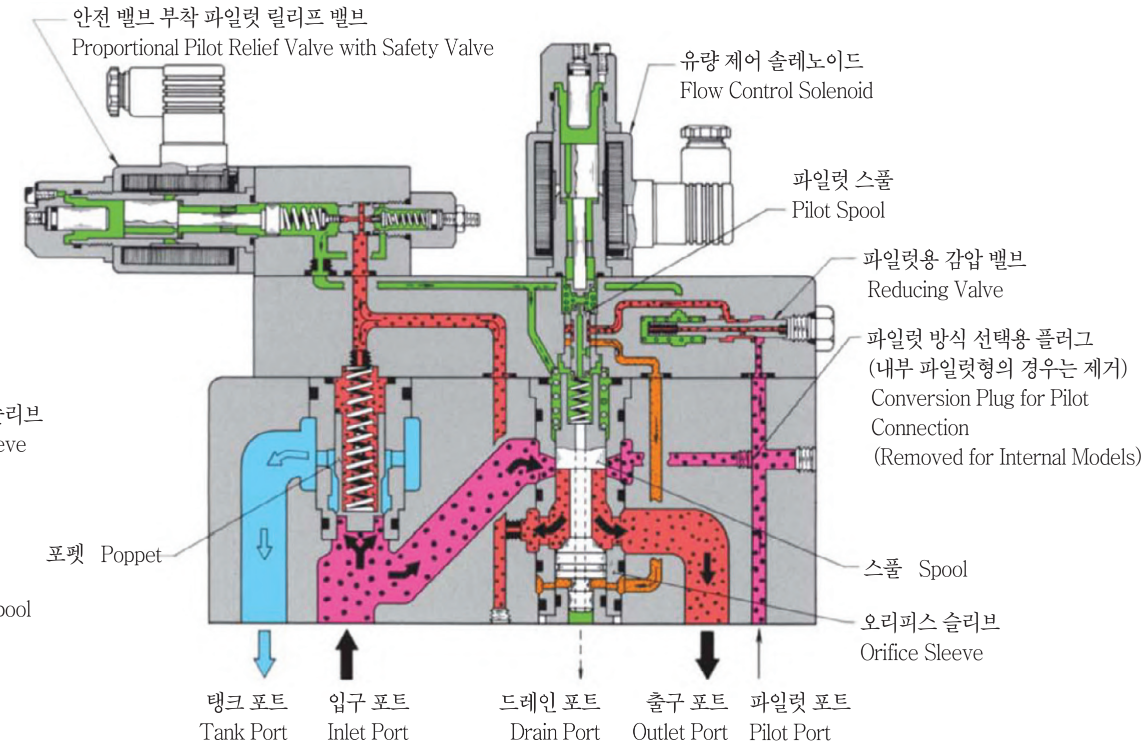
KS 유압기호
Graphic Symbol



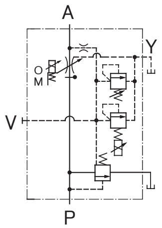
● 40Ω~10Ω 시리즈
40Ω~10Ω Series



● 10Ω~10Ω 시리즈
10Ω~10Ω Series

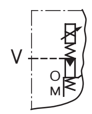


KS 유압기호
Graphic Symbol

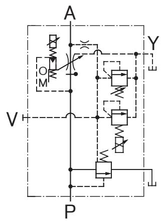


KS 유압기호
Graphic Symbol

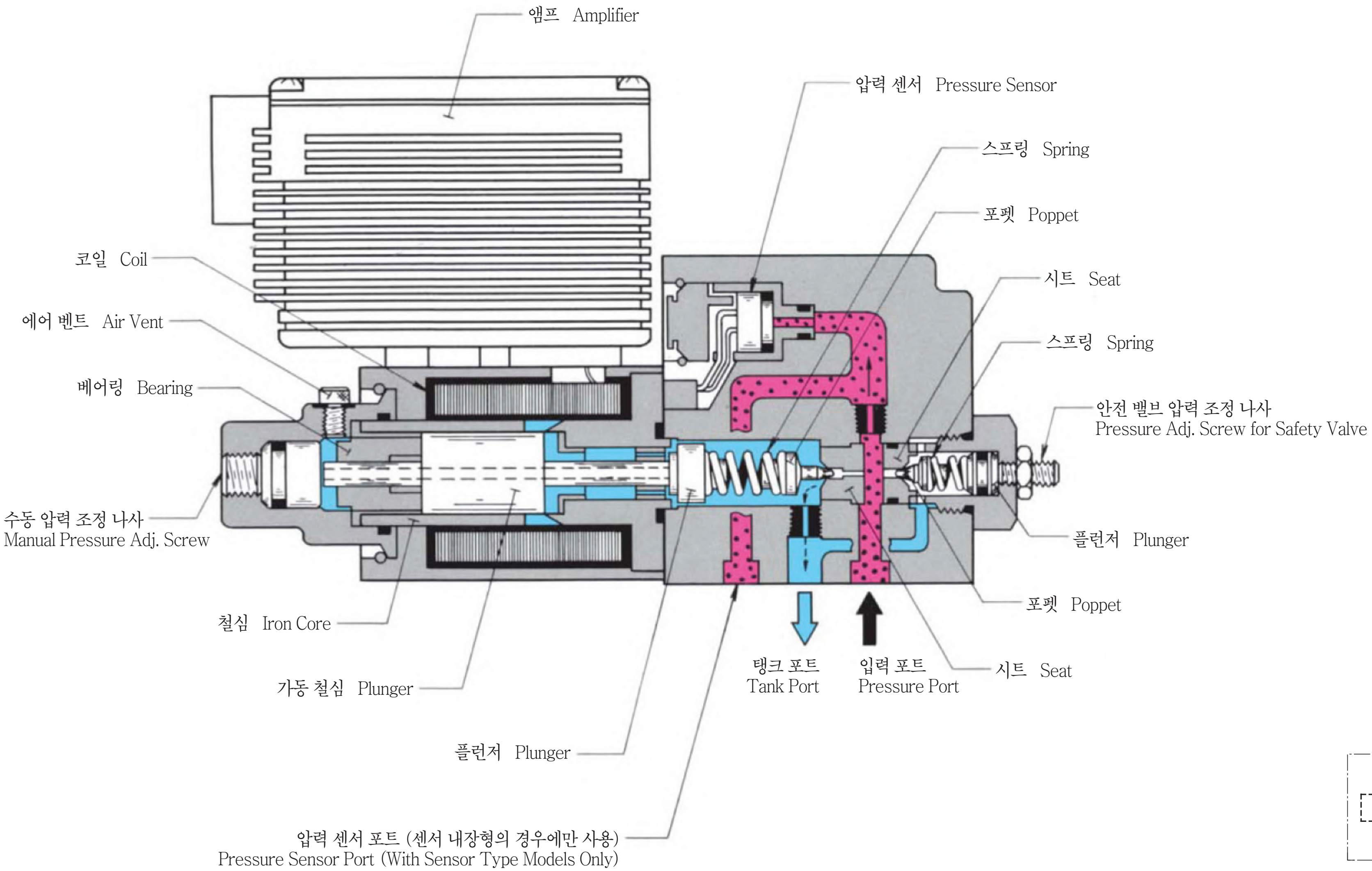
외부 파일럿 Ext. Pilot



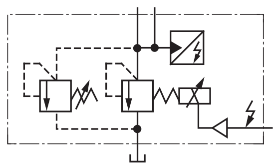
내부 파일럿 Int. Pilot



● 안전 밸브 부착 · 센서 내장형
With Safety Valve & Sensor



KS 유압기호
Graphic Symbol

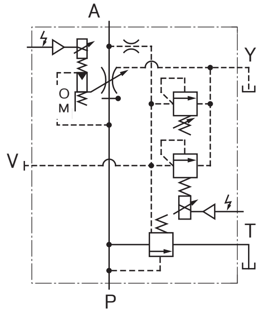


EH시리즈 비례전자식 파워세이빙 밸브 (릴리프 밸브 부착 유량 조정 밸브)

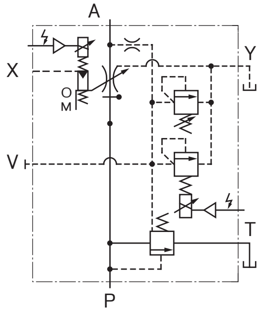
"EH" Series Proportional Electro-Hydraulic Relief & Flow Control Valves

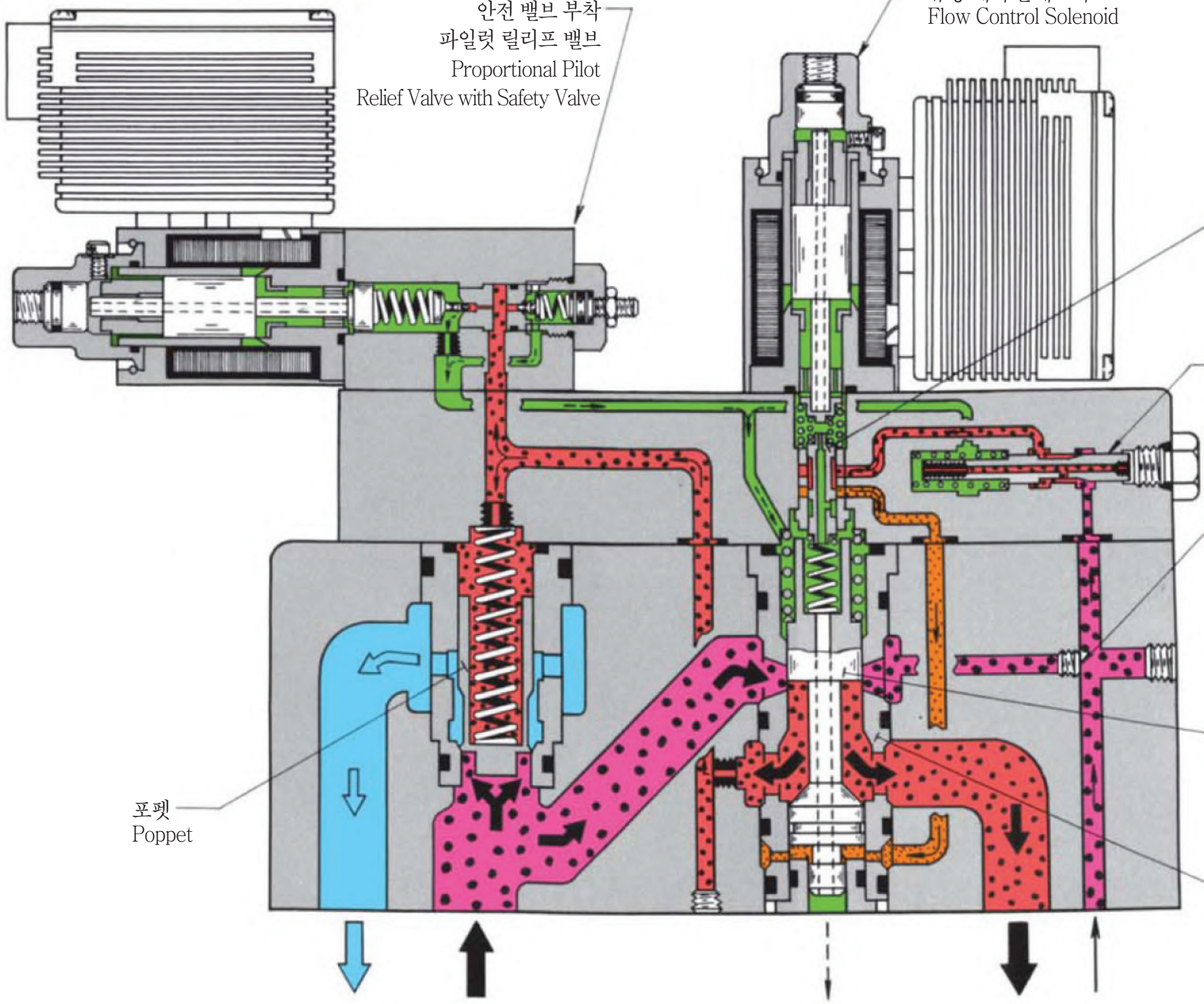
KS 유압기호
Graphic Symbol

내부 파일럿 Int. Pilot

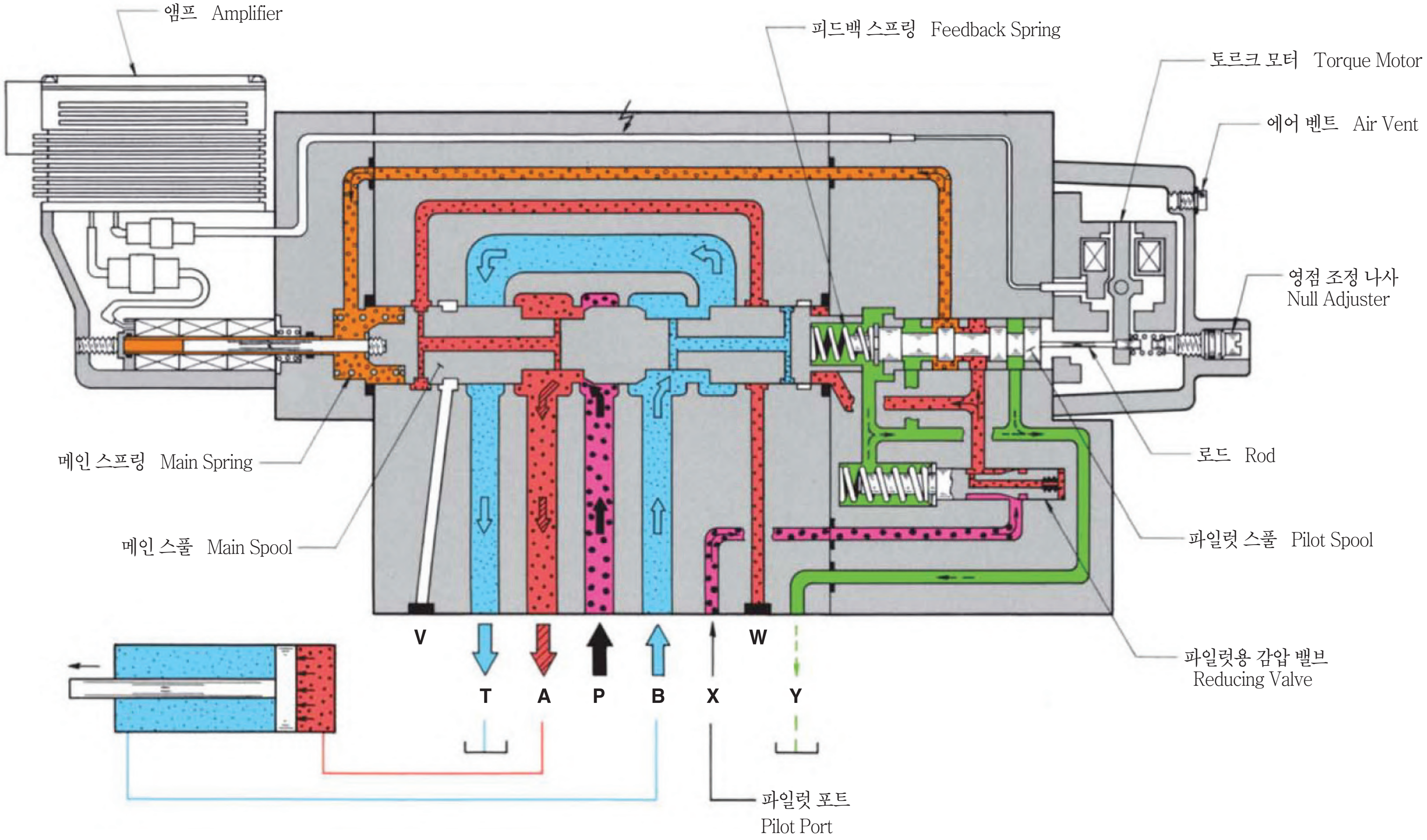


외부 파일럿 Ext. Pilot

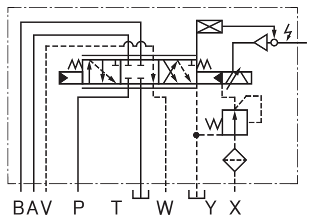




● 압력 보상 밸브 없음
Without Pressure Compensator Valve

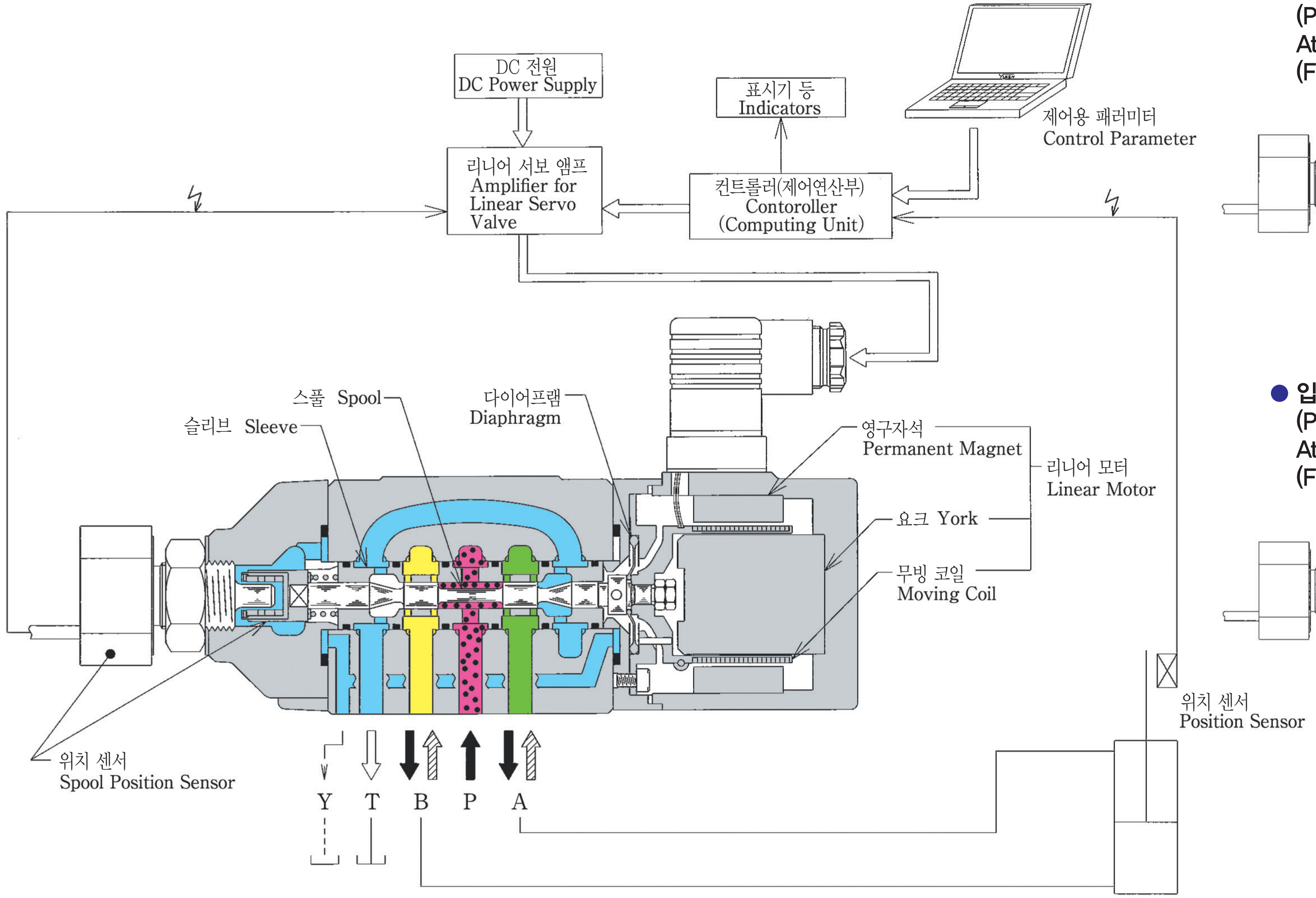


KS 유압기호
Graphic Symbol



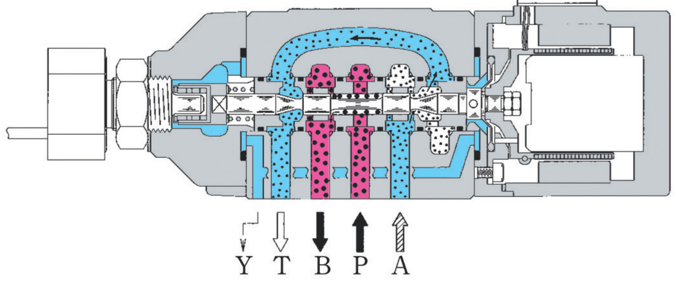
● 압력 보상 밸브 없는 경우는 V, W포트를 사용하지 않음

● 입력 신호가 거의 "0"일 때 At Around Null Position Input Signal

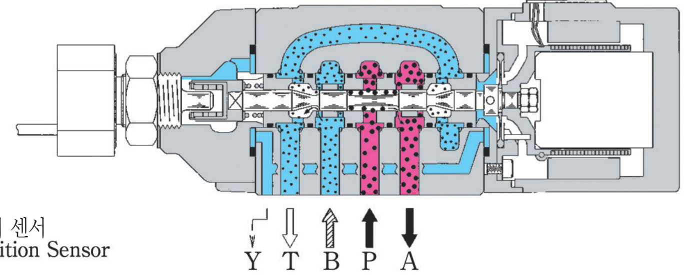


위치 제어시 구성도
Figure of constitution in case of the positioning

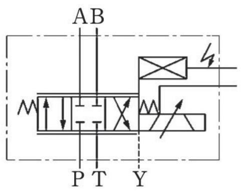
● 입력 신호 : 100%일 때
(P→B→A→T 흐름)
At Input Signal : 100%
(Flow : P→B→A→T)



● 입력 신호 : −100%일 때
(P→A→B→T 흐름)
At Input Signal : −100%
(Flow : P→A→B→T)

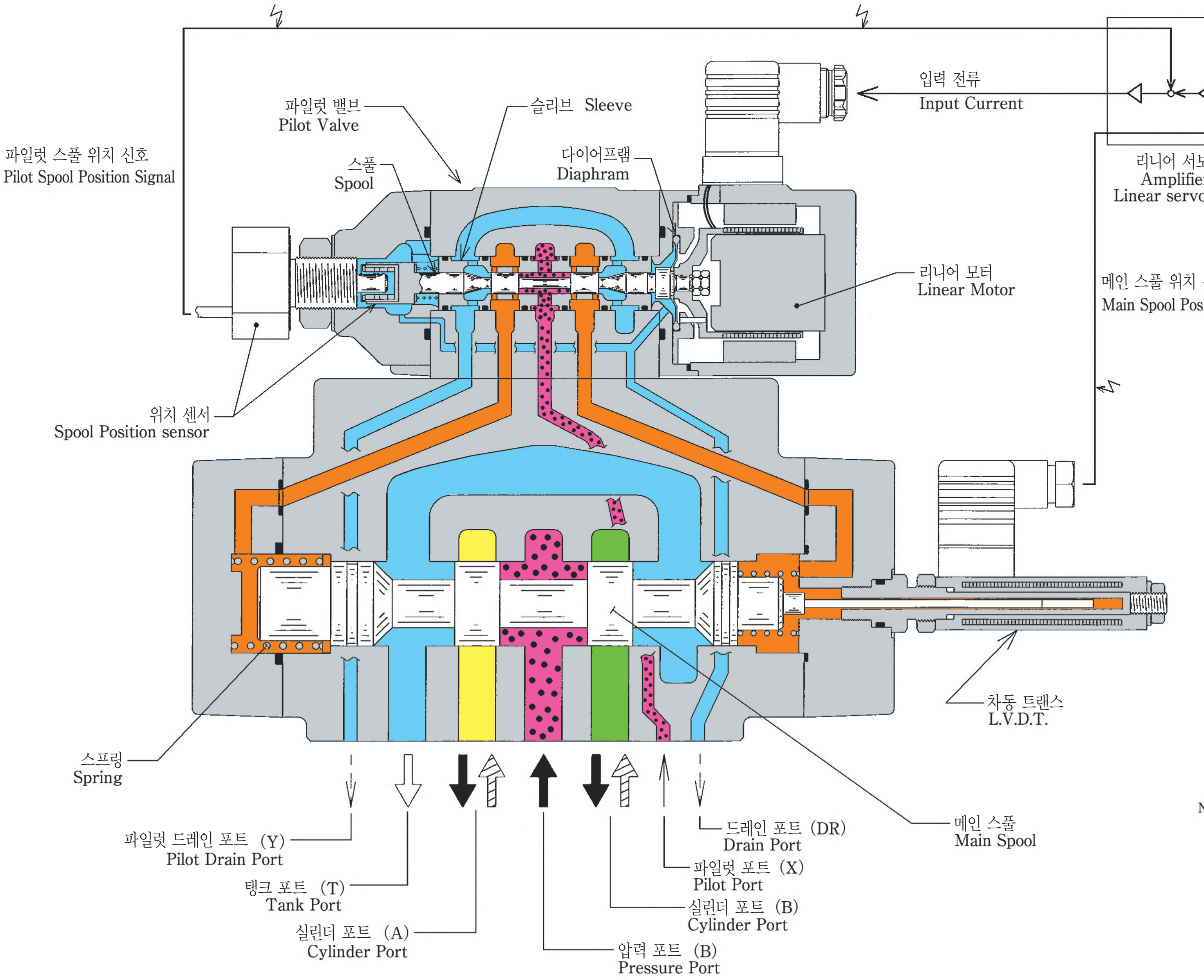


KS 유압기호
Graphic Symbol

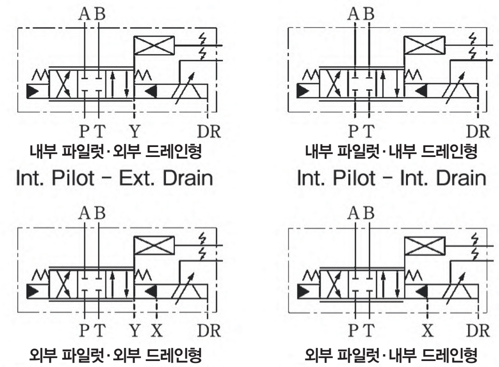


2단형 고속 리니어 서보 밸브 (앰프 설치형)

Two Stage Type High-speed Linear Servo Valves

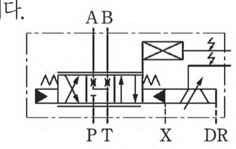


KS 유압기호
Graphic Symbol

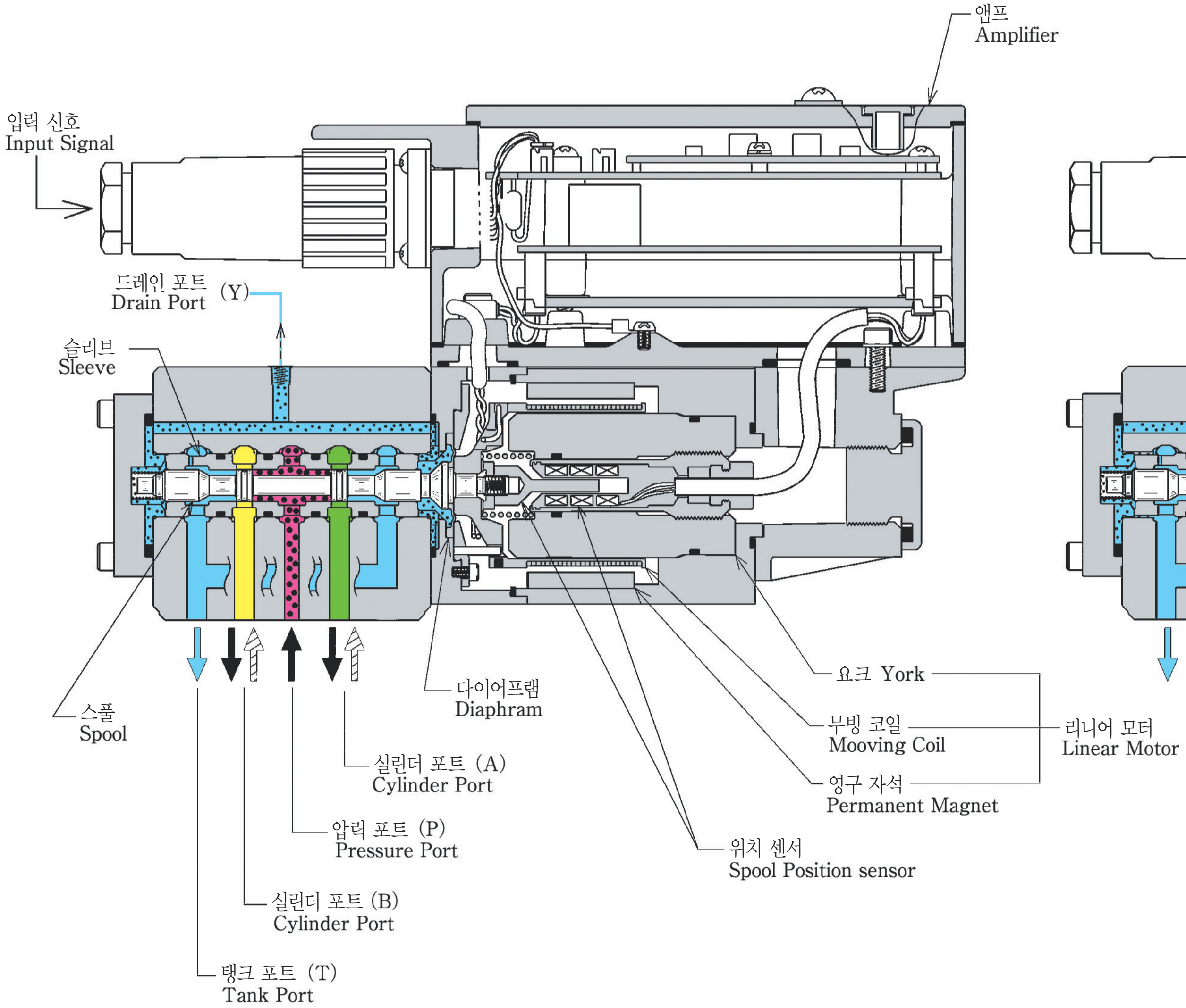


주) 위 그림은 스풀 형식 "2" "2P"를 나타냅니다.
"40"의 경우는 왼쪽 그림이 됩니다.
(외부 파일럿·내부 드레인형)

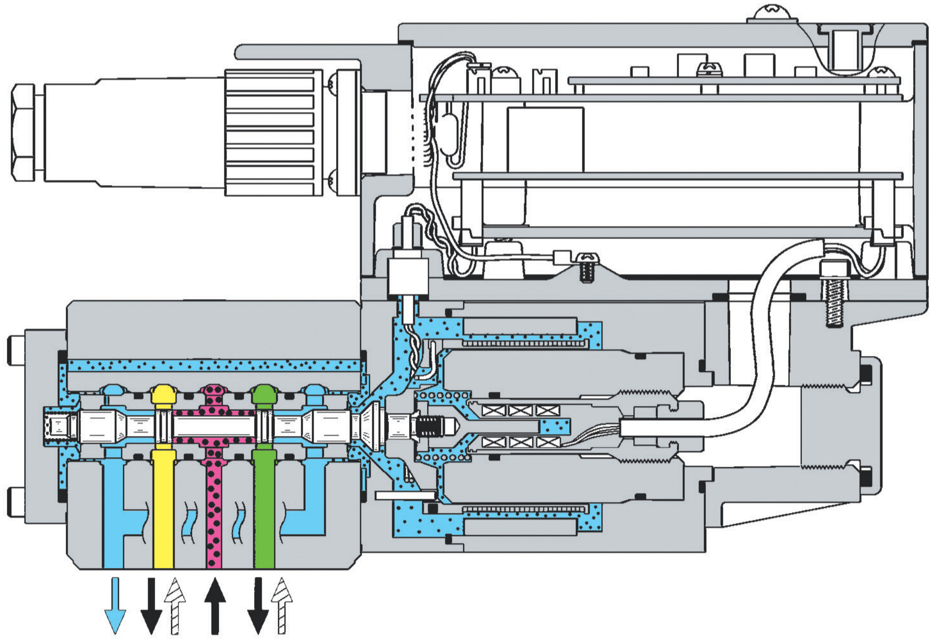
Note) The symbols above indicate the spool types "2" and "2P". The graphic symbol of the spool type "40" is shown on the right (external pilot/internal drain typr.)



● 건식형 Dry Type



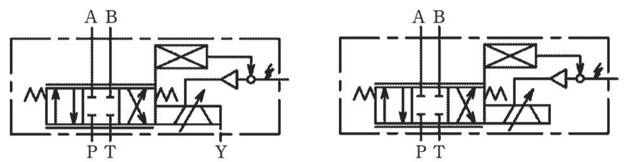
● 습식형 Wet Type



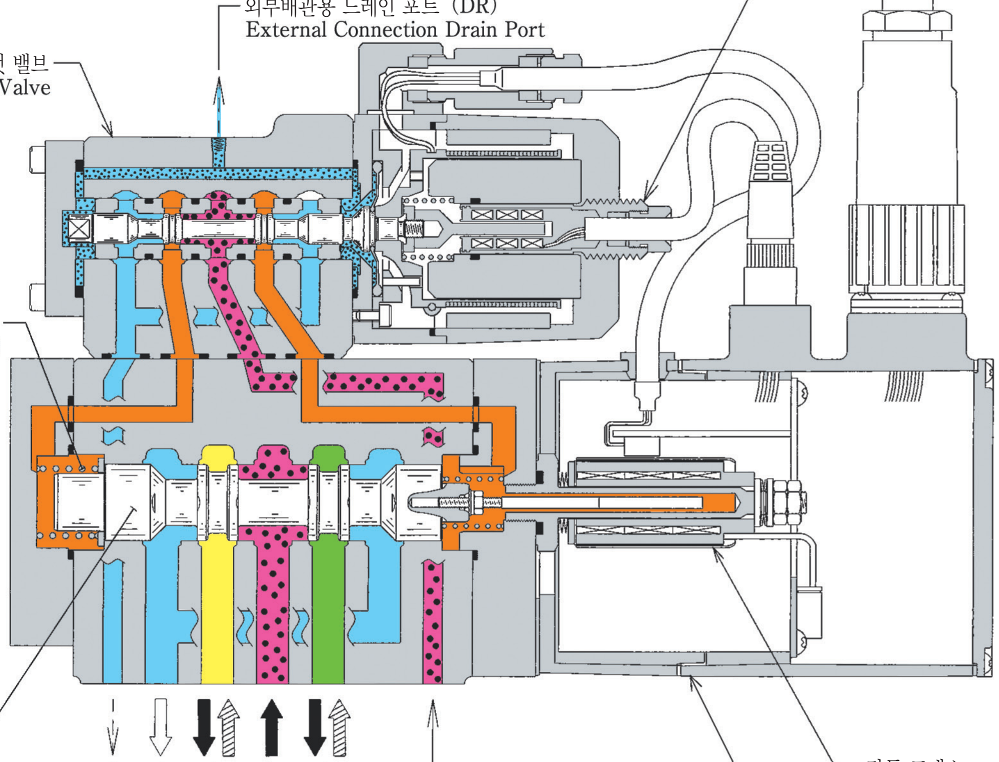
KS 유압기호
Graphic Symbols

Y포트 있음 (건식형)
With Y Port (Dry Type)

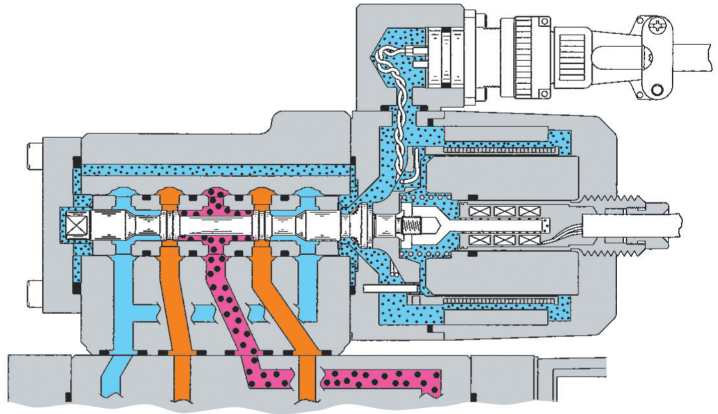
Y포트 없음 (습식형)
Without Y Port (Wet Type)



● 파일럿 밸브 건식형 Pilot Valve : Dry Type



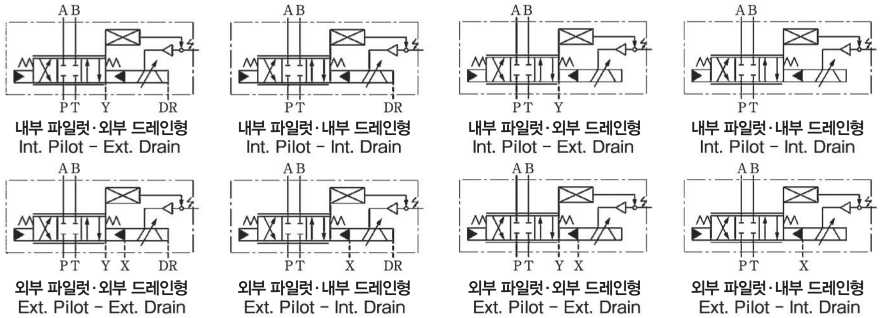
● 파일럿 밸브 습식형 Pilot Valve : Wet Type

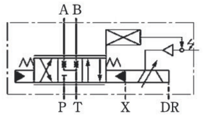


KS 유압기호
Graphic Symbols

파일럿 밸브 건식형
Pilot Valve : Dry Type

파일럿 밸브 습식형
Pilot Valve : Wet Type

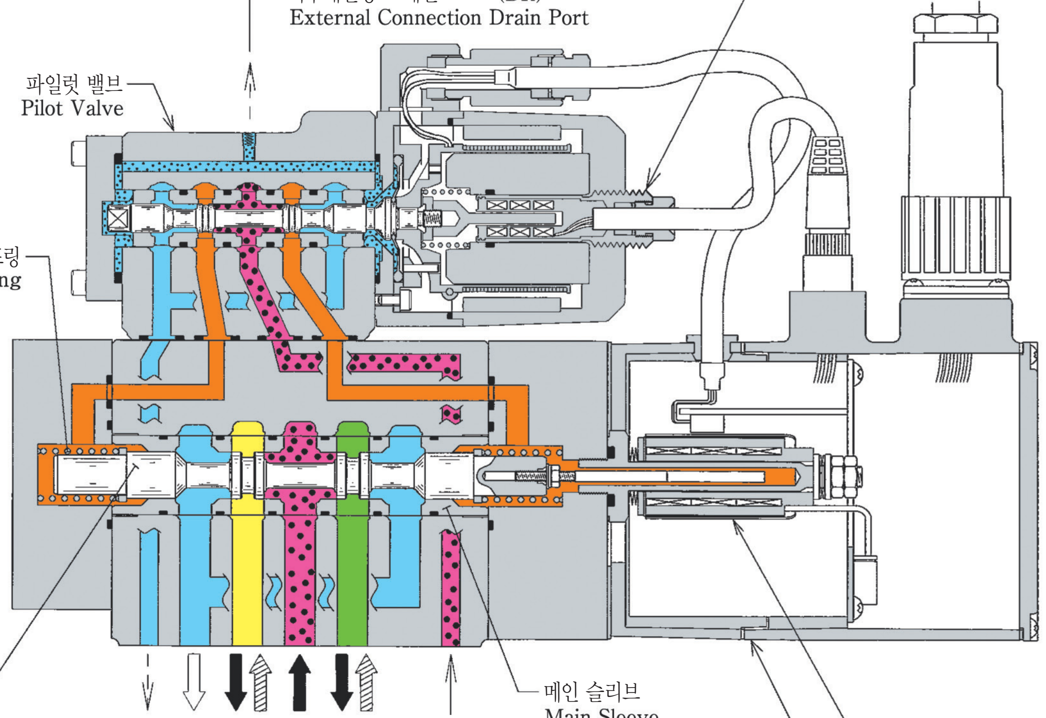




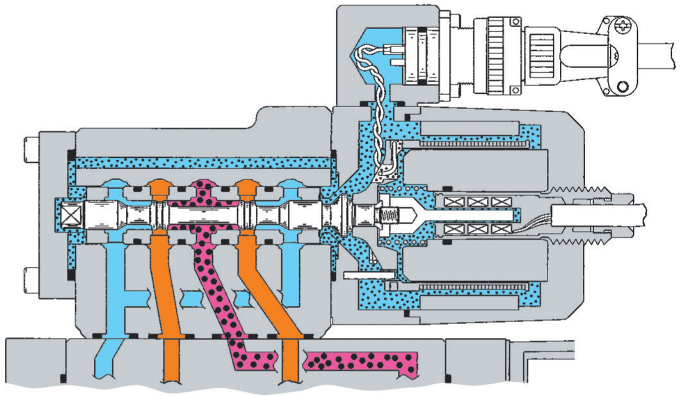
주) 위 그림은 스풀 형식 "2L" "2" "2P"를 나타냅니다.
"40"의 경우는 왼쪽 그림이 됩니다.
(파일럿 밸브 건식형·외부 파일럿·내부 드레인형)

Note) The symbols above indicate the spool types "2" and "2P".
The graphic symbol of the spool type "40" is shown on the left (Pilot Valve:Dry Type/external pilot/internal drain type).

● 파일럿 밸브 건식형 Pilot Valve : Dry Type



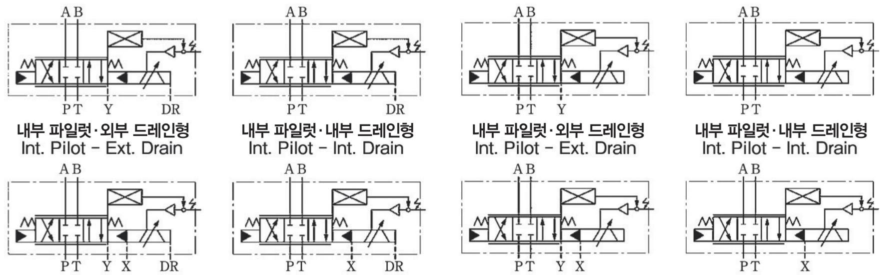
● 파일럿 밸브 습식형 Pilot Valve : Wet Type



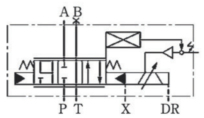
KS 유압기호
Graphic Symbols

파일럿 밸브 건식형
Pilot Valve : Dry Type

파일럿 밸브 습식형
Pilot Valve : Wet Type



내부 파일럿·외부 드레인형 Int. Pilot – Ext. Drain	내부 파일럿·내부 드레인형 Int. Pilot – Int. Drain	내부 파일럿·외부 드레인형 Int. Pilot – Ext. Drain	내부 파일럿·내부 드레인형 Int. Pilot – Int. Drain
외부 파일럿·외부 드레인형 Ext. Pilot – Ext. Drain	외부 파일럿·내부 드레인형 Ext. Pilot – Int. Drain	외부 파일럿·외부 드레인형 Ext. Pilot – Ext. Drain	외부 파일럿·내부 드레인형 Ext. Pilot – Int. Drain

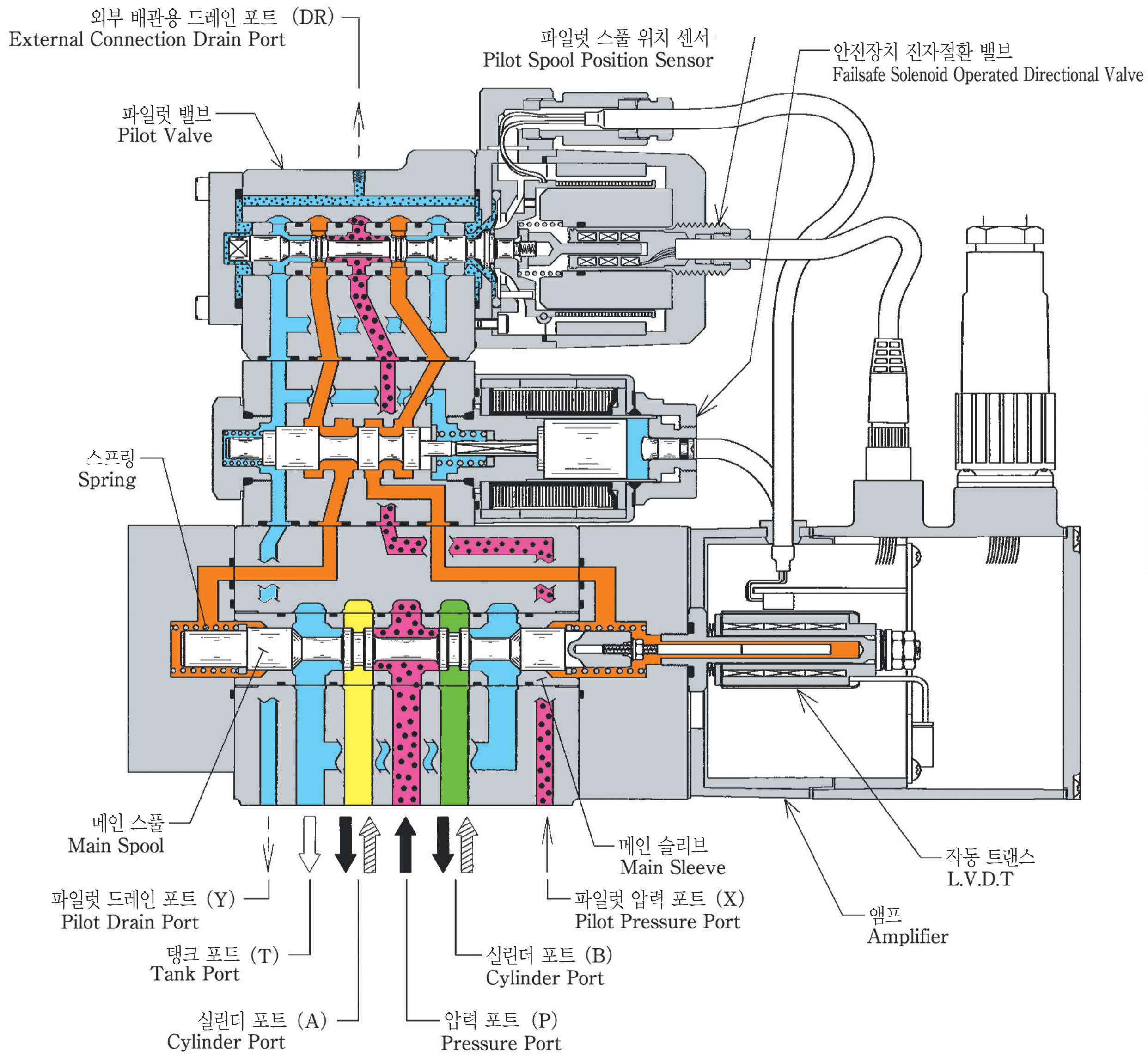


주) 위 그림은 스풀 형식 "S4"를 나타냅니다.
"S3"의 경우는 왼쪽 그림이 됩니다.
(파일럿 밸브 건식형·외부 파일럿·내부 드레인형)

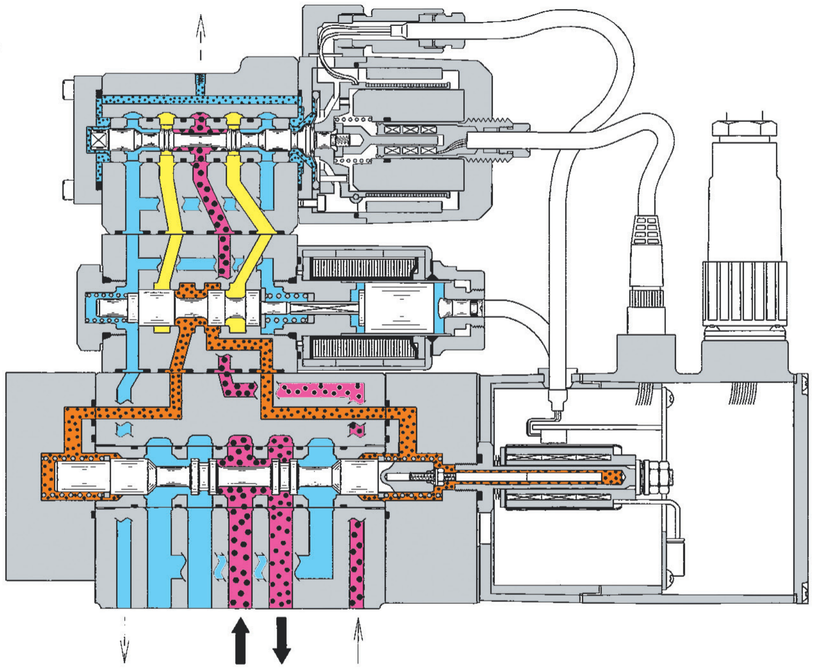
Note) The symbols above indicate the spool types "S4".
The graphic symbol of the spool type "S3" is shown on the left (Pilot Valve:Dry Type/external pilot/internal drain type).

앰프 탑재 2단형 리니어 서보 밸브 (건식형, 고성능형, 안전장치 전자절환 밸브 부착)

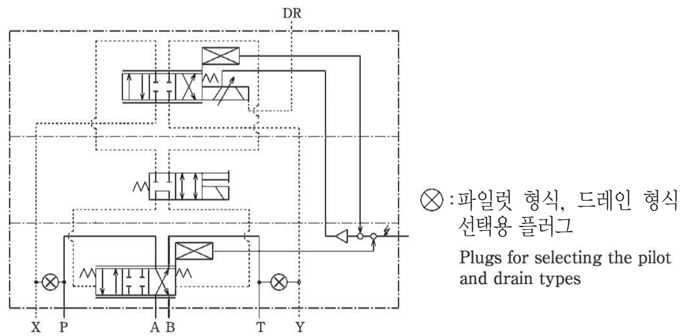
OBE Type Linear Servo Valves
(Two Stage Dry Type, High Performance Type with Failsafe Solenoid Operated Directional Valves)



● 안전장치 기능 작동시 (전원 단절시)
When Falesafe Functions Operated (Power Supply Loss)

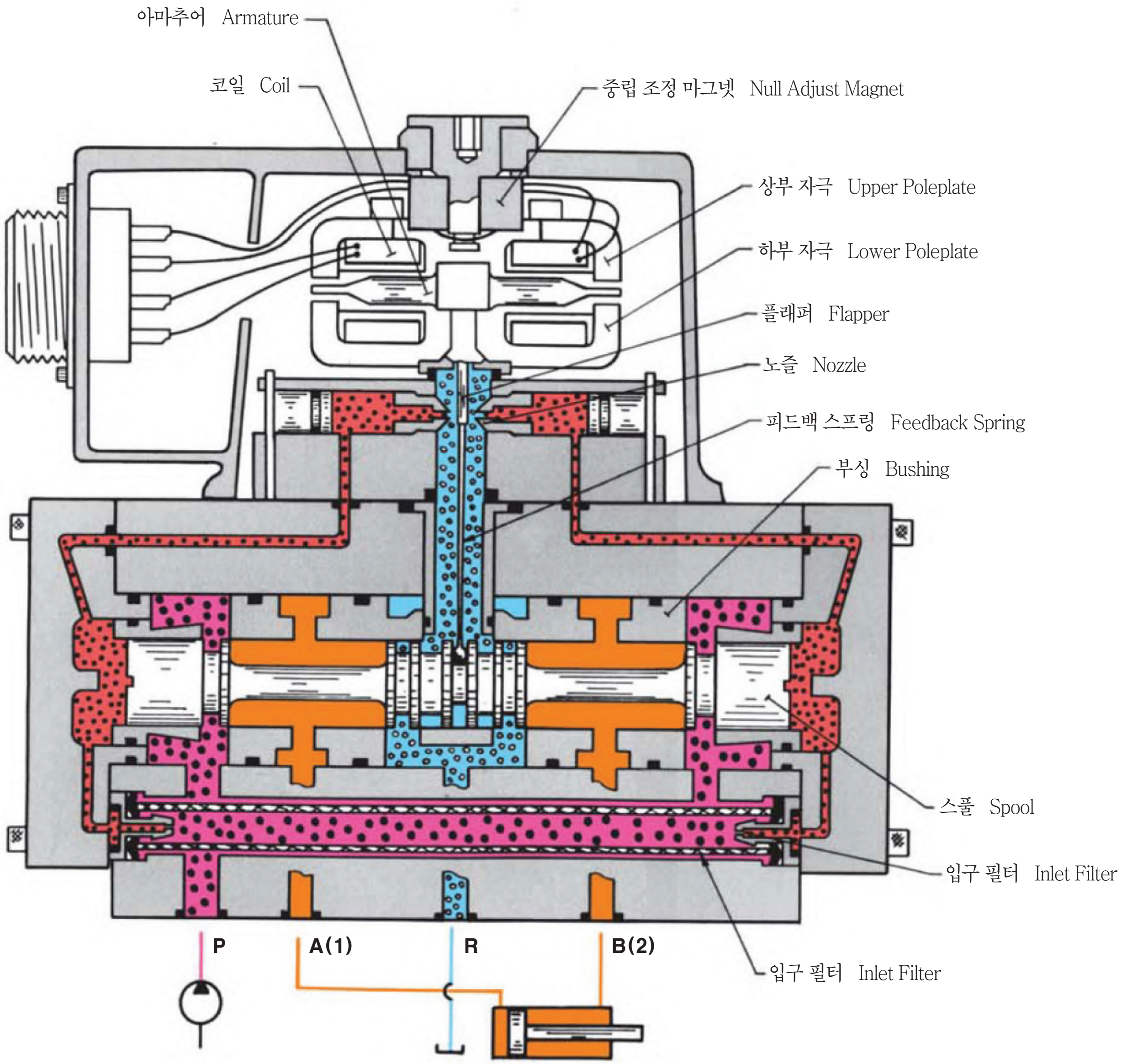


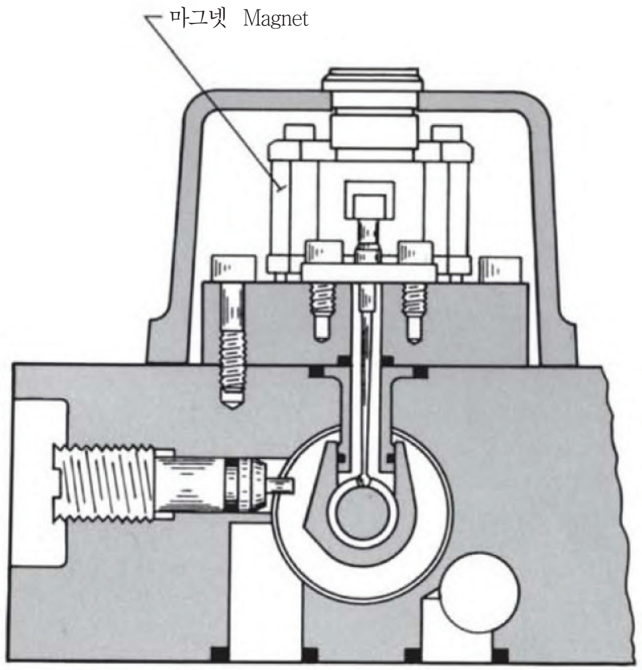
상세 유압기호 Detailed Graphic Symbol



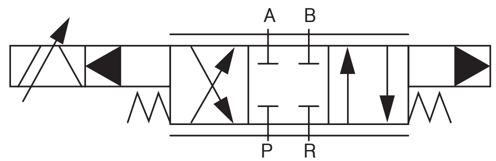
2단형 전기 유압 서보 밸브

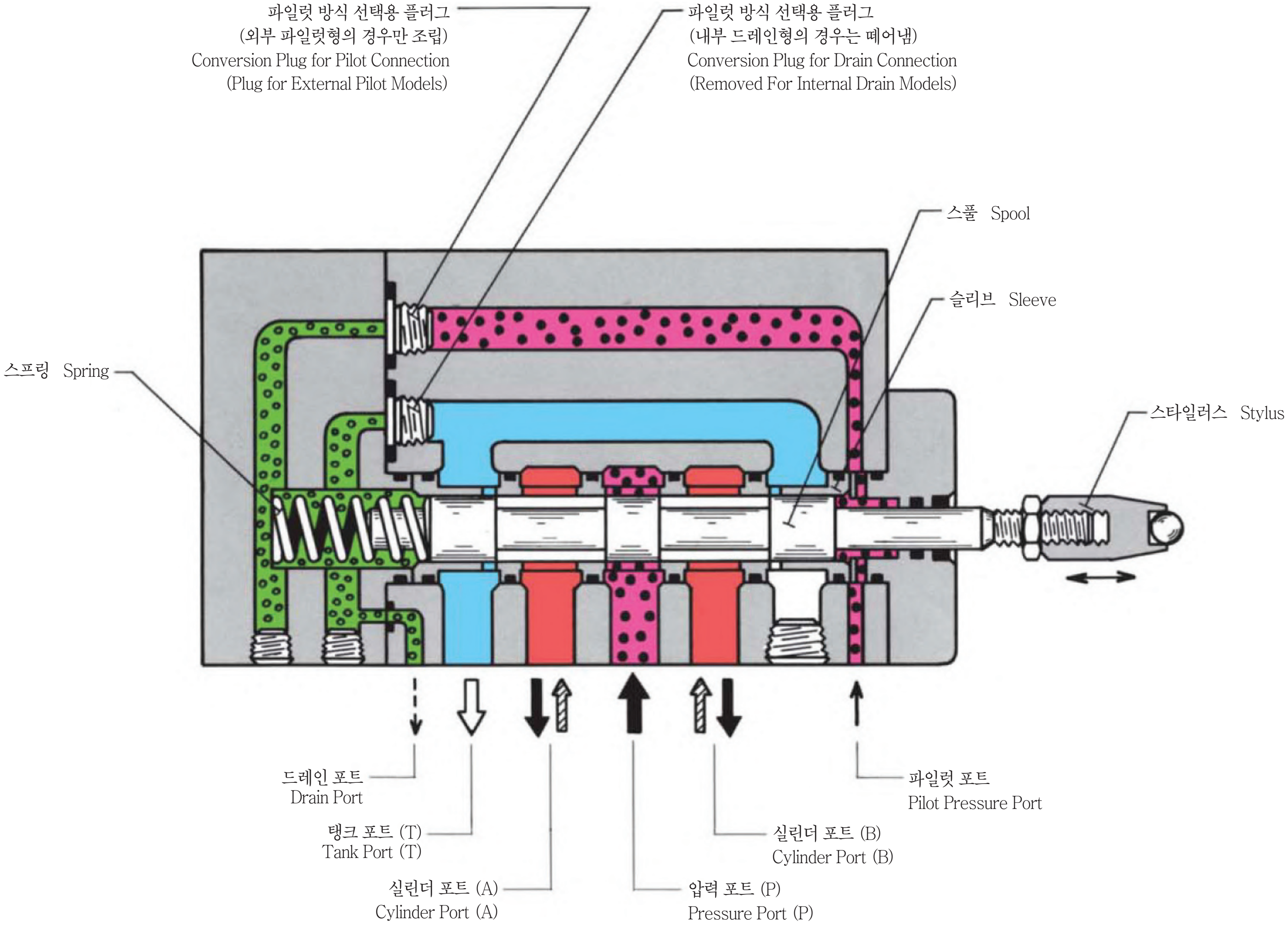
Electro-Hydraulic Two Stage Servo Valves





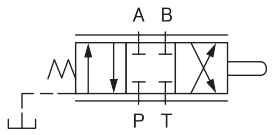
KS 유압기호
Graphic Symbol



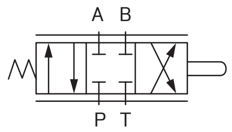


KS 유압기호
Graphic Symbol

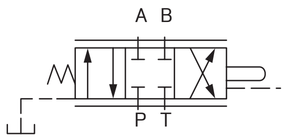
외부 드레인형
Ext. Drain



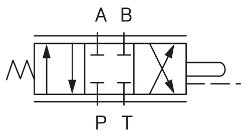
내부 드레인형
Int. Drain

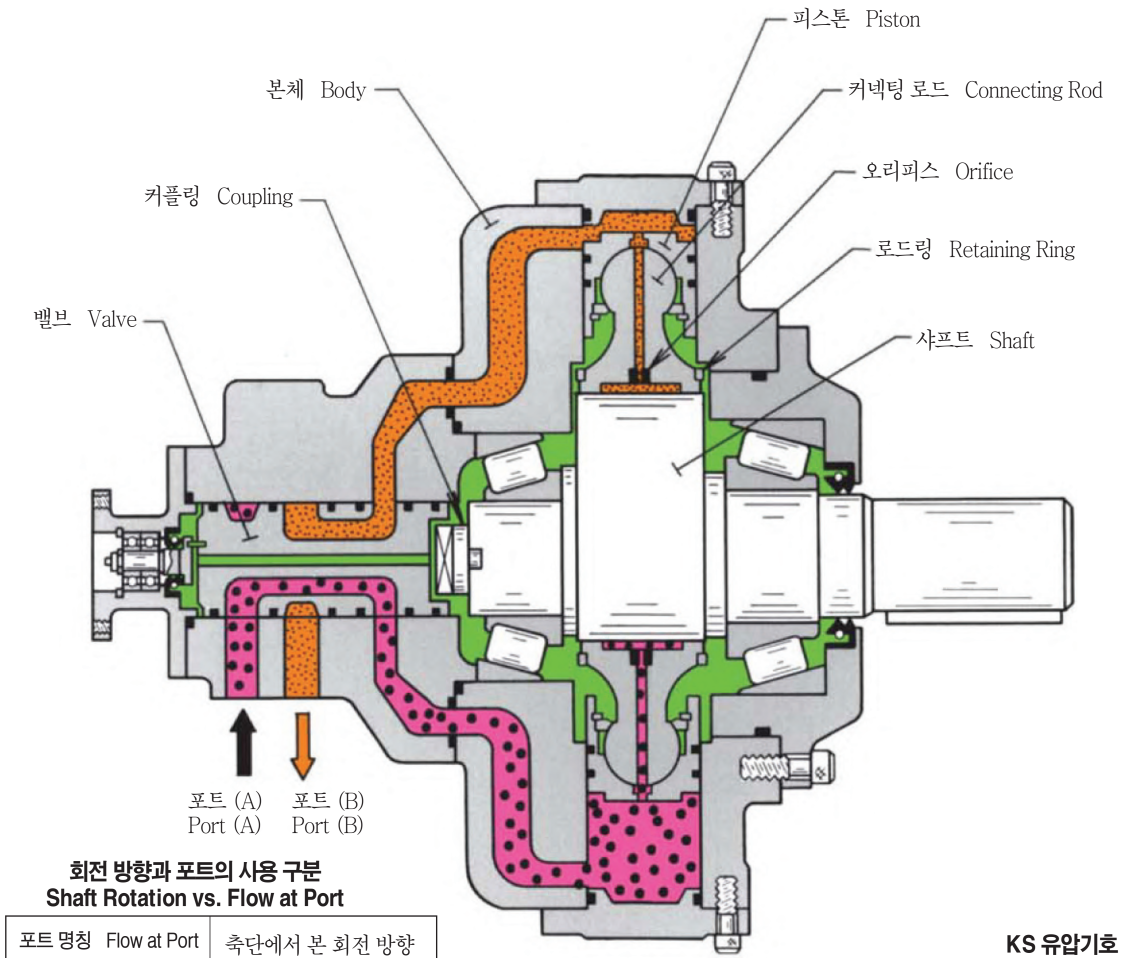


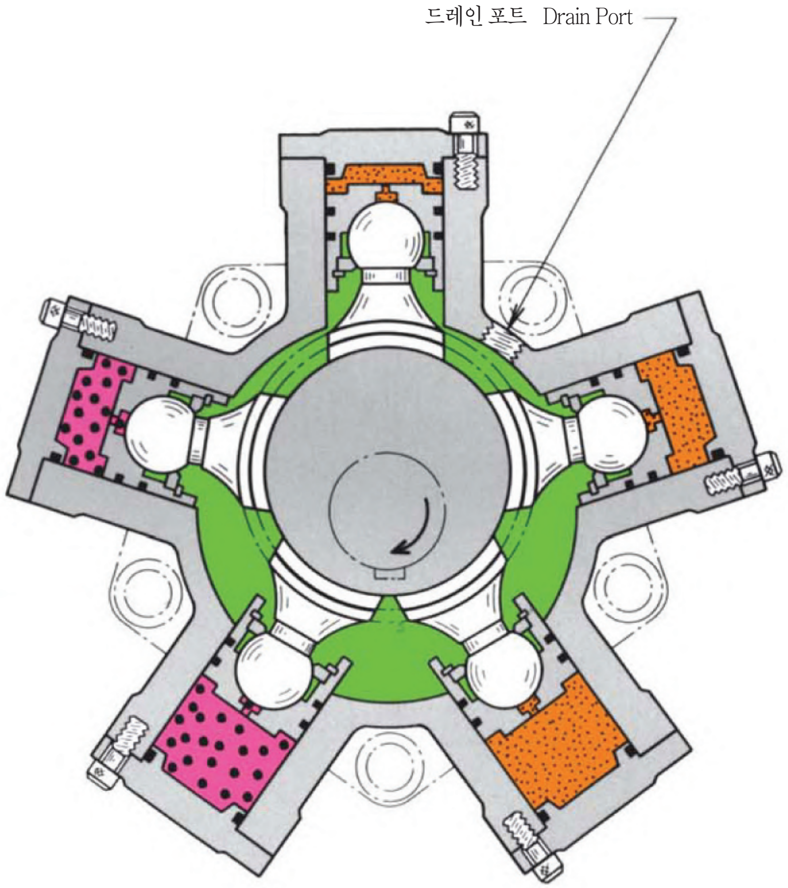
외부 파일럿 · 외부 드레인형
Ext. Pilot, Ext. Drain



외부 파일럿 · 내부 드레인형
Ext. Pilot, Int. Drain







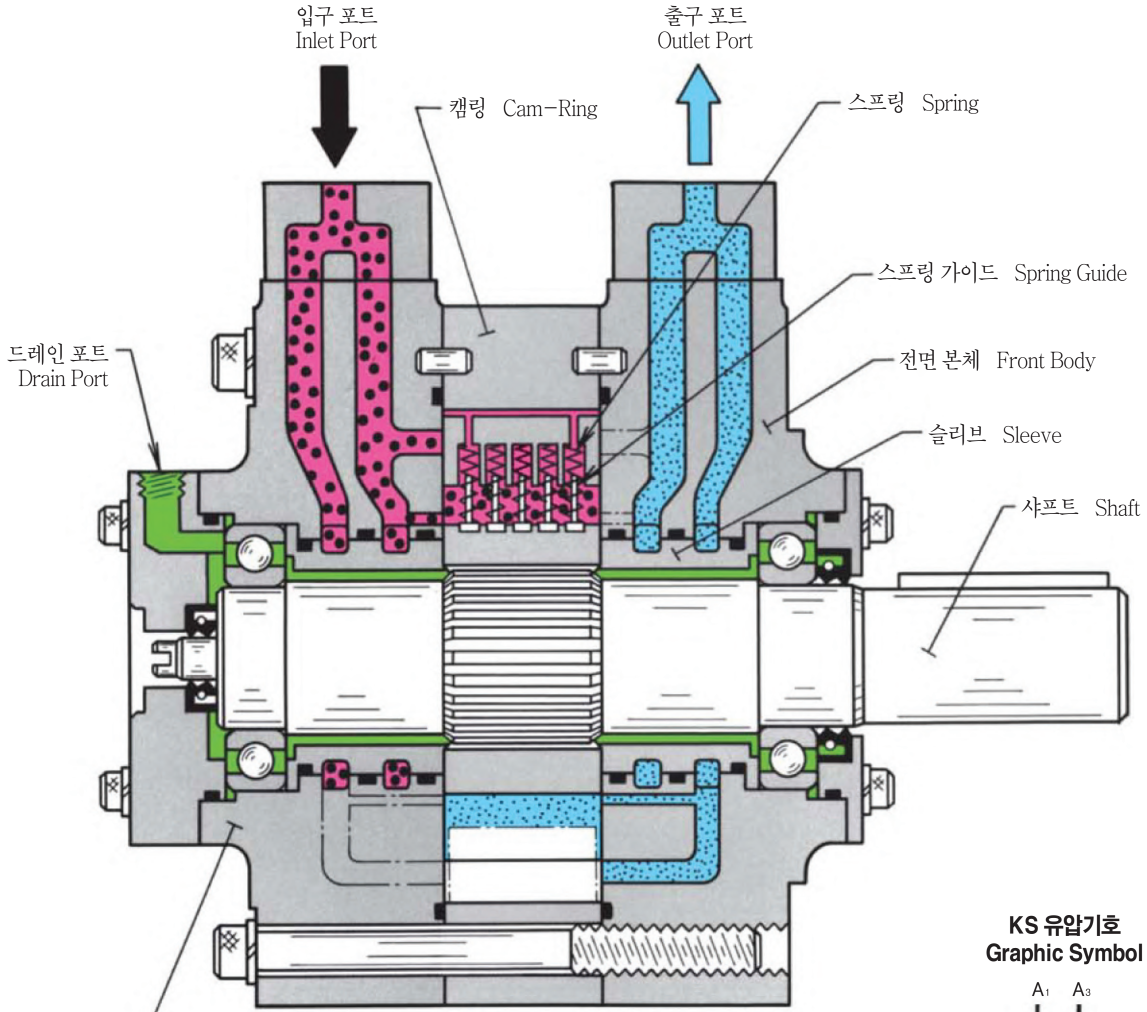
회전 방향과 포트의 사용 구분
Shaft Rotation vs. Flow at Port

포트 명칭 Flow at Port		축단에서 본 회전 방향 Shaft Rotation Viewed from Shaft End
포트 (A) Port (A)	포트 (B) Port (B)	
입구 Inlet	출구 Outlet	시계 방향 Clockwise
출구 Outlet	입구 Inlet	반시계 방향 Anti-Clockwise

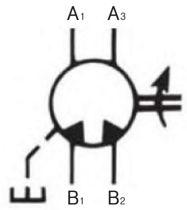
KS 유압기호
Graphic Symbol

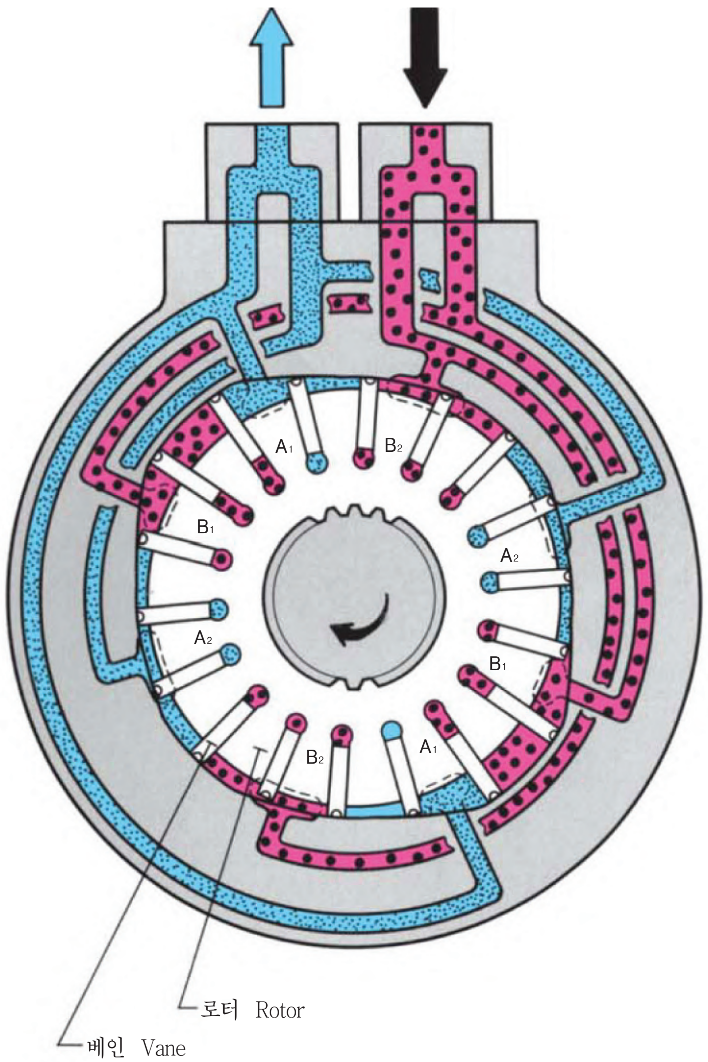
베인형 저속 고토르크 모터

Vane Type
Low Speed High Torque Hydraulic Motors

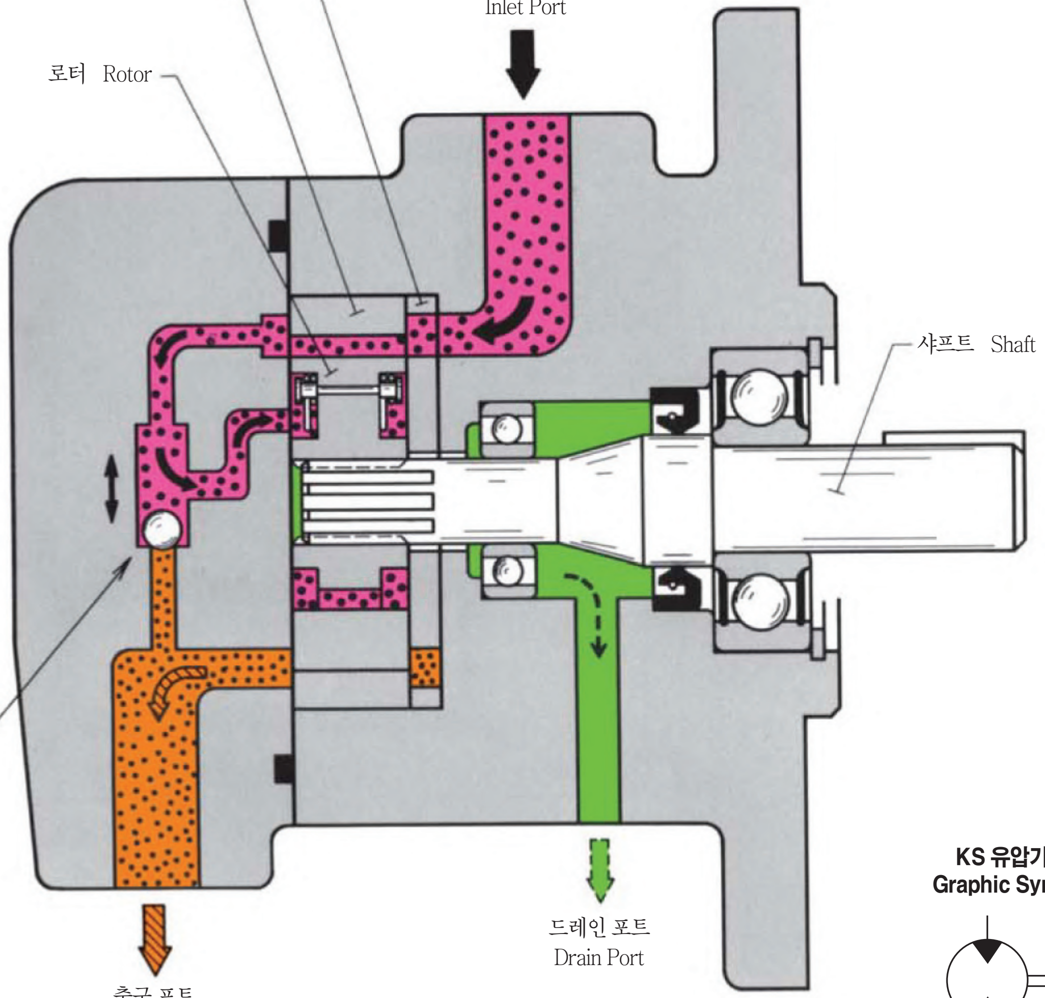


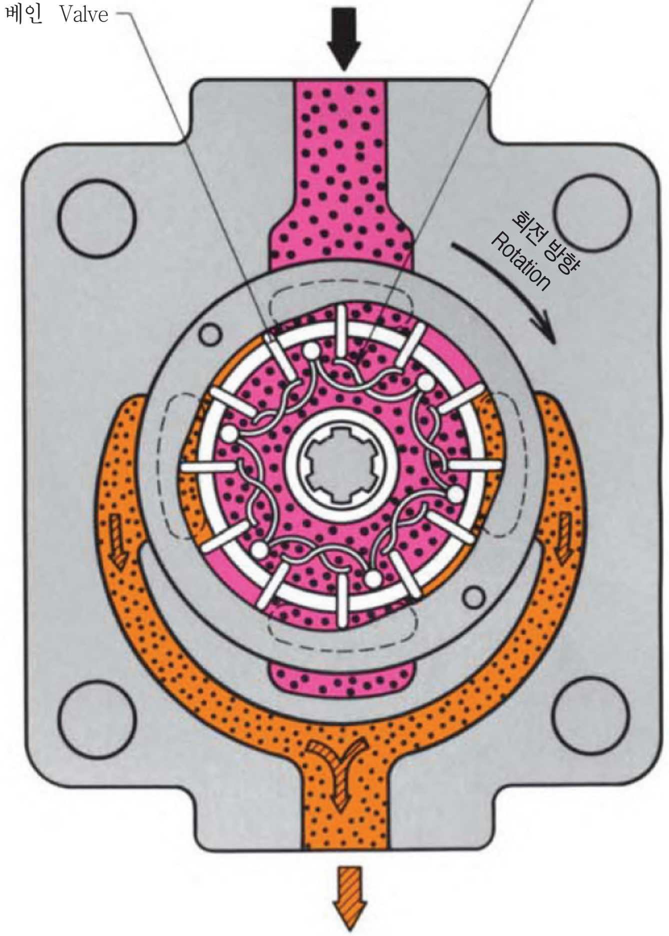
KS 유압기호
Graphic Symbol



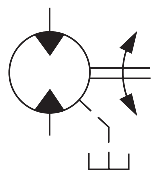


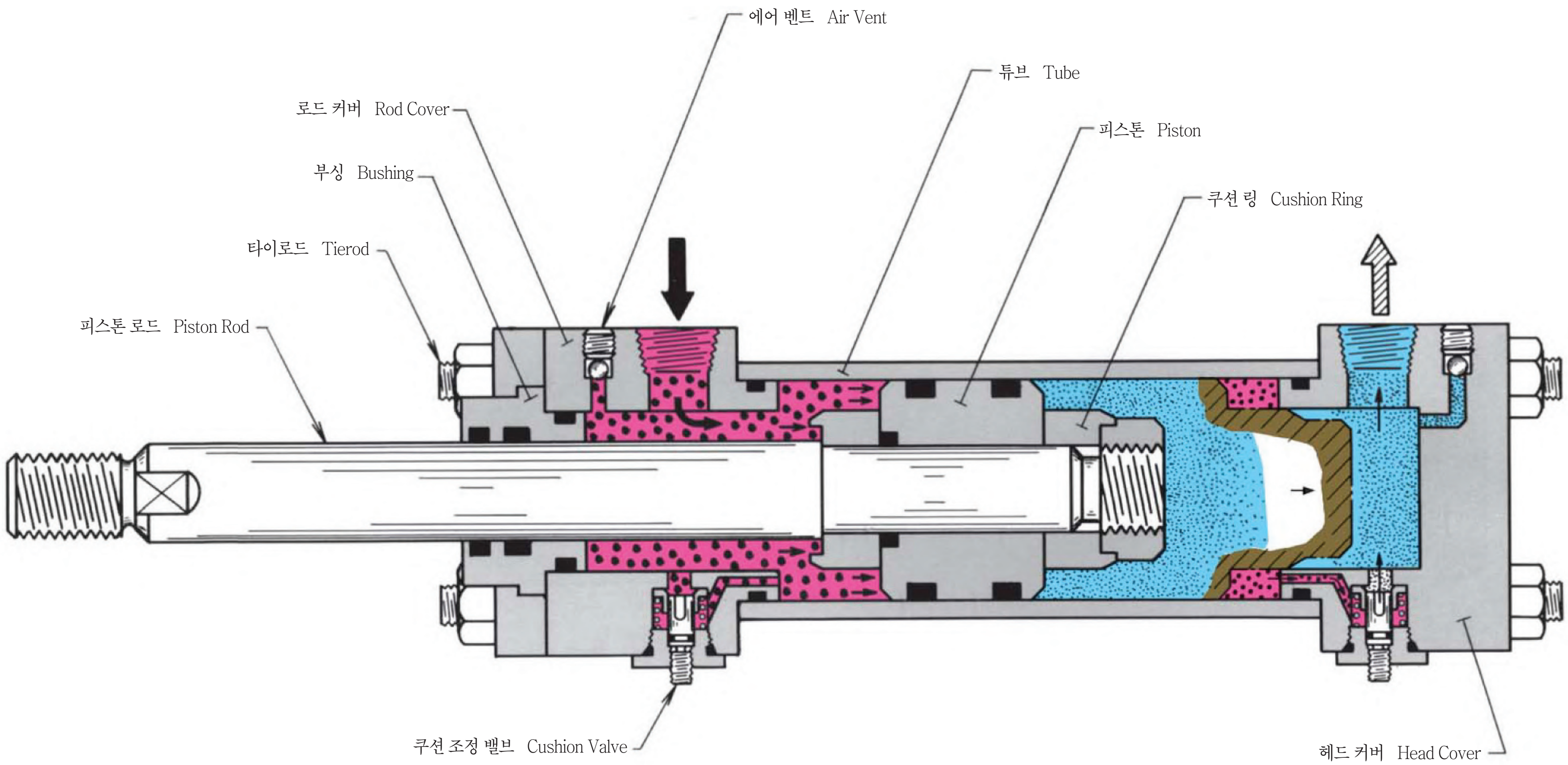
유압 베인 모터



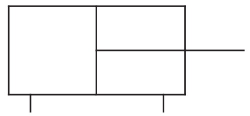


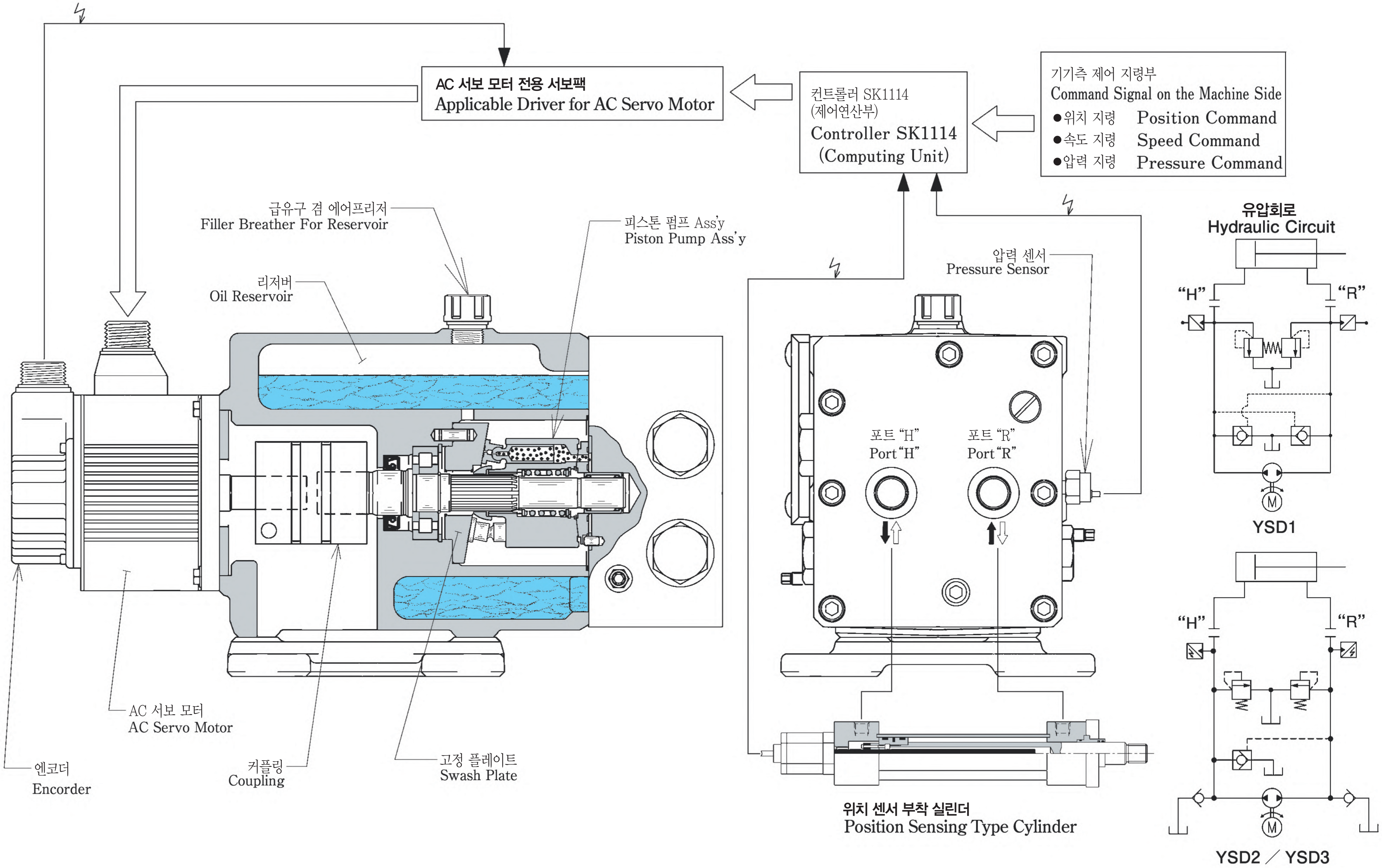
KS 유압기호
Graphic Symbol



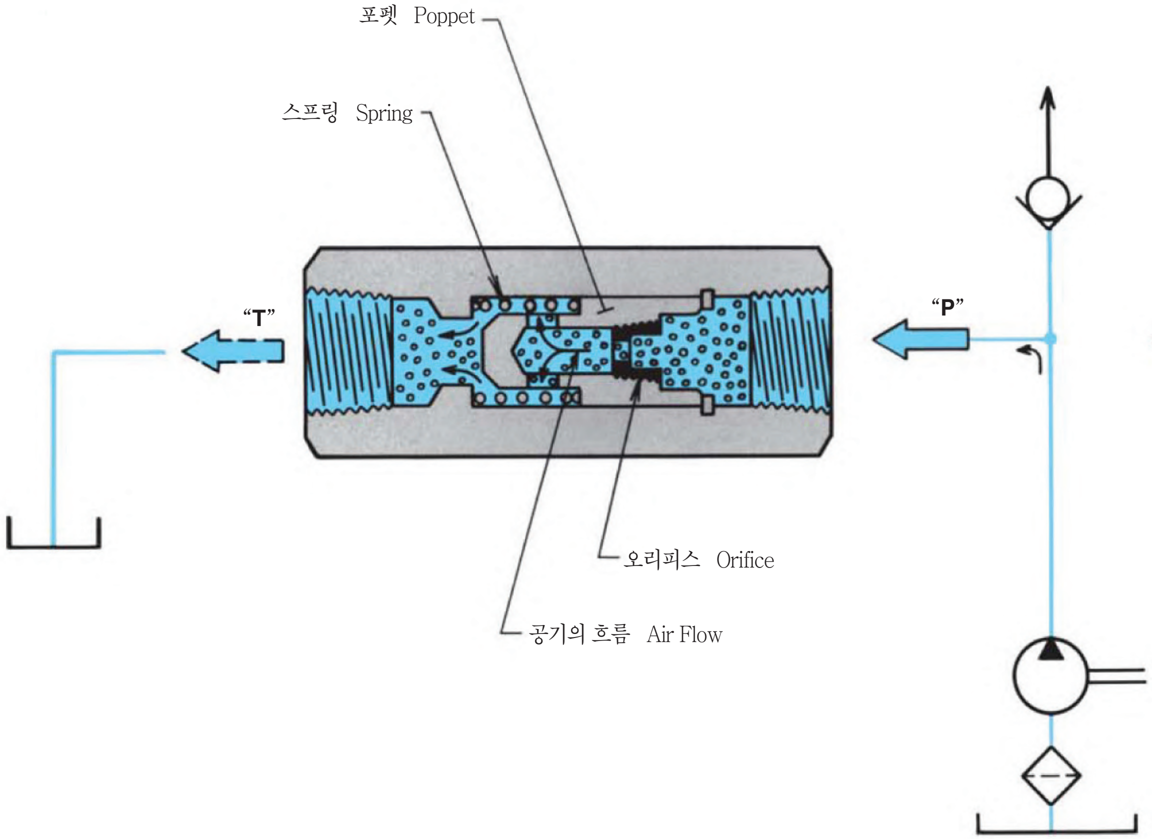


KS 유압기호
Graphic Symbol

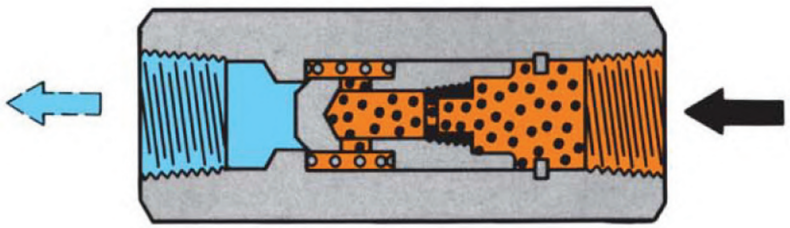



AC 서보 모터 전용 서보팩
Applicable Driver for AC Servo Motor
컨트롤러 SK1114
(제어연산부)
Controller SK1114
(Computing Unit)
기기측 제어 지령부
Command Signal on the Machine Side
●위치 지령 Position Command
●속도 지령 Speed Command
●압력 지령 Pressure Command
급유구 겸 에어프리저
Filler Breather For Reservoir
피스톤 펌프 Ass'y
Piston Pump Ass'y
리저버
Oil Reservoir
압력 센서
Pressure Sensor
포트 "H"
Port "H"
포트 "R"
Port "R"
유압회로
Hydraulic Circuit
"H"
"R"
M
YSD1
YSD2 ／ YSD3
AC 서보 모터
AC Servo Motor
엔코더
Encorder
커플링
Coupling
고정 플레이트
Swash Plate
위치 센서 부착 실린더
Position Sensing Type Cylinder

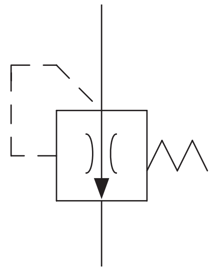
● 열린 상태 (공기배출시)
Open Condition (At Air Bleeding)



● 닫힌 상태
Closed Condition



KS 유압기호
Graphic Symbol



유압기기작동원리도집

2018년 12월 2차개정판

● **발행처**
한국유켄공업(주)
서울시 구로구 경인로 590 아주빌딩 210호
TEL. 02-2675-2110
FAX. 02-2675-2104

● **편집 디자인 및 인쇄**
(주)위드프레스
TEL. 02-2233-0345 / HP. 010-6284-2636