

Pneumatic Drive Bellows Pump & Auto Damper

HJS K-Series 벨로우즈 펌프 및 댐퍼 HJS K-Series Bellows Pump & Auto Damper



고품질 및 내구성
High quality and Durability

- 유량 안정성, 광범위한 온도 적용 및 내구성
Flow stability, Wide range of operating temperature and Durability



특별한 장점
Special advantages

- 짧은 공급 납기 (*Short lead delivery times*)
- 기존 펌프의 대체성 (*Replaceability of existing pumps*)
- 가격 경쟁력 (*Price competitive*)



쉬운 유지보수
Easy maintenance

- 낮은 유지비용 (*Low cost for maintenance*)

KP-30H & KP-60H

□ 고온 • 중온 • 상온 겸용 펌프 (Bellows Pump)
 High • Medium • Room-Temperature combined Bellows pump

KP-60H



KP-30H

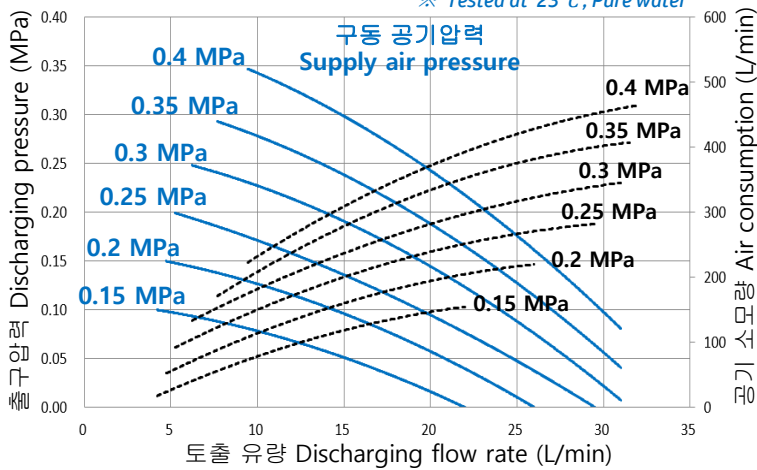
적용범위 (Operating temperature)
 10°C~180°C

최대유량 (Max Flow rate)
 30L/min & 60L/min

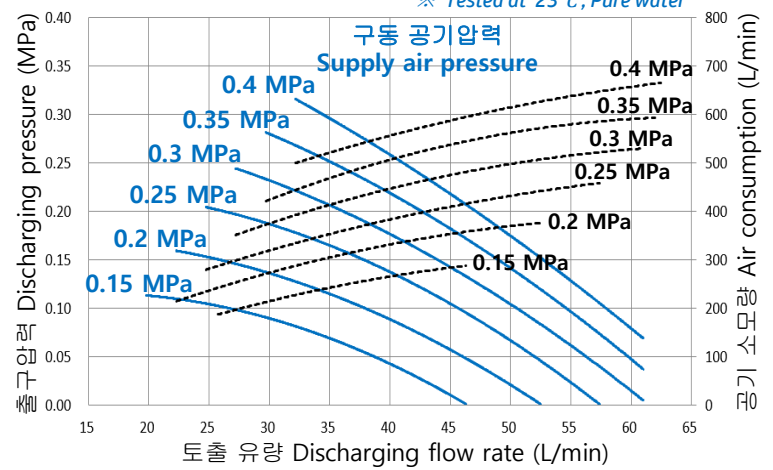
편리한 재고관리
 Easy stock management

□ 유량 Pump Performance Curve

KP-30H



KP-60H



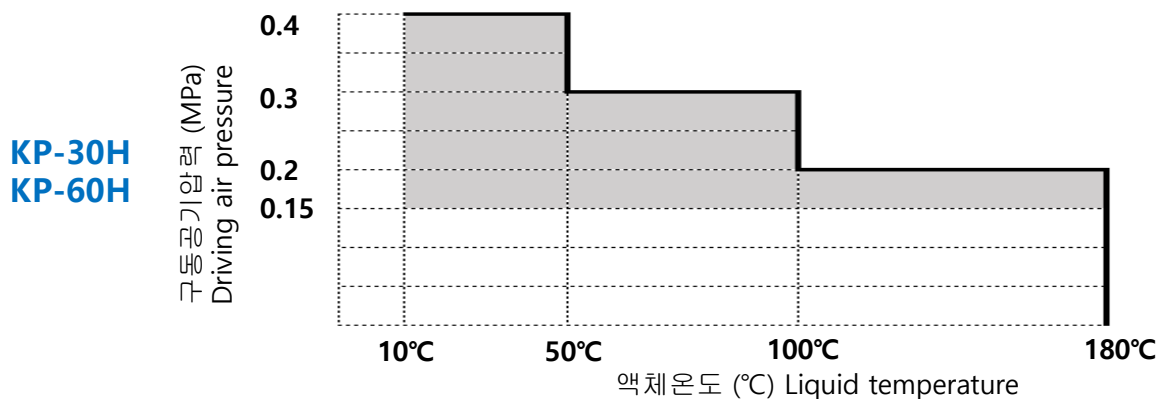
시험조건 Test conditions

- Supply air pipe size : Rc 3/8" (PT) Port (Tube O.D10 X I.D8 X 2M)
- Liquid pipe size : 3/4" Port (Tube O.D19 X I.D16)
- Test liquid : Pure water, 23°C

시험조건 Test conditions

- Supply air pipe size : Rc 1/2" (PT) Port (Tube O.D12 X I.D10 X 2M)
- Liquid pipe size : 1"Port (Tube O.D25 x I.D22)
- Test liquid : Pure water, 23°C

□ 구동공기 압력범위 Driving Air Pressure Range



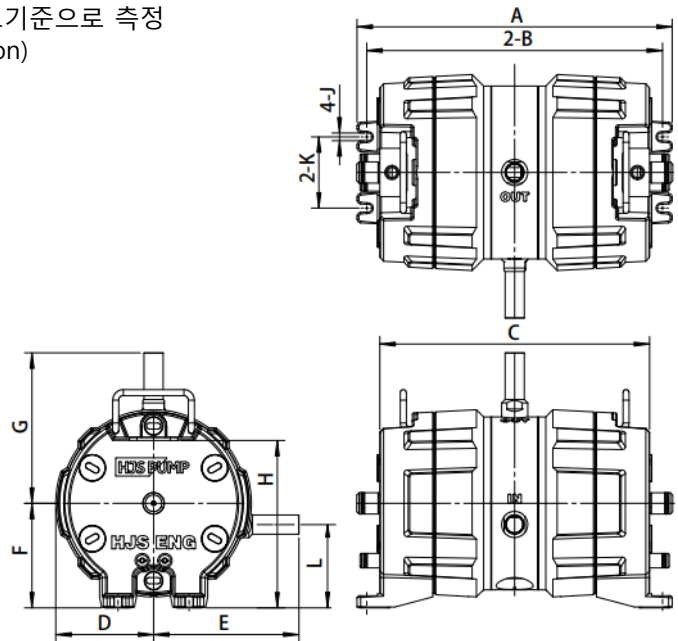
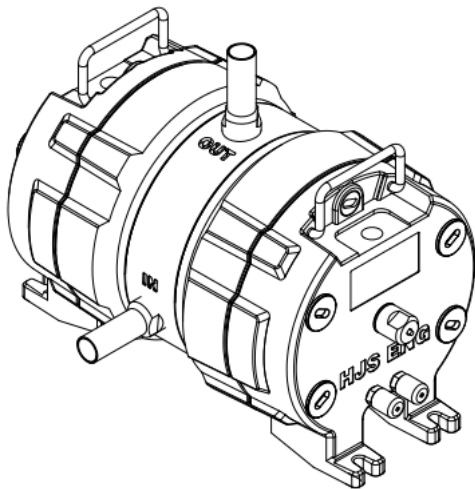
KP-30H & KP-60H

□ 규격 Standard Specifications

Items / Models	KP - 30H			KP - 60H		
최대 토출 유량 (L/min) Max. discharging flow rate	(*Note.1) 30 L/min			(*Note.1) 60 L/min		
스트로크당 유량 (L/stroke) Flow rate per stroke	(*Note.2) 0.40 L/stroke			(*Note.2) 0.86 L/stroke		
액체 온도 사용범위 (°C) Temperature range of liquid	10 ~ 50°C	51 ~ 100°C	101 ~ 180°C	10 ~ 50°C	51 ~ 100°C	101 ~ 180°C
구동 공기압 범위 (MPa) Driving air pressure range	0.15 ~ 0.4 MPa	0.15 ~ 0.3 MPa	0.15 ~ 0.2 MPa	0.15 ~ 0.4 MPa	0.15 ~ 0.3 MPa	0.15 ~ 0.2 MPa
최대허용스트로크속도 (spm) Max allowable Stroke speed	Max 75 stroke/min			Max 70 stroke/min		
AIR 공급 연결 포트 Air supply inlet ports	2-Rc 3/8" (PT)			2-Rc 1/2" (PT)		
액체 연결 포트 Liquid connection ports	PTFE 3/4" (O.D 19 x I.D16mm)			PTFE 1" (O.D 25 x I.D 22mm)		
액체 접촉 재질 Liquid contact materials	PTFE, PFA					
주변 환경 온도 범위 Ambient temperature	5 ~ 50°C					
근접스위치 센서 Proximity Switch	출력 형태 Output type	NPN Output (N.O. mode)				
	전원 Power supply	DC 10~30V				

*Note.1) 최대토출유량은 실온에서 순수물로 최대스트로크 속도기준으로 측정

*Note.2) 1스트로크 (1 stroke) : 1회 왕복 (1 reciprocating motion)



Models	A	B	C	D	E	F	G	H	J	K	L	Liquid in/out ports	Air supply ports	Weight
KP-30H	410.4	384.4	350.4	108.5	163.5	119.0	165.5	182.0	10	80	85.5	3/4"	Rc 3/8" (PT)	23 Kg
KP-60H	416.4	390.4	356.4	129.2	187.0	137.8	187.5	220.8	10	94	109.8	1"	Rc 1/2" (PT)	32 Kg

KP-30MC & KP-60MC

□ **중온 • 상온 겸용 펌프 (Bellows Pump)**
Medium • Room-Temperature combined Bellows pump

KP-60MC



KP-30MC

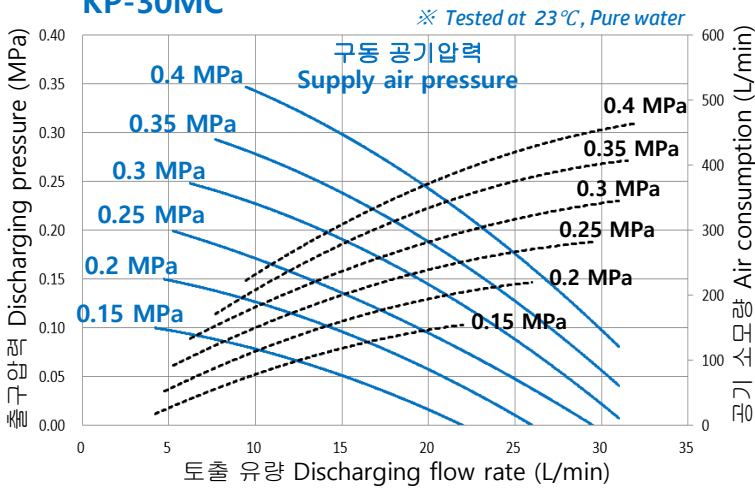
적용범위 (Operating temperature)
 10°C~100°C

최대유량 (Max Flow rate)
 30L/min & 60L/min

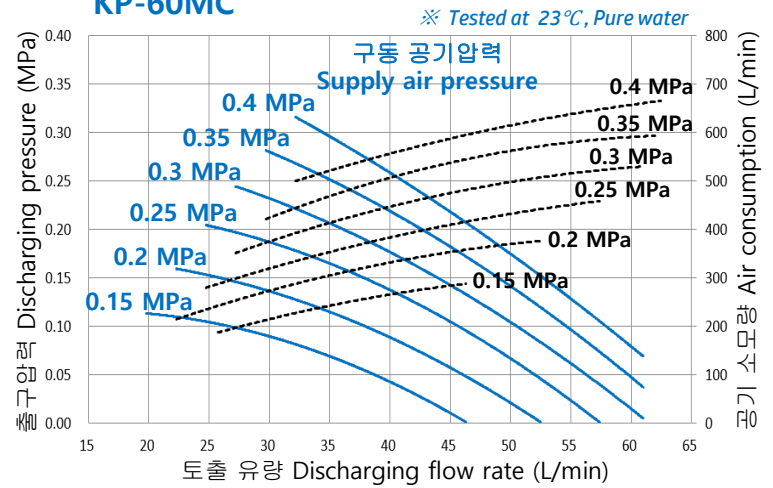
가격경쟁력
Price competitive

□ **유량 Pump Performance Curve**

KP-30MC



KP-60MC



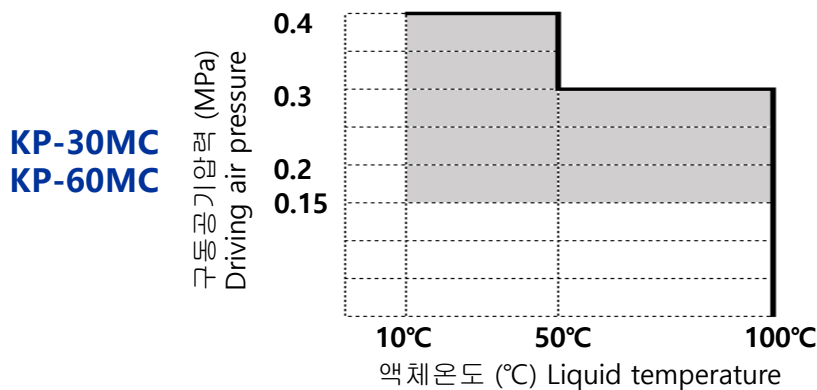
시험조건 Test conditions

- Supply air pipe size : Rc 3/8" (PT) Port (Tube O.D10 X I.D8 X 2M)
- Liquid pipe size : 3/4" Port (Tube O.D19 X I.D16)
- Test liquid : Pure water, 23°C

시험조건 Test conditions

- Supply air pipe size : Rc 1/2" (PT) Port (Tube O.D12 X I.D10 X 2M)
- Liquid pipe size : 1"Port (Tube O.D25 x I.D22)
- Test liquid : Pure water, 23°C

□ **구동공기 압력범위 Driving Air Pressure Range**



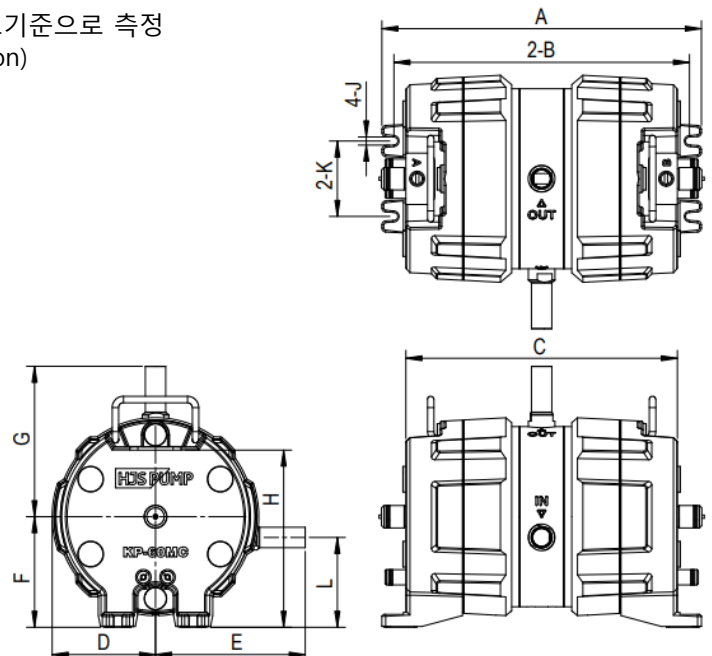
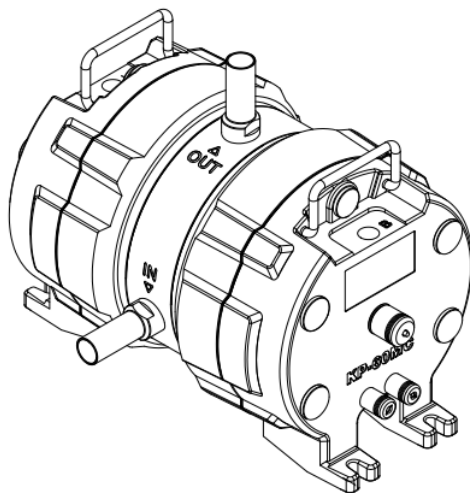
KP-30MC & KP-60MC

□ 규격 Standard Specifications

Items / Models	KP - 30MC			KP - 60MC		
최대 토출 유량 (L/min) Max. discharging flow rate	(*Note.1) 30 L/min			(*Note.1) 60 L/min		
스트로크당 유량 (L/stroke) Flow rate per stroke	(*Note.2) 0.40 L/stroke			(*Note.2) 0.86 L/stroke		
액체 온도 사용범위 (°C) Temperature range of liquid	10 ~ 50°C	51 ~ 100°C		10 ~ 50°C	51 ~ 100°C	
구동 공기압 범위 (MPa) Driving air pressure range	0.15 ~ 0.4 MPa	0.15 ~ 0.3 MPa		0.15 ~ 0.4 MPa	0.15 ~ 0.3 MPa	
최대허용스트로크속도 (spm) Max allowable Stroke speed	Max 75 stroke/min			Max 70 stroke/min		
AIR 공급 연결 포트 Air supply inlet ports	2-Rc 3/8" (PT)			2-Rc 1/2" (PT)		
액체 연결 포트 Liquid connection ports	PTFE 3/4" (O.D 19 x I.D16mm)			PTFE 1" (O.D 25 x I.D 22mm)		
액체 접촉 재질 Liquid contact materials	PTFE, PFA					
주변 환경 온도 범위 Ambient temperature	5 ~ 50°C					
근접스위치 센서 Proximity Switch	출력 형태 Output type	NPN Output (N.O. mode)				
	전원 Power supply	DC 10~30V				

*Note.1) 최대토출유량은 실온에서 순수물로 최대스트로크 속도기준으로 측정

*Note.2) 1스트로크 (1 stroke) : 1회 왕복 (1 reciprocating motion)



Models	A	B	C	D	E	F	G	H	J	K	L	Liquid in/out ports	Air supply ports	Weight
KP-30MC	386	360	326	108.5	163.5	119.0	165.5	182.0	10	80	95	3/4"	Rc 3/8" (PT)	20 Kg
KP-60MC	399	373	339	129.2	187.0	137.8	187.5	220.8	10	94	112	1"	Rc 1/2" (PT)	28 Kg

KD-30H & KD-60H

□ 댐퍼 (Auto Damper)

High • Medium • Room-Temperature combined Auto Damper

KD-60H



KD-30H

적용범위 (Operating temperature)
10°C~180°C

적용펌프 (Applied pump)
KP-30H/30MC & KP-60H/60MC

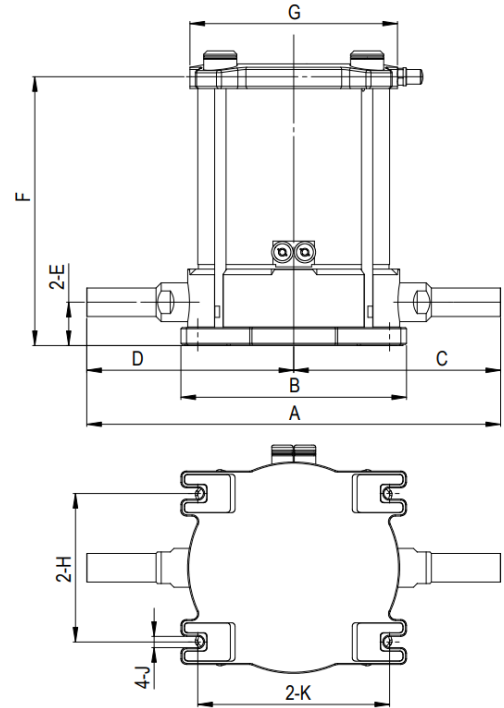
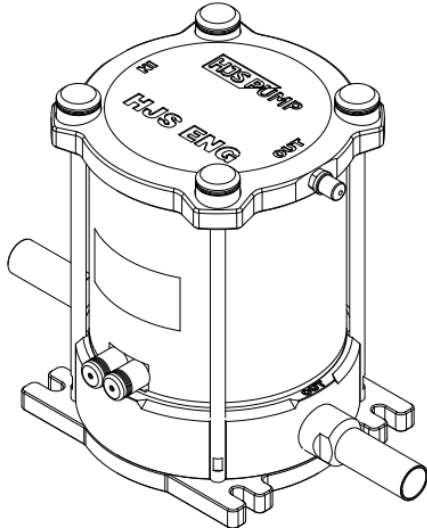
편리한 재고 관리
Easy stock management

□ 규격 Standard Specifications

Items / Models	KD - 30H			KD - 60H		
적용 펌프 Applied pump	KP-30H / KP-30MC			KP-60H / KP-60MC		
액체온도 사용범위 (°C) Temp. range of liquid 공급공기 압력범위(MPa) Air supply pressure	적용 펌프(Applied pump) : KP-30H			적용 펌프(Applied pump) : KP-60H		
	10 ~ 50 °C	51 ~ 100°C	101 ~ 180°C	10 ~ 50°C	51 ~ 100°C	101 ~ 180°C
	0.15 ~ 0.4 MPa	0.15 ~ 0.3 MPa	0.15 ~ 0.2 MPa	0.15 ~ 0.4 MPa	0.15 ~ 0.3 MPa	0.15 ~ 0.2 MPa
※ 댐퍼의 공급 공기압은 동작되는 펌프와 동일함 Supply air to Damper at the same pressure as Pump-driven air						
액체온도 사용범위 (°C) Temp. range of liquid 공급공기 압력범위(MPa) Air supply pressure	적용펌프(Applied pump) : KP-30MC			적용펌프(Applied pump) : KP-60MC		
	10 ~ 50 °C	51 ~ 100°C	N/A	10 ~ 50°C	51 ~ 100°C	N/A
	0.15 ~ 0.4 MPa	0.15 ~ 0.3 MPa	N/A	0.15 ~ 0.4 MPa	0.15 ~ 0.3 MPa	N/A
※ 댐퍼의 공급 공기압은 동작되는 펌프와 동일함 Supply air to Damper at the same pressure as Pump-driven air						
구동공기 공급 연결포트 Air supply inlet ports	Rc 1/8" (PT)			Rc 1/4" (PT)		
액체 연결 포트 Liquid connection ports	PTFE 3/4" (O.D 19 x I.D16mm)			PTFE 1" (O.D 25 x I.D 22mm)		
액체 접촉 재질 Liquid contact materials	PTFE, PFA					
주변환경 온도범위 Ambient temperature	5 ~ 50°C					
맥동 압력 폭 (MPa) Pulsation pressure width	≤ 0.06 MPa (액체 점도가 1~50mPa•s인 경우) Within 0.06 MPa (in case liquid viscosity is within 1~50 mPa•s)					

KD-30H & KD-60H

□ 구성도 Structural Drawings



Models	A	B	C	D	E	F	G	H	J	K	Liquid in/out ports	Air supply ports	Weight
KD-30H	304.6	186	152.3	152.3	34.0	231.4	154	110	10	160	3/4"	Rc 1/8" (PT)	9 Kg
KD-60H	341.0	200	170.5	170.5	38.5	238.9	184	132	10	174	1"	Rc 1/4" (PT)	12 Kg

급속배기밸브 Quick Exhaust Valve

□ 펌프 리턴 에어에 기인한 전자밸브 부식방지, 배기저항 감소

Prevent corrosion of solenoid valve by air returning from pump and reduce exhaust resistance

규격 Models	연결 포트 Connection ports	적용 펌프 Applied pump
KEV-R3	Rc 3/8" (PT)	KP-30H, KP-30MC, KA-C20H, KA-S25M
KEV-R4	Rc 1/2" (PT)	KP-60H, KP-60MC, KA-C40H, KA-S50M



KA-C20H & KA-C40H

□ 저맥동 펌프 (세정설비 순환용)

Low pulsation pump (Circulation pump for Cleaning equipment)

KA-C40H



KA-C20H

적용범위 (Operating Range)

최대유량 : 20 & 40 L/min, 적용온도 : 10°C ~ 180°C

저맥동 및 안정적인 유량 (Low pulsation, Stable flow)

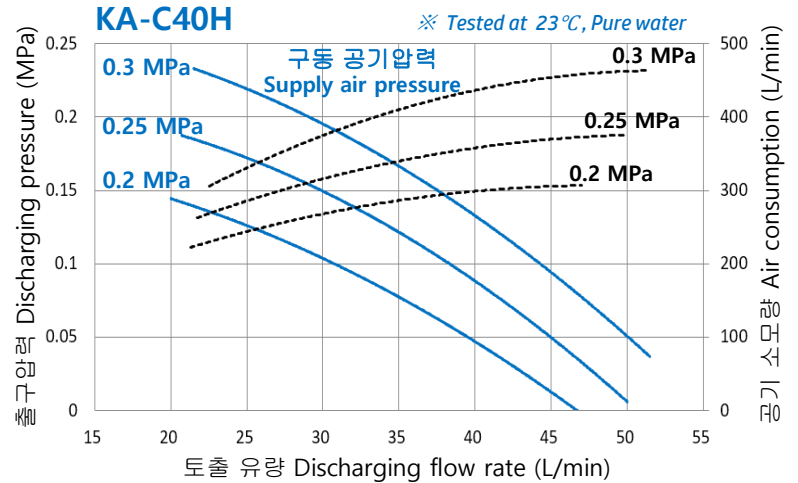
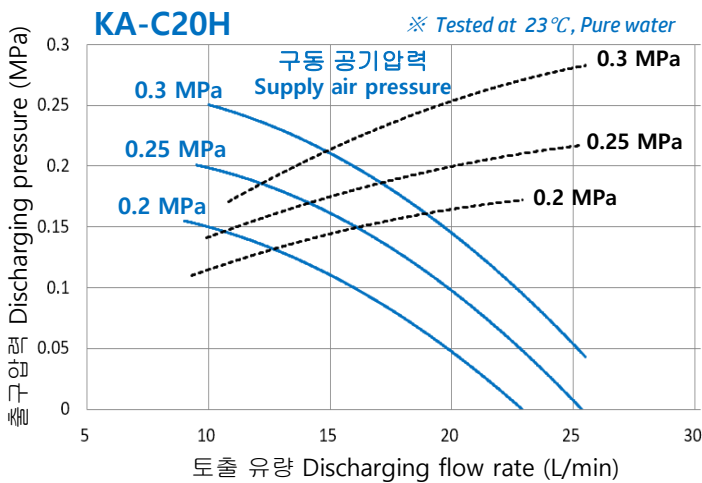
필터 저항 감소 (Low filter resistance)

펌프와 댐퍼 일체형, 설치공간 감소

Pump & damper integration,

Reduce installation space

□ 유량 Pump Performance Curve



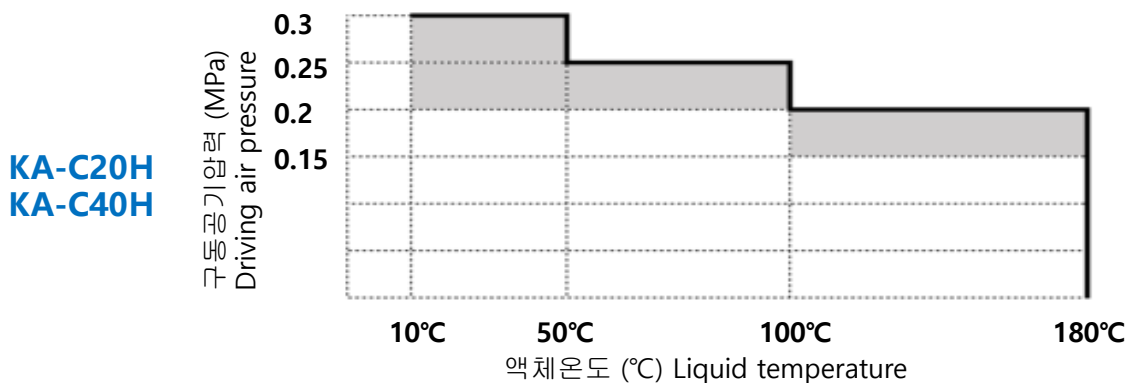
시험조건 Test conditions

- Supply air pipe size : Rc 3/8" (PT) Port (Tube O.D10 X I.D8 X 2M)
- Liquid pipe size : In port 3/4" (Tube O.D19 X I.D16)
Out port 3/4" (Tube O.D19 X I.D16)
- Test liquid : Pure water, 23°C

시험조건 Test conditions

- Supply air pipe size : Rc 1/2" (PT) Port (Tube O.D12 X I.D10 X 2M)
- Liquid pipe size : In port 1" (Tube O.D25 x I.D22)
Out port 1" (Tube O.D25 x I.D22)
- Test liquid : Pure water, 23°C

□ 구동공기 압력범위 Driving Air Pressure Range



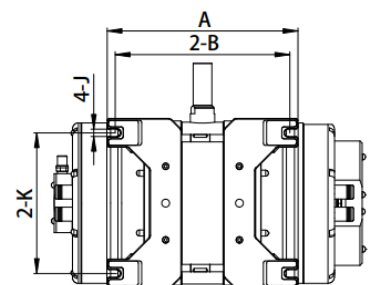
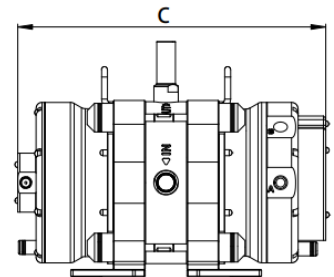
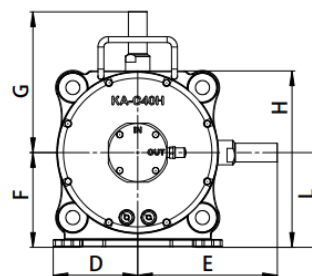
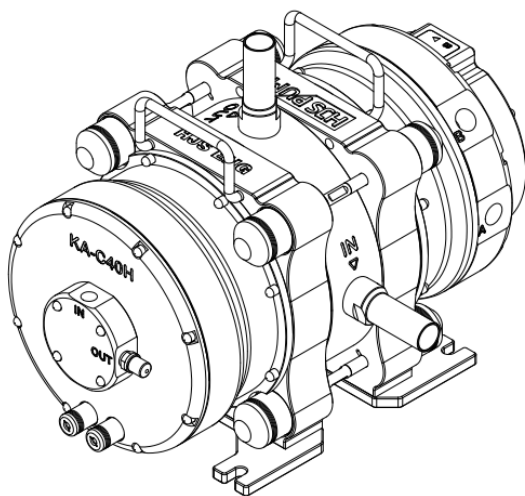
KA-C20H & KA-C40H

□ 규격 Standard Specifications

Items / Models	KA - C20H			KA - C40H		
최대 토출 유량 (L/min) Max. discharging flow rate	(*Note.1) 20 L/min			(*Note.1) 40 L/min		
스트로크당 유량 (L/stroke) Flow rate per stroke	(*Note.2) 0.22 L/stroke			(*Note.2) 0.40 L/stroke		
액체 온도 사용범위 (°C) Temperature range of liquid	10 ~ 50°C	51 ~ 100°C	101 ~ 180°C	10 ~ 50°C	51 ~ 100°C	101 ~ 180°C
구동 공기압 범위 (MPa) Driving air pressure range	0.2 ~ 0.3 MPa	0.2 ~ 0.25 MPa	0.15 ~ 0.2 MPa	0.2 ~ 0.3 MPa	0.2 ~ 0.25 MPa	0.15 ~ 0.2 MPa
최대허용스트로크속도 (spm) Max allowable Stroke speed	Max 105 stroke/min			Max 105 stroke/min		
AIR 공급 연결 포트 Air supply inlet ports	Pump Drive Air-In ports: 2-Rc 3/8" (PT) Damping Valve Air-In port : Rc 1/4" (PT)			Pump Drive Air-In ports : 2-Rc 1/2" (PT) Damping Valve Air-In port : Rc 1/4" (PT)		
액체 연결 포트 Liquid connection ports	PTFE 3/4" (O.D 19 x I.D 16mm)			PTFE 1" (O.D 25 x I.D 22mm)		
액체 접촉 재질 Liquid contact materials	PTFE, PFA					
주변 환경 온도 범위 Ambient temperature	5 ~ 50°C					
근접스위치 센서 Proximity Switch	출력 형태 Output type	NPN Output (N.O. mode)				
	전원 Power supply	DC 12~24V				
맥동 압력 폭 (MPa) Pulsation pressure width	≤ 0.06 MPa (액체 점도가 1~50mPa·s인 경우) Within 0.06 MPa (in case liquid viscosity is within 1~50 mPa·s)					

*Note.1) 최대토출유량은 실온에서 순수물로 최대스트로크 속도기준으로 측정

*Note.2) 1스트로크 (1 stroke) : 1회 왕복 (1 reciprocating motion)



Models	A	B	C	D	E	F	G	H	J	K	L	Liquid in/out ports	Air supply ports	Weight
KA-C20H	249.0	225.0	409.6	102.5	173.5	115	173.0	215	10	166	115	In : 3/4" Out : 3/4"	Pump : Rc 3/8" (PT) Valve : Rc 1/4" (PT)	23 Kg
KA-C40H	259.6	235.6	419.1	115.0	190.0	129	191.5	240	10	191	129	In : 1" Out : 1"	Pump : Rc 1/2" (PT) Valve : Rc 1/4" (PT)	28 Kg

KA-S25M & KA-S50M

□ 저맥동 펌프 (다양한 케미컬 이송용, Slurry 등)

Low pulsation pump (For various chemical supply system, Slurry etc.)

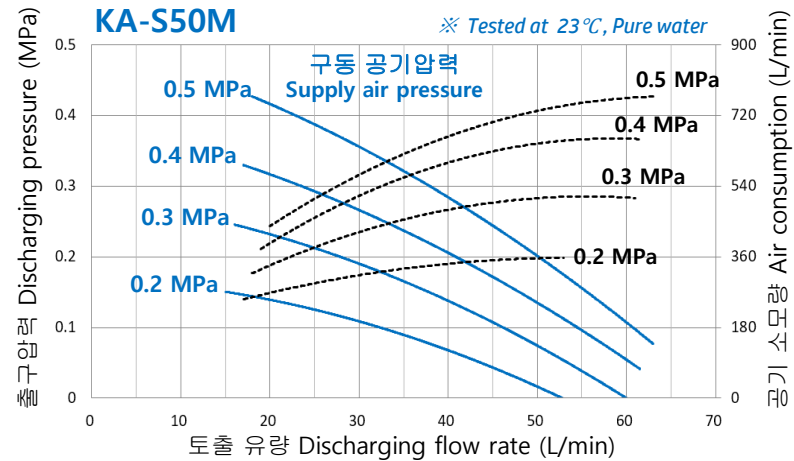
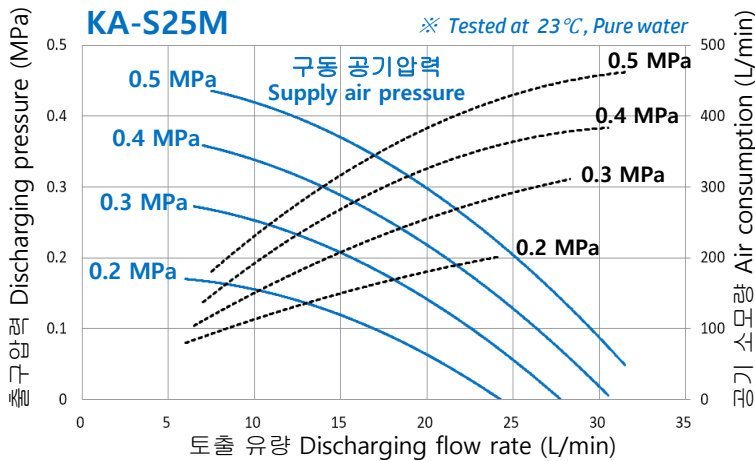


적용범위 (Operating Range)
 최대유량 : 25 & 50 L/min, 적용온도 : 10°C ~ 100°C

저맥동 및 안정적인 유량 (Low pulsation, Stable flow)
 필터 저항 감소 (Low filter resistance)

펌프와 댐퍼 일체형, 설치공간 감소
 Pump & damper integration,
 Reduce installation space

□ 유량 Pump Performance Curve



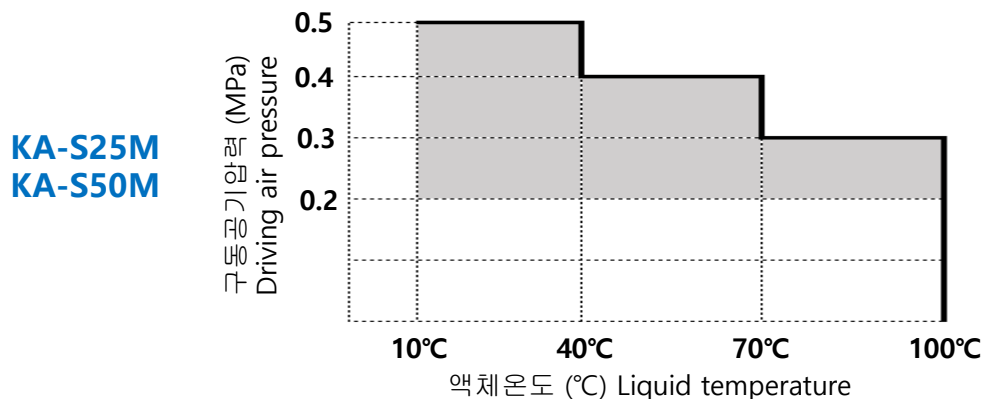
시험조건 Test conditions

- Supply air pipe size : Rc 3/8" (PT) Port (Tube O.D10 X I.D8 X 2M)
- Liquid pipe size : In port 1" (Tube O.D25 X I.D22)
 Out port 3/4" (Tube O.D19 X I.D16)
- Test liquid : Pure water, 23°C

시험조건 Test conditions

- Supply air pipe size : Rc 1/2" (PT) Port (Tube O.D12 X I.D10 X 2M)
- Liquid pipe size : In port 1+1/2" (Tube O.D38 x I.D34)
 Out port 1" (Tube O.D25 x I.D22)
- Test liquid : Pure water, 23°C

□ 구동공기 압력범위 Driving Air Pressure Range



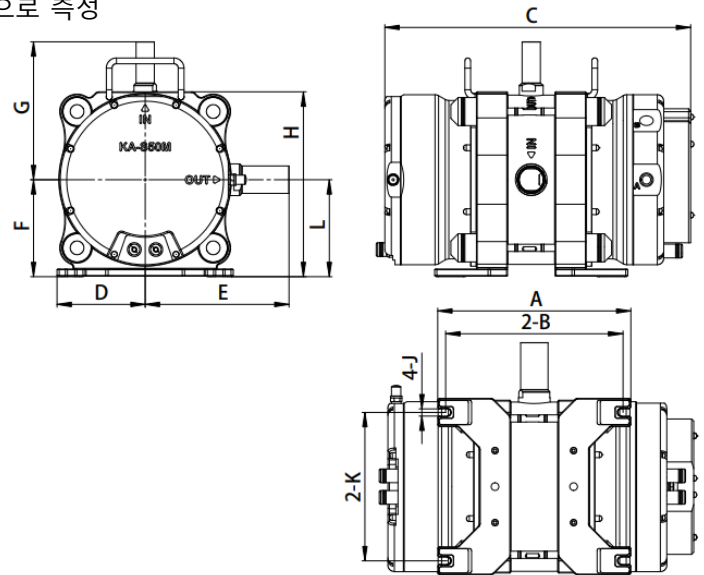
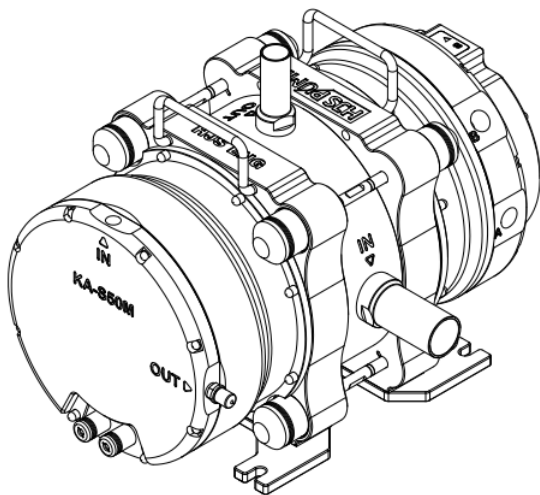
KA-S25M & KA-S50M

□ 규격 Standard Specifications

Items / Models	KA - S25M			KA - S50M		
최대 토출 유량 (L/min) Max. discharging flow rate	(*Note.1) 25 L/min			(*Note.1) 50 L/min		
스트로크당 유량 (L/stroke) Flow rate per stroke	(*Note.2) 0.22 L/stroke			(*Note.2) 0.46 L/stroke		
액체 온도 사용범위 (°C) Temperature range of liquid	10 ~ 40°C	41 ~ 70°C	71 ~ 100°C	10 ~ 40°C	41 ~ 70°C	71 ~ 100°C
구동 공기압 범위 (MPa) Driving air pressure range	0.2 ~ 0.5 MPa	0.2 ~ 0.4 MPa	0.2 ~ 0.3 MPa	0.2 ~ 0.5 MPa	0.2 ~ 0.4 MPa	0.2 ~ 0.3 MPa
최대허용스트로크속도 (spm) Max allowable Stroke speed	Max 115 stroke/min			Max 115 stroke/min		
AIR 공급 연결 포트 Air supply inlet ports	Pump Drive Air-In ports : 2-Rc 3/8" (PT) Damping Valve Air-In port : Rc 1/4" (PT)			Pump Drive Air-In ports : 2-Rc 1/2" (PT) Damping Valve Air-In port : Rc 1/4" (PT)		
액체 연결 포트 Liquid connection ports	- In port : PTFE 1" (O.D 25 x I.D 22mm) - Out port : PTFE 3/4" (O.D 19 x I.D 16mm)			- In port : PTFE 1+1/2" (O.D 38 x I.D 34mm) - Out port : PTFE 1" (O.D 25 x I.D 22mm)		
액체 접촉 재질 Liquid contact materials	PTFE, PFA					
주변 환경 온도 범위 Ambient temperature	5 ~ 50°C					
근접스위치 센서 Proximity Switch	출력 형태 Output type	NPN Output (N.O. mode)				
	전원 Power supply	DC 12~24V				
맥동 압력 폭 (MPa) Pulsation pressure width	≤ 0.06 MPa (액체 점도가 1~50mPa·s인 경우) Within 0.06 MPa (in case liquid viscosity is within 1~50 mPa·s)					

*Note.1) 최대토출유량은 실온에서 순수물로 최대스트로크 속도기준으로 측정

*Note.2) 1스트로크 (1 stroke) : 1회 왕복 (1 reciprocating motion)



Models	A	B	C	D	E	F	G	H	J	K	L	Liquid in/out ports	Air supply ports	Weight
KA-S25M	249.0	225.0	405.5	102.5	180.5	115	173.0	215	10	166	115	In : 1" Out : 3/4"	Pump : Rc 3/8" (PT) Valve : Rc 1/4" (PT)	24 Kg
KA-S50M	268.6	244.6	425.3	122.5	200.0	135	191.5	257	10	206	135	In : 1+1/2" Out : 1"	Pump : Rc 1/2" (PT) Valve : Rc 1/4" (PT)	33 Kg

주의사항 Precautions

1. 구성도 (Structural Drawings)

본 제품은 양산 중에 부분적으로 변경될 수 있으므로 실제 판매되는 제품과 본 카탈로그의 내용에 약간의 차이가 있을 수 있습니다.

(This product may be partially changed during mass production, so there may be some differences between the actual product being sold and the contents of this catalog.)

2. 압축 공기 (Compressed air)

만약 제품이 다음의 화학 용액에 사용된다면 당사에 연락주시기 바랍니다. 사용 조건에 따라서 비표준 사양의 제품이 필요할 수 있습니다.

(Supply the compressed air after reducing pressure at the nearest position of the pump. The compressed air has limitations as to chemicals and temperature to be used.)

3. 사용주의 액체 (Chemicals to be handled with care)

만약 제품이 다음의 화학 용액에 사용된다면 당사에 연락주시기 바랍니다. 사용 조건에 따라서 비표준 사양의 제품이 필요할 수 있습니다.

(If the product is used in the following chemical solutions, please contact us. Depending on the conditions of use, non-standard products may be required.)

- 1) 염산(HCL), 질산(HNO₃) 등의 고 투과성 화학물질 (Highly permeable chemicals) : 부식방지 사양 필요 (Corrosion-proof)
(Highly permeable chemicals including hydrochloric acid (HCL), nitric acid (HNO₃), etc : Corrosion-proof is required.)
- 2) 용제계 용액 (Solvent) : 방폭 사양 필요 (Explosion-proof)
(Solvent : Explosion-proof is required.)
- 3) 히드라진(Hydrazine) , 발연황산(Fuming sulfuric acid) 및 박리액(Stripper) 등의 반응성이 높은 화학물질
(Highly reactive chemicals including hydrazine, fuming sulfuric acid and stripper.)

홈페이지 Company Website

Korean (한국어)



www.hjseng.com

Chinese (中文版)



www.hjseng.com

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