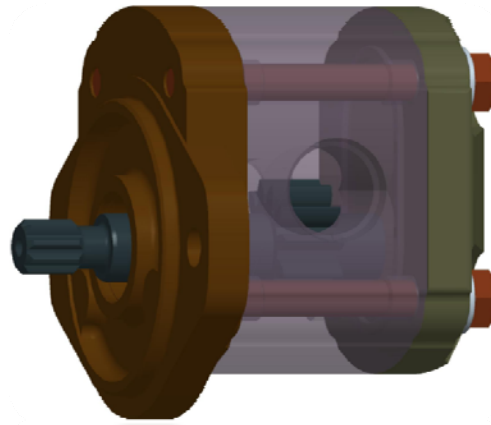


Dynamatic Technologies Ltd®

HIGH PRESSURE - 1DX Series

Hydraulic Gear Pump

Salient Features



The HIGH PRESSURE 1DX SERIES of Dynamatic® gear pumps, have been designed to specifically meet the demanding needs of modern high performance hydraulic systems. The 1DX series has optimized twelve teeth gears. They offer high-pressure rating, combined with low pressure-ripples and low-noise characteristics. The extensive range of displacements available provides close matching for a wide variety of applications.

The Salient features of the 1DX Series of pumps are detailed below.

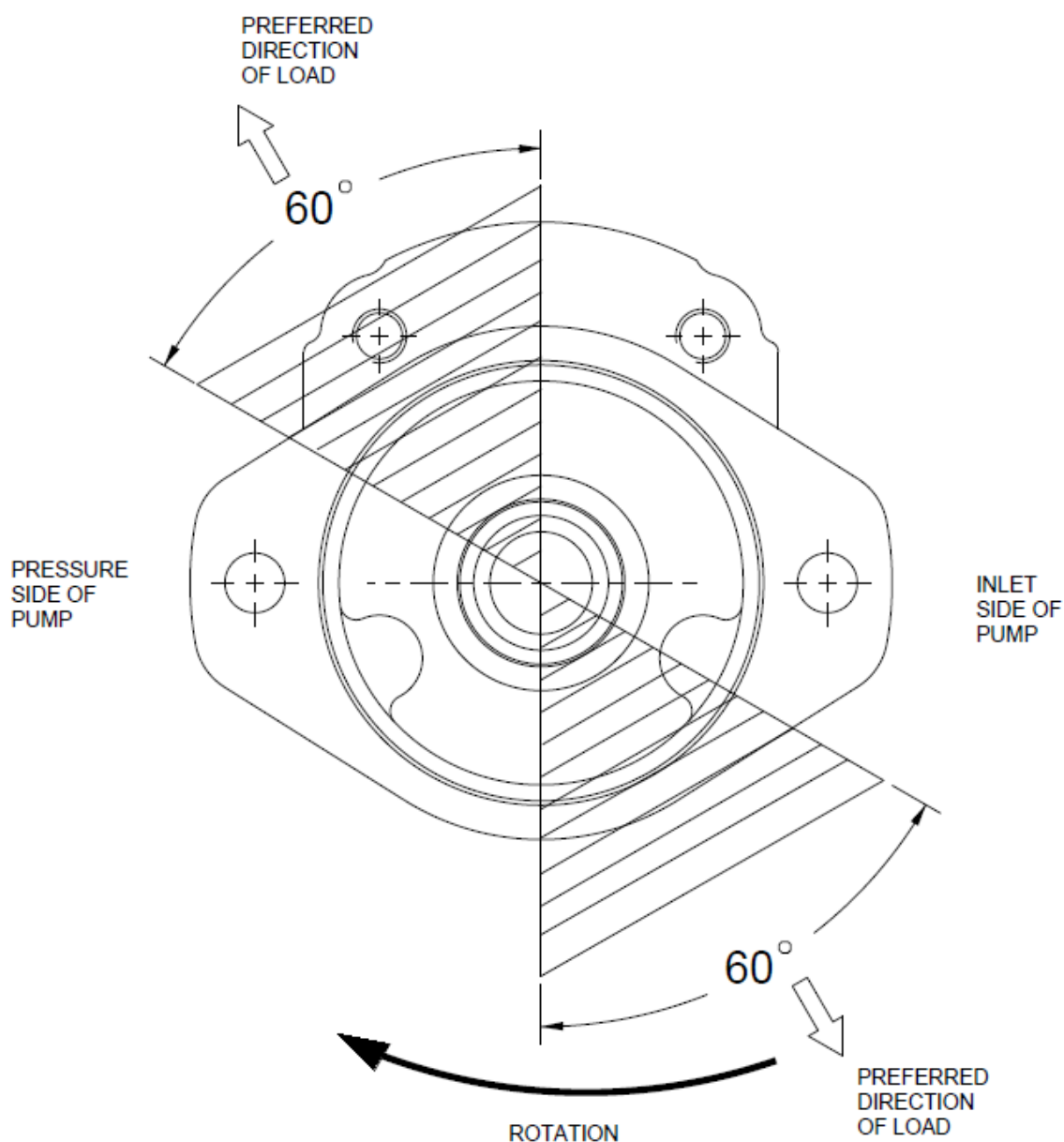
- Twelve-teeth gear design.
- Low pressure-ripple / system noise.
- Feasibility of common inlet ports, for multiple-unit configuration
- Rear (cover) mounted ports available.
- Available in Single, Double & Triple Tandem pump configuration

Pump Sizes: The 1DX Series of Pumps are available in sizes ranging from 4.5 to 28 cc per rev.

High Pressure: The 1DX Series of pumps have capability to withstand a maximum continuous operating pressure of 250 bar, to meet exacting requirements.

Quality: The use of statistical process control techniques during all phases of manufacturing, ensures the use of high quality and accurate components. All pumps in the 1DX series, are performance tested to achieve total quality.

Options: The 1DX Series includes various shaft types viz. parallel, taper and spline and also various types of mounting flanges, which provide optimum flexibility in connecting to the power source of the equipment.



PREFERRED DIRECTION OF EXTERNAL LOADING ON THE PUMP SHAFT



1DX Pump Performance Data:

1DX Series

Pump Type	Theoretical displacement cc/rev	Maximum Continuous Pressure P1*		Speed at P1 rpm		Typical Delivery at 1500 rpm at P1**	
		bar	psi	min	max	Max(lpm)	Min(lpm)
1DX030	3	250	3625	700	3500	4.5	3.8
1DX040	4	250	3625	700	3500	6	5.2
1DX050	5	250	3625	700	3500	7.5	6.7
1DX060	6	250	3625	700	3500	9	8.2
1DX070	7	250	3625	700	3500	10.5	9.6
1DX080	8	250	3625	700	3500	12	11.1
1DX090	9	250	3625	700	3500	13.5	12.6
1DX100	10	250	3625	700	3500	15	14.0
1DX110	11	250	3625	700	3500	16.5	15.5
1DX120	12	250	3625	700	3500	18	16.9
1DX130	13	250	3625	700	3500	19.5	18.5
1DX140	14	250	3625	700	3500	21	19.9
1DX150	15	250	3625	700	3500	22.5	21.4
1DX160	16	250	3625	700	3500	24	22.9
1DX170	17	250	3625	700	3500	25.5	24.3
1DX180	18	250	3625	700	3250	27	25.7
1DX190	19	250	3625	700	3250	28.5	27.2
1DX200	20	250	3625	700	3250	30	28.5
1DX210	21	250	3625	700	3000	31.5	30.2
1DX220	22	230	3336	700	3000	33	31.6
1DX230	23	230	3336	700	2750	34.5	33.1
1DX240	24	210	3045	700	2750	36	34.4
1Dx250	25	210	3045	700	2750	37.5	35.9
1DX260	26	200	2900	700	2250	39	37.5
1DX270	27	190	2755	700	2250	40.5	38.8
1DX280	28	190	2755	700	2250	42	40.2



1DX Pump Performance Graph:

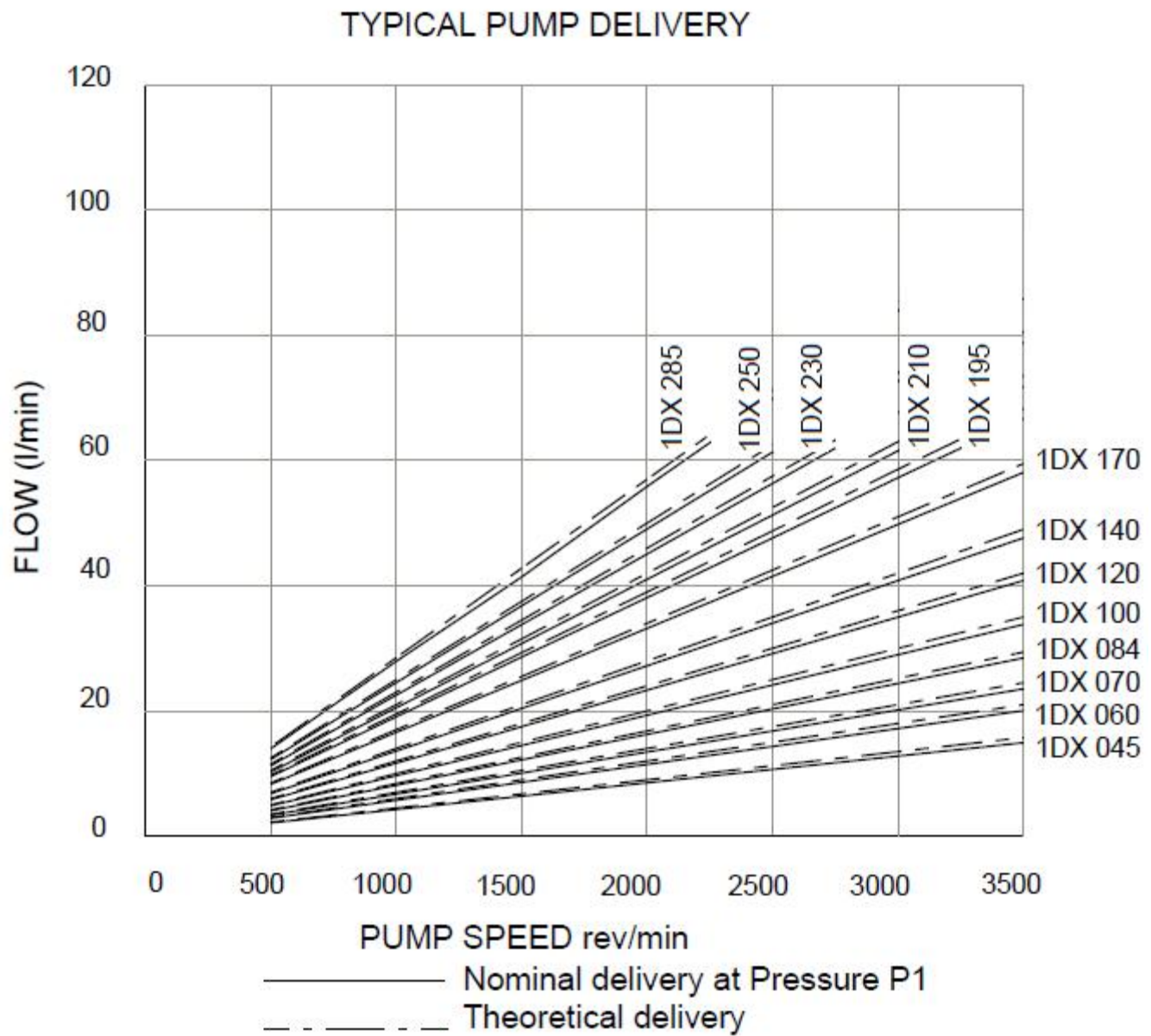
1DX290	29	180	2610	700	2250	43.5	41.7
1DX300	30	180	2610	700	2250	45	43.2
1DX310	31	170	2465	700	2250	46.5	44.7
1DX320	32	160	2320	700	2250	48	46.2
1DX330	33	160	2320	700	2250	49.5	47.7

*Pressure quoted is relief valve maximum pressure

** Typical delivery at maximum continuous pressure while using with SAE VG 68 grade oil at 50°C temperature.

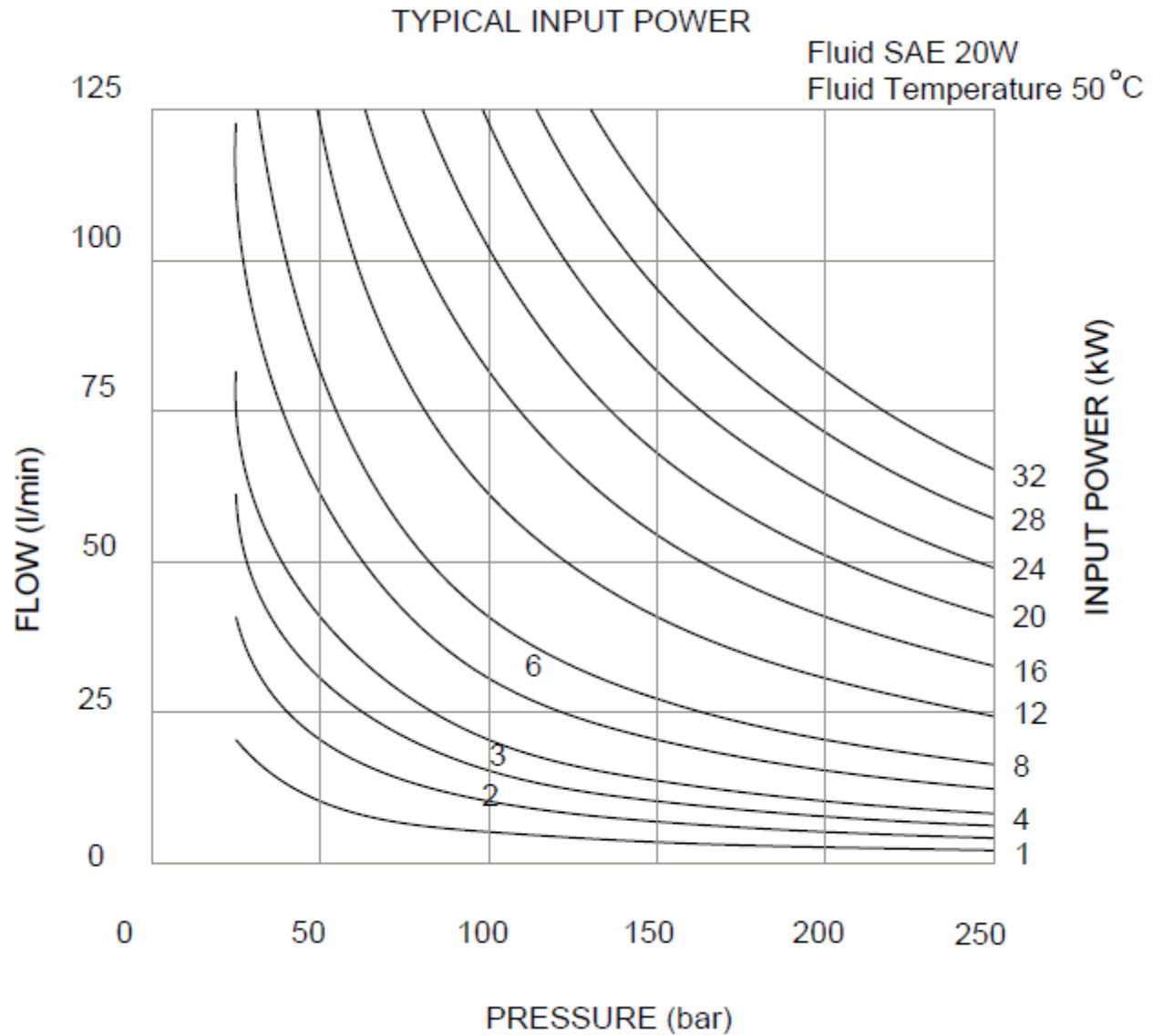


1DX Pump Performance Graph:





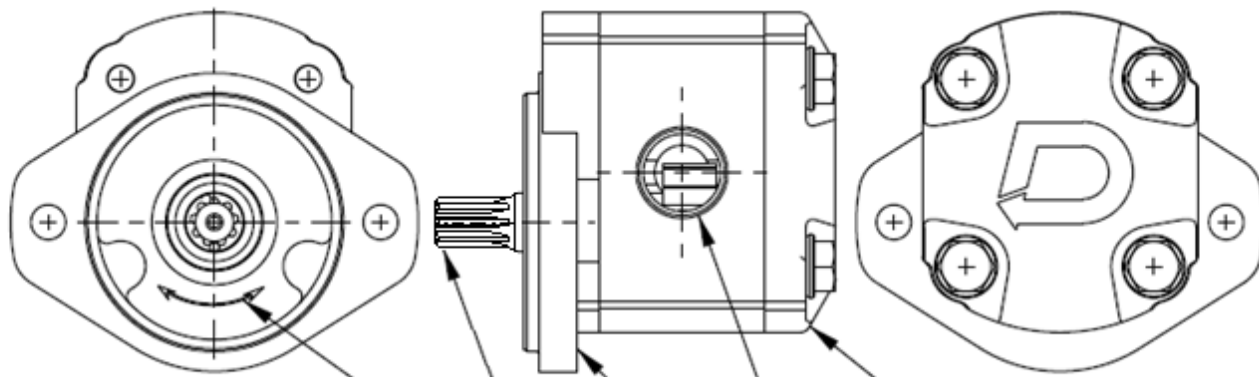
1DX Pump Codification:





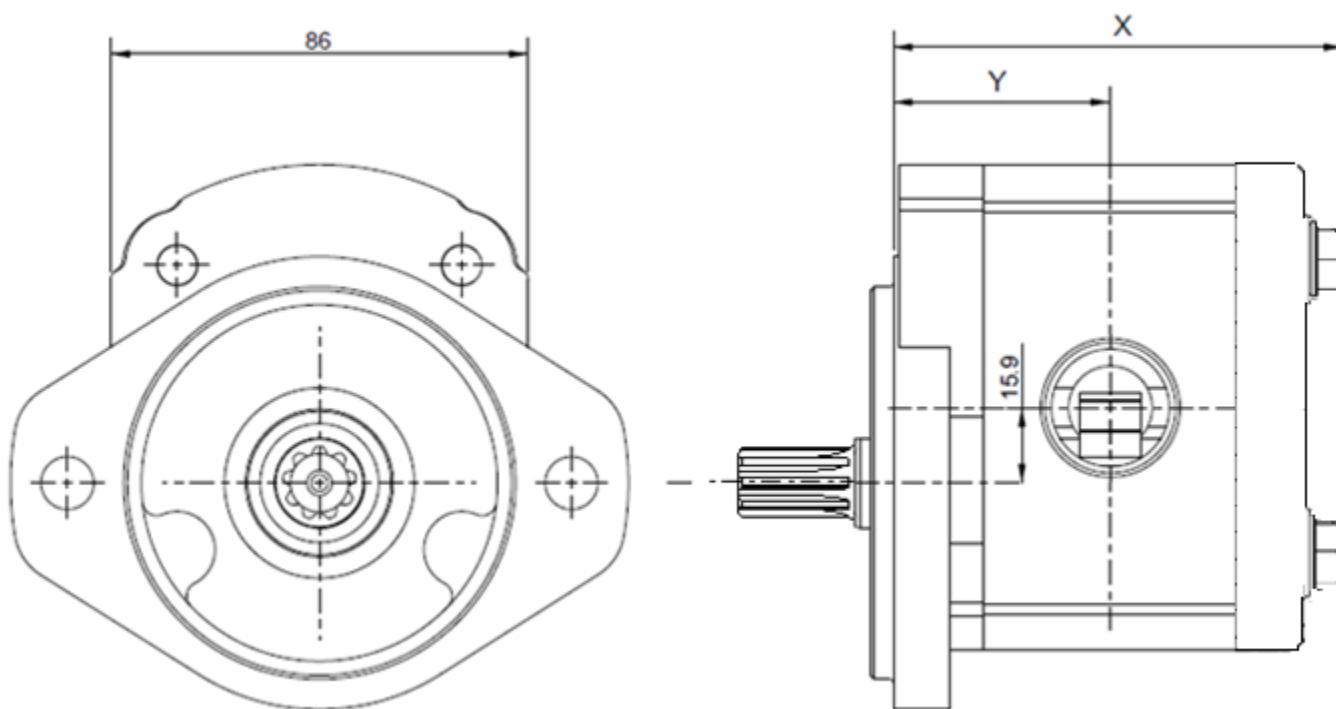
1DX Pump Installation Dimensions:

1DX Series



FRAME	FLOW	ROTATION	SHAFT	FLANGE	BODY PORT	COVER	SHAFT SEAL
1DX	----	----	----	----	----	----	----

FLOW		ROTATION		SHAFT CODE		FLANGE		BODY CODE		COVER		SEAL	
DISPLACEMENT CC/Rev	PUMP MODEL	A	ANTI CLOCK WISE	P	SAE PARALLEL	S	SAE 2 BOLTS	J	THREADED J PORT	B	STANDARD	N	NITRILE
4.5	045	C	CLOCK WISE	L	L SHAFT	K	K-TYPE	T	THREADED T PORT			V	VITON
6.0	060			K	K-TYPE			F	FLANGE TYPE PORT			G	2-NITRILE
7.0	070			T	TAPER SHAFT							W	2-VITON
8.4	084			S	SAE, 9T. SPLINED								
10.0	100			G	SAE, 11 T. SPLINED								
12.0	120												
14.0	140												
17.0	170												
19.5	195												
21.0	210												
23.0	230												
25.0	250												
28.5	285												



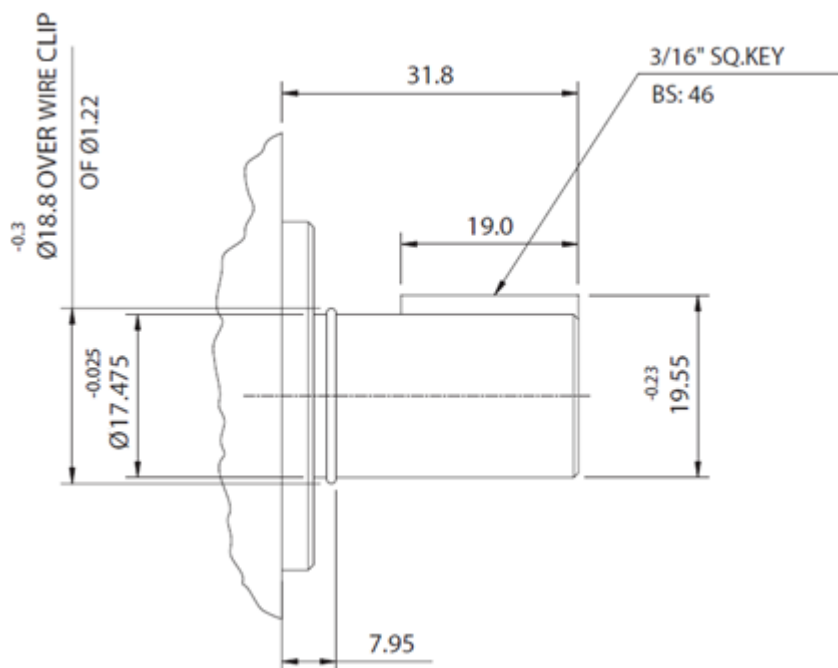
PUMP TYPE	Dim. 'Y'	Dim. 'X'	PUMP TYPE	Dim. 'Y'	Dim. 'X'
1DX045	43.0	90	1DX170	58.3	120.6
1DX060	44.1	92.2	1DX195	60.2	124.4
1DX070	44.9	93.8	1DX210	61.4	126.8
1DX084	46.0	96.0	1DX230	63.0	130
1DX100	47.3	98.6	1DX250	64.6	133.2
1DX120	48.9	101.8	1DX285	67.3	138.6
1DX140	50.5	105			

All dimensions are in mm unless otherwise specified

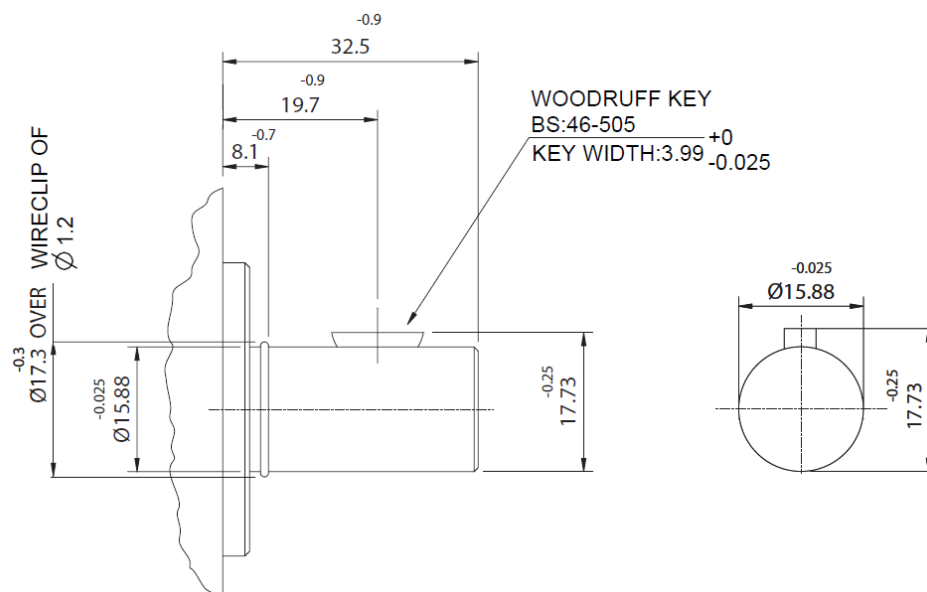
Shaft Code:

1DX Series

CODE-P



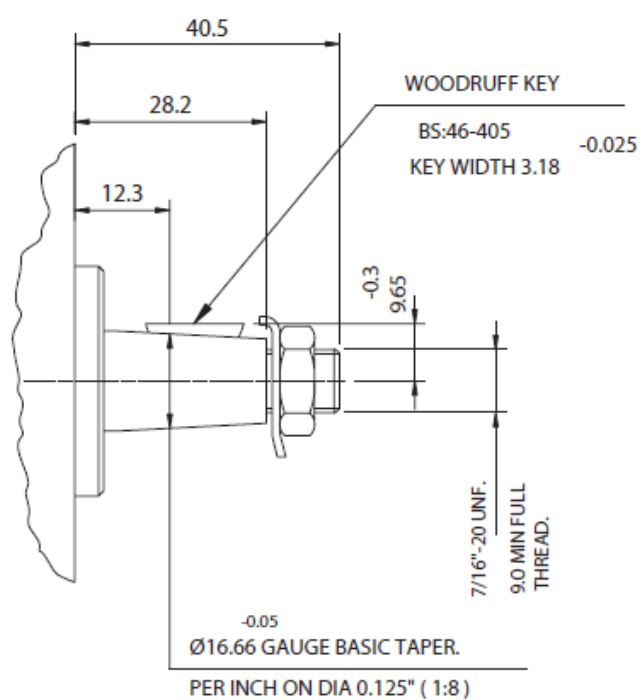
CODE-L



All dimensions are in mm unless otherwise specified

Shaft Code:

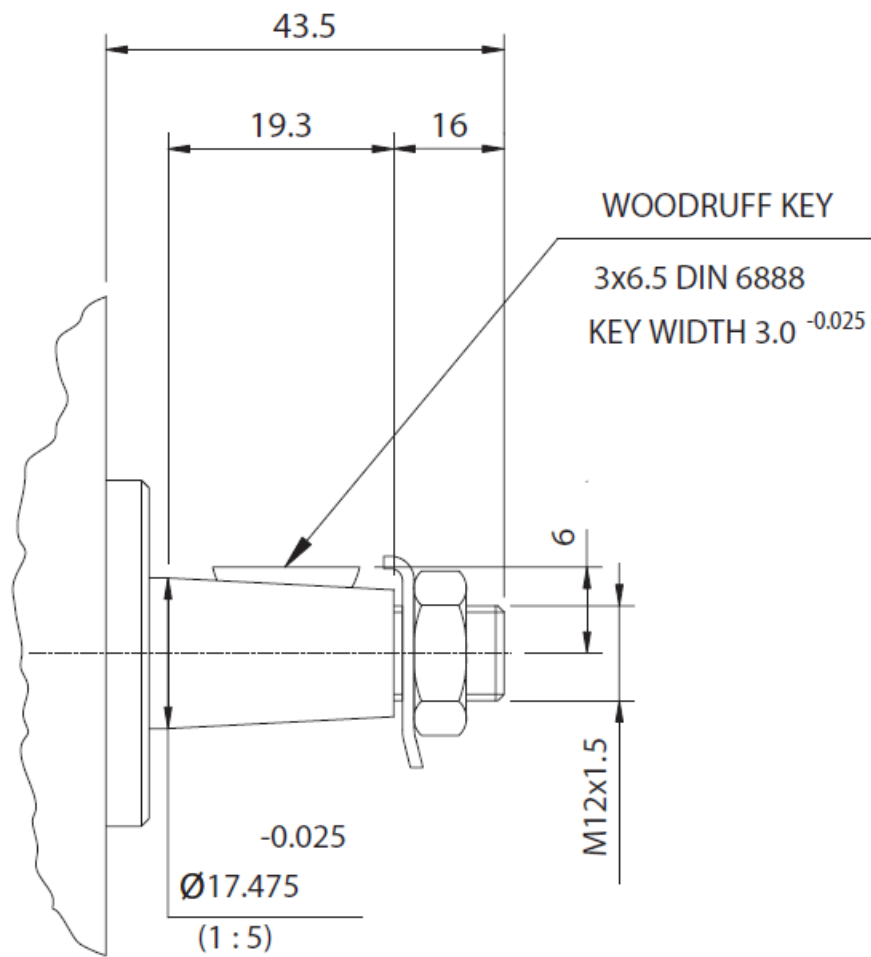
CODE-T



All dimensions are in mm unless otherwise specified

Shaft Code:

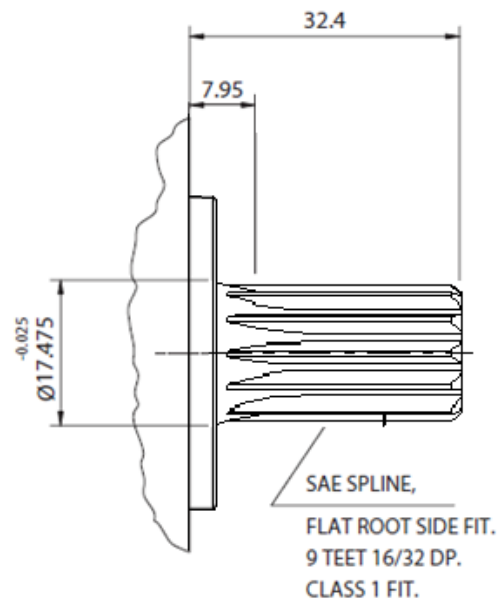
CODE-K



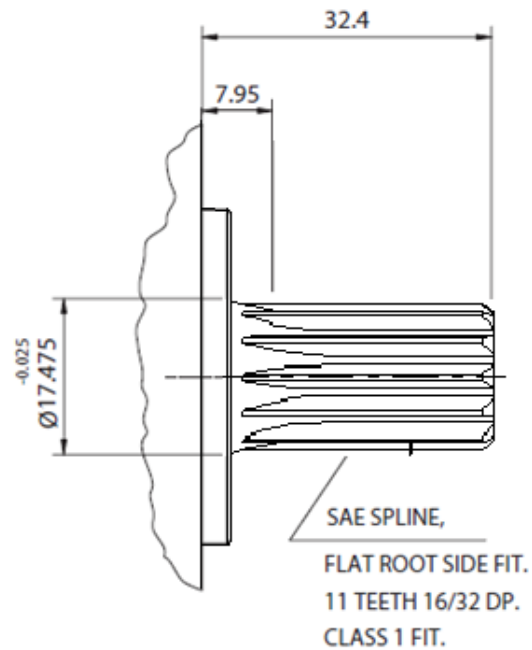
All dimensions are in mm unless otherwise specified

Shaft Code:

CODE-S



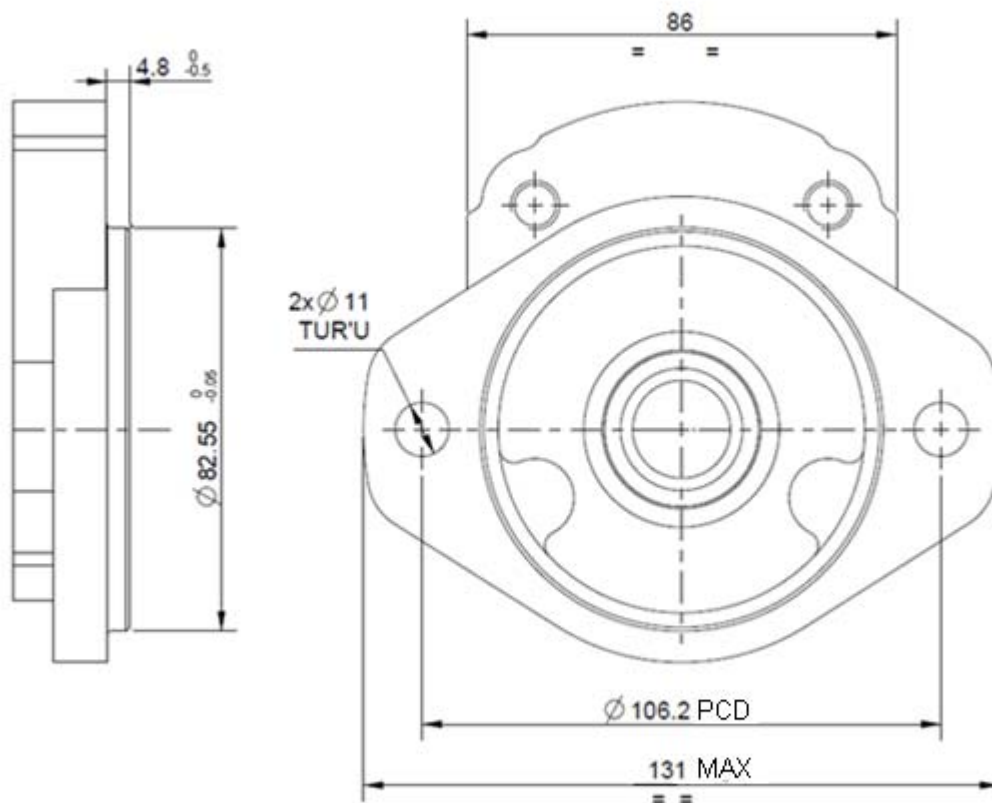
CODE-G



All dimensions are in mm unless otherwise specified

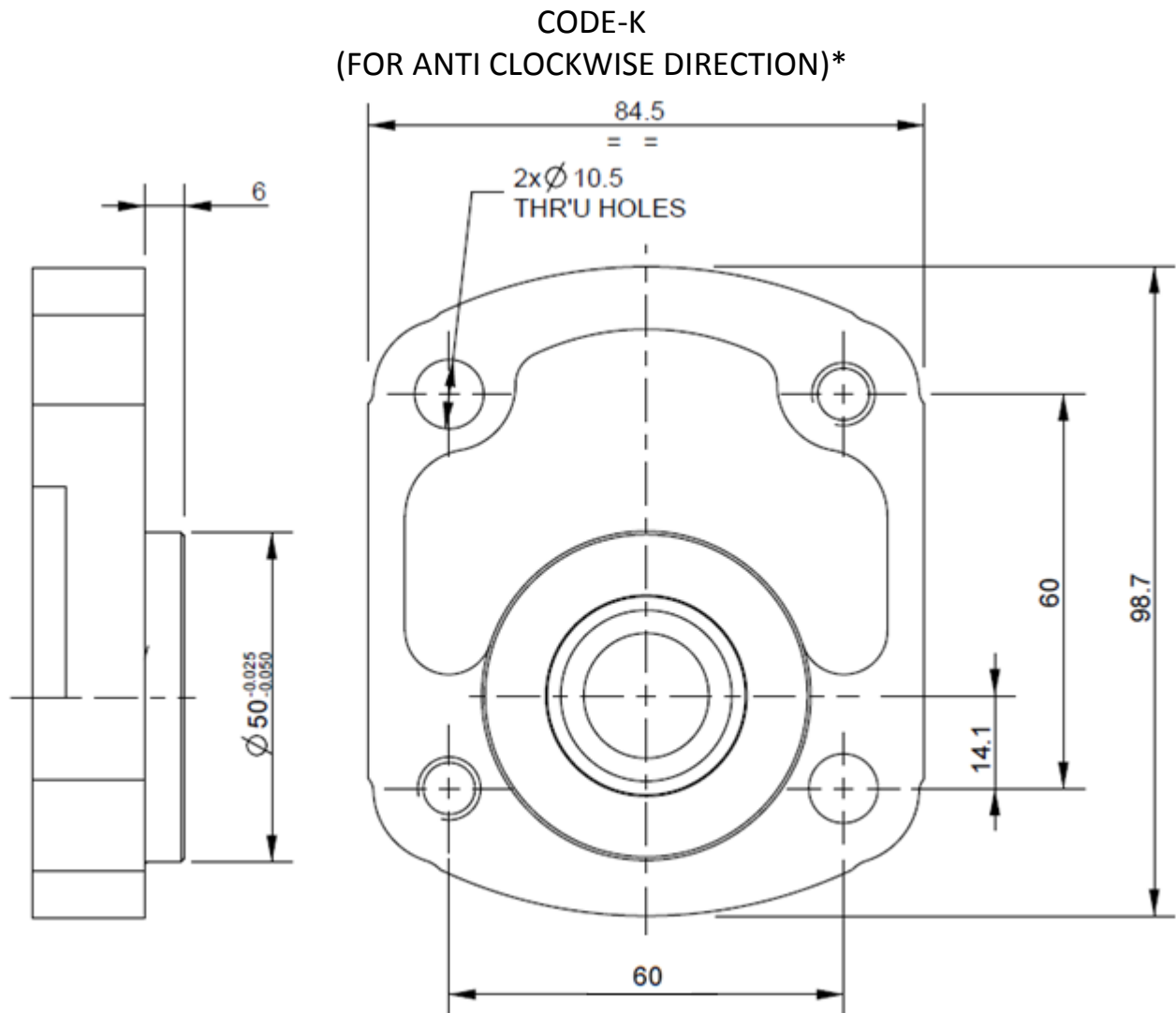
Mounting Flange Details:

CODE-S
SAE 2 BOLTS



All dimensions are in mm unless otherwise specified

Mounting Flange Details:



*FOR CLOCKWISE DIRECTION, THE POSTION OF THROUGH HOLES & TAPPED HOLES ARE TO BE INTERCHANGED

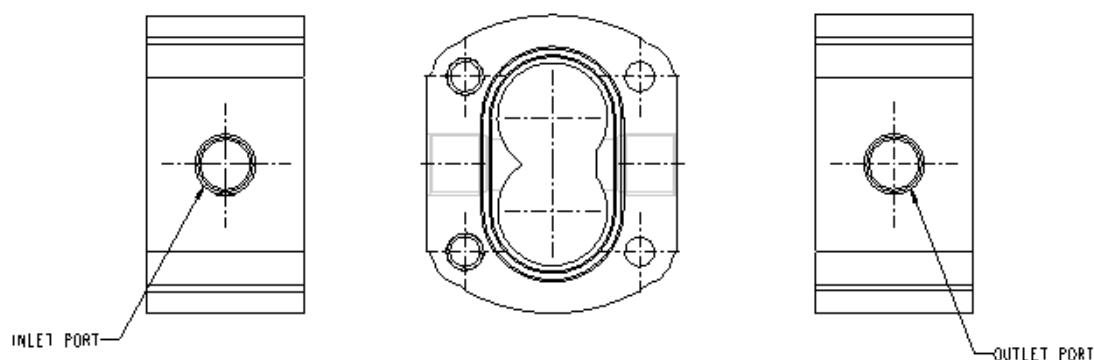
All dimensions are in mm unless otherwise specified

Body port details:

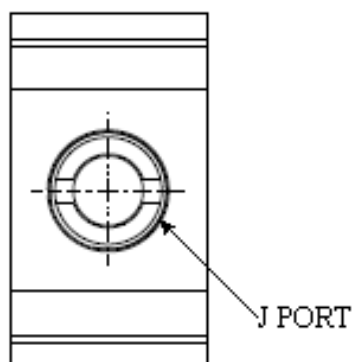
Available Body Port Details for different flows:

SL.NO	PUMP CAPACITY	PORT TYPES	
		CODE-T	CODE-J
1	1DX045 TO 1DX100		
	INLET	1/2"-BSP	1-1/16"-12 UN
	OUTLET	1/2"-BSP	7/8"-14 UNF
2	1DX120 TO 1DX285		
	INLET	3/4"-BSP	1-5/16"-12 UN
	OUTLET	3/4"-BSP	1-1/16"-12 UN

I PORT DETAILS

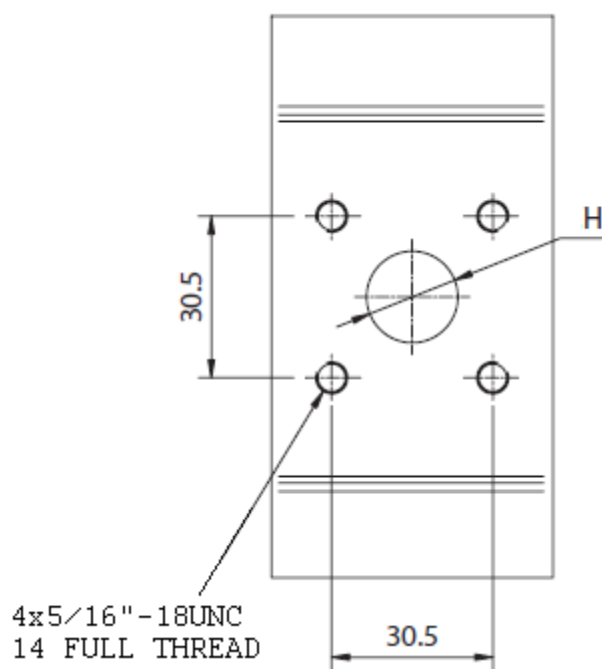


J-PORT



Body port details:

CODE-F



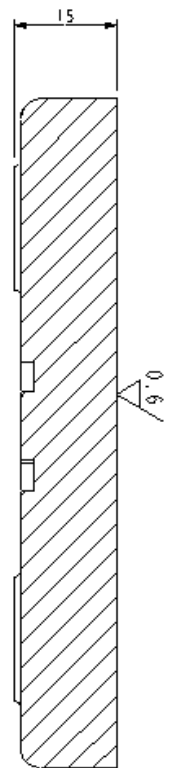
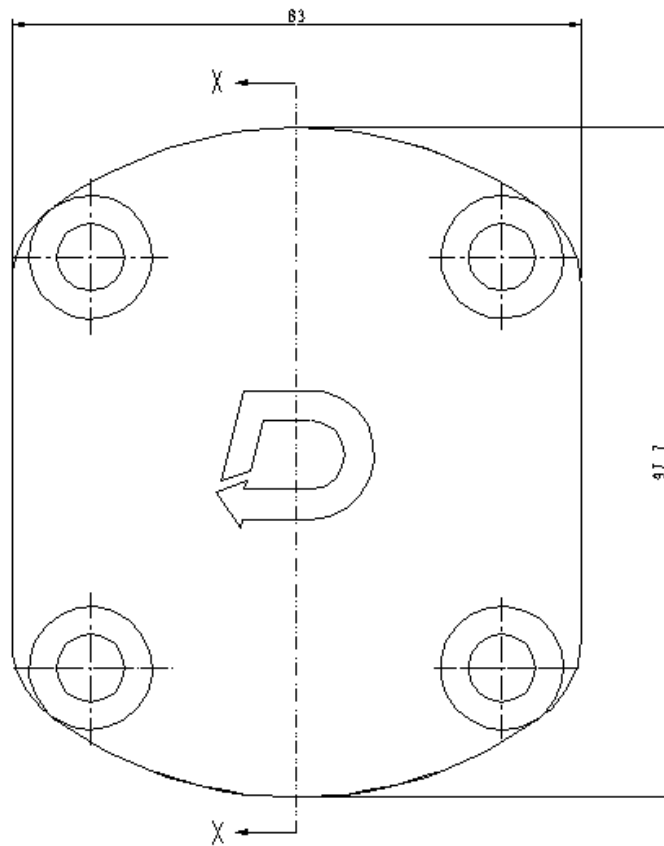
SL NO	PUMP CAPACITY	DIA:H ^{+0.1}
1	FOR 1DX045 TO 1DX100	17.3
2	FOR 1DX120 TO 1DX285	20.3

*INLET & OUTLET PORTS ARE IDENTICAL

All dimensions are in mm unless otherwise specified

End cover plate:

CODE-B



SECTION X-X

All dimensions are in mm unless otherwise specified