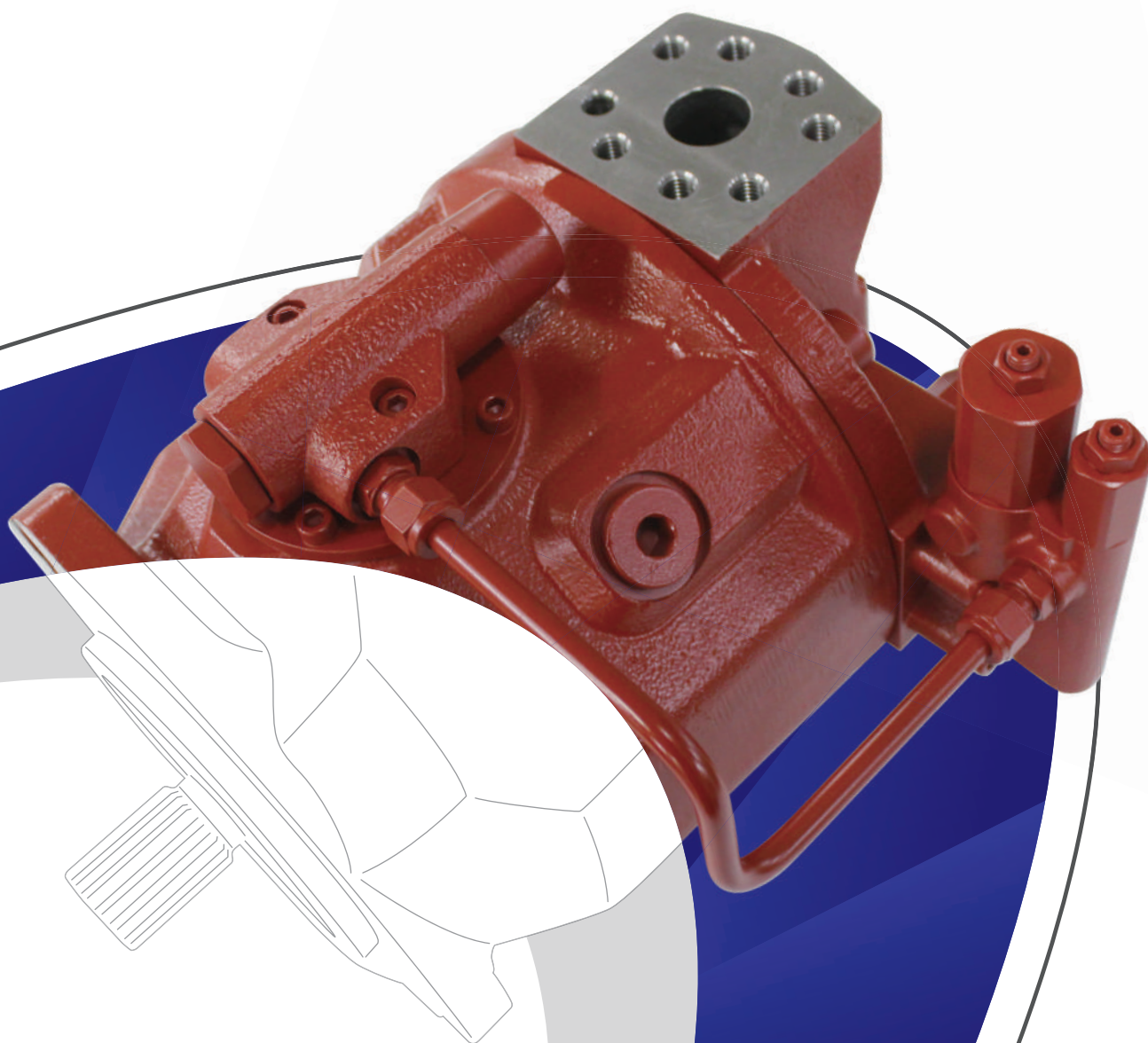


SF Hy-world

AXIAL PISTON PUMP&MOTORS

THEMA CLUSTER TRANSFER MACHINE HYDRAULIC TOTAL SOLUTION





SF Hy-world Co.,Ltd. was established in 2009 and became the major producer in Korea for the parts of Hydraulic Pumps, Motors, Reducers those are critical components of excavators.

In spite of short company history, We accomplished 3 million(USD) turn over in 2012 and 90% is export proportion, it means our potentiality in the after market for Excavators and resulted from accumulated technical experience from the fields.

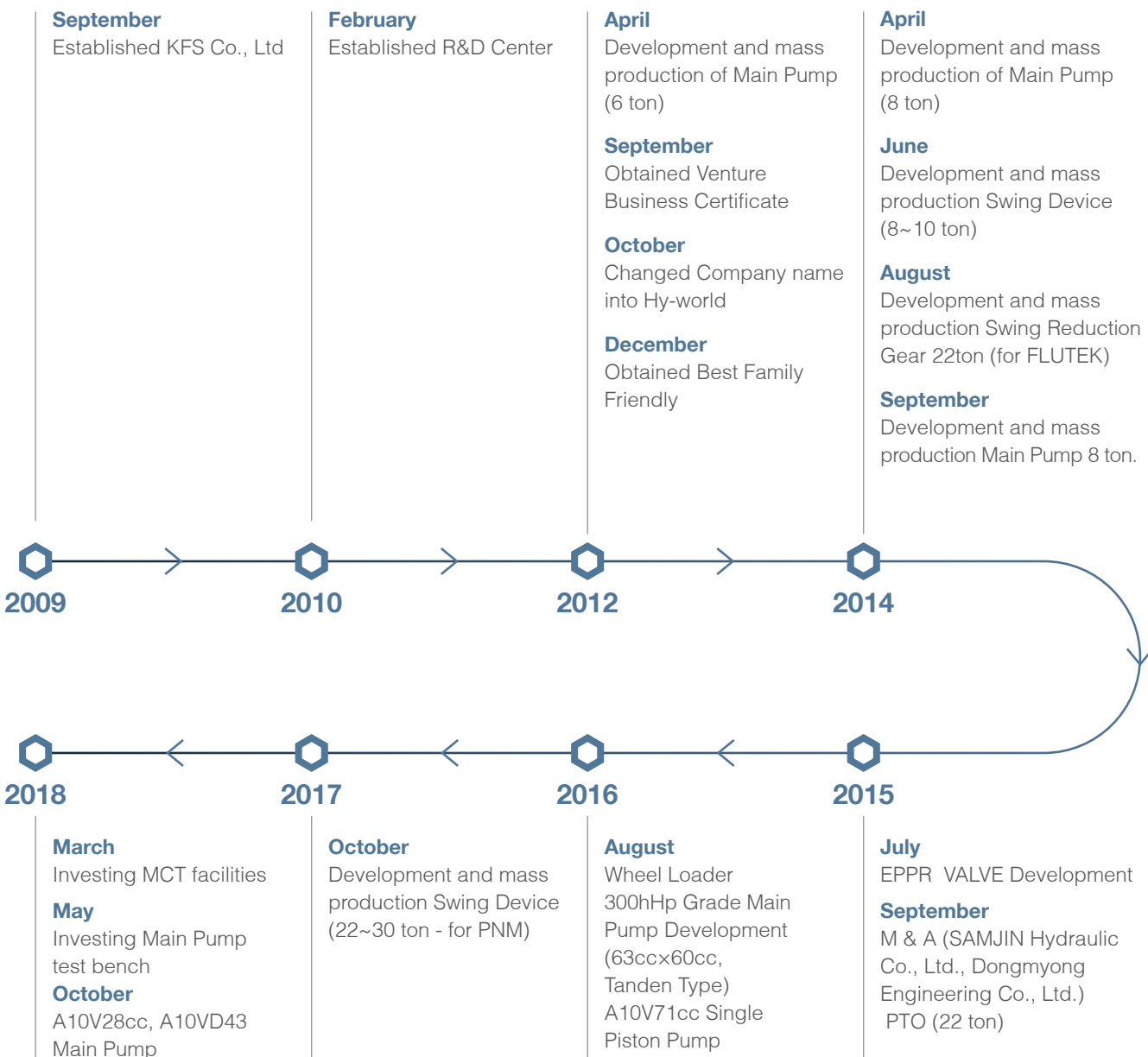
In 2013, SF Hy-world will open new era for the production base in the new factory with modernized facilities and perfect testing system, to be the best producer of components in the international after market of Excavators.

In order to satisfy with every clients who contact with SF Hy-world for the good business, We always focus on customer's desire and do our best.

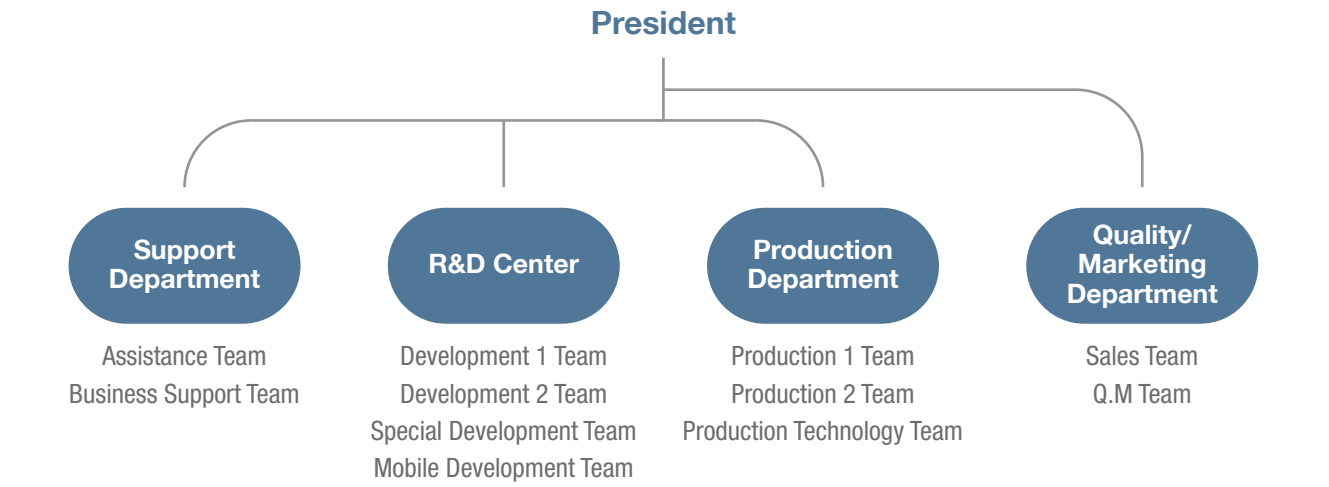
Therefore, please never hesitate to discuss with SF Hy-world whenever you need our supports.
Thank you very much for your kind attention to our brief company introduce.



HISTORY



ORGANIZATION OF BUSINESS



QUALITY CONTROL SYSTEM & CERTIFICATE

PRODUCTION IMPROVEMENT

- Catch-Up Voice of Customer
- Secure of Durability(Internal Activity)
- Official Approval - ISO/'R' Certification
- International Certification - 'CE' Certification



Customer

Development Quality Control

- Development Planning(DR)
- Proto Stage - Design&Performance Review
- Pilot Stage - Productivity[LOT] Review
- Pre Production Stage

Process Quality Control

- Process Control-Parts Inspection/Process Witness
- Control of Supplier Quality System
- Inspection Equipment Maintenanc&Adjustment
- Process Improvement(Fool-Proof etc)

MANUFACTURE

Order	Type	Spec.	Maker	Amount	Others
1	MCT	TNV-80	S&T	1	
2		VX-65N	WIA	1	
3		VX-500/50	WIA	3	
4		ACE-HM500	DOOSAN	1	
5		H-63G	WIA	2	
6		KH-50G	WIA	2	
7	CNC	ACT-2SP-V3	OKUMA & HOWA	1	
8		PUMA 280F	DOOSAN	1	
9		PUMA 240A	DOOSAN	1	
10		PUMA 10	DOOSAN	2	
11		ML-32C1	MAIER	1	SWISS TYPE
12	LASER MARKING	MCSA F-9020	DAEJU	1	
13	VERTICAL HONING	CVH-033	CLEANRECH	1	



CVH-033



VX-500/50



KH-50G



PUMA 280F

TEST EQUIPMENT

Order	Type	Spec.W	amount	Others
1	Multipurpose Test Snad	5,000psi	1	
2	Valve Test Snad	300kg/cm ² , 40Lpm	1	
3	Proportional / Valve Test Snad	350kg/cm ² , 150Lpm	1	
4	Motor Test Stand	55kw, 2800rpm	1	
5	Pump Test Snad	110kw, 2,800rpm	1	
6	Test Snad	1,000psi	2	
7	High-Pressure Test Snad	2,000kg/cm ² , 4Lpm	1	



Valve Test Snad
210kg/cm², 20Lpm



Valve Test Snad
350kg/cm², 80Lpm



Proportional / Valve Test Snad



Pump Test Snad



Certificate Name



Certificate Name



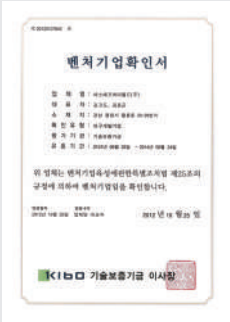
Certificate Name



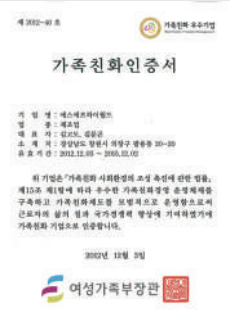
Certificate Name



Certificate Name



VENTURE Certificate
(Venture Company)



Best Family Frirndly -
Management System
Certificate



Corporate r&d Center
Certificate



ISO 9001



ISO 14001

Piston Pump K3V/K5V Series (ONLY CONSIGNMENT SALE)

Swash plate type Axial piston pumps

Ordering code

K3V / K5V Series

K3V

Displacement/
Size (cc/rev)

000

DT : Tandem type
double pump
S : Single type pump

DT

- : Standard
P : with PTO/
H : with Centrifugal pump

P

Pump code

000

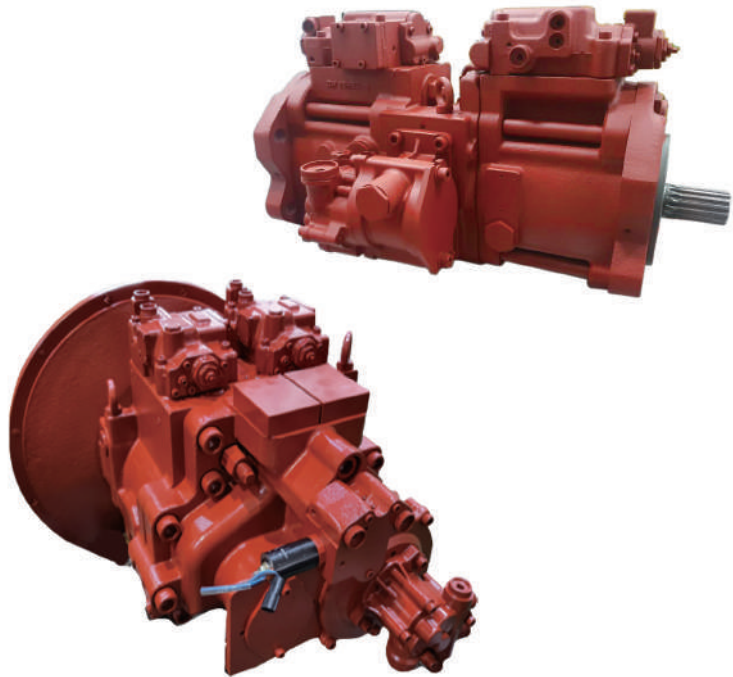
Direction of
rotation

R : Clockwise rotation
L : Counter clockwise
rotation

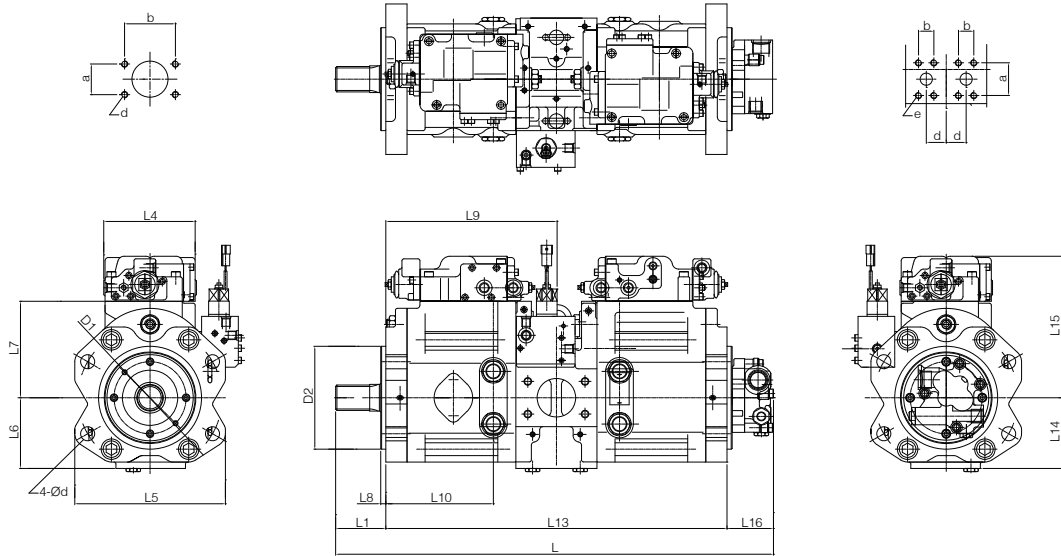
R

Regulator Code

0000



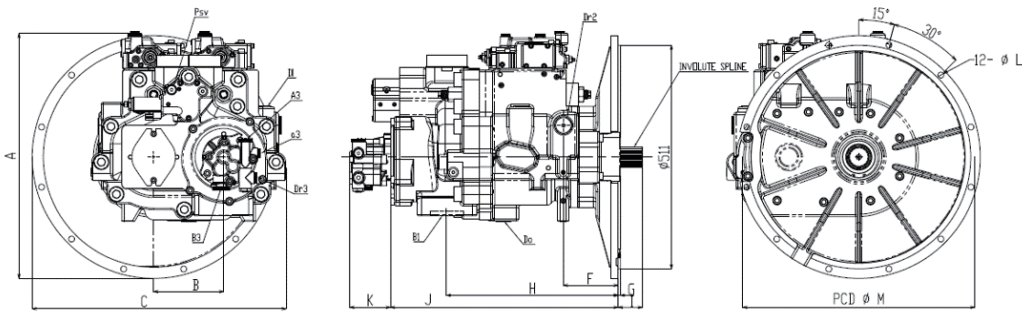
DIMENSIONS



Model	D1	D2	d	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L
K3V63DT	180	125	18	76	70	70	140	190	89	98	8	228	138	37	37	464	97	195	78	618
K3V112DT	224	160	22	78	80	80	140	234	100	110	8	265	167	41	41	538	109	220	78	694
K3V140DT	250	180	22	93	92	92	140	256	112	123	8	305	190	53	53	618	121	245	80	791
K3V180DT	250	180	22	93	92	92	140	256	112	123	8	305	190	53	53	618	121	245	80	791
K5V80DTP	180	125	18	76	70	70	140	190	89	98	8	228	138	37	37	464	97	195	78	618
K5V140DTP	224	160	22	78	80	80	140	234	100	110	8	265	167	41	41	538	109	220	78	684
K5V200DTP	250	180	22	93	92	92	140	256	112	123	8	305	190	53	53	618	121	245	80	791

SPECIFICATIONS

Model	Max Displacment	Rated pressure		Max Pressure		Max for sell priming (rpm)		Max input toque		Weight	Application
	cc/rev	(kgf/cm2)	Mpa	(kgf/cm2)	Mpa	Rated	Max	kgf-m	N-m	kgf	ton
K3V63DT	63 x 2	350	34.3	400	39.2	2,650	3,250	35	343.2	81	13 ~ 17
K3V112DT	112 x 2	350	34.3	400	39.2	2,360	2,700	60	588.4	125	20 ~ 25
K3V140DT	140 x 2	350	34.3	400	39.2	2,150	2,500	114	1118	160	29 ~ 37
K3V180DT	180 x 2	350	34.3	400	39.2	1,950	2,300	114	1118	160	39 ~ 45
K5V80DTP	80 x 2	350	34.3	400	39.2	2,460	3,000	54	529.6	81	13 ~ 17
K5V140DTP	140 x 2	350	34.3	400	39.2	2,160	2,500	86	843.4	125	29 ~ 37
K5V200DTP	200 x 2	350	34.3	400	39.2	1,900	2,200	114	1118	160	39 ~ 50
K5V200DPH	200 x 2	350	34.3	400	39.2	1,700	1,900	114	111.8	260	39 ~ 50



Model	A	B	C	F	G	H	I	J	K	L	M
K5V200DPH (R4500LC-7)	540	160	580	125	5	392	55.6	520	93	13.5	530

DIMENSIONS OF SHAFT END

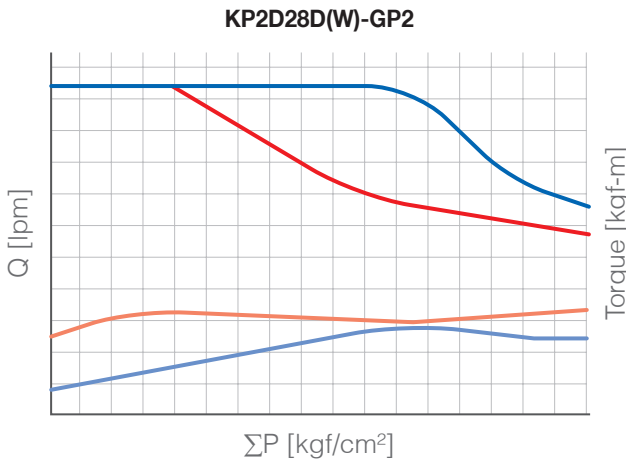
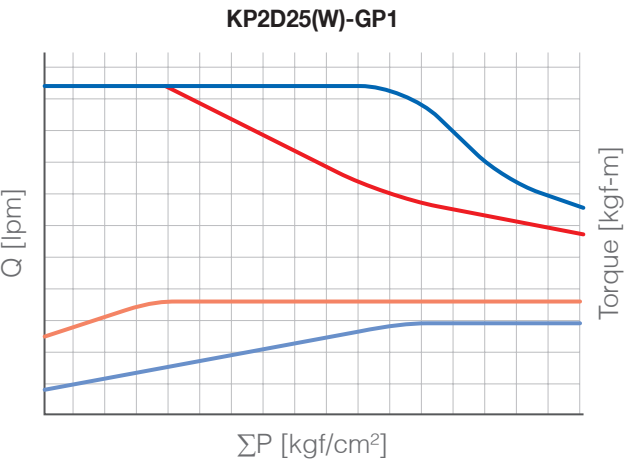
Model	No. of teeth	Pitch circle dia	Pressure angle	Module	Rule
K3V63DT	14	29.6	30°	12/24	SAE
K3V112DT	12	30	20°	2.5	JIS D2001
K3V112DT	14	35	20°	2.5	JIS D2001
K3V140DT	17	42.5	20°	2.5	JIS D2001
K3V180DT	17	42.5	20°	2.5	JIS D2001
K5V80DTP	12	30	20°	2.5	JIS D2001
K5V140DTP	17	42.5	20°	2.5	JIS D2001
K5V200DTP	17	42.5	20°	2.5	JIS D2001
K5V200DPH	17	42.5	20°	2.5	JIS D2001

KP2D25(W)-GP1 /KP2D28D(W)-GP2

Piston Type Main pump for excavator

Ordering code

SERIES	KP2D
SIZE	
Displacement	
25cc	25
27.3cc	28
36cc	36
Option Sol V/V	
Blank : With out	S
S : With	
Option Wheel	
Blank : With out	W
W : With	
Gear Pump	
GP1 16.2 + 4.5cc	GP1
GP2 18.3 + 4.5cc	
GP3 12.1 + 6.5cc	
GP4 6.5cc	
GP5 16.2 + 6.5cc	
GP6 18.3 + 6.5cc	



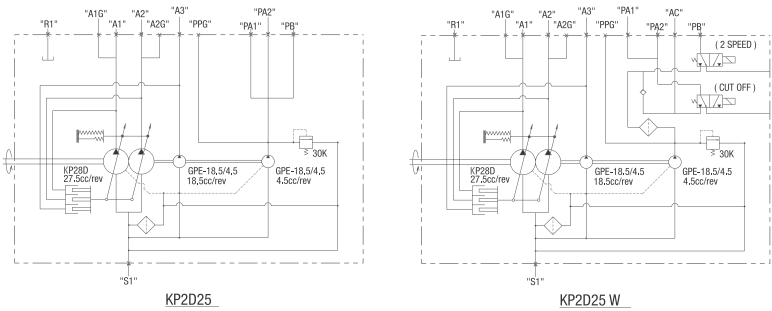
SPECIFICATIONS

Model	Displacement (cm ² / rev)				Rated pressure (kgf/cm ²)	flow (l/min)	Max speed for self priming (rpm)	Max input torque (kgf-m)	Application (ton)
	A1	A2	A3	A4					
KP2D25(W)-GP1	25	25	16.2	4.5	220	55 X 2	2200	14	7
KP2D28D(W)-GP2	27.3	27.3	18.2	4.5	220	61.6 X 2	2200	14	7

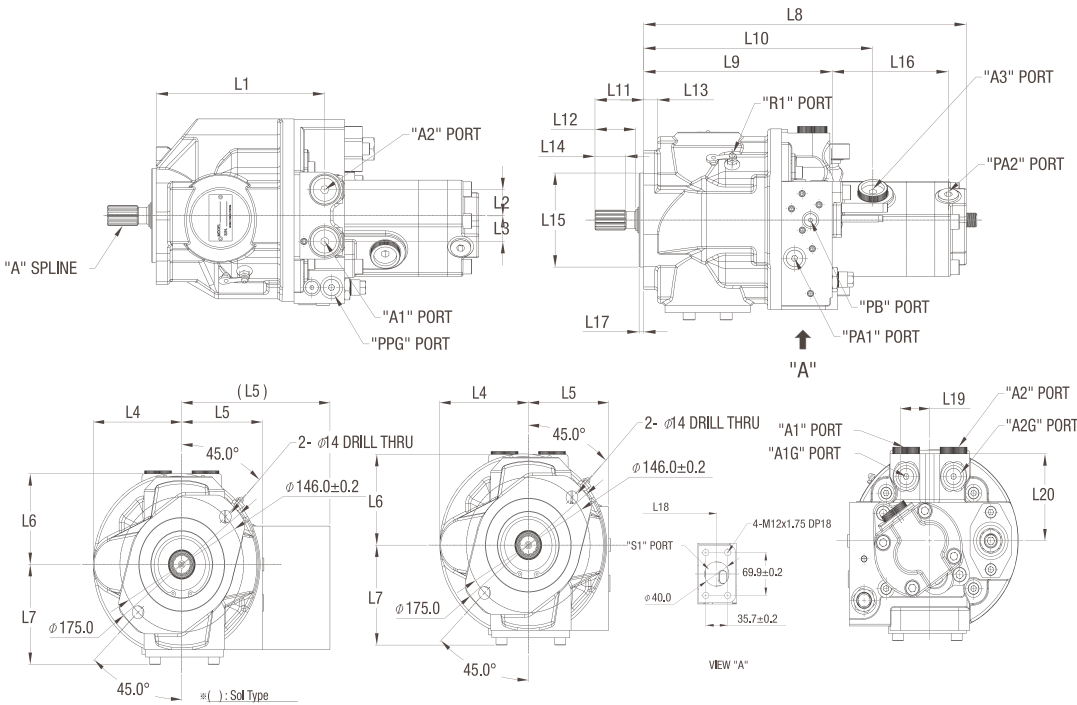
CHARACTERISTICS

- Specialized Main pump for mini Excavator, especially 5~7 ton.
- Undersized and Easy to attach.
- Compact and Suitable for Zero Tail type.
- Having a high level of efficiency Itself and easy to operate.

CIRCUIT DIAGRAM



DIMENSIONS



"A" SPLINE

No. of teeth	N	13
Module	M	16/32
Pres.Angle	α	30
Diameter	d	Ø20.6375
Type of teeth	-	Flat root side fit

PORT SIZE

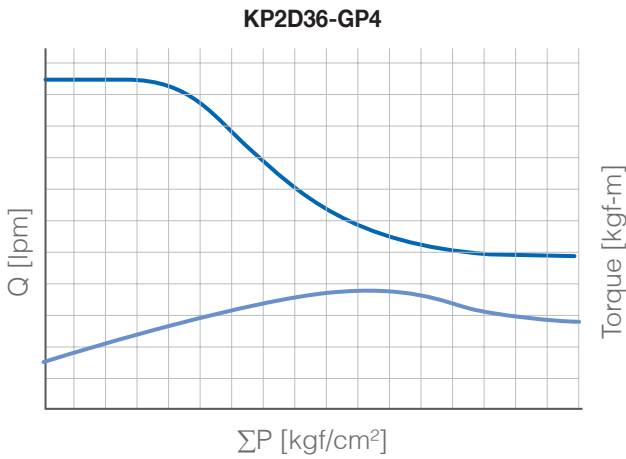
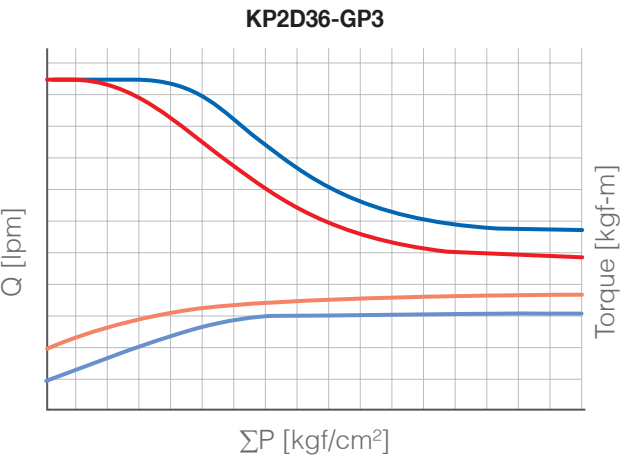
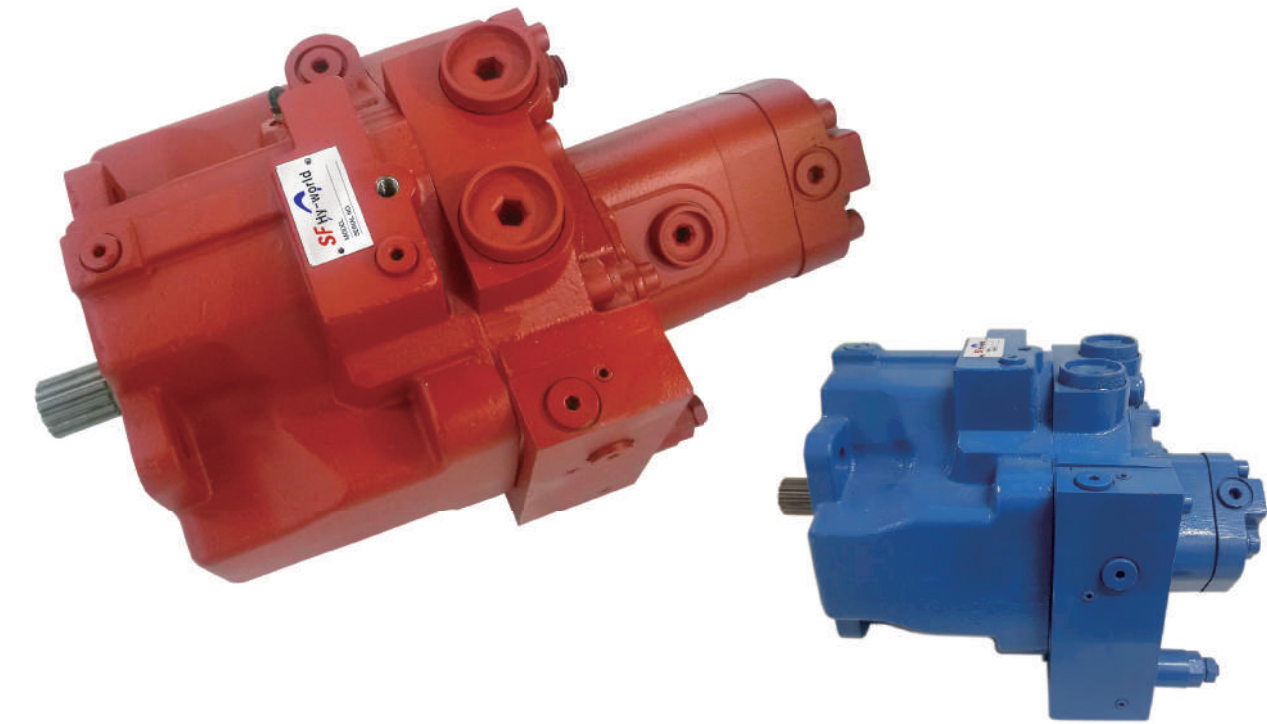
Port size	Description	Port
SAE A 1-1/2	Input port	S1
PF 1/2	Output port	A1, A2, A3
PF 3/8	Output port	PA2
PF 1/4	Output port	PA2
PF 1/8	Gauge port	A1G, A2G, PPG
PF 1/8	Output port	PB
M10 X P1.0	Air port	R1

DIMENSIONS

L1	L2	L3	L4	L5	(L5)	L6	L7	L8	L9	L10
182.2	28.0	28.0	109.3	90.1	162	102.9	103.1	348.6	203.6	247.3
L11	L13	L14	L15	L16	L17	L20				
52.7	15	33	101.6	129.2	5	98				

KP2D36

Piston Type Main pump for excavator



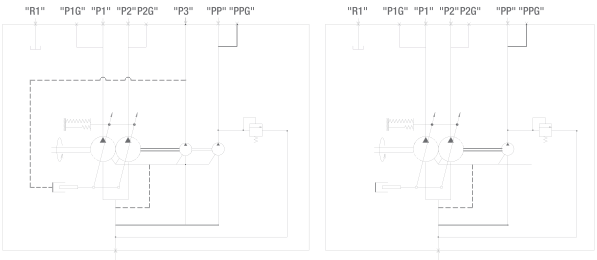
SPECIFICATIONS

Model	Displacement (cm ² / rev)				Rated pressure (kgf/cm ²)	flow (l/min)	Max speed for self priming (rpm)	Max input torque (kgf-m)	Application (ton)
	A1	A2	A3	A4					
KP2D36-GP3	37	37	12.1	6.5	280	74 X 2	2000	17.8	8
KP2D36-GP4	37	37	-	6.5	280	74 X 2	2000	13.5	8

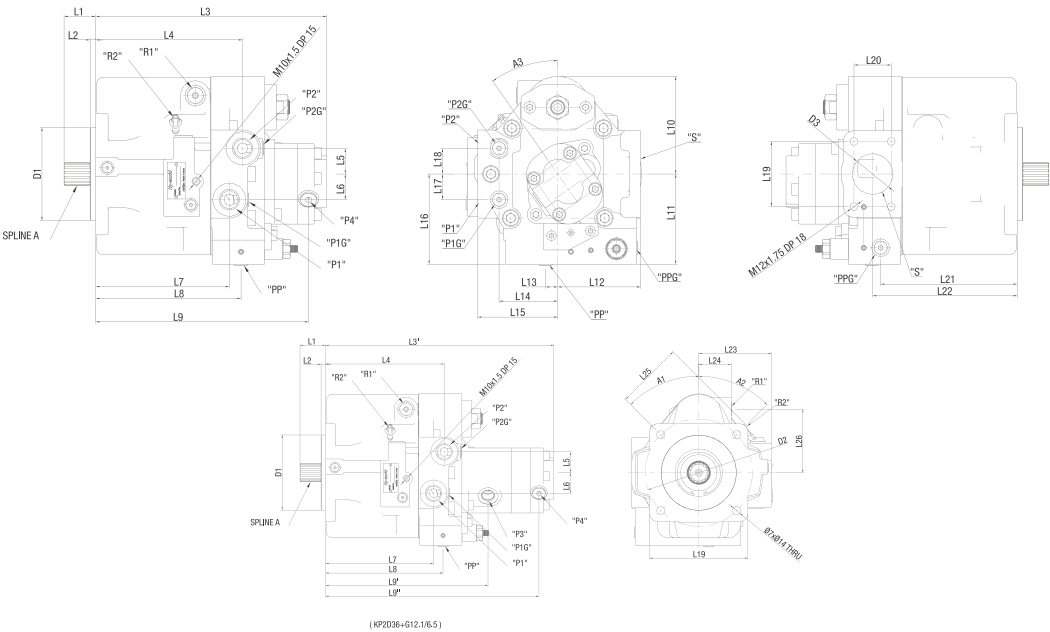
CHARACTERISTICS

- Specialized Main pump for mini Excavator, especially 8 ton.
- Undersized and Easy to attach.
- Compact and Suitable for Zero Tail type.
- Having a high level of efficiency Itself and easy to operate.

CIRCUIT DIAGRAM



DIMENSIONS



"A" SPLINE

No. of teeth	N	14
Module	M	12/24
Pres.Angle	α	30
Diameter	d	Ø29.633
Diameter	D	Ø31.2
Type of teeth	-	Flat root side fit

PORT SIZE

Port size	Description	Port
SAE A 2-1/2	Input port	S
PF 3/4 O-ring Type	Output port	P1, P2
PF 3/8 O-ring Type	Drain port	R1
	Output port	P4
PF 1/4 O-ring Type	Output port	PP
	Gauge port	PPG, P1G, P2G
PF 1/2 O-ring Type	Output port	P3

DIMENSIONS

D1	D2	D3	A1	A2	A3	L1	L2	L3	L3'	L4	L5
Ø127	Ø181	Ø55	45°	45°	35°	43.2	7.7	315.1	385.1	200.1	35.0
L6	L7	L8	L9	L9'	L9''	L10	L11	L12	L13	L14	L15
35.0	182.1	198.1	290.1	274.1	360.1	133.0	123.0	113.0	16.5	80.0	109.0
L16	L17	L18	L19	L20	L21	L22	L23	L24	L25	L26	
123.0	35.0	35.0	88.9	50.8	186.1	197.1	123.0	55.0	113.6	107.0	

KSD 29/33/43

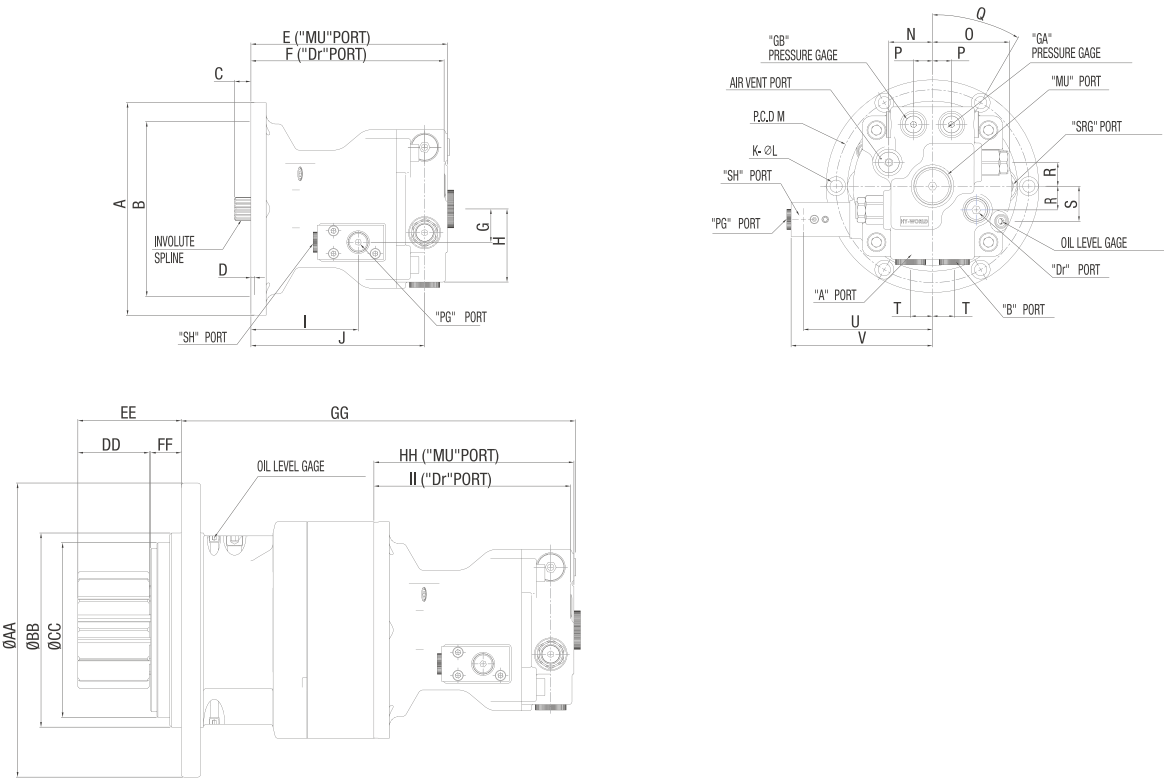
Swing Device

Ordering code

SERIES	KMS
SIZE	43
Displacement	
28.9cc	29
33.0cc	33
43.0cc	43
Option Valve	W
Blank : With out	
S : With	
Reduction Gear & Torque	RG02



DIMENSIONS



SPECIFICATIONS

Model	REDUCTION GEAR RATIO	GEAR SPEC		Displacement (cc/rev)	Max. output torque (kgf.m[kN.m])	Relief Valve (kgf/cm ² [MPa])
		MODULE	NO OF TOOTH			
KMS29 (5~7ton)	i=19.464	7	13	28.9	215[2105]	210±5[20.6]
KMS43 (8~10ton)	i=19.464	8	12	43	293[2873]	235±5[23.0]
R11D (22ton)	i=19.636	12	13	130	1,067[10460]	280±5[28.6]
R14D (30ton)	i=20.04	12	15	180	1,245[12200]	280±5[28.6]

PORT SIZE

Port size	Type	Port
PF 1/2	O-ring Type	A, B
PF 3/4	O-ring Type	MU
PF 3/8	O-ring Type	Air Vent, Dr
PF 1/4	O-ring Type	GA, GB, SH, PG
PT 1/2	-	SRG
PT 1/4	-	Level Gage

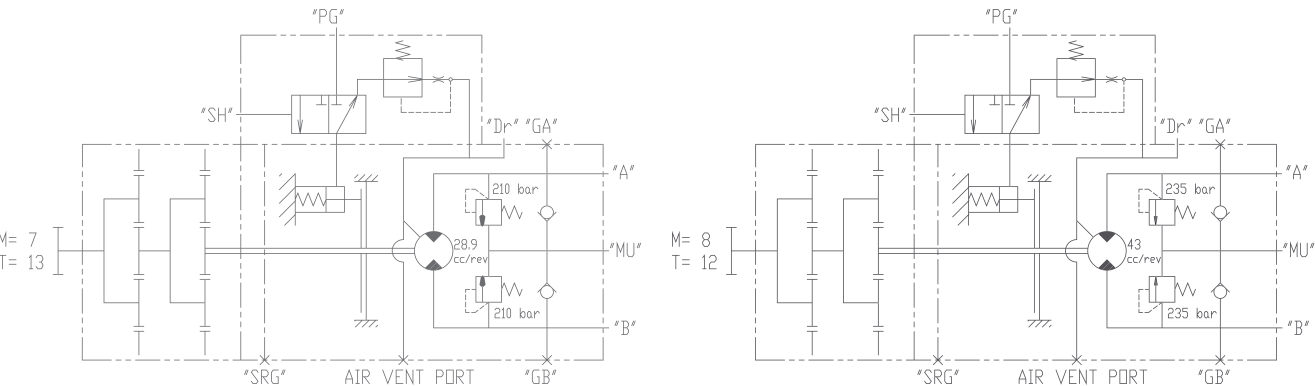
DIMENSIONS

Division	A	B	C	D	E	F	G	H	I	J	K
5~7 ton	224.0	184.0	17.3	4.0	207.0	203.5	35.0	77.0	113.0	183.0	6.0
8~10 ton											
22 ton	307.0	262.0	27.5	8.0	277.0	277.0	0	114	142.5	239	16
30 ton	344.0	288.0	-40	-	333.3	333.3	0	108.5	191.3	298.8	14
Division	L	M	N	O	P	Q	R	S	T	U	V
5~7 ton	18.0	203.0	46.0	81.0	20.0	30.0	25.0	37.0	23.0	168.0	149.0
8~10 ton											
22 ton	14.0	282	56.0	116.0	24.0	22.50	24.0	0	34	167.0	185
30 ton	17.5	313	78.0	146.0	24.0	250	24.0	0	34	167.0	200
Division	AA	BB	CC	DD	EE	FF	GG	HH	II		
5~7 ton	303	200	180	73.5	98.2	31.5	406	207.0	203.5		
8~10 ton					106.5						
22 ton	410	310	268	94	162	15	594	295.2	276.5		
30 ton	450	345	278	112	179	67	674.2	355.2	333.3		

CHARACTERISTICS

- Time delay valve & Relief valve
- Mini(5~8ton) excavator, Aerial working platform, Crane, etc. Applicable
- Included time delay valve and relief valves

CIRCUIT DIAGRAM

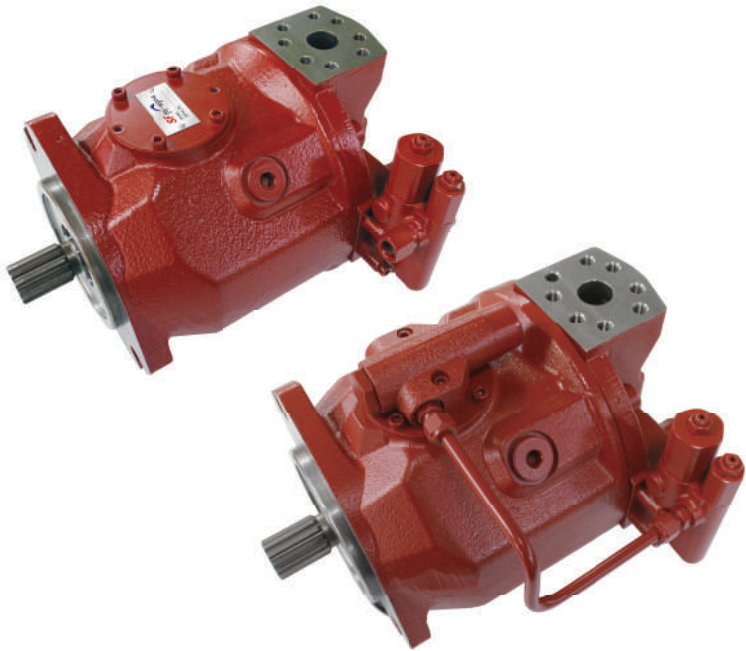


K10V Series

(A10V)

Ordering code

SERIES	K10V
SIZE Displacement 71cc 71	71
Control devices Pressure-and flow control DFR Pressure-and flow, Torque control DFRL	DFR
Direction of rotation Clockwise	R
Design Number	10



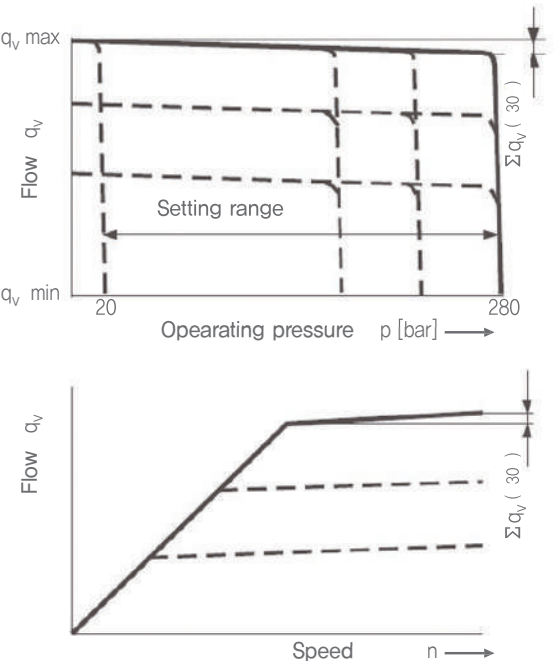
SPECIFICATIONS

Model	Displacement (m2/rev)			Rated pressure (kgf/cm2)	Rated pressure (kgf/cm2)			Max speed (rpm)	Max input torque (kgf-m)	Application (ton)
	A1	A2	A3		A1	A2	A3		△p=280 bar	
K10V71 DFR	71	-	-	280	156	-	-	2200	32.5	8
K10V71 DFRL	71	-	10	280	156	-	20	2200	32.5	8

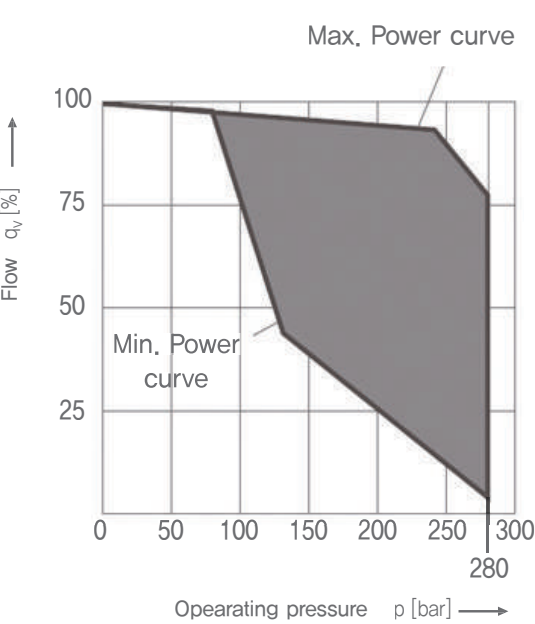
STATIC CHARACTERISTIC

DFR TYPE

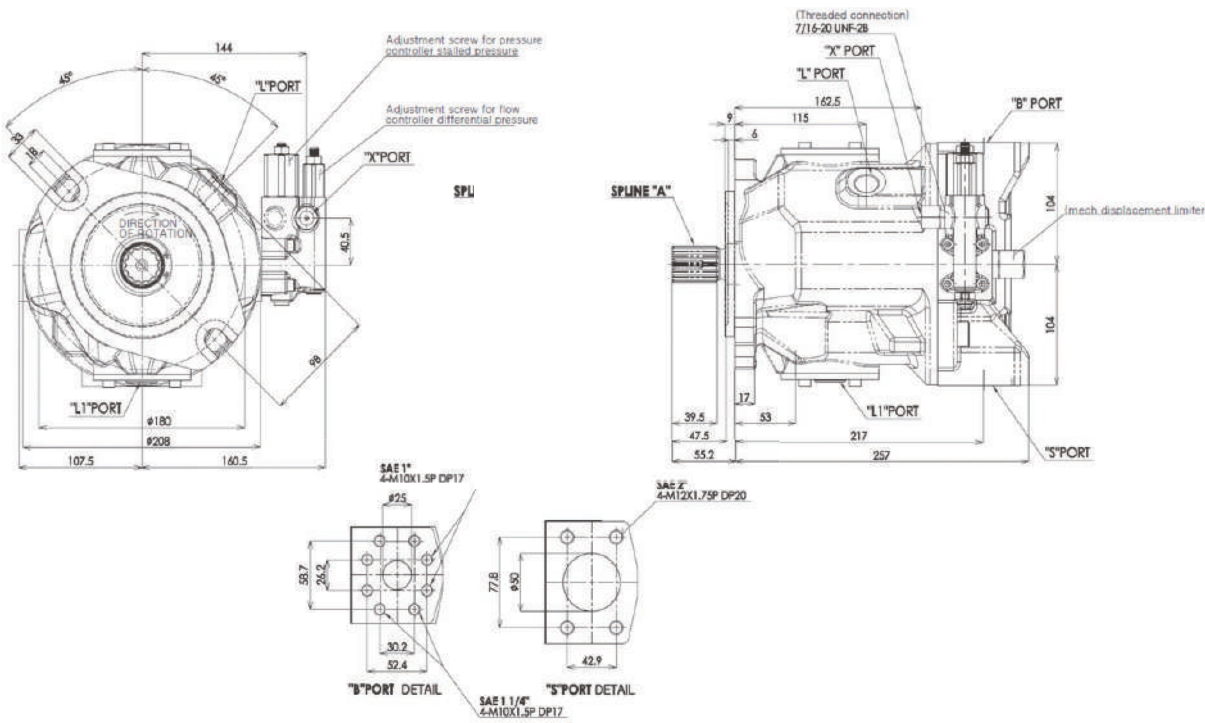
($n_1=1500$ rpm, $t_{oil}=50^{\circ}\text{C}$)



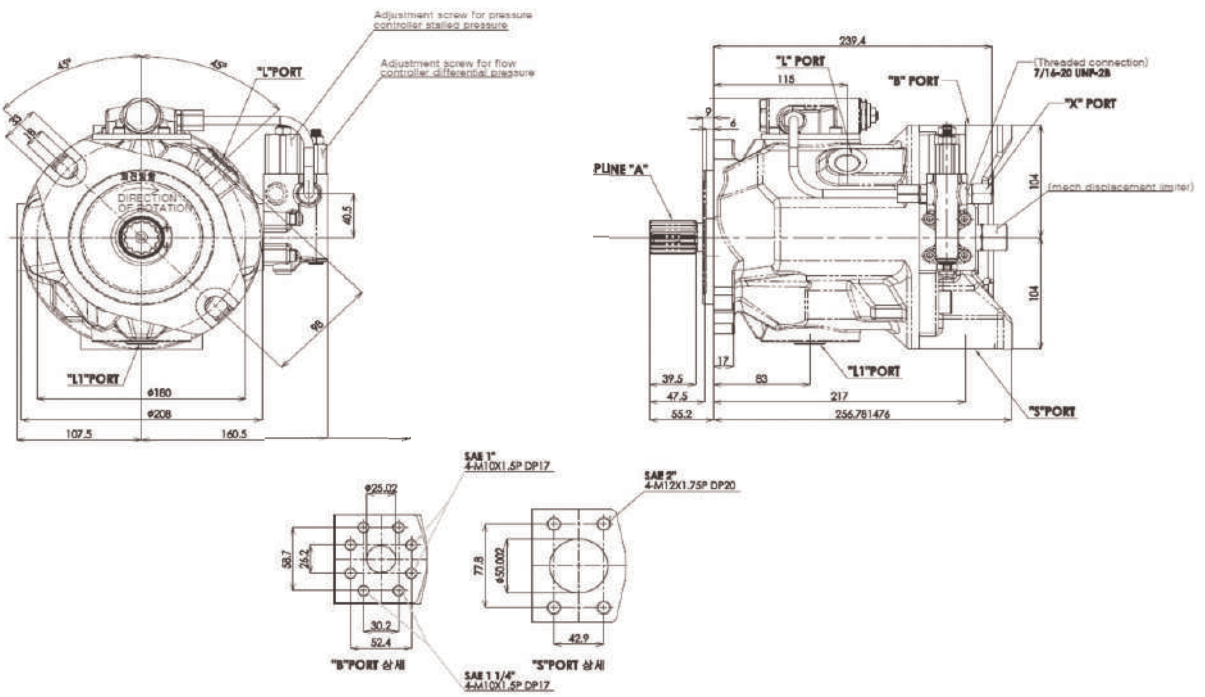
DFRL TYPE



DFR TYPE



DFRL TYPE



"A" SPLINE

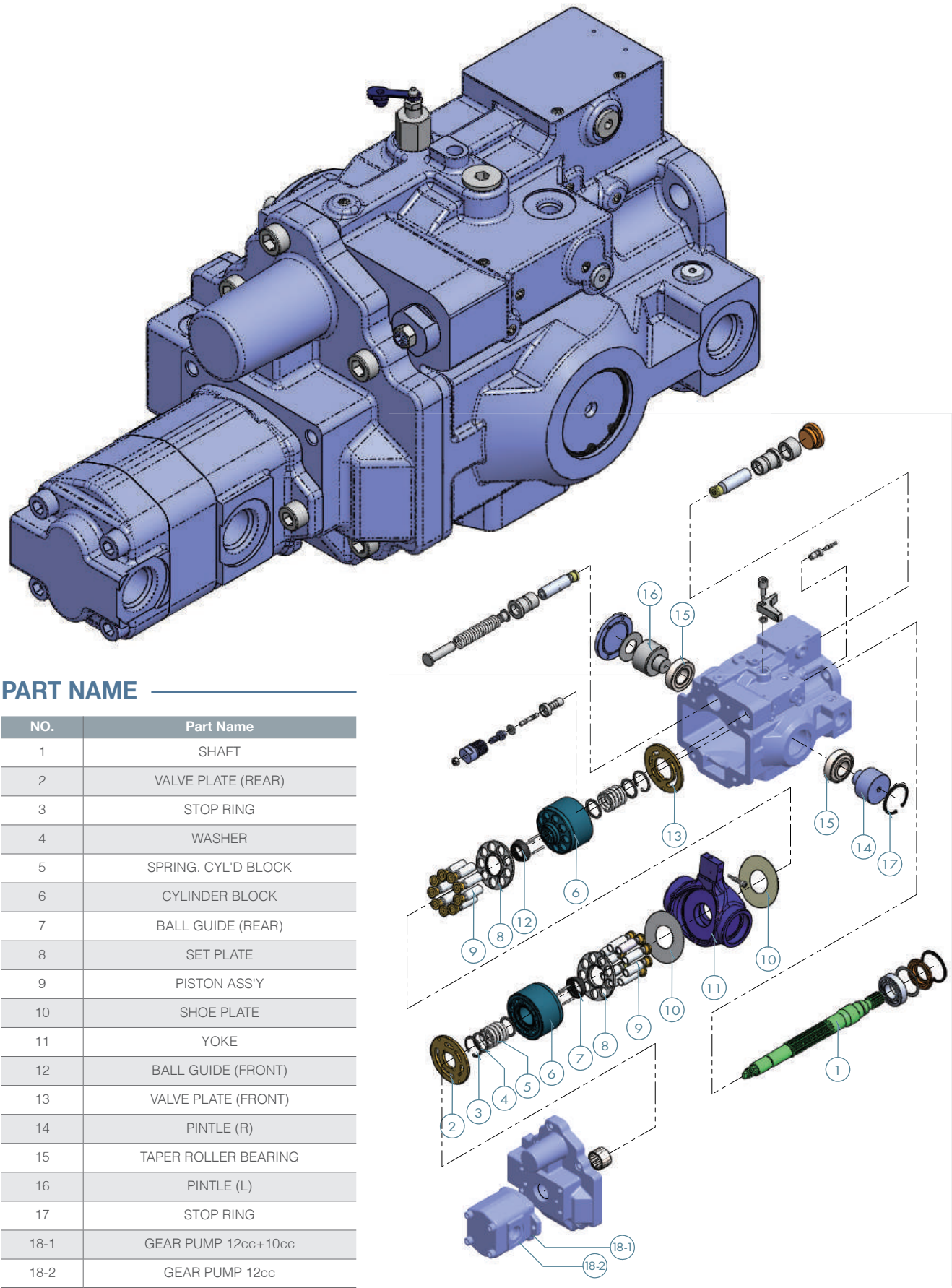
No. of teeth	N	14
Module	M	12/24
Pres. Angle	°	30 °
Diameter	d	$\phi 26.99$
Diameter	D	$\phi 31.22$
Type of teeth	-	Flat root side fit

PORT SIZE

Port	Title	Configuration
B	OUTPUT	SAE 1" or 1 1/4"
S	INPUT	SAE 2"
L / L1	DRAIN	M22 x 1.5P
X	PILOT	M14 x 1.5P DP12

A10VD43

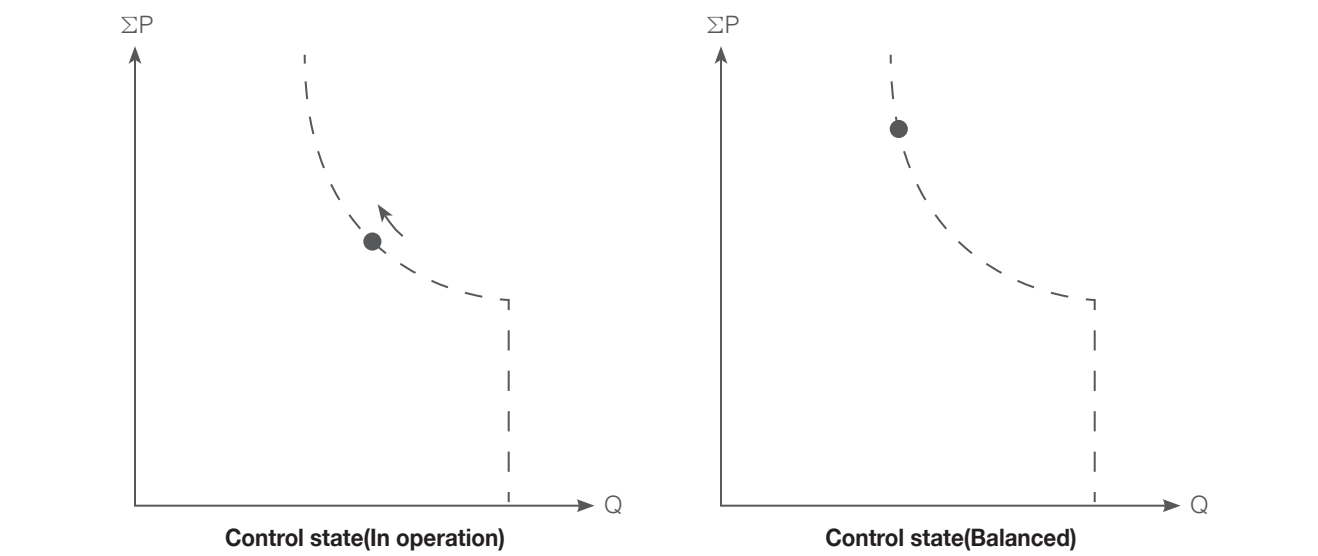
Piston Type Main Pump For Excavator



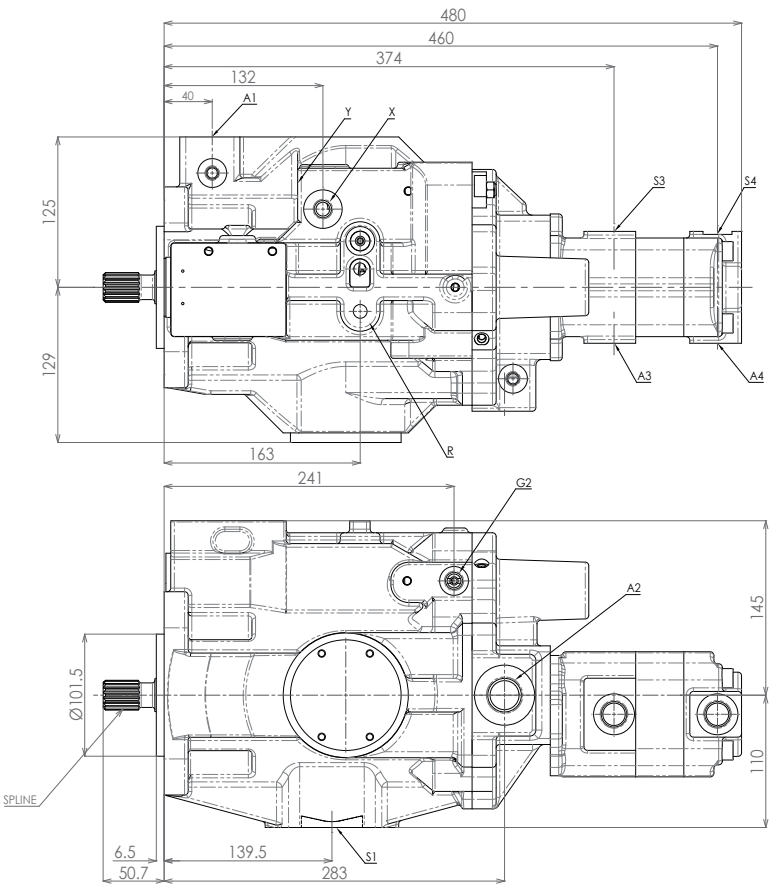
SPECIFICATIONS

Model	Displacement(m ² /rev)				Rated pressure(kgf/cm ²)				Max speed(rpm)	Application(ton)
	A1	A2	A3	A4	A1	A2	A3	A4		
A10VD43+12cc+10cc	43	43	12	10	220	220	180	50	2200	5~8
A10VD43+12cc	43	43	12	-	220	220	50	-	2200	5~8

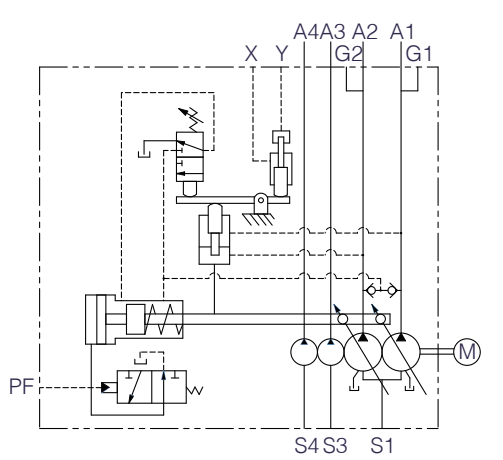
CHARACTERISTICS



DIMENSIONS



CIRCUIT DIAGRAM

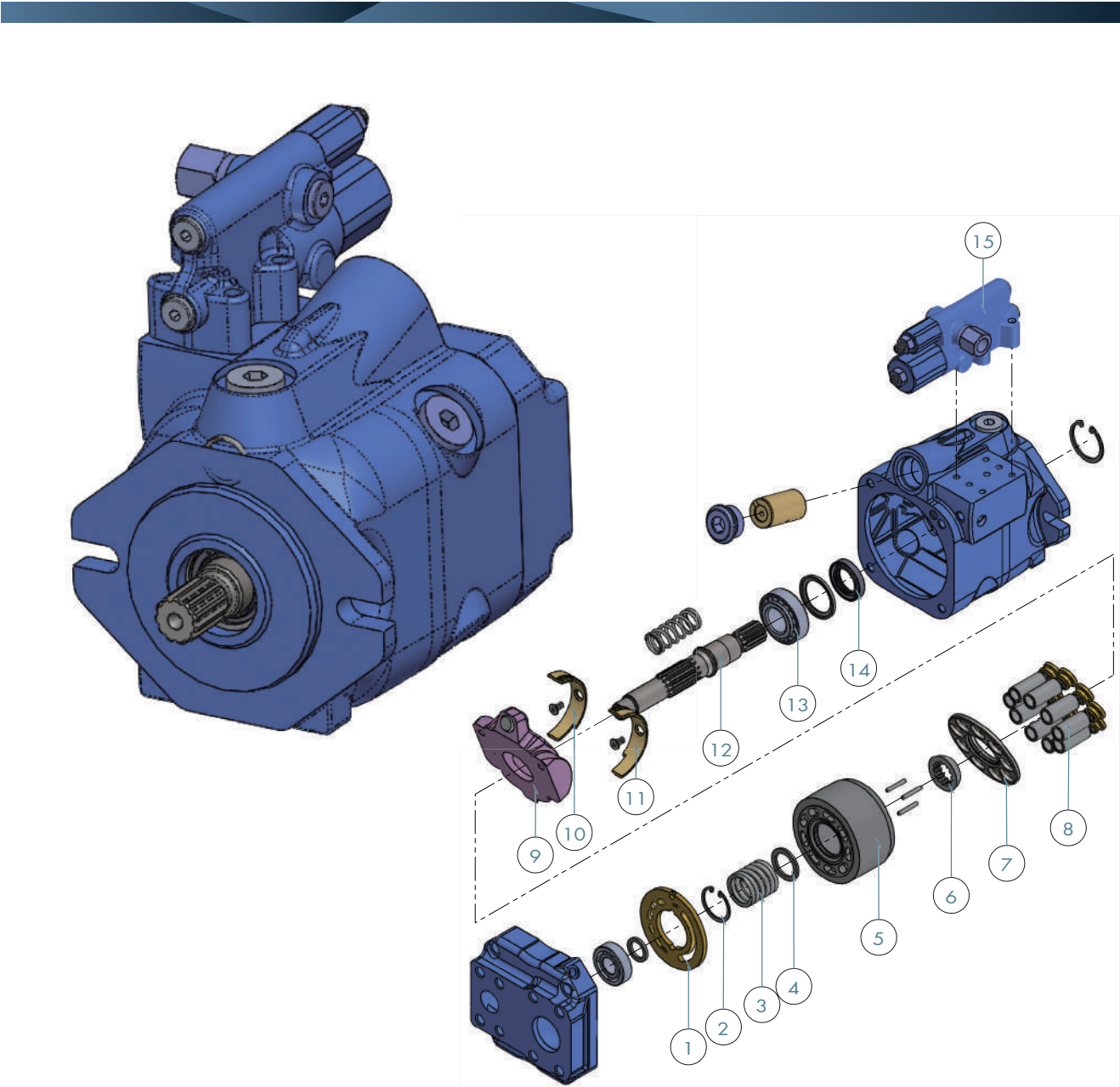


PORT SIZE

Port	Port name	Port size
A1, A2	Delivery port	PF 3/4
A3	Gear pump Delivery port	PF 3/4
A4	Gear pump Delivery port	PF 1/2
S1	Suction port	SAE 2
S3	Gear pump suction port	PF 3/4
S4	Gear pump suction port	PF 1/2
X	Pilot port	PF 1/4
Y	Pilot port	PF 3/8
G1,G2	Gauge port	PF 1/4
R	Air vent port	PF 1/4

A10V28

Piston Type Main Pump For Excavator



PART NAME

NO.	Part Name
1	VALVE PLATE
2	STOP RING
3	SPRING. CYL'D BLOCK
4	SPING SEAT
5	CYLINDER BLOCK
6	BALL GUIDE
7	SET PLATE
8	PISTON ASS'Y
9	SWASH PLATE
10	SLIDING BEARING (L)
11	SLIDING BEARING (R)
12	SHAFT
13	BEARING
14	OIL SEAL
15	CONTROL VALVE

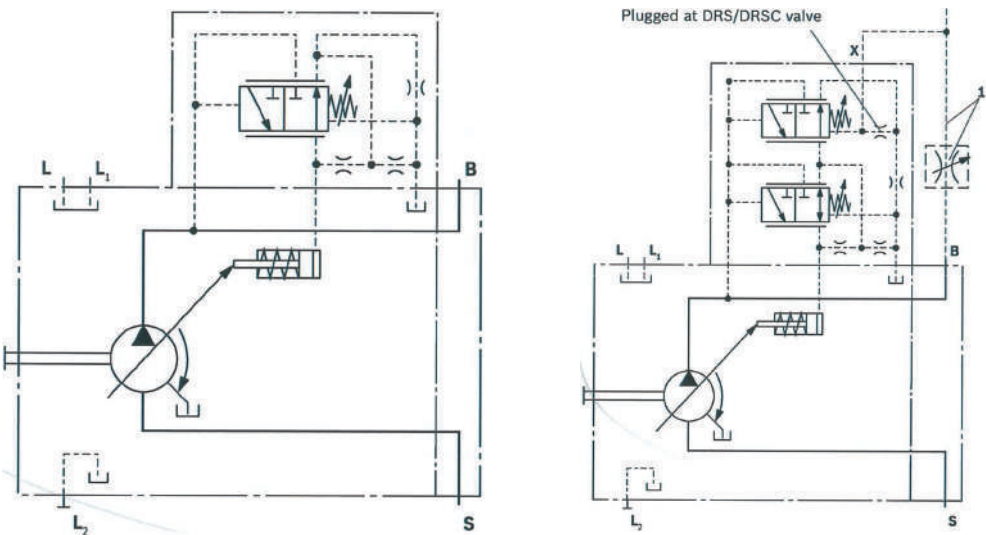
SPECIFICATIONS

MODEL	Displacement	POWER	Max speed(rpm)	Flow	Torque	Weight
A10VNO28	28 cm3	42 HP	3200 RPM	90 l/min	94 NM	15 kg

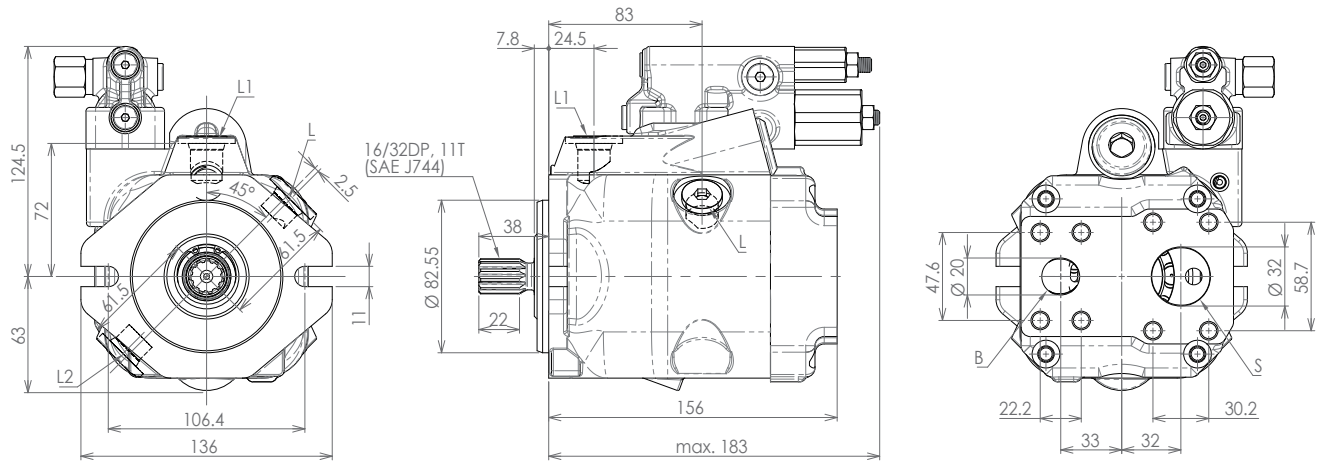
CHARACTERISTICS

- Cranes and lifting equipment
- Truck-mounted concrete pumps
- Cleaning vehicle

CIRCUIT DIAGRAM



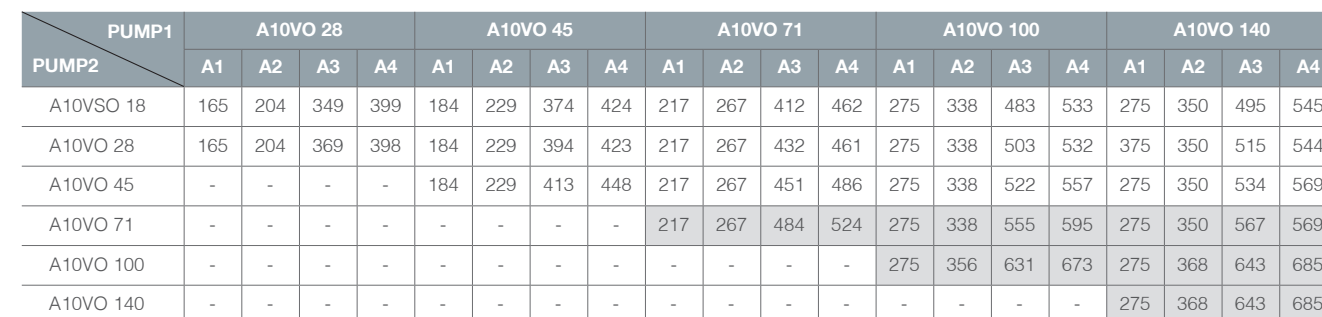
DIMENSIONS



Piston Type Main pump for Wheel Loader



Unit dimension of the combination pump
A10VO + A10VO



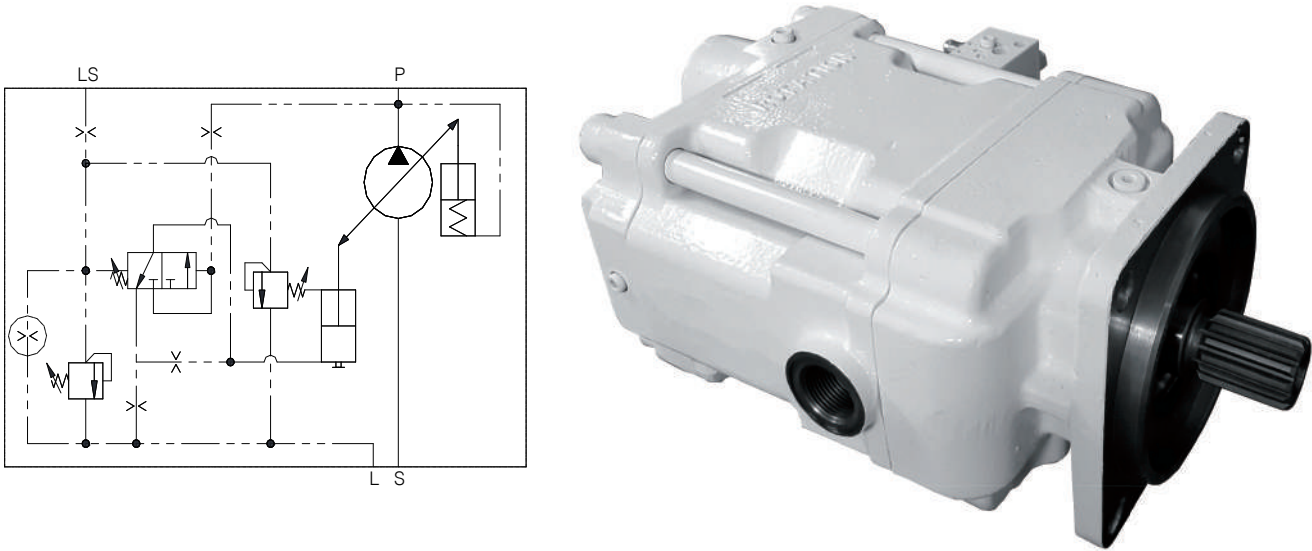
- Mini(5~8ton) excavator, Aerial working platform, Crane, etc. Applicable

San Involute Spline(A)		
Flat Route Side Fit		
Sae J498B, Class 1		
TOOLS	Pitch	12/14
	Pressure Angle	30°
	NO.OF Teeth	14
Major Dia		Φ 31.22 0 -0.13
Minor Dia		Φ 26.99 0 -0.33

Port	Title	Configuration
B1, B2	Output	Sae 1"
S1, S2	Input	Sae 2"
L1, L2, L3, L4	Drain	M22X1.5P
X1, X2	Pilot	M14X1.5P DP12

SGP-110 / LLSN-10

Variable Displacement Axial Piston Pump



MODEL CODE

SGP	-110	- ※	-LLSN	-10
PISTON PUMP	Displacement	MODEL TYPE B : Basic T : Thru Shaft	Controller Type	Design number

FEATURES & APPLICATIONS

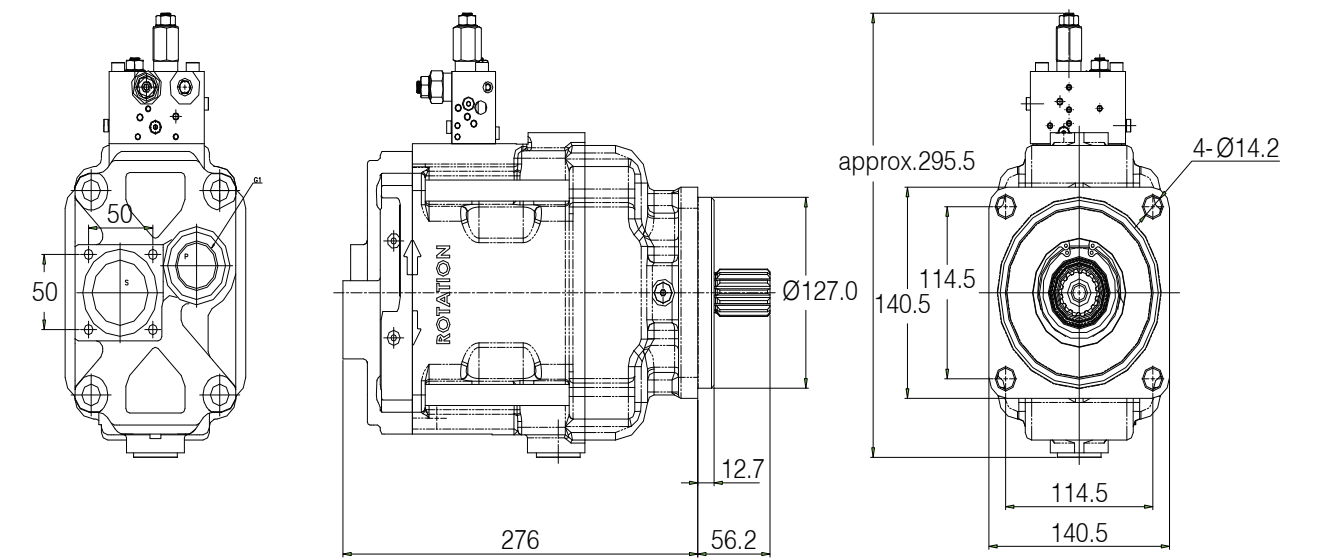
Optimized power-to-weight ratio for mobile vehicle
High self-suction speed
Thru-shaft for operating additional hydraulic pumps
Intended applications
Cranes and lifting equipment
Truck-mounted concrete pumps
Machines for forestry and agricultural purposes
Cleaning vehicle
Wheeled armored vehicle
Power take-off(PTO) of the commercial vehicle

SPECIFICATIONS

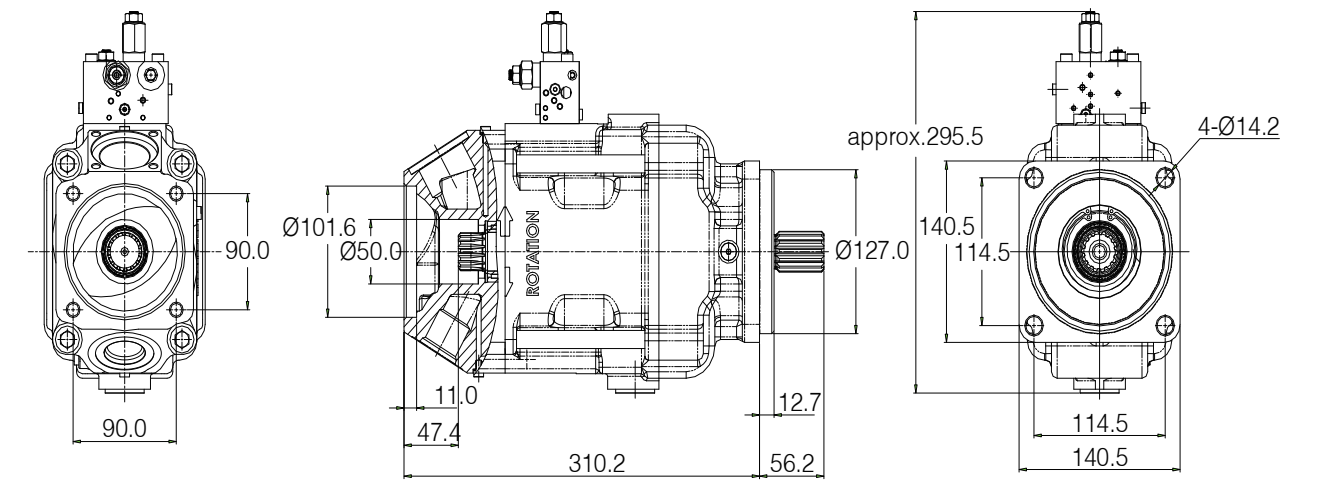
Max. pressure	Geometric displacement	Max. rotation speed	Min. rotation speed	Overall efficiency	Max. drive torque	Weight
350 bar	110 cc/rev	2200 rpm	500 rpm	85% or more	640 Nm	34 kg(Thru Shaft)

DIMENSIONS

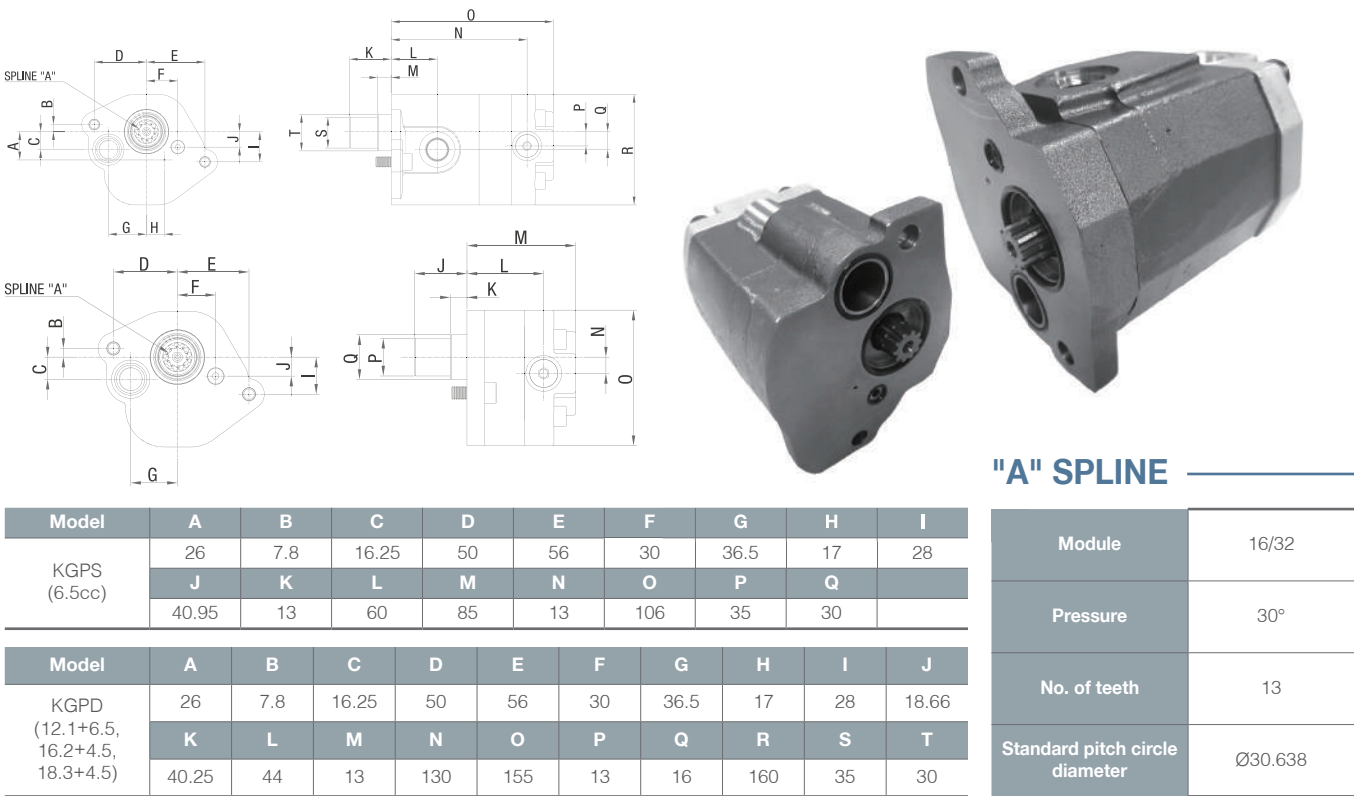
BASIC



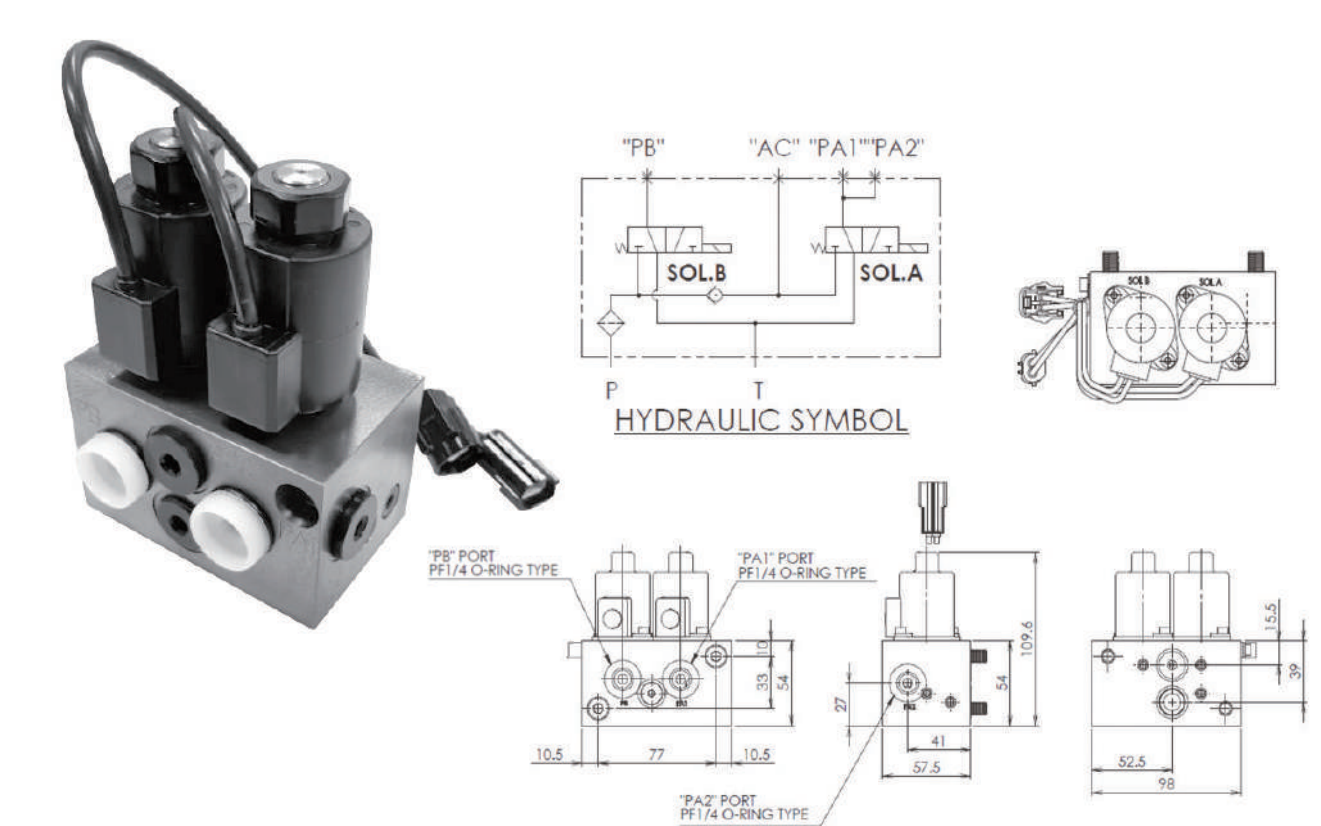
THRU SHAFT TYPE



Gear Pump

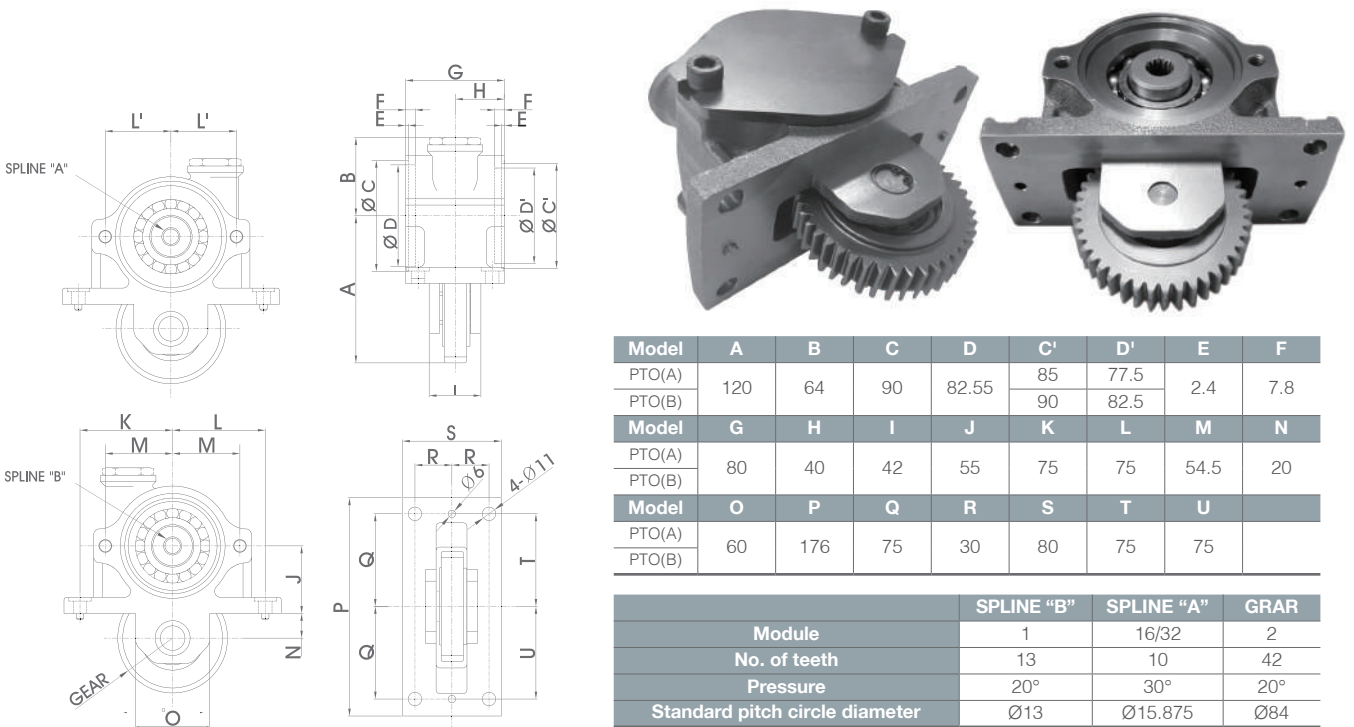


Sol. valve



PTO

(K3V/K5V DTP Series)

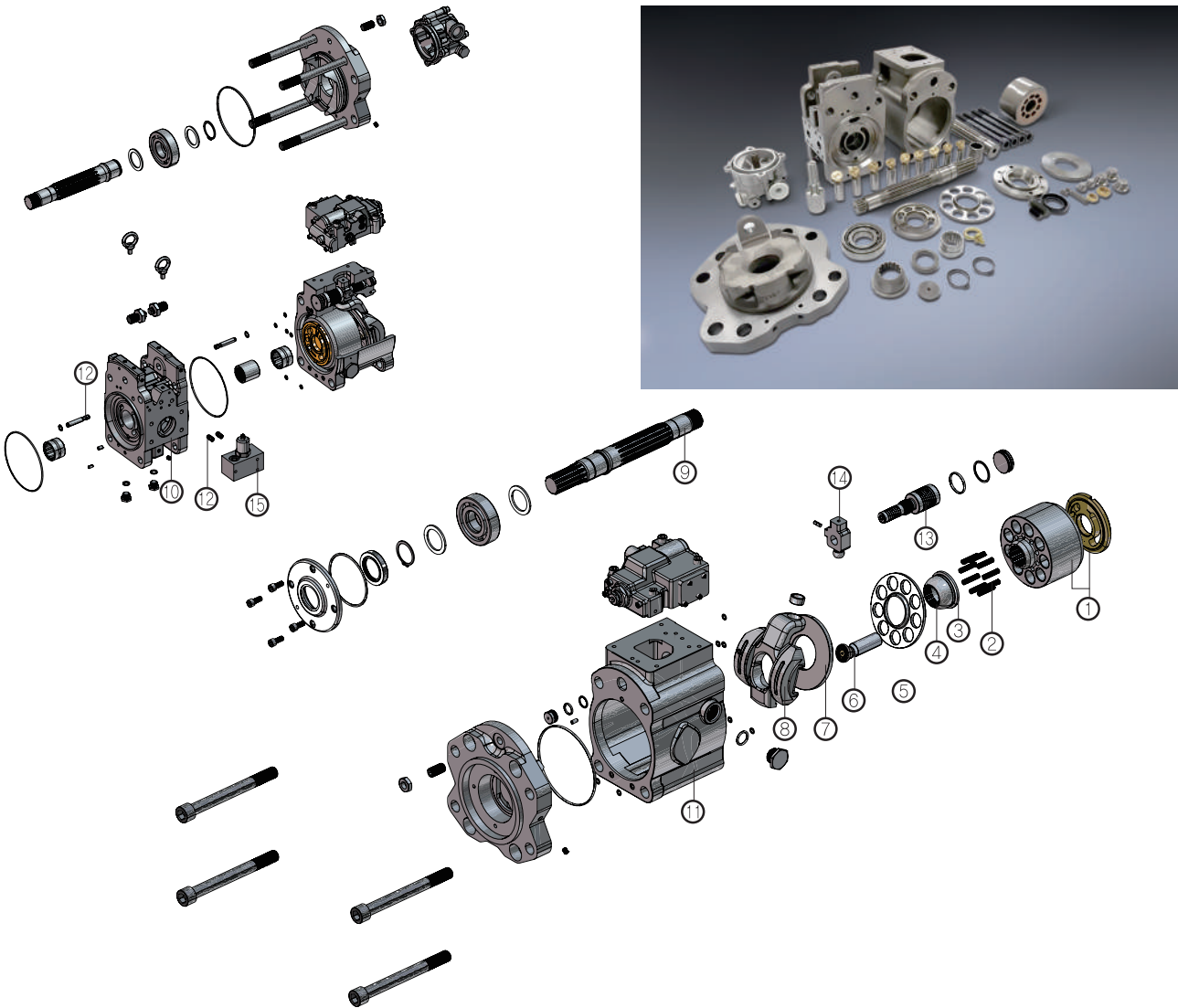


EPPR VALVE

5K 10/40, 9N2T 5K 10/40, DPA TYPE, 5K 20/40, 9N1T 5K 20/40

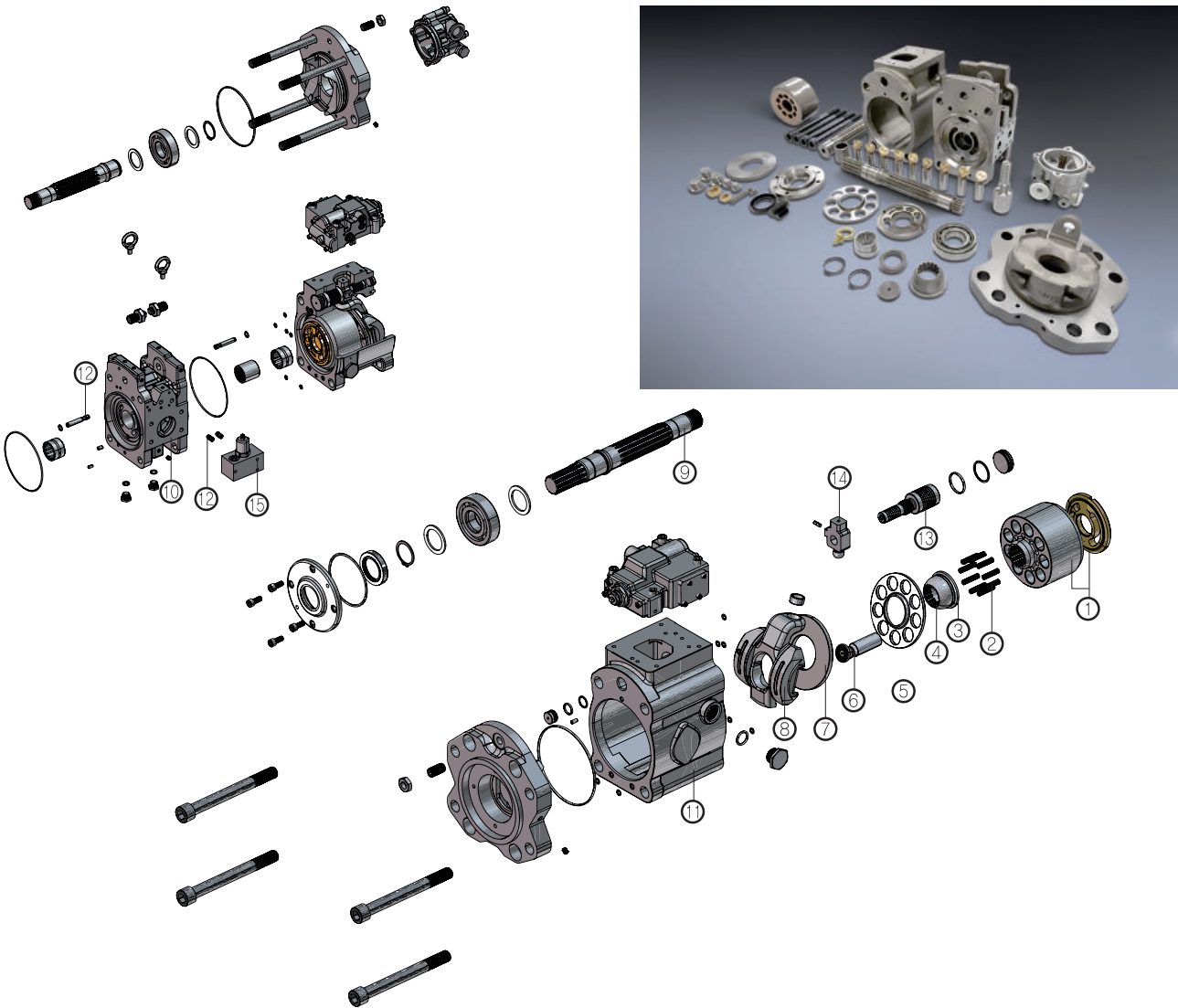


K3V63/112/140/180DT



NO.	Part Name	Q'ty	Unit	Remarks
1-a	Cylinder Block Ass'y(with Valve Plate- RH)	1	set	
1-b	Cylinder Block Ass'y(with Valve Plate- LH)	1	set	
2	Coil Spring (9pcs/set)	2	set	
3	Spacer	2	pcs	
4-a	Spherical Bush(Ball Guide)Casting type	2	pcs	
4-b	Spherical Bush(Ball Guide)Bronze type	2	pcs	
5	Push Plate (Set Plate)	2	pcs	
6	Piston Ass'y(9pcs/set)	2	set	
7	Shoe Plate	2	pcs	
8	Swash Plate & Support	2	pcs	
9	Drive Shaft (RH/LH)	2	pcs	
10	Valve Block	2	pcs	
11	Case(Housing)	2	pcs	
12-a	Check Valve – long	2	pcs	
12-b	Check Valve – short	2	pcs	
13	Servo Piston	2	pcs	
14	Tilting Pin	2	pcs	
15	Eppr v/v assy	1	pcs	

K5V80/140/160/200DT



NO.	Part Name	Q'ty	Unit	Remarks
1-a	Cylinder Block Ass'y(with Valve Plate- RH)	1	set	
1-b	Cylinder Block Ass'y(with Valve Plate- LH)	1	set	
2	Coil Spring (9pcs/set)	2	set	
3	Spacer	2	pcs	
4-a	Spherical Bush(Ball Guide)Casting type	2	pcs	
4-b	Spherical Bush(Ball Guide)Bronze type	2	pcs	
5	Push Plate (Set Plate)	2	pcs	
6	Piston Ass'y(9pcs/set)	2	set	
7	Shoe Plate	2	pcs	
8	Swash Plate & Support	2	pcs	
9	Drive Shaft (RH/LH)	2	pcs	
10	Valve Block	2	pcs	
11	Case(Housing)	2	pcs	
12-a	Check Valve – long	2	pcs	
12-b	Check Valve – short	2	pcs	
13	Servo Piston	2	pcs	
14	Tilting Pin	2	pcs	
15	Eppr v/v assy	1	pcs	

M2X120/146/150/170/210



NO.	Part Name	Q'ty	Unit	Remarks
1	DRIVE SHAFT	1	pcs	
2	SHOE PLATE	1	pcs	
3	PISTON ASSY (9PCS/SET)	1	set	
4	PUSH PLATE(SET PLATE)	1	pcs	
5	BALL GUIDE	1	pcs	
6	WASHER	1	pcs	
7	PIN	6	pcs	
8	CYLINDER BLOCK	1	pcs	
9	COIL SPRING	1	pcs	
10	WASHER	1	pcs	
11	VALVE PLATE	1	pcs	
12	SEPARATE PLATE	3(4)	pcs	
13	FRICTION PLATE	2(3)	pcs	
14	SNAP RING	1	pcs	

SBS80/120/140(FOR CATERPILLAR 320C/325C)



NO.	Part Name	Q'ty	Unit	Remarks
1	DRIVE SHAFT(L)	1		15T
2	DRIVE SHAFT(R)	1		KEY
3	DRIVE SHAFT(L)	1		17T
4	DRIVE SHAFT(R)	1		11T
5	SLIDING BEARING OF SUPPORT	2		
6	SLIDING BEARING OF SWASH PLATE	2		
7	SWASH PLATE	1		
8	TILTING PIN	1		
9	SHOE PLATE	1		
10	PISTON	9		
11	SET PLATE	1		
12	BALL GUIDE	1		
13	SPACE	1		
14	COIL SPRING	9		
15	CYLINDER BLOCK	1		
16	VALVE PLATE(SBS120)	1		
17	VALVE PLATE(SBS140)	1		
18	PIN OF SWASH PLATE	2		
19	PIN OF SHOE PLATE	1		
20	COUPLING	1		

M5X130/180



NO.	Part Name	Q'ty	Unit	Remarks
1	VALVE PLATE	1		
2	SEPARATION PLATE	3		
3	FRICTION PLATE	2		
4	CYLINDER BLOCK	1		
5	SET PLATE	1		
6	PISTONE SHOE	9		
7	SHOE PLATE	1		
8	DRIVE SHAFT	1		

HPV90/160 for PC200-3/5 & PC300-3/5



NO.	Part Name	Q'ty	EA	Remarks
1	CYLINDER BLOCK ASS'Y (WITH VALVE PLATE(RH))	1	set	
2	CYLINDER BLOCK ASS'Y (WITH VALVE PLATE(LH))	1	set	
3	PUSH PLATE(SET PLATE)	1	pcs	
4	PISTON ASS'Y(9PCS/SET)	1	set	
5	CAM ROCKER(SWASH PLATE)	1	pcs	
6	THRUST BEARING(PLATE)	1	pcs	
7	CRADLE(FR)	1	pcs	Round type
8	CRADLE(RR)	1	pcs	
9	DRIVE SHAFT(RH)	1	pcs	
	DRIVE SHAFT(LH) - KEY TYPE	1	pcs	PC200-5
	DRIVE SHAFT(LH) - SPLINE TYPE	1	pcs	PC200-5

HPV95/132 for PC200-6/7 & PC300-6/7



NO.	Part Name	Q'ty	EA	Remarks
1	Cylinder Block Ass'y (with Valve Plate(RH))	1	set	
2	Cylinder Block Ass'y (with Valve Plate(LH))	1	set	
3	Ball Guide	1	pcs	
4	Push Plate(Set Plate)	1	pcs	
5	Piston & Shoe(9pcs)	1	set	9pcs
6	Cam Rocker(Swash Plate)-OLD	1	pcs	PC200-6
7	Cam Rocker(Swash Plate)-NEW	1	pcs	PC200-6E/7
8	Cradle	1	pcs	
9	Drive Shaft(RH)	1	pcs	

HPV116 & HPV145



NO.	Part Name	Q'ty	EA	Remarks
1	HEAD COVER	1		C-TYPE
2	HEAD COVER	1		D-TYPE
3	HEAD COVER	1		F-TYPE
4	SERVO PISTON	1		
5	SERVO PISTON PIN	1		
6	VALVE PLATE	1		
7	BOLT OF VALVE PLATE	2		
8	SNAP RING OF CENTER	2		
9	ROTOR	1		
10	FEEDBACK LEVER	1		
11	SNAP RING OF BOLT	6		
12	LINK OF VALVE PLATE	2		
13	PIN OF LINK	2		
14	COIL SPRING	1		
15	PISTON	7		
16	PIN OF CENTER PIN	1		
17	CENTER PIN	1		
18	PIN OF CENTER PIN	1		
19	DRIVE SHIFT	1		
20	REGULATOR ASS'Y	1		C&D TYPE
21	REGULATOR ASS'Y	1		F TYPE

HPV050/102/105/135



NO.	Part Name	Q'ty	EA	Remarks
1	SERVO PISTON	2		
2	SERVO PISTON PIN	2		
3	HEAD COVER	1		
4	VALVE PLATE(R)	1		
5	SNAP RING	8		
6	BOLT OF VALVE PLATE	4		
7	ROTOR	2		
8	LINK OF VALVE PLATE	4		
9	PIN OF LINK	4		
10	COIL SPRING	2		
11	PISTON	14		
12	FEEDBACK LEVER	2		
13	VALVE PLATE(L)	1		
14	CENTER PIN	2		
15	BALL OF CENTER PIN	2		
16	DRIVE SHAFT(R)	1		
17	DRIVE SHAFT(L)	1		
18	LOCK NUT	2		

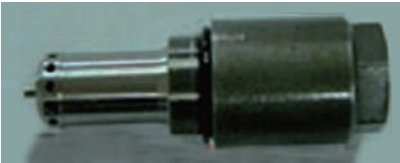
A4VG250



NO.	Part Name	Q'ty	EA	Remarks
1	CYLINDER BLOCK	1		
2	PISTON ASS'Y	9		
3	VALVE PLATE	1		
4	SET PLATE	1		
5	BALL GUIDE	1		
6	DRIVE SHAFT	1		

Relief Valve

PC200-3



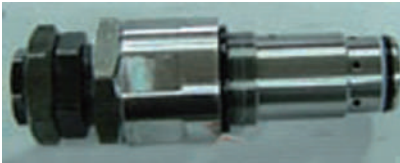
Part No. 709-70-61201

PC200-3



Part No. 709-70-51200

PC200-5



Part No. 709-70-51401

PC200-6



Part No. 723-40-50100

PC200-6



Part No. 723-40-56100

PC200-6



Part No. 723-40-56302

PC200-6E



Part No. 723-40-51102

PC200-6E



Part No. 723-40-51401

KAYABA



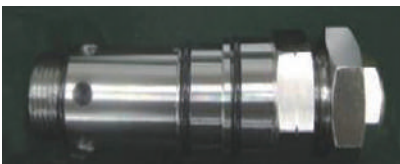
Part No. 21113-40051

M2X146



Part No. KRD21EK10-350/315/140-T

CAT320B/C



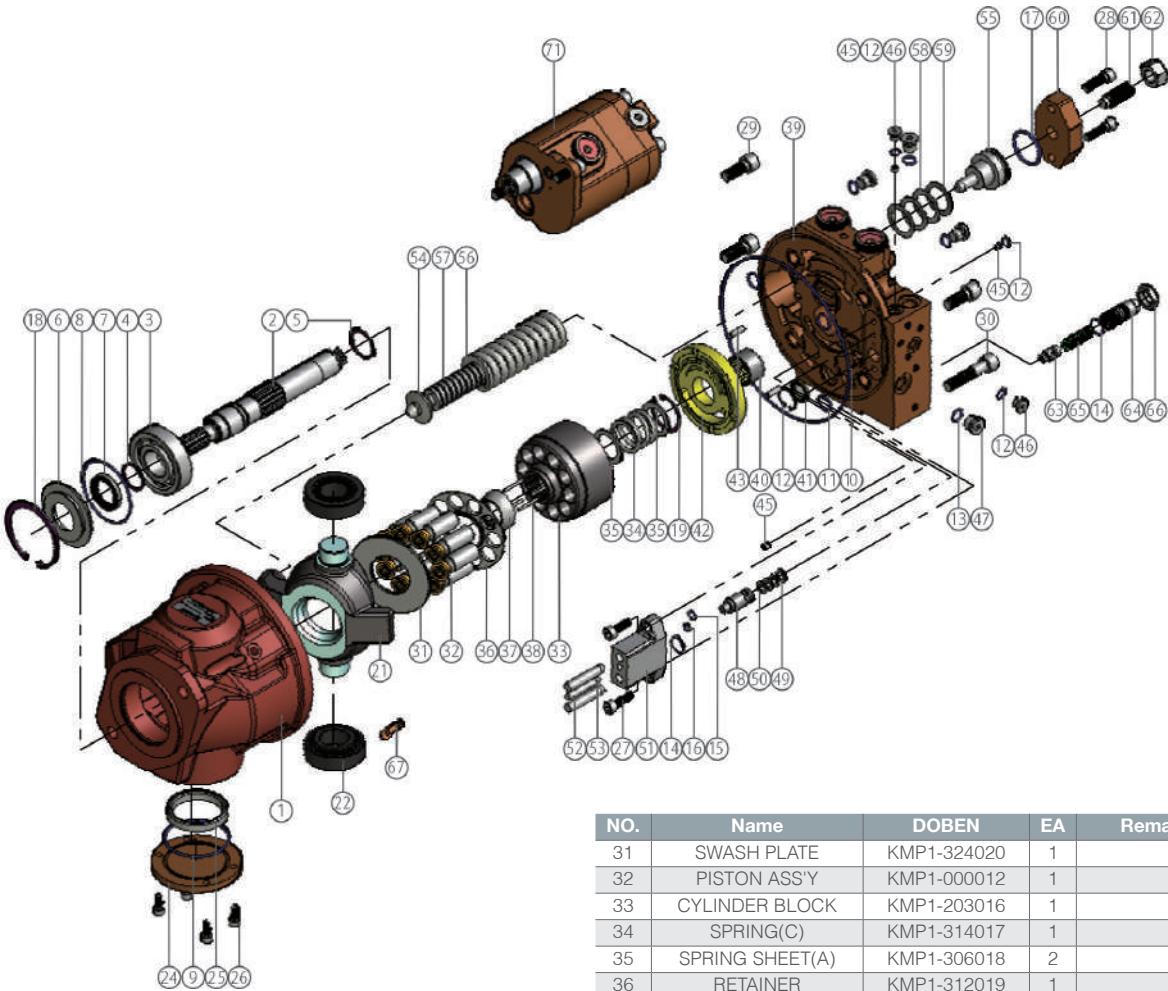
Part No. 171-0030

M2X150/170



Part No. V9612039829

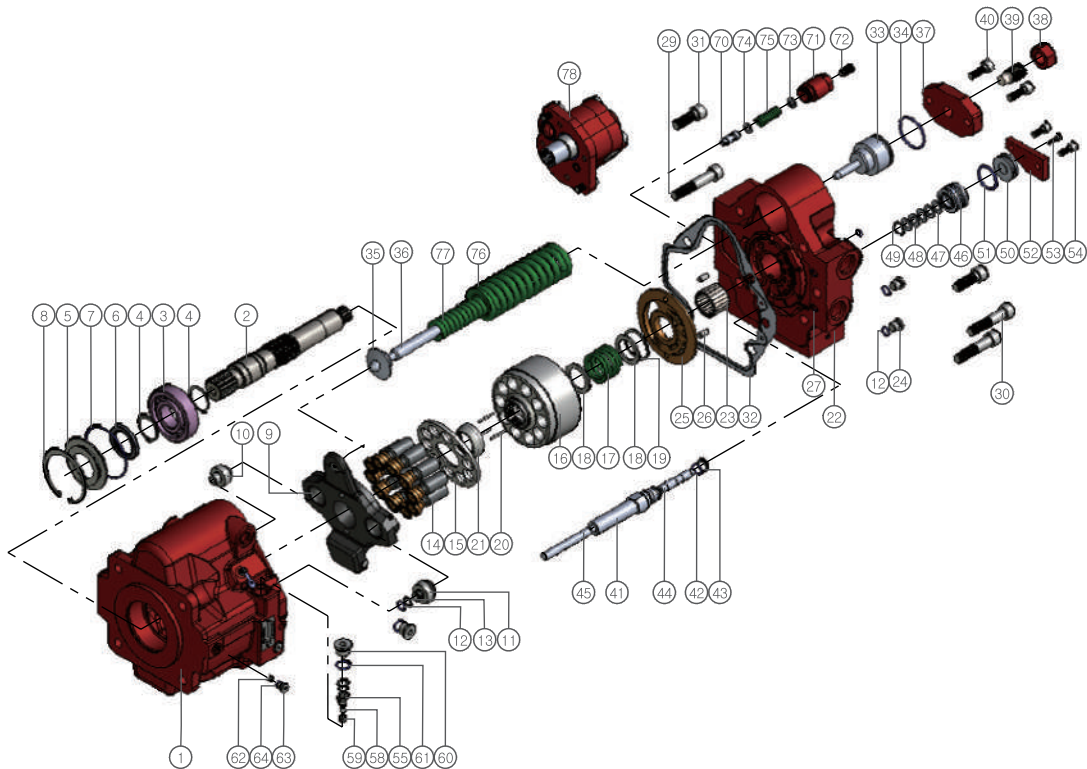
5 _ 7 TON MAIN PUMP



NO.	Name	DOBEN	EA	Remarks
1	HOUSING	KMP1-201004	1	
2	SHAFT	KMP1-319005	1	
3	BALL BEARING	K909-6306	1	30X72X19
4	SNAP RING	K904-EXT028	1	C TYPE SHAFT 28
5	SNAP RING	K904-EXT030	1	C TYPE SHAFT 30
6	SEAL CASE	KMP1-320006	1	
7	OIL SEAL	K910-TCV284006	1	
8	O-RING	K903-001A147	1	AS568-147
9	O-RING	K903-001A144	1	AS568-144
10	O-RING	K903-001A168	1	AS568-168
11	O-RING	K903-002P015	4	P015
12	O-RING	K903-002P008	3	P008
13	O-RING	K903-002P011	4	P011
14	O-RING	K903-001A016	2	AS568-016
15	O-RING	K903-001A011	1	AS568-011
16	O-RING	K903-001A009	1	AS568-009
17	O-RING	K903-001P034	1	P034
18	SNAP RING	K904-INT072	1	C TYPE HOLE 72
19	SNAP RING	K904-INT040	1	C TYPE HOLE 40
20	SNAP RING	K904-INT025	1	C TYPE HOLE 25
21	KMP1-211008	KMP1-211008	1	
22	TAPER ROLLER BEARING	K909-HR32206J	2	30X62X21.25
23	SEAT	KMP1-305009	1	
24	SIDE COVER	KMP1-321010	1	
25	SPACER	KMP1-322011	1	
26	SOC.HD CAP SCREW	K907-SM06016	4	M6 x 16
27	SOC.HD CAP SCREW	K907-SM08025	2	M8 x 25
28	SOC.HD CAP SCREW	K907-SM08030	2	M8 x 30
29	SOC.HD CAP SCREW	K907-SM12030	3	M12 x 30
30	SOC.HD CAP SCREW	K907-SM12055	1	M12 x 55

NO.	Name	DOBEN	EA	Remarks
31	SWASH PLATE	KMP1-324020	1	
32	PISTON ASS'Y	KMP1-000012	1	
33	CYLINDER BLOCK	KMP1-203016	1	
34	SPRING(C)	KMP1-314017	1	
35	SPRING SHEET(A)	KMP1-306018	2	
36	RETAINER	KMP1-312019	1	
37	PIVOT	KMP1-325021	1	
38	DAWEL PIN	K915-D03030	3	Ø3X30
39	VALVE BLOCK	KMP1-205023	1	
40	NIDDLE BEARING	K909-HMK2620	1	
41	STRAINER	KMP1-401027	1	
42	VAVLE PLATE	KMP1-324024	1	
43	PARALLEL PIN	K905-D06020	2	Ø6X20
44	PIPE PLUG	K911-NPT1/16	10	NPT 1/16
45	ORIFICE	KMP1-315025	3	
46	RO PLUG	K914-PF1/8	2	PF 1/8PF 1/8
47	RO PLUG	K914-PF1/4	4	PF 1/4
48	CONTROL PISTON	KMP1-309040	1	
49	SPRING SHEET	KMP1-306043	1	
50	CONICAL WASHER	KMP1-328044	3	
51	CONTROL CYLINDER	KMP1-215039	1	
52	CONTROL PIN (A)	KMP1-326041	2	
53	CONTROL PIN (B)	KMP1-326042	1	
54	SPRING SEAT(A)	KMP1-306029	1	
55	SPRING SEAT(B)	KMP2-306030	1	
56	SPRING(OUT)	KMP1-314034	1	
57	SPRING(IN)	KMP1-314035	1	
58	SHIM(A)	KMP1-327036	3	T=0.5
59	SHIM (B)	KMP1-327037	1	T=1.0
60	SPRING COVER	KMP1-204032	1	
61	ADJUSTMENT SCREW	KMP1-316033	1	M16XP1.5
62	HEX. NUT	K902-HM16	1	M16
63	SPOOL	KMP1-302045	1	
64	ADJUST SCREW	KMP1-316046	1	
65	SPRING, RELIEF	KMP1-314047	1	
66	NUT, RELIEF	KMP1-318048	1	M18XP1.0
67	AIR VENT	KMP1-501049	1	
71	GEAR PUMP ASS'Y	KGP1-000002	1	16.2cCX4.5cc

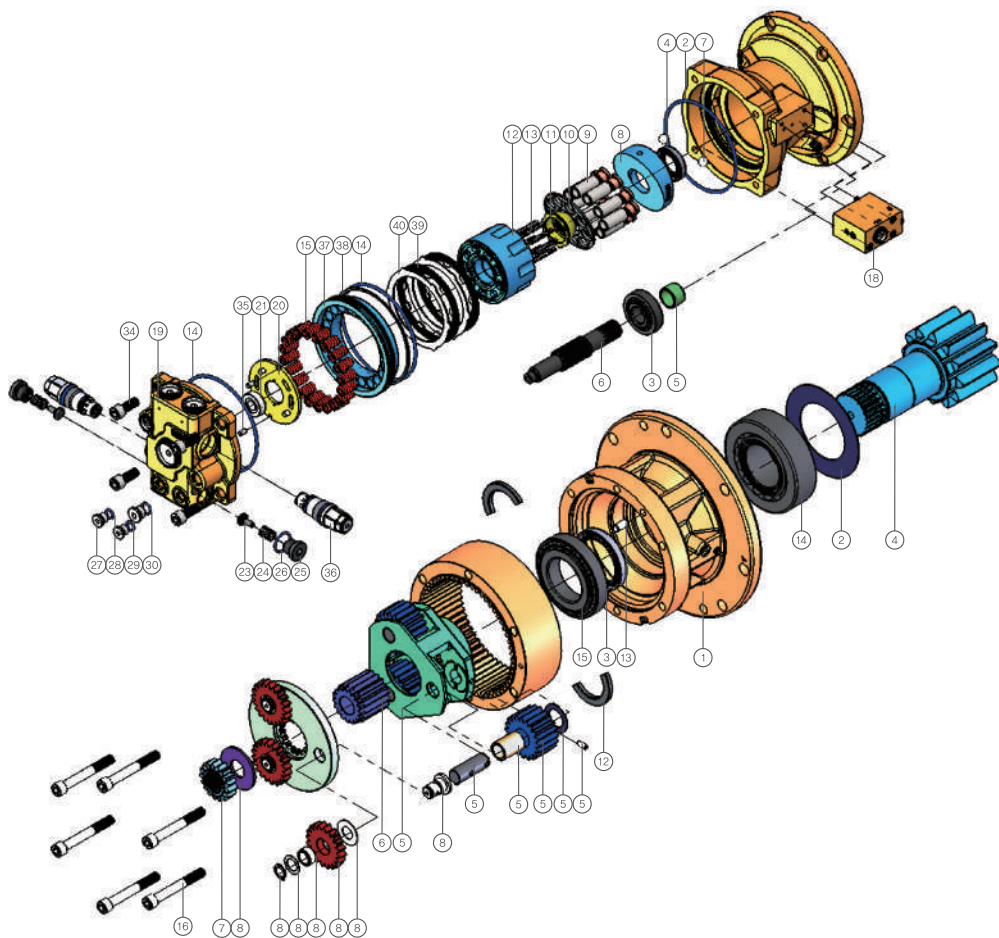
8 TON MAIN PUMP



NO.	Name	DOBEN	EA	Remarks
1	HOUSING	KMP5-201004	1	
2	SHAFT	KMP5-319005	1	
3	BALL BEARING	K909-6307	1	6307
4	SNAP RING	K904-EXT035	2	C TYPE SHAFT 35
5	SEAL CASE	KMP5-320006	1	
6	OIL SEAL	K910-TCV35X52X6	1	
7	O-RING	K903-001A151	1	
8	SNAP RING	K904-INT080	1	AS568-147
9	SWASH PLATE ASS'Y	KMP5-000007	1	AS568-144
10	BALL GUIDE(A)	KMP5-332012	1	AS568-168
11	BALL GUIDE(B)	KMP5-332013	1	P015
12	O-RING	K903-002P011	5	P008
13	BACK UP RING	K916-P011	1	P011
14	PISTON ASS'Y	KMP5-000014	10	AS568-016
15	RETAINER	KMP5-312017	1	AS568-011
16	CYLINDER BLOCK	KMP5-203019	1	AS568-009
17	SPRING,CYL'D BLOCK	KMP5-314020	1	P034
18	WASHER	KMP5-328021	2	C TYPE HOLE 72
19	SNAP RING	K904-INT045	1	C TYPE HOLE 40
20	DAWEL PIN	K915-D03030	3	C TYPE HOLE 25
21	PIVOT	KMP5-325022	1	
22	VALVE BLOCK	KMP5-205024	1	30X62X21.25
23	NEEDLE ROLLER BEARING	K909-304030	1	
24	RO PLUG	K914-PF 1/4	4	
25	VALVE PLATE	KMP5-324025	1	
26	PARALLEL PIN	K905-D080106	2	M6 x 16
27	O-RING	K903-002P009	4	M8 x 25
28	PIPE PLUG	K911-PY1/16	7	M8 x 30
29	SOC.HD CAP SCREW	K907-SM14075	1	M12 x 30
30	SOC.HD CAP SCREW	K907-SM14065	2	M12 x 55
31	SOC.HD CAP SCREW	K907-SM14040	2	
32	GASKET	KMP5-409026	1	
33	SPRING SEAT	KMP5-306027	1	
34	O-RING	K903-002P044	1	
35	SPRING SHEET(A)	KMP5-306029	1	
36	SPRING GUIDE	KMP5-307030	1	
37	SPRING COVER	KMP5-204034	1	

NO.	Name	DOBEN	EA	Remarks
38	HEX.NUT	K902-HM20	1	□3X30
40	SOC.HD CAP SCREW	K907-SM10030	2	
41	SLEEVE	KMP5-304036	1	
42	O-RING	K903-002P015	1	
43	BACK UP RING	K916-P015	1	
44	SPOOL	KMP5-302037	1	□6X20
45	CONTROL PIN	KMP5-326038	1	NPT 1/16
46	CONTROL PISTON	KMP5-309039	1	
47	WASHER	KMP5-328040	1	PF 1/8PF 1/8
48	CONICAL WASHER	KMP5-328041	4	PF 1/4
49	SNAP RING	K904-INT020	1	
50	STOPPER	KMP5-310042	1	
51	O-RING	K903-002P032	1	
52	COVER	KMP5-321043	1	
53	SOC.HD CAP SCREW	K907-SM05016	1	
54	SOC.HD CAP SCREW	K907-SM08020	2	
55	PLUG, SUTTLE V/V	KMP5-308051	1	
56	SEAL WASHER,SUTTLE V/V	KMP5-328052	1	
57	WASHER, SUTTLE V/V	KMP5-328053	1	
58	STEEL BALL	K917-D006	1	
59	SEAT ,SUTTLE V/V	KMP5-305054	1	T=0.5
60	RO PLUG	K914-M8X1.5	1	T=1.0
61	O-RING	K903-002P016	1	
62	ORIFICE	KMP1-315025	1	M16XP1.5
63	RO PLUG	K914-PF1/8	2	M16
64	O-RING	K903-002P008	3	
65	RO PLUG	K914-PF3/8	1	
66	O-RING	KMP1-314047	1	
70	SPOOL, RELIEF V/V	KMP1-318048	1	
71	BODY, RELIEF V/V	KMP1-501049	1	
72	ADJUST SCREW,RELIEF V/V	KMP5-316045	1	
73	SPING FOLLOW,RELIEF V/V	KMP5-336047	1	
74	WASHER,RELIEF V/V	KMP5-314049	1	
75	SPRING,RELIEF V/V	KMP5-314048	1	
76	SPRING(OUT)	KMP5-314032	1	
77	SPRING(IN)	KMP5-314031	1	
78	GEAR PUMP ASS'Y	KGP6-000001	1	

5 _ 8 TON SWING DEVICE



Reduction Gear

NO.	Name	DOBEN	EA	Remarks
1	GEAR CASE	KSR2-202004	1	
2	COVER(BEARING)	KSR1-321005	1	
3	OIL SEAL	K901-TC659013	1	TC65X90X13
4	DRIVE SHAFT	KSR2-319006	1	
5	CARRIER ASS'Y(NO.2)	KSR1-000008	1	
6	SUN GEAR(NO.2)	LSR1-331016	1	
7	SUN GEAR(NO.1)	KSR1-331025	1	
8	CARRIER ASS'Y(NO.1)	KSR1-000017	1	
9	RING GEAR	KSR1-331015	1	
10	PIPE PLUG	K911-PT 1/8	2	PT 1/8
11	PIPE PLUG	K911-PT 3/8	1	PT 3/8
12	HALF COLLAR	KSR1-333007	2	
13	PARALLEL PIN	K905-D10022	2	Ø10X22
14	TAPER POLLER BEARING	K909-HR32313J	2	HR30212J
15	TAPER POLLER BEARING	K909-HR30213J	1	HR30212J
16	SOC.HD CAP SCREW	K907-SM12095	6	X12 x 95

Motor

NO.	Name	DOBEN	EA	Remarks
1	HOUSING	KSM1-201004	1	
2	O-RING	K903-001A252	1	AS568-252
3	TAPER ROLLER BEARING	K909-HR30305J	1	HR30305J
4	OIL SEAL	K910-TCV1709	1	30X50X11(TCV1709)
5	BUSH	K919-253020	1	IR25X30X20
6	SHAFT	KSM1-319005	1	
7	STEEL BALL	K917-5/16"	2	5/16"

NO.	Name	DOBEN	EA	Remarks
8	SWASH PLATE	KSM3-207007	1	17.5°
9	PISTON ASS'Y	KSM1-000008	9	
10	RETAINER	KSM1-312011	1	
11	PIVOT	KSM1-325012	1	
12	CYLINDER BLOCK	KSM1-215016	1	
13	SPRING	KSM1-314017	9	
14	O-RING	K903-001A254	2	AS568-254
15	SPRING	KSM1-314020	20	
16	PIPE PLUG	K911-PT1/2	1	PT 1/2
17	PIPE PLUG	K911-PT1/4	2	PT 1/4
18	TIME DELAY VALVE ASS'Y	KSM1-000049	1	
19	REAR CASE	KSM1-202031	1	
20	VALVE PLATE	KSM1-324032	1	
21	TAPER ROLLER BEARING	K909-30202	1	#30202
22	SHIM(TAPER BEARING)	KSM1-327033	1	
23	POPPET	KSM1-303046	2	
24	SPRING	KSM1-314047	2	
25	PLUG	KSM1-308048	2	
26	O-RING	K903001ID026	2	ID26X2.5
27	RO PLUG	K914-PF1/4	2	PF 1/4
28	O-RING	K903-002P011	2	P011
29	RO PLUG	K914-PF3/8	1	PF 3/8
30	O-RING	K903-002P014	1	P014
34	SOC.HD CAP SCREW	K907-SM12030	4	M12 x 30
35	PARALLEL PIN	K905-D06012	2	Ø6X12
36	RELIFE VALVE ASS'Y	KSM1-000060	2	
37	BRAKE PISTON	KSM1-216019	1	
38	BACK UP RING	K916-00A254	1	AS568-254
39	FRICTION PLAT E ASS'Y	KSM1-000013	2	
40	SEPARATER PLATE	KSM1-404014	2	

