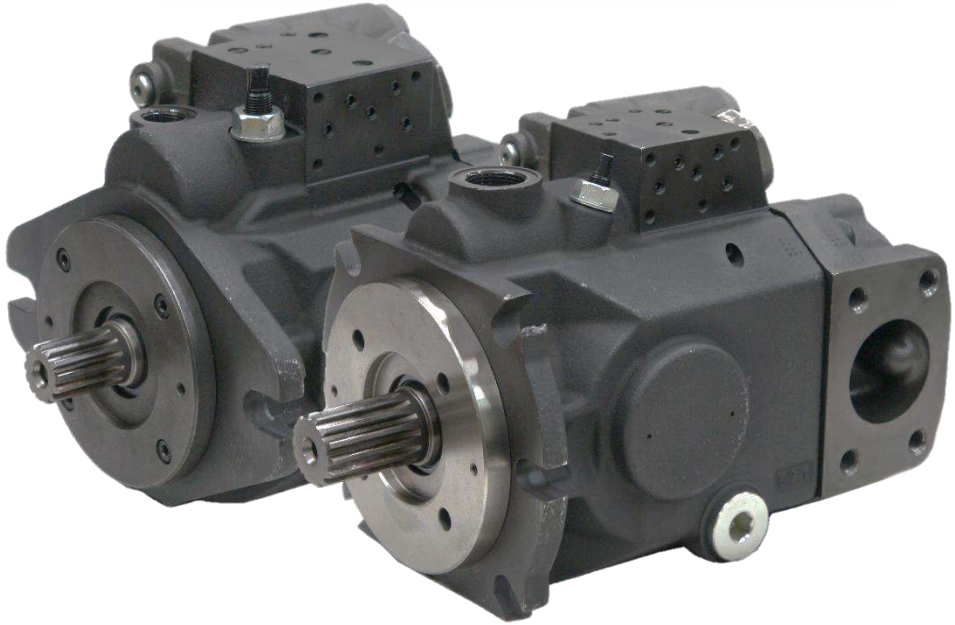
A3HM Series High Pressure Piston Pump

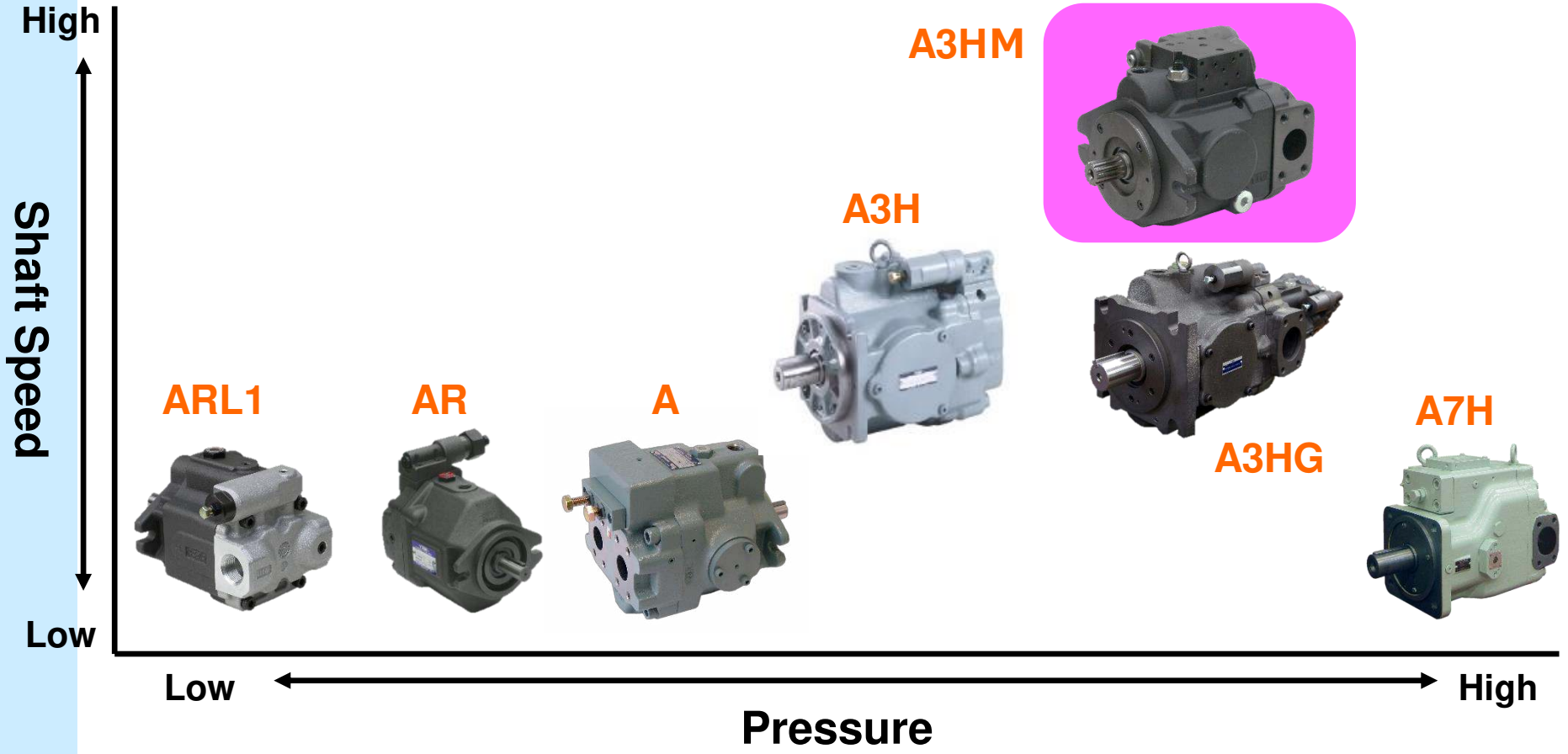
Product Presentation



June 6th 2020

YUKEN KOGYO CO., LTD.
Product Planning Group

Engine driven, high pressure and high performance pumps match the requirements of construction vehicle market.



Markets for Application

YUKEN
Living with Hydraulics

P1021-E

Timber Crane

Asphalt Cutter

Concrete Pump

Engine Testing Facilities

Floodgate

Ship Facilities

A3HM Piston Pump Advantages

Offering hydraulic pumps competitive in the construction vehicle market to target Rexroth A10VO-53 Series

A3HM28

A3HM63

- High Pressure & Shaft Speed
- Compact & Lightweight
- Global market targeted displacement
- Through drive type offered as a standard
- Various Control Types

A3HM Piston Pump Advantages

YUKEN
Living with Hydraulics

P1021-E

High Pressure & Shaft Speed

Rated pressure 31.5MPa, Max. pressure 35.0MPa
Max. shaft speed increased to 3400 r/min (A3HM18) to achieve large capacity. Best match for construction vehicles.

Series	A3HM	A10VO（32series）	A10V(S)O（53series）
Rated Pressure（MPa）	31.5	28.0	25.0
Max. Pressure（MPa）	35.0	35.0	31.5

Series	A3HM18	A3HM28	A3HM45	A3HM63	A3HM85	A3HM100
Geometric Displacement (cm^3/rev)	18.6	28.7	45.7	63.5	85.6	100.7
Max. Shaft Speed (r/min)	3400	3200	2700	2600	2500	2300
《Ref.》 Shaft Speed A10V(S)O 53Series	3300	3000	2600	2600	2500	2300

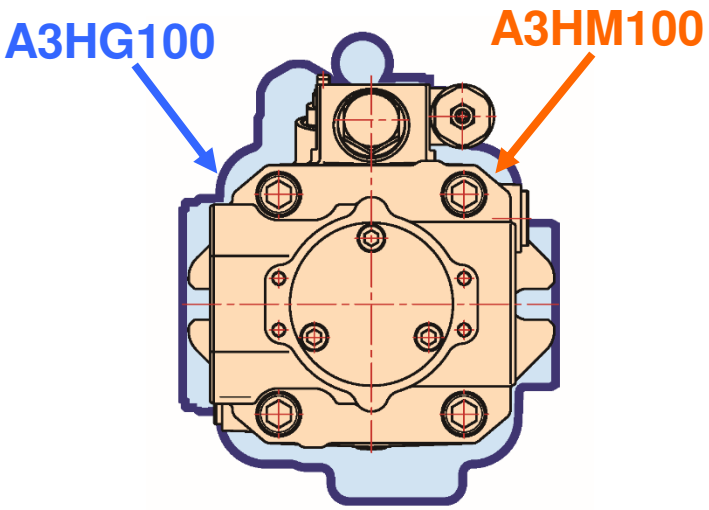
A3HM Piston Pump Advantages

Compact & Lightweight

Body and mass designed to be about 35% less than our existing products. Compact product.

36% smaller body
Compared with Yuken's conventional pumps

37% less mass
Compared with Yuken's conventional pumps



Series	A3HM100	A3HG100
Weight（kg）	36	57
Dimensions(mm)	350 × 213 × 219	402 × 225 × 281.5

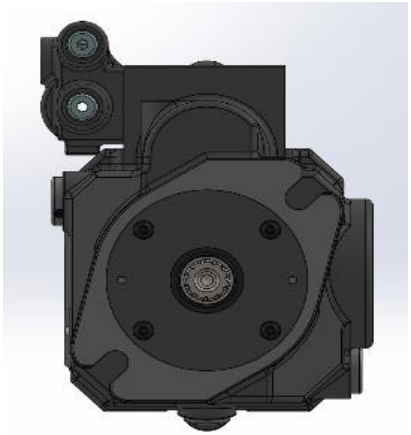
A3HM Piston Pump Advantages

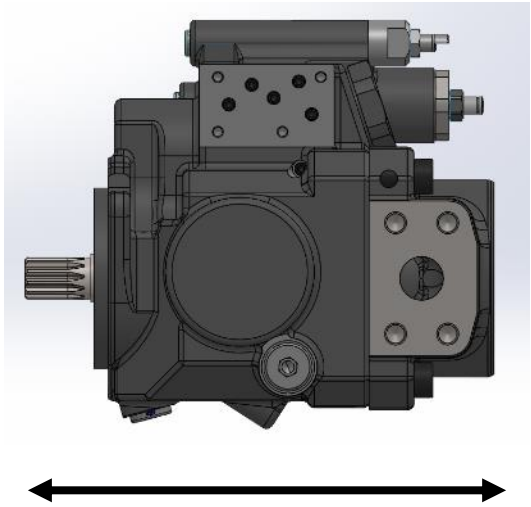
Compact & Lightweight

The dimensions of A10VO18 (side port, non-through drive) are shown in brackets.

A3HM18 Max. Size

Mass 12kg (11.5kg)





A3HM Piston Pump Advantages

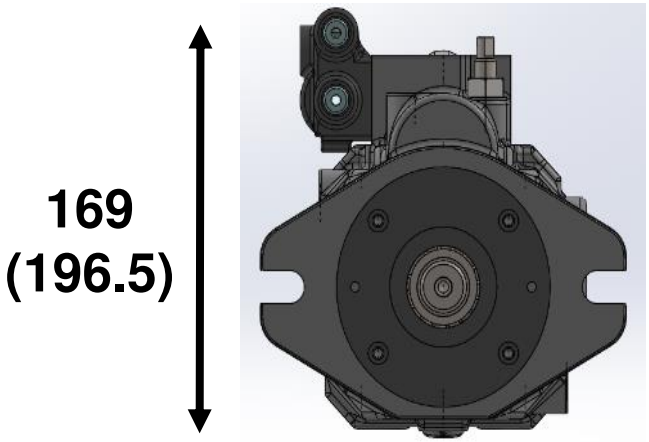
Living with Hydraulics

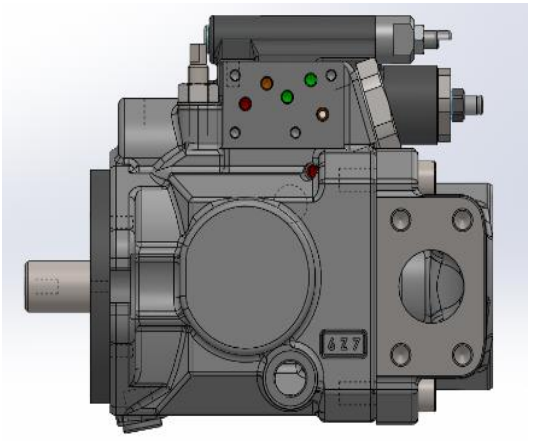
Compact & Lightweight

The dimensions of A10VO28 (side port, non-through drive) are shown in brackets.

A3HM28 Max. Size

Mass 14kg (15kg)





A3HM Piston Pump Advantages

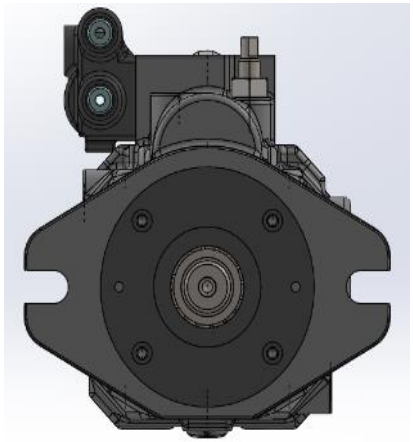
Living with Hydraulics

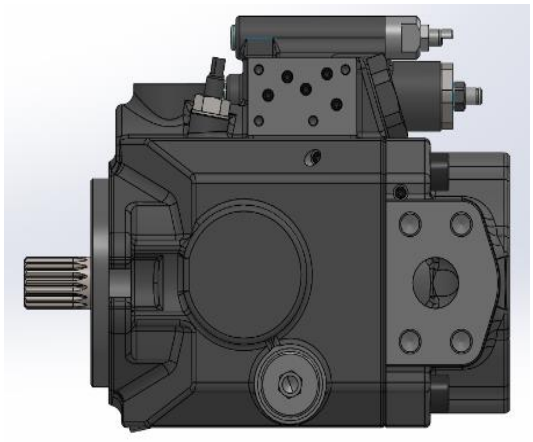
Compact & Lightweight

The dimensions of A10VO45 (side port, non-through drive) are shown in brackets.

A3HM45 Max. Size

Mass 21kg (18kg)





A3HM Piston Pump Advantages

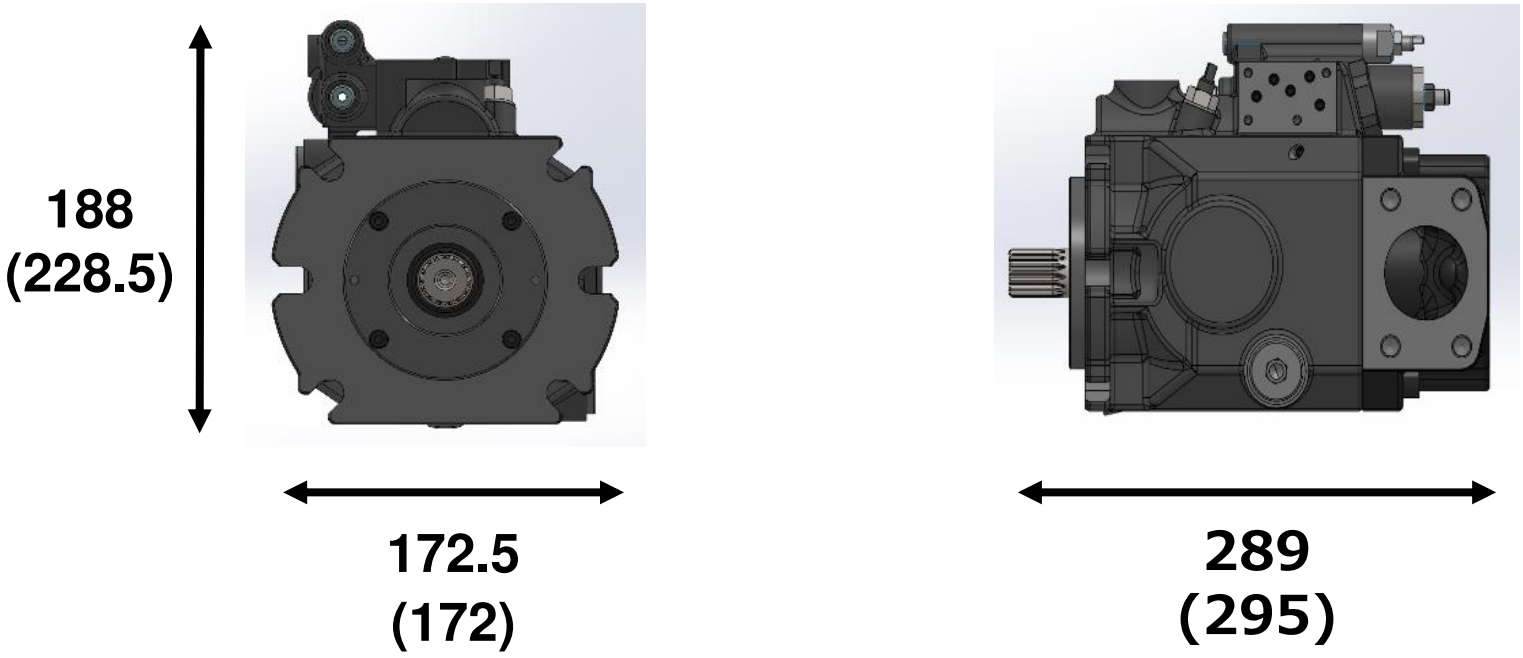
Living with Hydraulics

Compact & Lightweight

The dimensions of A10VO63 (side port, non-through drive) are shown in brackets.

A3HM63 Max. Size

Mass 24.5kg (22kg)



A3HM Piston Pump Advantages

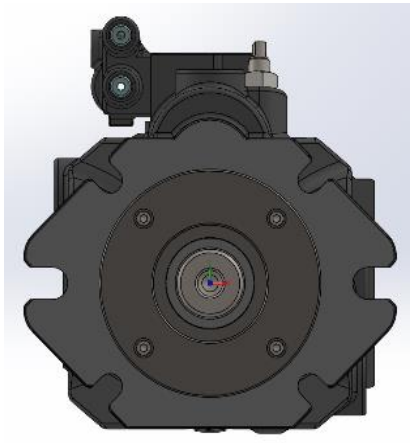
YUKEN
Living with Hydraulics

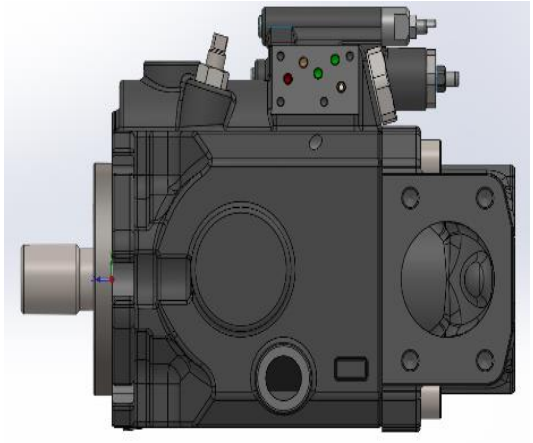
Compact & Lightweight

The dimensions of A10VO85 (side port, non-through drive) are shown in brackets.
***Body of A3HM85 and A3H100 is the same.**

A3HM85 Max. Size

Mass 36kg (36kg)





A3HM Piston Pump Advantages

YUKEN
Living with Hydraulics

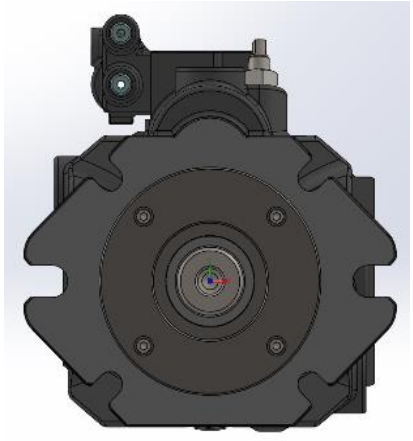
P1021-E

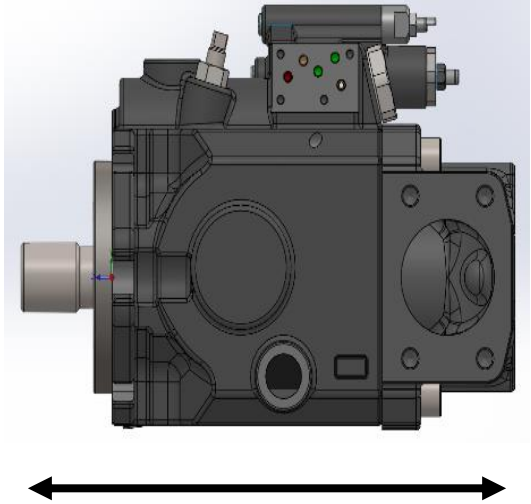
Compact & Lightweight

The dimensions of A10VO100 (side port, non-through drive) are shown in brackets.
***Body of A3HM100 and A3H85 is the same.**

A3HM100 Max. Size

Mass 36kg (36kg)



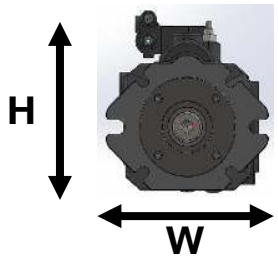


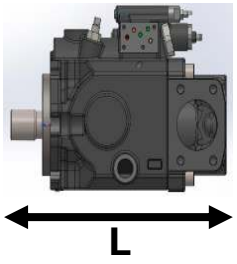
A3HM Piston Pump Advantages

Compact & Lightweight

The dimensions of A10VO100 (side port, non-through drive) are shown in brackets.

A3HM Max. Size Comparison





Units: Size（mm), Mass(kg)

Series	A3HM18	A3HM28	A3HM45	A3HM63	A3HM85	A3HM100
Size W	139.5 (136)	174 (172)	174 (172)	172.5 (172)	213 (210)	
Size H	168 (185)	169 (196.5)	183.5 (200)	188 (228.5)	217 (252.5)	219 (252.5)
Size L	214 (221)	228 (250.5)	263.5 (266.5)	289/299 (295)	350 (339)	
Mass	12 (11.5)	14 (15)	21 (18)	24.5/25 (22)	36 (36)	

A3HM Piston Pump Advantages

YUKEN
Living with Hydraulics

P1021-E

Global market targeted displacement & mounting method

We have arranged displacement range we don't have among our conventional pumps to target A10VO-53 Series.
Switching the pumps can become easier because the mounting surface is SAE based.

YUKEN

A3H

A3HM

A3HG

18	28	45	63	85	100		
16	37	56	71	100	145	180	

Rexroth

A10VO

53 Series

10	18	28	45	63	85	100		

32 Series

45	71	100	140	180

A3HM Piston Pump Advantages

YUKEN Living with Hydraulics

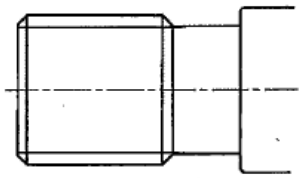
P1021-E

Global market targeted displacement & mounting method

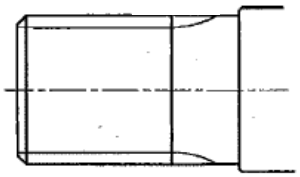
[International Standard Based]

Series	A3HM18	A3HM28	A3HM45	A3HM63	A3HM85	A3HM100
Pump Mounting Method	SAE-A 2-bolts (Φ82.55)	SAE-B 2-bolts (Φ101.6)	SAE-B 2-bolts (Φ101.6)	SAE-B 2-bolts (Φ101.6)	-	-
	-	-	-	SAE-C 4-bolts (Φ127.0)	SAE-C 4-bolts (Φ127.0)	SAE-C 4-bolts (Φ127.0)
Shaft Extension (Spline)	①ISO 3019-1 Standard ②High Torque Transmission				ISO 3019-1 Standard	
Suction Port (SAE J518 code51)	1 1/4 in M10		1 1/2 in M10	2 in M12	2 1/2 in M12	
Discharge Port (SAE J518 code52)	3/4 in M10		1 in M12		1 1/4 in M14	
Drain Port (3 pos.)	G3/8 Bonded Seal		G3/4 Bonded Seal			

ISO 3019-1 Standard



High Torque Transmission



A3HM Piston Pump Advantages

YUKEN Living with Hydraulics

P1021-E

Through drive type employed as standard

We made available the installation of driven side pump to driving side pump.
Wide range of maximum flow allows for wide range of applications as hydraulic power source for various equipment.
Please, keep axial torque in the range shown below.

Driving Side Pump 〔Ref.〕	Series	A3HM18		A3HM28		A3HM45		A3HM63				A3HM 85	A3HM 100
	Pump Mounting Type	A		B		B		B		C		C	C
	Shaft Extension	S	R	S	R	S	R	S	R	S	R	S	S
	Rated Torque (N・m)	93		144		229		318				429	505
Driven Side Pump	Allowable Torque (N・m)	157	172	172		402	404	402	472			848	848
Driving Side + Driven Side Pump	Allowable Torque (N・m)	157	172	261	298	402	474	402	474	720	893	1354	1354

Calculating Axial Torque

$$T = \frac{P \times q}{2\pi}$$

T : Torque （N・m）　P : Pressure (MPa)
q : Geometric Displacement (cm^3/rev)

A3HM Piston Pump Advantages

YUKEN
Living with Hydraulics

P1021-E

Through drive type employed as standard

Through drive kit is available.
Please, order if necessary.

A3HM18～45

Driving Side Pump	Driven Side Pump		Through Drive Kit Model
	Flange Type	Shaft Extension	
A3HM18	SAE A - 2 hole (45° installation combined)	SAE A - 9T 16/32	KT-A3HM18/28-A-10
		SAE - 11T 16/32	KT-A3HM18/28-AB1-10
A3HM28	SAE A - 2 hole (45° installation combined)	SAE A - 9T 16/32	KT-A3HM18/28-A-10
		SAE - 11T 16/32	KT-A3HM18/28-AB1-10
	SAE B - 2 hole	SAE B - 13T 16/32	KT-A3HM28-B-10
A3HM45	SAE A - 2 hole	SAE A - 9T 16/32	KT-A3HM45/63-A-10
		SAE - 11T 16/32	KT-A3HM45/63-AB2-10
	SAE A - 2 hole 45°	SAE - 11T 16/32	KT-A3HM45/63-AB3-10
	SAE B - 2 hole	SAE B - 13T 16/32	KT-A3HM45/63-B-10
		SAE BB - 15T 16/32	KT-A3HM45/63-BB-10

A3HM Piston Pump Advantages

YUKEN
Living with Hydraulics

P1021-E

Through drive type employed as standard

Through drive kit is available.
Please, order if necessary.

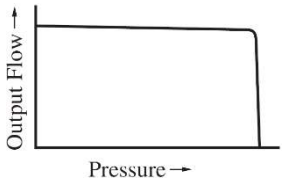
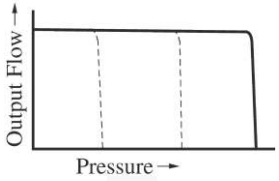
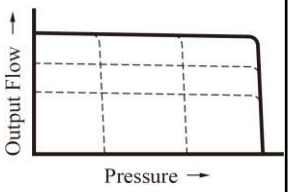
A3HM63～100

Driving Side Pump	Driven Side Pump		Through Drive Kit Model
	Flange Type	Shaft Extension	
A3HM63	SAE A - 2 hole	SAE A - 9T 16/32	KT-A3HM45/63-A-10
		SAE - 11T 16/32	KT-A3HM45/63-AB2-10
	SAE A - 2 hole 45°	SAE - 11T 16/32	KT-A3HM45/63-AB3-10
	SAE B - 2 hole	SAE B - 13T 16/32	KT-A3HM45/63-B-10
		SAE BB - 15T 16/32	KT-A3HM45/63-BB-10
	SAE C - 4 hole	SAE C - 14T 12/24	KT-A3HM63-C-10
A3HM85 A3HM100	SAE A - 2 hole (45° installation combined)	SAE A - 9T 16/32	KT-A3HM85/100-A-10
		SAE - 11T 16/32	KT-A3HM85/100-AB1-10
	SAE B - 2 hole	SAE B - 13T 16/32	KT-A3HM85/100-B-10
		SAE BB - 15T 16/32	KT-A3HM85/100-BB-10
	SAE C - 4 hole	SAE C - 14T 12/24	KT-A3HM85/100-C-10
		SAE CC - 17T 12/24	KT-A3HM85/100-CC-10

A3HM Piston Pump Advantages

Control Types Serve Application Purpose

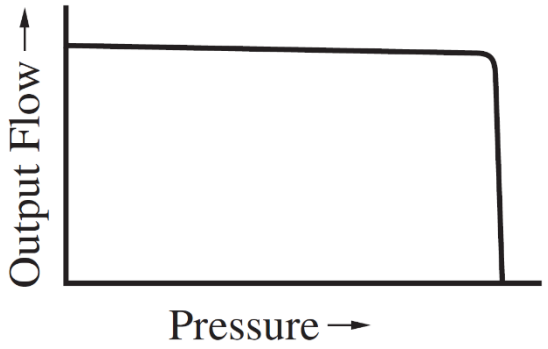
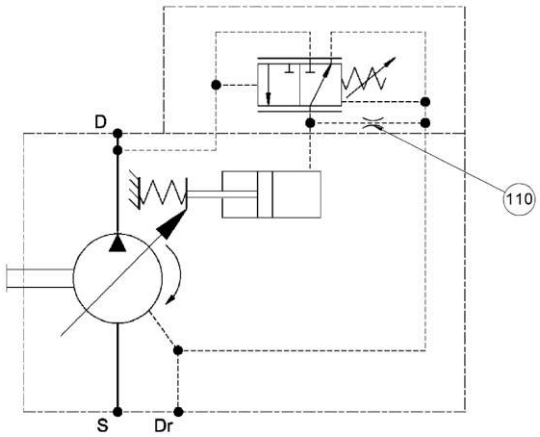
We are ready to offer 3 control types described below.
We plan the development of 09 type (Constant Torque Type) and 04 type (Proportional Electro-Hydraulic Load Sensing Type).

Control Code	Yuken	01	07	14	09	04
	Rex	DR	DRG	DRF		
Control Type		Pressure Compensator Type	Pilot Pressure Control Type Pressure Compensator	Load Sensing Type	Constant Torque Type	Proportional Electro-Hydraulic Load Sensing Type
Characteristics					Under development	Under Development

Control Types Serve Application Purpose

Supply of output flow and pressure are adjustable to exactly meet equipment specs. Allows to plan for energy saving.

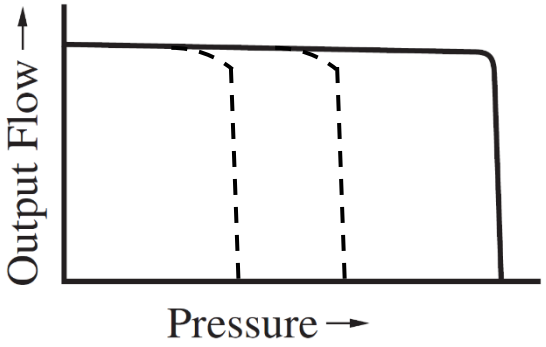
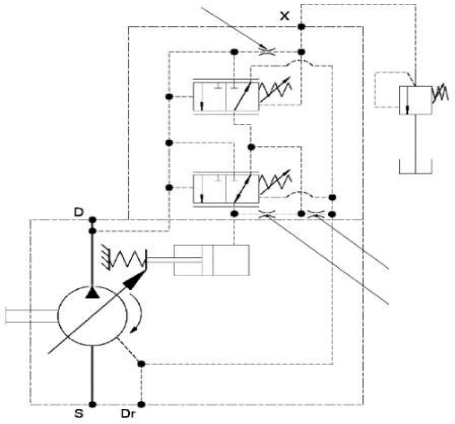
Relief valve becomes unnecessary. The system can be simplified.

Control Code Control Type	"01" Pressure Compensator Type
Characteristics	■ Performance Characteristic  
Explanation	● Pump flow decreases when pressure reaches preset cut-off pressure. ● Output flow and full cut-off pressure are adjustable.

Control Types Serve Application Purpose

Pilot pressure in 01 (Pressure Compensator Type) mechanism is controlled from outside.

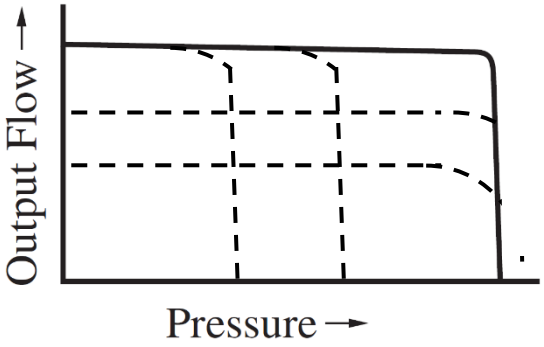
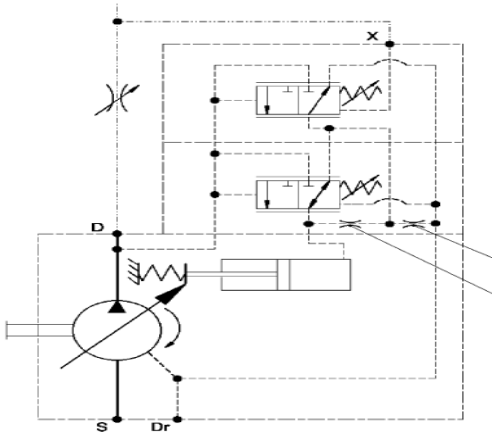
Full cut-off pressure can be remote-controlled according to your requirements.

Control Code Control Type	"07" Pilot Pressure Control Type Pressure Compensator
Characteristics	■ Performance Characteristic  
Explanation	● The pump is used in combination with the pilot relief valve or proportional pressure control valve for pressure setting

A3HM Piston Pump Advantages

Control Types Serve Application Purpose

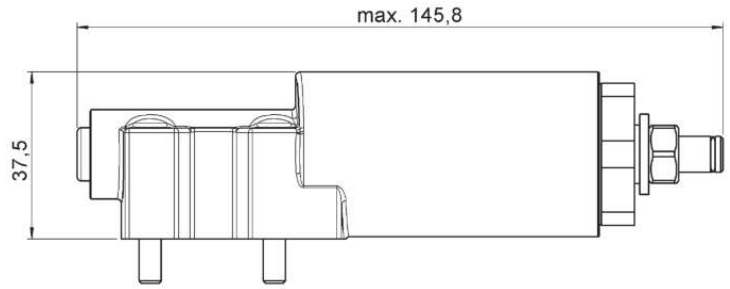
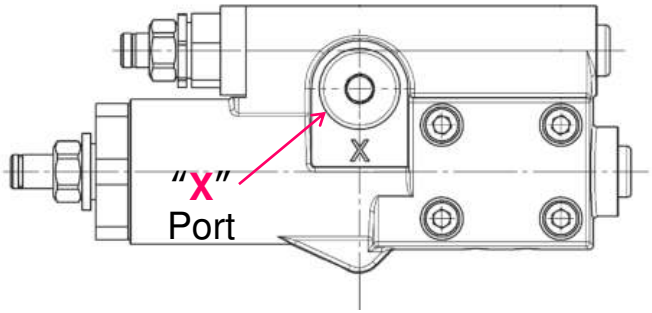
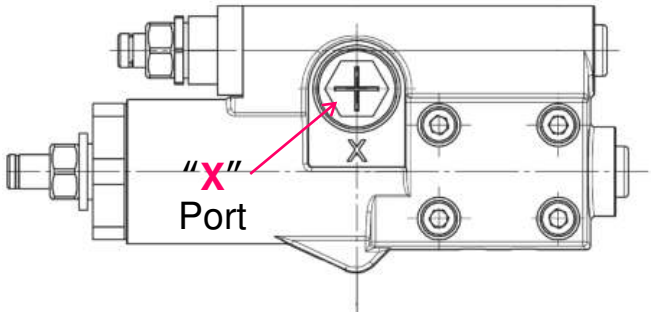
Allows automatic control of output flow to achieve constant pressure drop at the inlet and outlet of the flow control valve installed on discharge side.

Control Code Control Type	"14" Load Sensing Control Type
Characteristics	■ Performance Characteristic  
Explanation	● Energy-Saving pump control type. Supplies minimum required pressure and flow to move the load (actuator).

Control Types Serve Application Purpose

A3HM Pilot Valves

Mounting method to the pump is the same for each valve.

Control Valve Drawing	Pilot Valve Model
	A3HMV-**01**-10 (01 Control Valve)
	A3HMV-**07**-10 (07 Control Valve)
	A3HMV-**14**-10 (14 Control Valve)

Specifications

YUKEN
Living with Hydraulics

P1021-E

Item \ Model No.		A3HM18	A3HM28	A3HM45	A3HM63	A3HM85	A3HM100
Geometric Displacement cm^3/rev		18.6	28.7	45.7	63.5	85.6	100.7
Min. Adj. Flow cm^3/rev		-	17.8	27.5	44.0	61.3	70.5
Rated Pressure MPa		31.5					
Max. Pressure（＊）MPa		35.0					
Allowable Shaft Speed r /min	Max.	3400	3200	2700	2600	2500	2300
	Min.	600					
Suction Pressure		−20 -+400 kPa					
Hydraulic Oil		Petroleum Base Oils（ref. separate material for non-petroleum base oils)					
Seal Material		FKM（fluororubber）					
Mass kg		12	14	21	24.5/25	36	36

(*) ・・・Surge pressure, pressure allowable for a short time period.

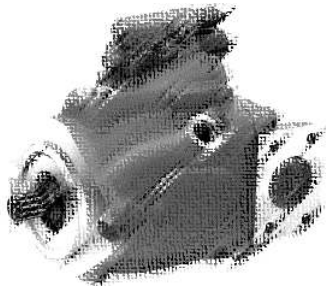
Hydraulic Oil Operating Conditions

Viscosity/ Temperature Range	Cold Start	Regular Operation	Short Time Operation
Viscosity mm²/s	400 - 1600	16 - 400	7 - 15
Temperature ° C (At Suction Port)	-40 - -25	-25 - 90	90 - 115
Operating Condition Limits	Operating Time: <1 min Discharge Pressure: <3MPa Shaft Speed: <1000r/min	-	Operating Time: <1 min Discharge Pressure: <8MPa
Recommended Viscosity mm²/s	20 - 60		
Degree of Oil Contamination	Within 20/18/14 (ISO 4406 code)		

List of allowed non-petroleum based hydraulic oils

ISO Category	Type	Hydraulic Oil Name
HFDU	Fatty Acid Ester Based	Quintolubric 888-46
HEPR	Biodegradable Hyd. Oil	AVIA Syntofluid PE-B 30
HEES	Biodegradable Hyd. Oil	Panolin HLP Synth 46

Materials for A3HM pump replacement



Ref) Rexroth AG Product Catalog: RE 92703（Edition: 12.2015）

Model Designation List

Model Number Designation

A3HM 63 – R 01 C S R –10

Series

Displacement (Nominal)
18 28 45 63 85 100

Direction of Rotation
R: Clockwise
L: Counterclockwise

Control Type
01: Pressure Compensator Type
07: Pilot Pressure Control Type
Pressure Compensator
14: Load Sensing Type

Design Number

Shaft Extension
None: ISO 3019-1 based
R : High Torque Transmission

Port Position
S: Side Port

Pump Mounting
Ref. chart to the right

Series	Pump Mounting (ISO 3019-1 based)
A3HM18	A: 82-2
A3HM28	B: 101-2
A3HM45	B: 101-2
A3HM63	B: 101-2 C: 127-4
A3HM85 A3HM100	C: 127-2/4

Model Designation List

Model Number Designation

A10V O 63 DR / 53 R – V S C 12 K01

- **A10V** — Series
- **O** — Circuit
  - O: for Open Circuit
- **63** — Displacement (Nom.)
  - 18 28 45 63 72 85 100
- **DR** — Control Type
  - DR: Pressure Compensator Type
  - DRG: Pilot Pressure Control Pressure Compensator
  - DRF: Load Sensing Type
  - LA*: Constant Torque Type
  - E*: Proportional Electro-Hydraulic Load Sensing
  - *To be developed
  - ⋮
- **53** — Series No.
- **R** — Direction of Rotation (view on drive shaft)
  - R: Clockwise
  - L: Counterclockwise
- **V** — Seal Material
  - V: FKM (fluororubber)
- **S** — Shaft Extension
  - S: Standard
  - R: High Torque Transmission
  - U: Reduced Diameter (unavailable for through drive)
  - W: Reduced Diameter for High Torque (unavailable for through drive)
  - * Unavailable
- **C** — Mounting
  - C: 2-hole mounting
  - D: 4-hole mounting
- **12** — Port Position
  - 11: Axial Port (unavailable for through drive)
  - 12: Side Port
- **K01** — Trough Drive Mounting
  - *Ref. next page

Model Designation List

Through Drive Mounting

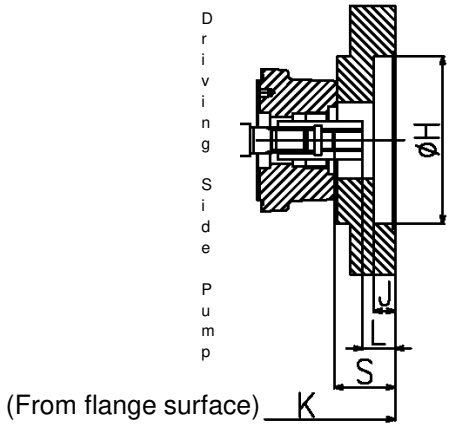
A10V O 63 DR / 53 R – V S C 12 K01

Code	Flange Size	Coupling for Spline Shaft	(Yuken Equivalent)
N00	Non-Through Drive		-
K01	82-2 (A)	5/8 in 9T 16/32DP	KT-A3HM18/28-A-10 KT-A3HM45/63-A-10 KT-A3HM85/100-A-10
K52		3/4 in 11T 16/32DP	KT-A3HM18/28-AB1-10 KT-A3HM45/63-AB2-10 KT-A3HM45/63-AB3-10 KT-A3HM85/100-AB1-10
K68	101-2 (B)	7/8 in 13T 16/32DP	KT-A3HM28-B-10 KT-A3HM45/63-B-10 KT-A3HM85/100-B-10
K04		1 in 15T 16/32DP	KT-A3HM45/63-BB-10 KT-A3HM85/100-BB-10
K15	127-4 (C)	1 1/4 in 14T 12/24DP	KT-A3HM63-C-10 KT-A3HM85/100-C-10
K16		1 1/2 in 17T 12/24DP	KT-A3HM85/100-CC-10

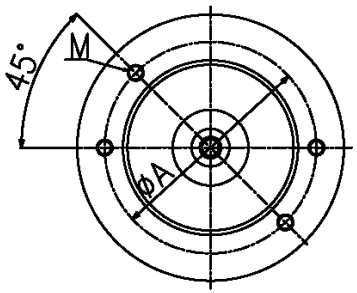
Through Drive Details (A3HM18,28(A10VO18,28))

YUKEN
Living with Hydraulics

P1021-E

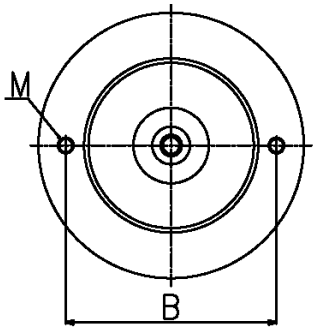


Flange Type: a



KT-A3HM18/28-A-10
KT-A3HM18/28-AB1-10

Flange Type: b



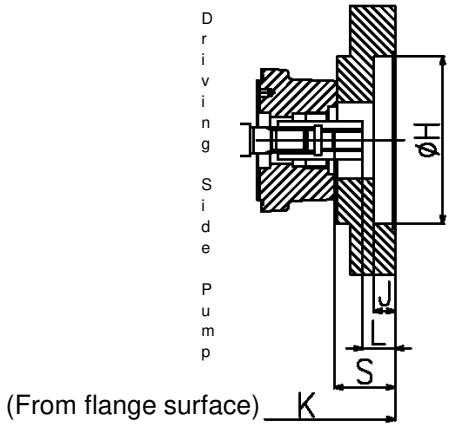
(KT-A3HM28-B-10)

Driving Side Pump	Flange Shape	Shaft Extension	Flange Type	Mounting Dimensions (mm)							
				A	B	H	J	K	L	S	M
A3HM18	SAE A - 2 hole (45° installation combined)	SAE A – 9T 16/32	a	106.4	—	82.55	8 (10)	209 (182)	13.6 (—)	35 (43.3)	M10
		SAE - 11T 16/32			—				23 (18.8)	41 (39)	
A3HM28	SAE A - 2 hole (45° installation combined)	SAE A – 9T 16/32	a	106.4	—	82.55	8 (10)	220 (204)	13.6 (—)	35 (47)	M10
		SAE - 11T 16/32			—				23 (18.8)	41 (39.3)	
	SAE B – 2 hole	SAE B – 13T 16/32	b	—	146	101.6	10.5 (10)	222 (204)	24.2 (17.8)	45 (42.3)	M12

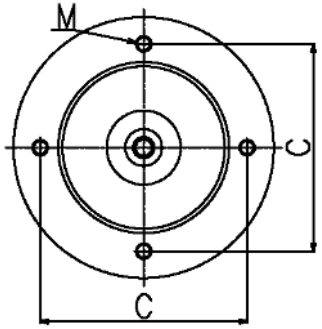
* A10VO dimensions displayed in brackets

Trough Drive Details (A3HM45(A10VO45))

YUKEN
Living with Hydraulics

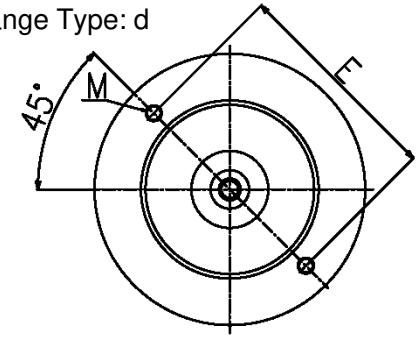


Flange Type: c



KT-A3HM45/63-A-10
KT-A3HM45/63-AB2-10
KT-A3HM45/63-B-10
KT-A3HM45/63-BB-10

Flange Type: d



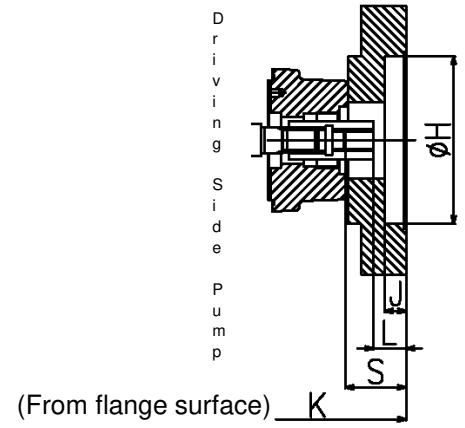
(KT-A3HM45/63-AB3-10)

Driving Side Pump	Flange Shape	Shaft Extension	Flange Type	Mounting Dimensions (mm)							
				C	E	H	J	K	L	S	M
A3HM45	SAE A – 2 hole	SAE A – 9T 16/32	c	106.4	—	82.55	8.5 (10)	236.5 (229)	13.4 (—)	35 (53)	M10
		SAE - 11T 16/32			—				23.2 (18.9)	41 (39.4)	
	SAE A - 2 hole 45°	SAE - 11T 16/32	d	—	106.4	82.55	8.5 (10)	253.5 (—)	23.2 (—)	41 (—)	M10
	SAE B – 2 hole	SAE B – 13T 16/32	c	146	—	101.6	12 (10)	255 (229)	23.9 (17.9)	44.1 (42.4)	M12
		SAE BB - 15T 16/32			—				24.3 (18.9)	48.9 (47.9)	

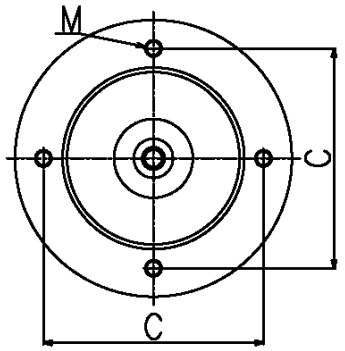
* A10VO dimensions displayed in brackets

Through Drive Details (A3HM63 (A10VO63))

YUKEN
Living with Hydraulics

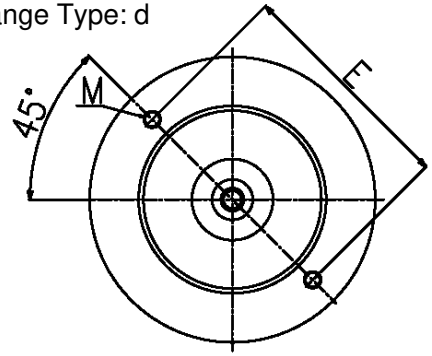


Flange Type: c



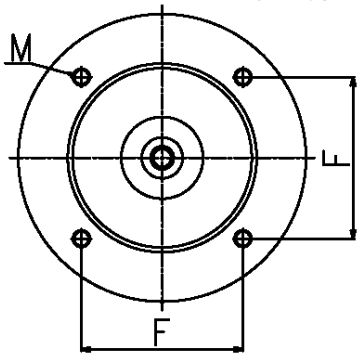
KT-A3HM45/63-A-10
KT-A3HM45/63-AB2-10
KT-A3HM45/63-B-10
KT-A3HM45/63-BB-10

Flange Type: d



(KT-A3HM45/63-AB3-10)

Flange Type: e



(KT-A3HM63-C-10)

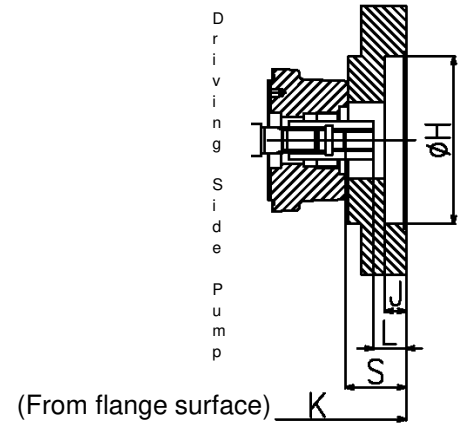
Driving Side Pump	Flange Shape	Shaft Extension	Flange Type	Mounting Dimensions (mm)								
				C	E	F	H	J	K	L	S	M
A3HM63	SAE A – 2 hole	SAE A – 9T 16/32	c	106.4	—	—	82.55	8.5 (10)	262 (255)	13.4 (—)	35 (59)	M10
		SAE - 11T 16/32			—	—				23.2 (—)	41 (—)	
	SAE A - 2 hole 45°	SAE - 11T 16/32	d	—	106.4	—	82.55	8.5 (10)	279 (255)	23.2 (18.9)	41 (39.4)	M10
	SAE B – 2 hole	SAE B – 13T 16/32	c	146	—	—	101.6	12 (10)	280.5 (255)	23.9 (17.9)	44.1 (42.4)	M12
		SAE BB - 15T 16/32			—	—				24.3 (18.4)	48.9 (47.4)	
	SAE C – 4 hole	SAE C – 14T 12/24	e	—	—	114.5	127	16 (13)	284 (255)	29 (—)	59	M12

* A10VO dimensions displayed in brackets

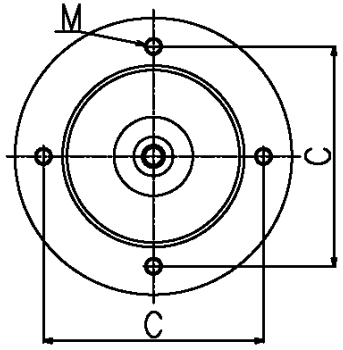
Through Drive Details (A3HM85,100(A10VO85,100))

YUKEN
Living with Hydraulics

P1021-E

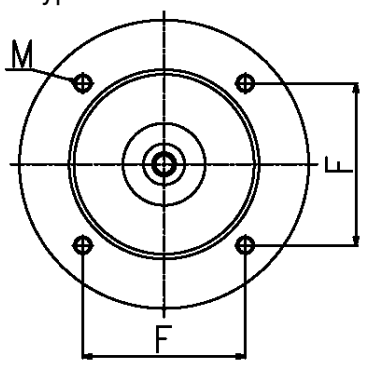


Flange Type: c



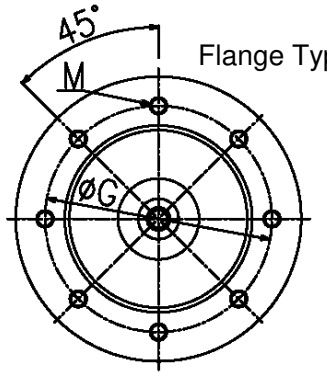
(KT-A3HM85/100-B-10)
(KT-A3HM85/100-BB-10)

Flange Type: e



(KT-A3HM85/100-C-10)
(KT-A3HM85/100-CC-10)

Flange Type: f



(KT-A3HM85/100-A-10)
(KT-A3HM85/100-AB1-10)

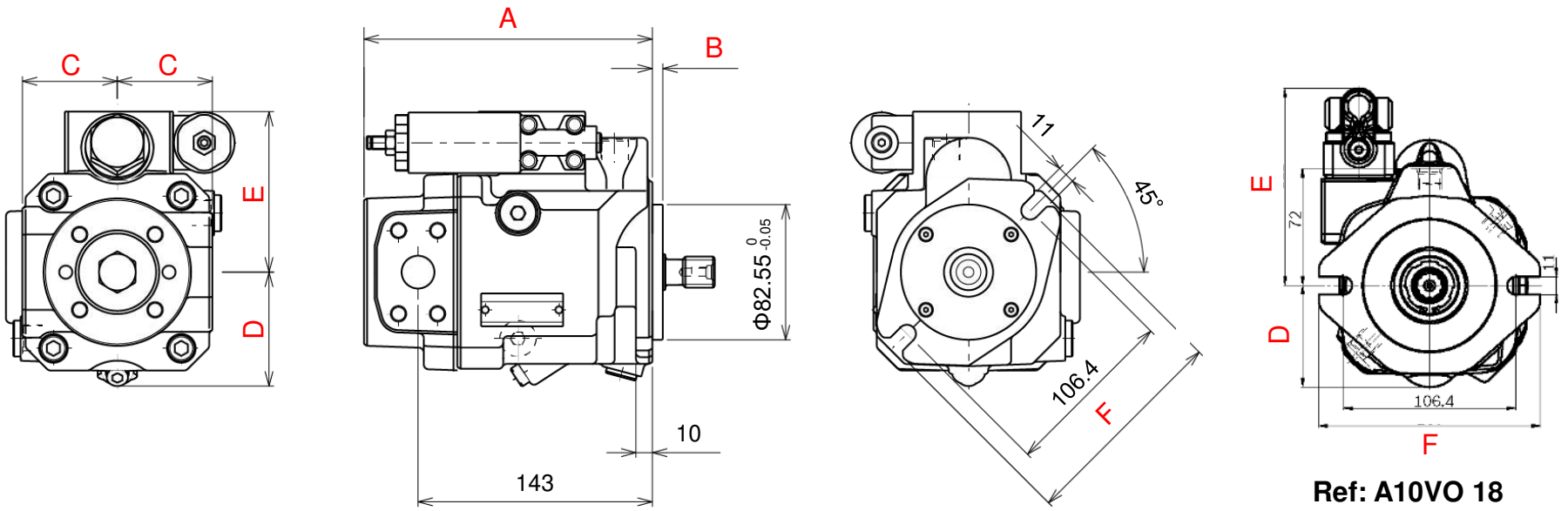
Driving Side Pump	Flange Shape	Shaft Extension	Flange Type	Mounting Dimensions (mm)								
				C	F	G	H	J	K	L	S	M
A3HM85 A3HM100	SAE A – 2 hole (45° installation combined)	SAE A – 9T 16/32	f	—	—	106.4	82.55	8.5 (10)	292.5 (302)	13.5 (—)	35.5 (68)	M10
		SAE - 11T 16/32		—	—					23.5 (23.6)	41.5 (44.1)	
	SAE B – 2 hole	SAE B – 13T 16/32	c	146	—	—	101.6	12 (10)	302	24 (22)	44.5 (46.5)	M12
		SAE BB - 15T 16/32			—	—				25 (22.2)	49.5 (51.2)	
	SAE C – 4 hole	SAE C – 14T 12/24	e	—	114.5	—	127	16 (13)	317.5 (301.5)	28.6 (—)	59.6 (67.9)	M12
		SAE CC - 17T 12/24		—		—				22.6 (—)	65.6 (67.9)	

* A10VO dimensions displayed in brackets

Comparison of Dimensions [A10VO 18 ⇔ A3HM18]

YUKEN
Living with Hydraulics

P1021-E



Ref: A10VO 18

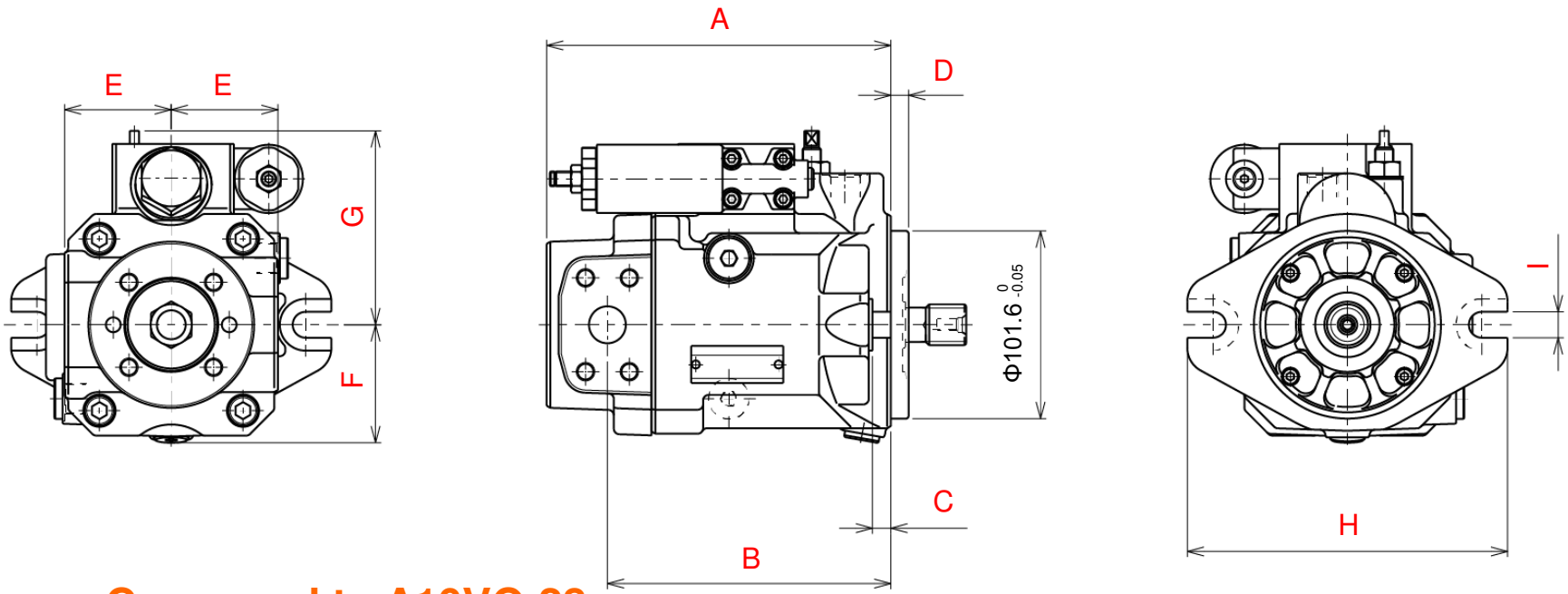
Compared to A10VO 18

Series	A	B	C	D	E	F
A10VO 18	170	7.8	56.5	63	122	136
A3HM18	176	6.4	58	70	98	130

Comparison of Dimensions [A10VO 28 ⇔ A3HM28]

YUKEN
Living with Hydraulics

P1021-E



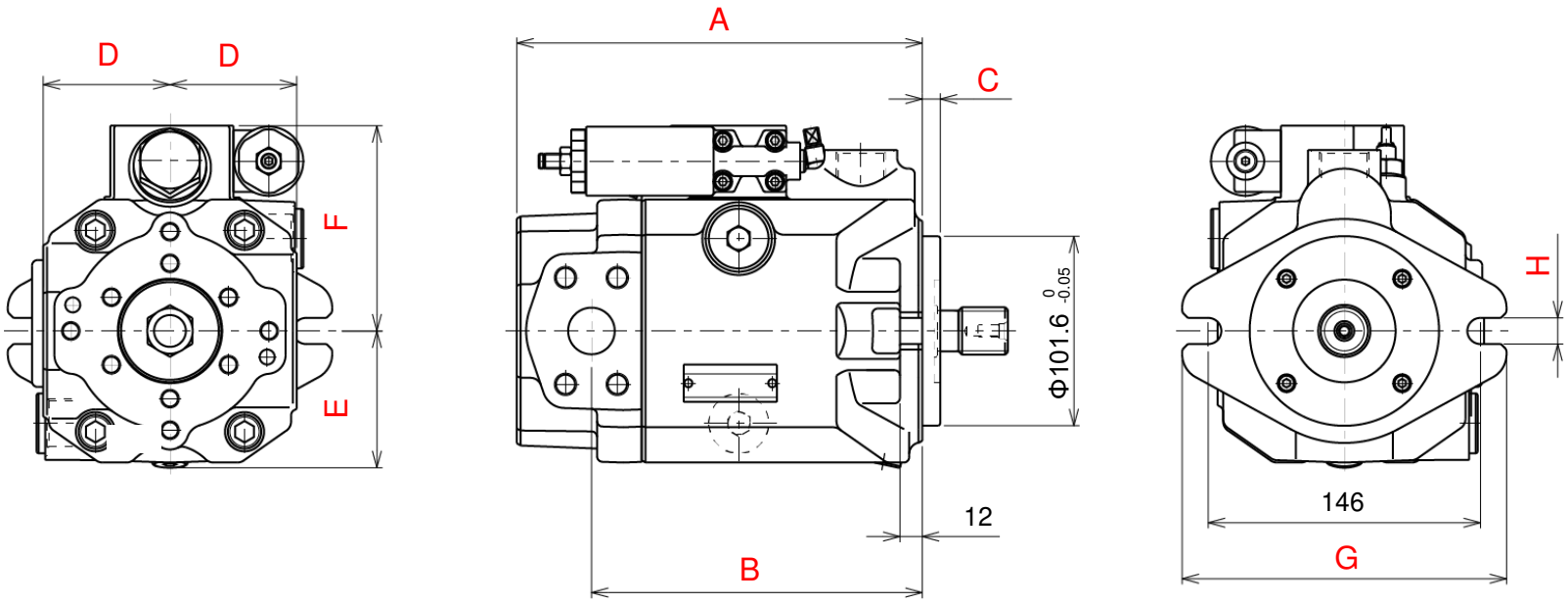
Compared to A10VO 28

Series	A	B	C	D	E	F	G	H	I
A10VO 28	Max. 209.5	160	12	9.5	66	73	123.5	172	14.3
A3HM 28	187	154	10	9.7	58	64	105	174	14

Comparison of Dimensions [A10VO 45 ⇔ A3HM45]

YUKEN
Living with Hydraulics

P1021-E



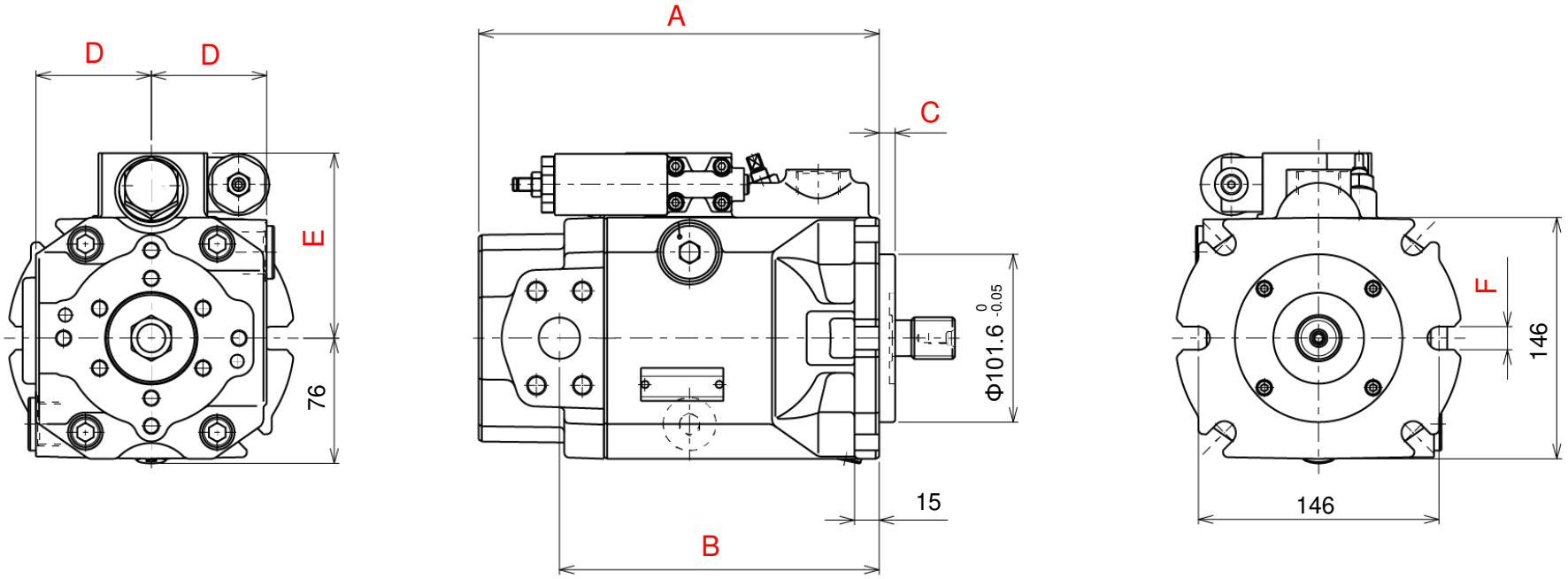
Compared to A10VO 45

Series	A	B	C	D	E	F	G	H
A10VO 45	Max. 220.5	178	9.5	90	68.5	131.5	172	14.3
A3HM 45	217.5	177.5	9.7	68	73.5	110	174	14

Comparison of Dimensions [A10VO 63(C) ⇔ A3HM63]

YUKEN
Living with Hydraulics

P1021-E



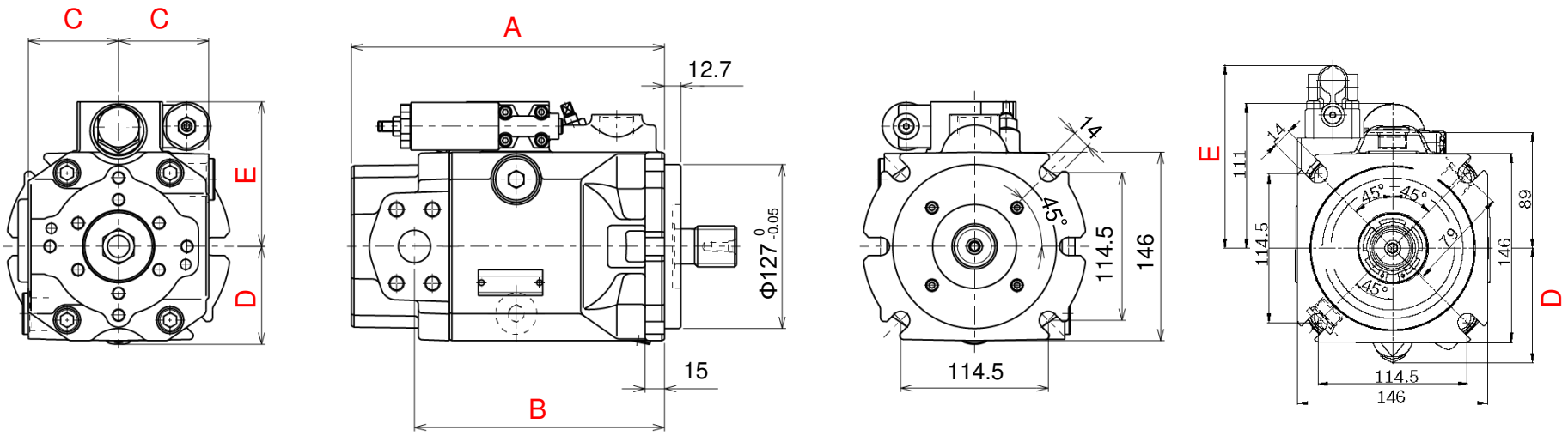
Compared to A10VO 63(C)

Series	A	B	C	D	E	F
A10VO 63(C)	239.5	201.5	9.5	72	140.4	14.3
A3HM63	243	194	9.7	70	112	14

Comparison of Dimensions [A10VO 63(D) ⇔ A3HM63]

YUKEN
Living with Hydraulics

P1021-E



Ref: A10VO 63(D)

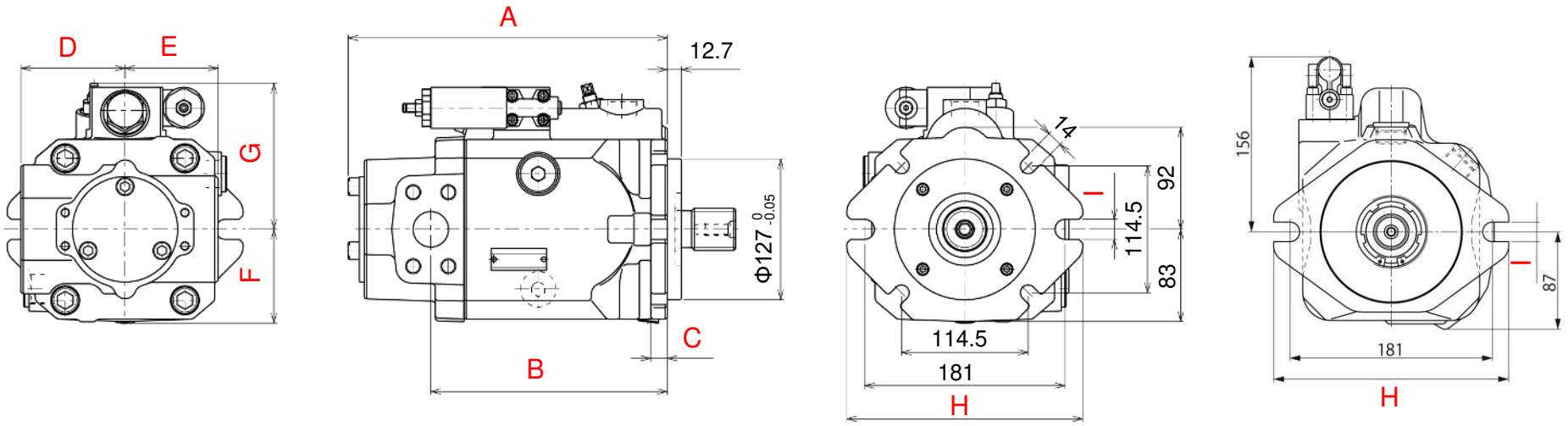
Compared to A10VO 63(D)

Series	A	B	C	D	E
A10VO 63(D)	239.5	201.5	72	88	140
A3HM63	243	194	70	76	112

Comparison of Dimensions [A10VO 85(C) ⇔ A3HM85]

YUKEN
Living with Hydraulics

P1021-E



Ref: A10VO 85(C)

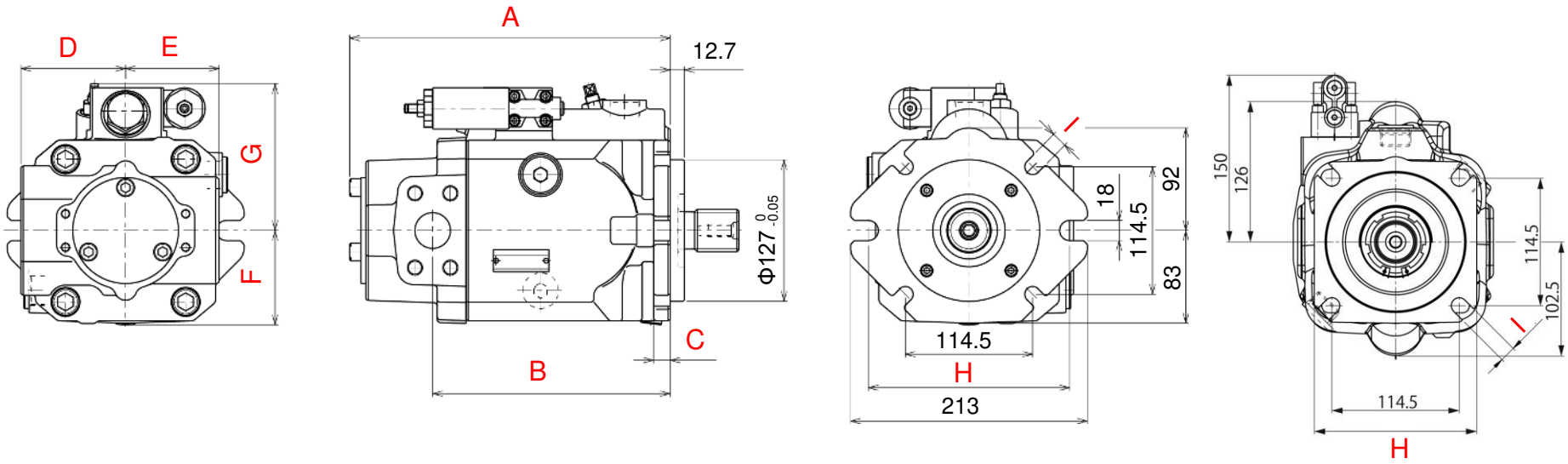
Compared to A10VO 85(C)

Series	A	B	C	D	E	F	G	H	I
A10VO 85(C)	277	235.5	20	95	85	87	156	210	17.5
A3HM 85	288	213.5	15	94	84	85	132	213	18

Comparison of Dimensions [A10VO 85(D) ⇔ A3HM85]

YUKEN
Living with Hydraulics

P1021-E



Ref: A10VO 85(D)

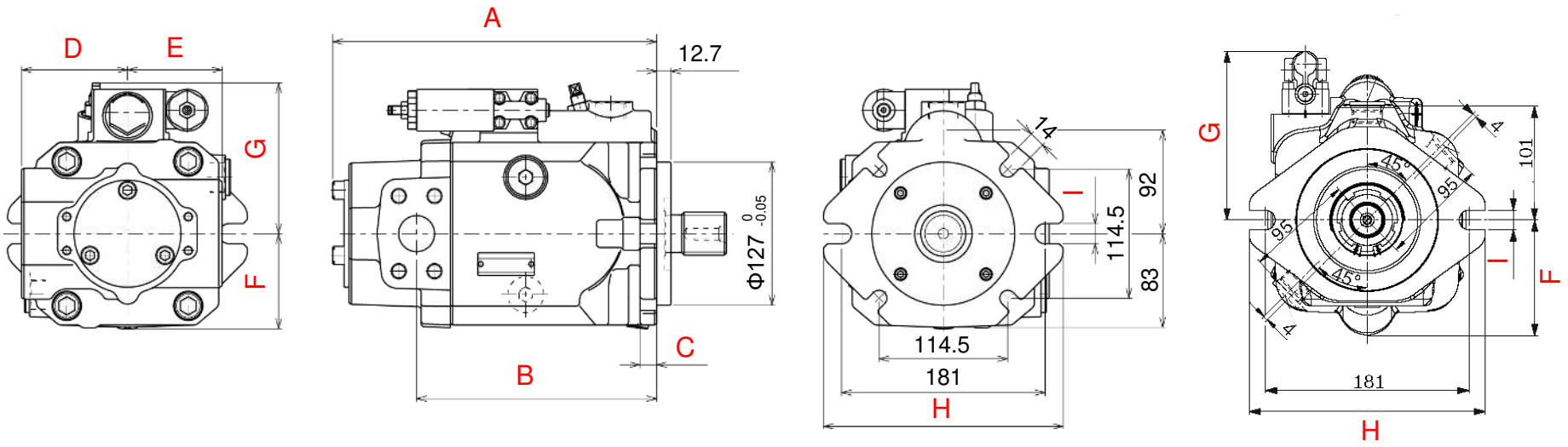
Compared to A10VO 85(D)

Series	A	B	C	D	E	F	G	H	I
A10VO 85(D)	277	235	20	95	85	102.5	150	146	14.3
A3HM 85	288	213.5	15	94	84	85	132	181	14

Comparison of Dimensions [A10VO 100(C) ⇔ A3HM100]

YUKEN
Living with Hydraulics

P1021-E



Ref.: A10VO 100(C)

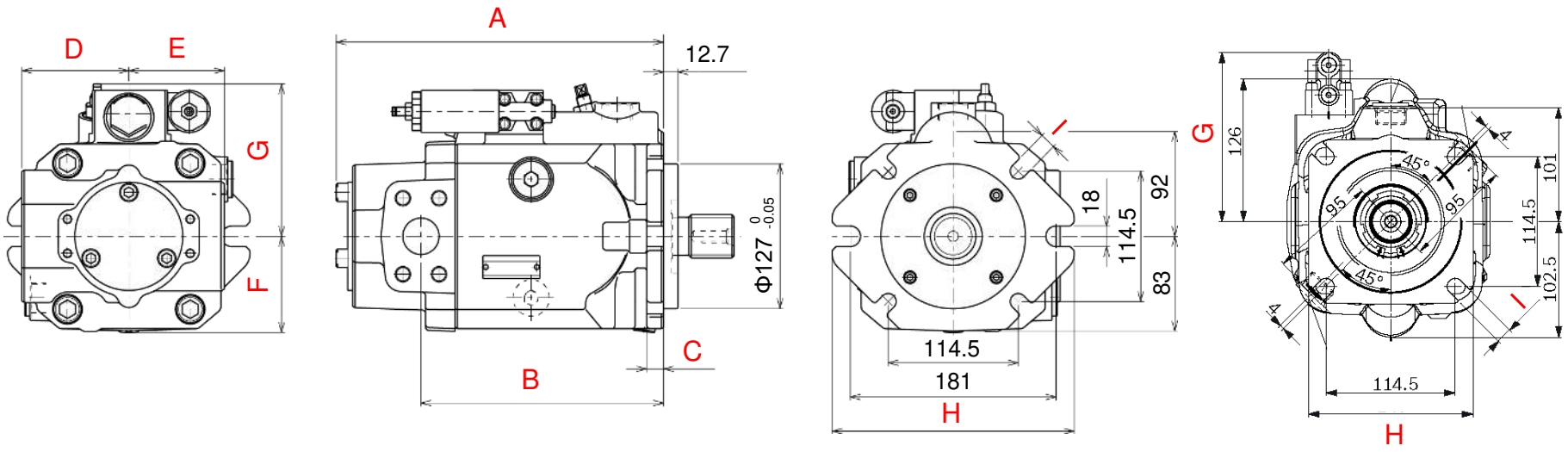
Compared to A10VO 100(C)

Series	A	B	C	D	E	F	G	H	I
A10VO 100(C)	277	235	20	95	85	102.5	150	210	17.5
A3HM 100	288	213.5	15	94	84	85	134	213	18

Comparison of Dimensions [A10VO 100(D) ⇔ A3HM100]

YUKEN
Living with Hydraulics

P1021-E



Ref.: A10VO 100(D)

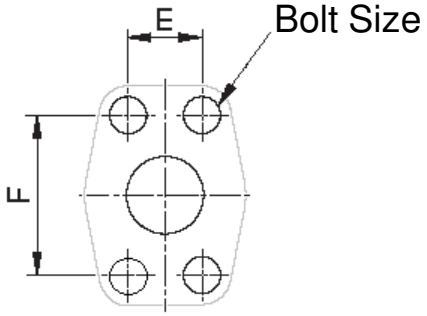
Compared to A10VO 100(D)

Series	A	B	C	D	E	F	G	H	I
A10VO 100(D)	277	235	20	95	85	87	150	146	14.3
A3HM 100	288	213.5	15	94	84	85	134	213	14

Comparison of Port Flange Elements

YUKEN
Living with Hydraulics

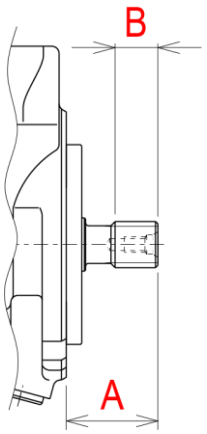
P1021-E



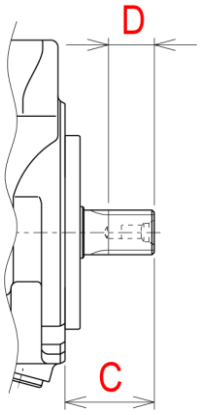
Series	Suction Port				Discharge Port			
	Port Size	Bolt Size	E	F	Port Size	Bolt Size	E	F
A10VO18,28	1 1/4	M10	30.2	58.7	3/4	M10	22.2	47.6
A3HM18,28							23.8	50.8
A10VO45	1 1/2	M12	35.7	69.9	1	M10	26.2	52.4
A3HM45						M12	27.8	57.2
A10VO63	2	M12	42.9	77.8	1	M10	26.2	52.4
A3HM63						M12	27.8	57.2
A10VO85,100	2 1/2	M12	50.8	88.9	1 1/4	M14	31.8	66.7
A3HM85,100								

Shaft Details (A10VO Series ⇔ A3HM Series)

YUKEN
Living with Hydraulics



Shaft Extension:
ISO 3019-1 based



Shaft Extension:
High Torque Transmission

Series	Size	Shaft Extension: ISO 3019-1 based		Shaft Extension: High Torque Transmission	
		A	B	C	D
A10VO18	11T-16/32DP	38	21	38	21
A3HM18		38	17.8	38	19.5
A10VO28	13T-16/32DP	41	25.1	41	25
A3HM28		41	20.2	41	22
A10VO45	15T-16/32DP	45.9	30	45.9	29.5
A3HM45		46	24.7	46	26.5
A10VO63	15T-16/32DP	55.4	39.5	55.4	38
A3HM63		46	24.7	46	26.5
A10VO85	17T-16/32DP	61.9	43.5	61.9	42
A3HM85		62	37.7	—	
A10VO100	17T-16/32DP	61.9	43.5	—	
A3HM100		62	37.7	—	

Yuken Group continues to grow over the span of 70 years

YUKEN

Living with Hydraulics

—Warnings—

Please, be informed that all product models, specifications, and parameters displayed in this material are as of present day and may be subject to design changes without prior notice.

All the information in the present material is provided in good faith and has been duly scrutinized. However under no circumstance shall we have any liability for the loss or damage incurred as a result of the use of this information.