

XA_i series

the *intelligent* pump - SAE version

fixed displacement bent axis design



The compact size envelope of XA_i pumps, together with their technology, means they can be installed in environments with little space available, and be used at relatively high rotating speeds.

ADVANTAGES

- ▶ Pump automatically sets to required direction of rotation
- ▶ Mounting and start-up, easier than ever !

CHARACTERISTICS

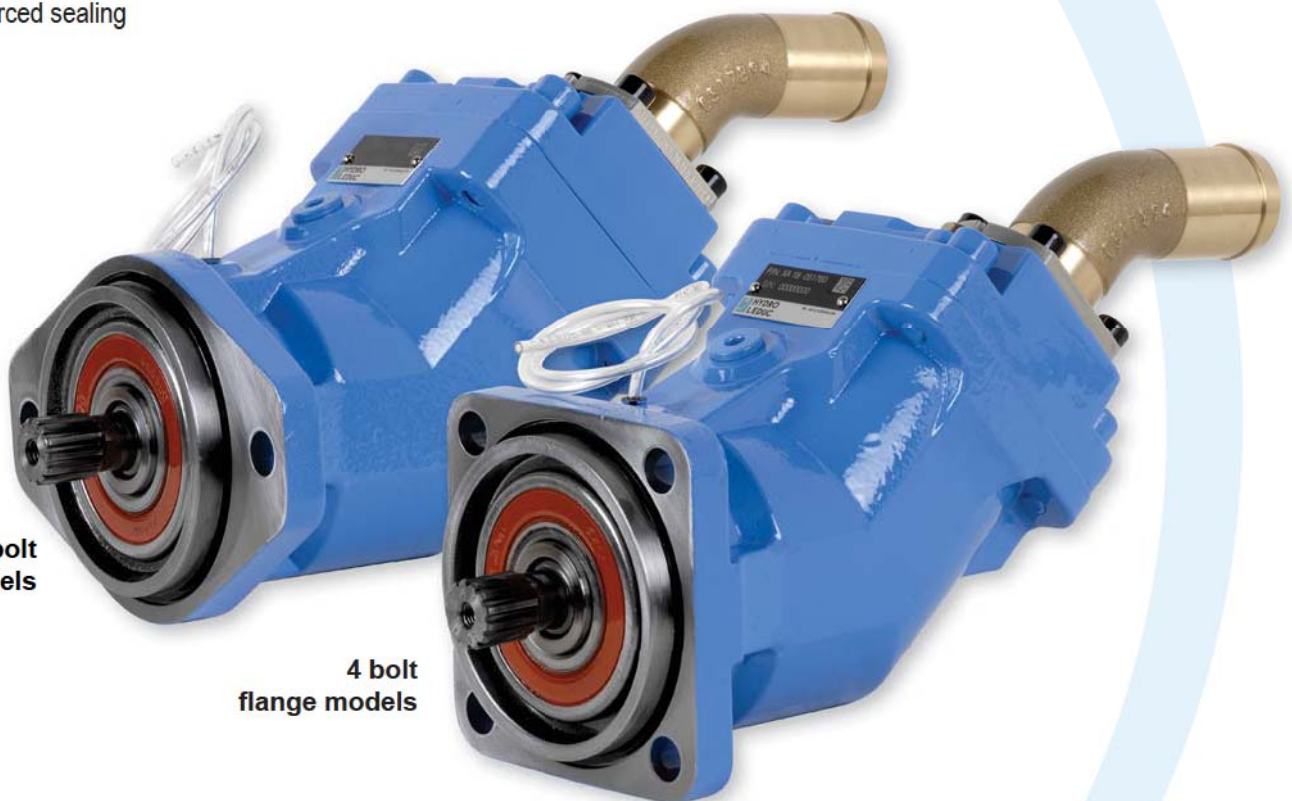
- 7 pistons
- original idea for plate - barrel synchronisation
- use of materials with high mechanical resistance
- reinforced sealing

■ 10 models:

- from 18 to 63 cc/rev (1.1 to 3.84 cu.in/rev)
- 380 bar (5511 psi) continuous working pressure
- 420 bar (6092 psi) peak pressure
- maximum speed from 2300 to 2900 rpm

2 bolt
flange models

4 bolt
flange models



Characteristics - XA $\dot{\iota}$ SAE version

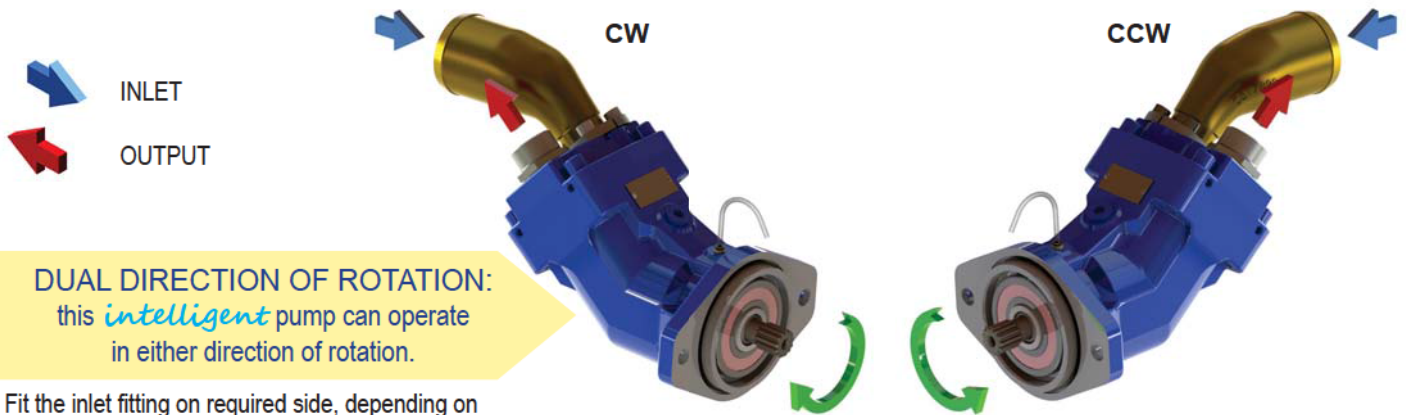
► 2 bolt flange - SAE J744

Pump reference	Displac. Cu.in/rev (cc/rev)	Maximum continuous pressure psi (bar)	Maximum intermittent peak pressure psi (bar)	Maximum rotating speed at absolute pressure 14.51 psi / 1 bar rpm	Max. torque absorbed at 5511 psi (380 bar) lbf ft (N.m)	Weight		Overhang torque	
						without inlet fitting lbs (kg)	with inlet fitting lbs (kg)	without inlet fitting lbf ft (N.m)	with inlet fitting lbf ft (N.m)
XA $\dot{\iota}$ 18 0524085	1.1 (18)	5511 (380)	6092 (420)	2900	84 (114)	22.15 (10.5)	23.14 (10.5)	7.04 (9.54)	7.35 (9.97)
XA $\dot{\iota}$ 25 0524095	1.52 (25)	5511 (380)	6092 (420)	2750	117 (159)	22.38 (10.15)	23.36 (10.6)	7.11 (9.64)	7.43 (10.07)
XA $\dot{\iota}$ 32 0524105	1.95 (32)	5511 (380)	6092 (420)	2700	150 (204)	26.34 (11.95)	27.67 (12.4)	8.81 (11.95)	9.15 (12.4)
XA $\dot{\iota}$ 41 0524115	2.5 (41)	5511 (380)	6092 (420)	2550	192 (261)	26.45 (12)	27.45 (12.45)	8.85 (12)	9.18 (12.45)

► 4 bolt flange - SAE J744

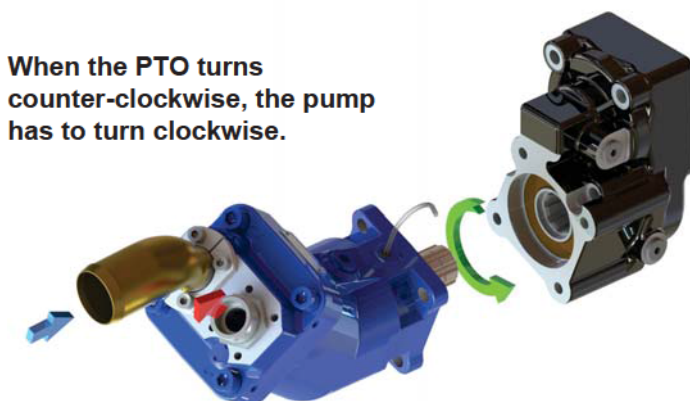
Pump reference	Displac. cu.in/rev (cc/rev)	Maximum continuous pressure psi (bar)	Maximum intermittent peak pressure psi (bar)	Maximum rotating speed at absolute pressure 14.51 psi / 1 bar rpm	Max. torque absorbed at 5511 psi (380 bar) lbf ft (N.m)	Weight		Overhang torque	
						without inlet fitting lbs (kg)	with inlet fitting lbs (kg)	without inlet fitting lbf ft (N.m)	with inlet fitting lbf ft (N.m)
XA $\dot{\iota}$ 18 0524080	1.1 (18)	5511 (380)	6092 (420)	2900	84 (114)	22.59 (10.25)	23.59 (10.7)	7.18 (9.73)	7.49 (10.16)
XA $\dot{\iota}$ 25 0524090	1.52 (25)	5511 (380)	6092 (420)	2750	117 (159)	22.71 (10.3)	23.70 (10.75)	7.19 (9.75)	7.53 (10.21)
XA $\dot{\iota}$ 32 0524100	1.95 (32)	5511 (380)	6092 (420)	2700	150 (204)	26.68 (12.1)	27.67 (12.55)	8.92 (12.1)	9.26 (12.55)
XA $\dot{\iota}$ 41 0524110	2.5 (41)	5511 (380)	6092 (420)	2550	192 (261)	26.78 (12.15)	27.78 (12.6)	8.96 (12.15)	9.29 (12.6)
XA $\dot{\iota}$ 50 0524360 XA $\dot{\iota}$ 50 0524365	3.07 (50.3)	5511 (380)	6092 (420)	2450	234 (318)	26.89 (12.2)	27.89 (12.65)	9.45 (12.81)	9.80 (13.28)
XA $\dot{\iota}$ 63 0524120 XA $\dot{\iota}$ 63 0524125	3.84 (63)	5511 (380)	6092 (420)	2300	295 (401)	27.01 (12.25)	28 (12.7)	9.49 (12.86)	9.83 (13.33)

XA $\dot{\iota}$ - SAE series

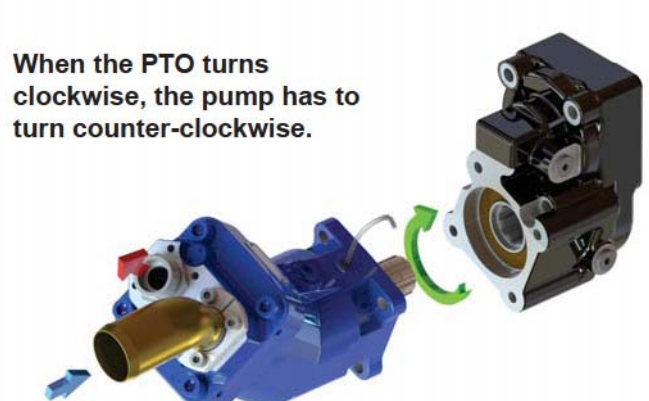


DUAL DIRECTION OF ROTATION:
this *intelligent* pump can operate in either direction of rotation.

Fit the inlet fitting on required side, depending on the direction of rotation of the PTO, and the pump will set itself accordingly.

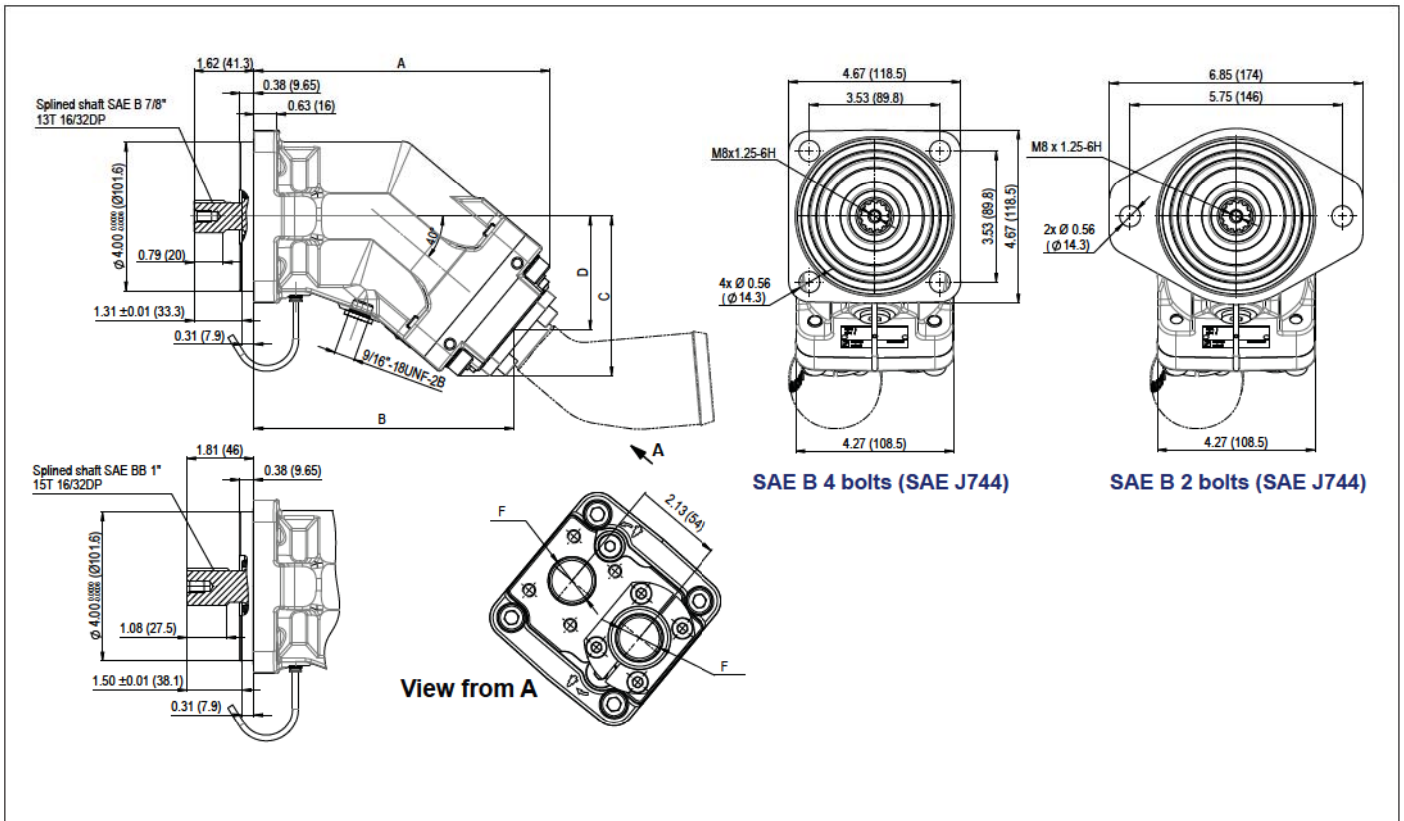


When the PTO turns counter-clockwise, the pump has to turn clockwise.



When the PTO turns clockwise, the pump has to turn counter-clockwise.

XAi SAE version - Dimensions



Dimensions in inches (mm).

► SAE B - 2 bolt mounting configurations (SAE J744)

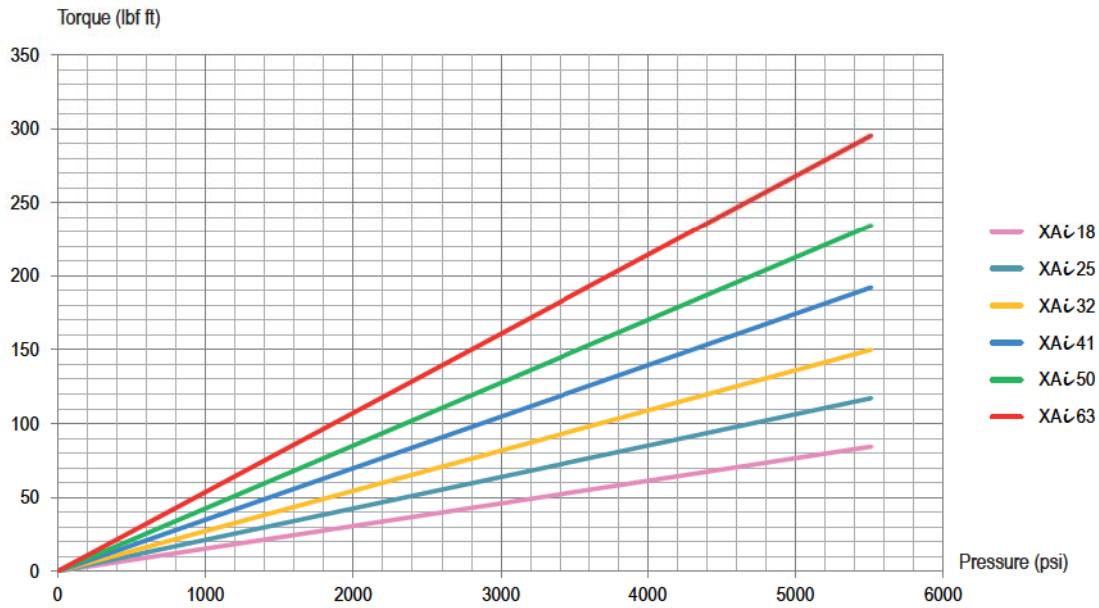
Reference	A	B	C	D	F	Shaft
XAi 18 0524085	7.76 (197.2)	6.79 (172.5)	4.08 (103.7)	2.87 (73)	3/4"-16 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 25 0524095	7.76 (197.2)	6.79 (172.5)	4.08 (103.7)	2.87 (73)	3/4"-16 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 32 0524105	8 (203.2)	7.03 (178.5)	4.28 (108.7)	3.03 (77)	3/4"-16 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 41 0524115	8 (203.2)	7.03 (178.5)	4.28 (108.7)	3.03 (77)	1 1/16"-12 UNF-2B	SAE B 7/8" 13T-16/32DP

► SAE B - 4 bolt mounting configurations (SAE J744)

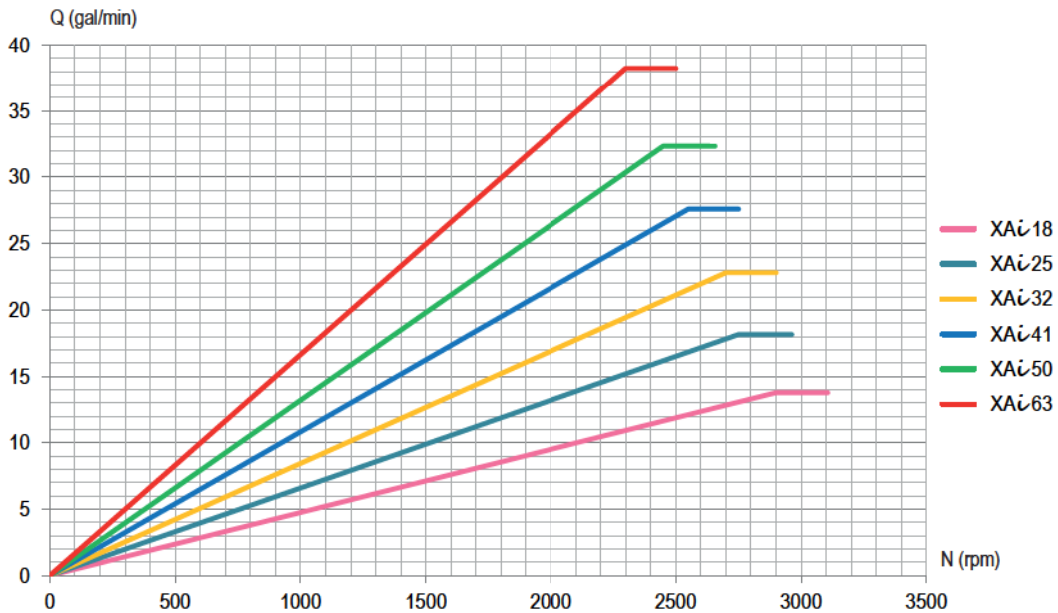
Reference	A	B	C	D	F	Shaft
XAi 18 0524080	7.76 (197.2)	6.79 (172.5)	4.08 (103.7)	2.87 (73)	3/4"-16 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 25 0524090	7.76 (197.2)	6.79 (172.5)	4.08 (103.7)	2.87 (73)	3/4"-16 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 32 0524100	8 (203.2)	7.02 (178.5)	4.28 (108.7)	3.03 (77)	3/4"-16 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 41 0524110	8 (203.2)	7.02 (178.5)	4.28 (108.7)	3.03 (77)	1 1/16"-12 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 50 0524360	8.45 (214.7)	7.48 (190)	4.65 (118.2)	3.4 (86.5)	1 1/16"-12 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 63 0524120	8.45 (214.7)	7.48 (190)	4.65 (118.2)	3.4 (86.5)	1 1/16"-12 UNF-2B	SAE B 7/8" 13T-16/32DP
XAi 50 0524365	8.45 (214.7)	7.48 (190)	4.65 (118.2)	3.4 (86.5)	1 1/16"-12 UNF-2B	SAE BB 1" 15T-16/32DP
XAi 63 0524125	8.45 (214.7)	7.48 (190)	4.65 (118.2)	3.4 (86.5)	1 1/16"-12 UNF-2B	SAE BB 1" 15T-16/32DP

Dimensions in inches (mm).

► Torque absorbed as a function of pump output pressure

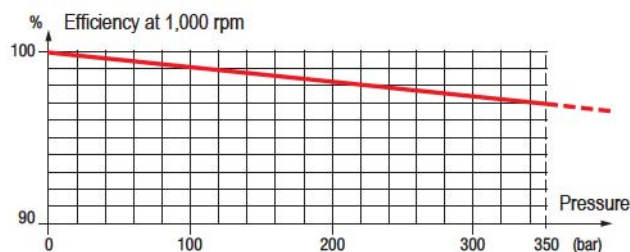


► Flow as a function of rotating speed



► Volumetric efficiency

These graphs are the results of testwork done in HL R&D laboratory, on a specific test bench, with an ISO 46 fluid at 77°F/25°C (100 cSt), the pump is fitted with a 2" inner diameter HL inlet fitting and tank situated slightly above pump.

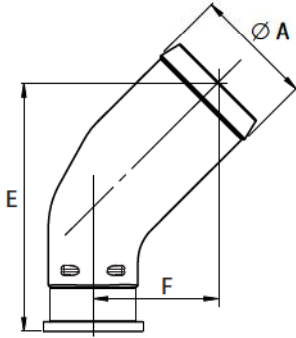




INLET FITTINGS FOR XAi PUMPS

All XAi pumps are supplied with their inlet fitting.
Please specify required fitting from the choice below when ordering.

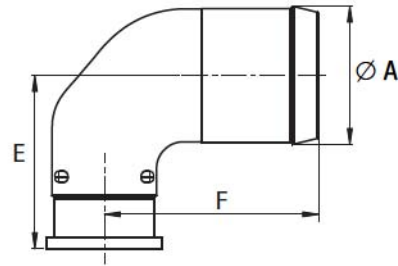
45° elbow fittings



Reference	Ø hose	Ø A	E	F
0517894	1 ½"	1.54 (39.1)	3.61 (91.7)	1.84 (46.7)
0517896	42	1.69 (43.0)	3.61 (91.7)	1.84 (46.7)
0517897	1 ¾"	1.81 (46.0)	3.61 (91.7)	1.84 (46.7)
0517893	2"	2.04 (51.8)	4.27 (108.4)	2.14 (54.4)
0517892	2 ½"	2.54 (64.5)	4.93 (125.2)	2.45 (62.2)

Dimensions in inches (mm).

90° elbow fittings



Reference	Ø hose	Ø A	E	F
0517947	1 ½"	1.54 (39.1)	2.31 (58.6)	3.13 (79.5)
0517946	2"	2.04 (51.8)	2.56 (64.9)	3.16 (80.2)
0517945	2 ½"	5.54 (64.5)	2.81 (71.3)	3.44 (87.5)

Dimensions in inches (mm).

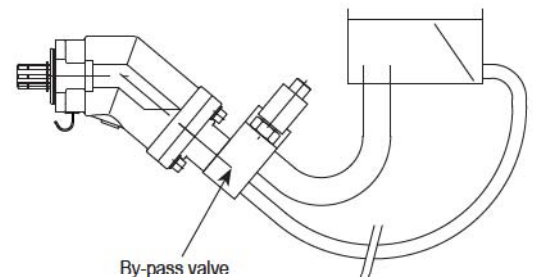
BY-PASS VALVE FOR XAi PUMPS

For XAi pump applications where the pump is driven by a continuous running PTO (PTO which cannot be disengaged), HYDRO LEDUC offers a by-pass valve which is fitted onto the back of the pump.

This solution allows the continuous running of the pump:

- without creating problems of fluid overheating;
- without affecting pump service life;
- with no modifications necessary to the hydraulic circuit of the equipment.

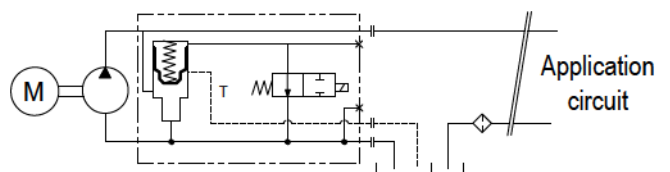
LEDUC part number	12 Volts	24 Volts
XAi 18 to XAi 32	RPA32 0518755	RPA32 0521710
XAi 41 to XAi 63	BPA63 0518520	BPA63 0521715



► How does it work ?

The by-pass valve is a 12 or 24 Volts solenoid valve.

When not activated, it enables pump output to link up to pump inlet.
When it is activated, the pump operates normally (output flow).



► XA $\dot{\iota}$ overhang torque with by-pass

2 bolt flange - SAE J744

Pump reference	Weight		Overhang torque	
	without inlet fitting lbs (kg)	with inlet fitting lbs (kg)	without inlet fitting lbf ft (N.m)	with inlet fitting lbf ft (N.m)
XA $\dot{\iota}$ 18 - 2 bolts	28.33 (12.85)	29.32 (13.30)	9.87 (13.38)	12.51 (16.96)
XA $\dot{\iota}$ 25 - 2 bolts	28.44 (12.90)	29.43 (13.35)	12.13 (16.45)	12.55 (17.02)
XA $\dot{\iota}$ 32 - 2 bolts	32.41 (14.70)	33.40 (15.15)	14 (18.98)	14.43 (19.56)
XA $\dot{\iota}$ 41 - 2 bolts	32.52 (14.75)	33.51 (15.20)	10.36 (14.04)	14.47 (19.62)

4 bolt flange - SAE J744

Pump reference	Weight		Overhang torque	
	without inlet fitting lbs (kg)	with inlet fitting lbs (kg)	without inlet fitting lbf ft (N.m)	with inlet fitting lbf ft (N.m)
XA $\dot{\iota}$ 18 - 4 bolts	28.77 (13.05)	29.76 (13.50)	12.27 (16.64)	12.69 (17.21)
XA $\dot{\iota}$ 25 - 4 bolts	28.77 (13.05)	29.76 (13.50)	12.27 (16.64)	12.69 (17.21)
XA $\dot{\iota}$ 32 - 4 bolts	32.74 (14.85)	33.73 (15.30)	14.14 (19.17)	14.57 (19.75)
XA $\dot{\iota}$ 41 - 4 bolts	32.85 (14.90)	33.84 (15.35)	14.19 (19.24)	14.62 (19.82)
XA $\dot{\iota}$ 50 - 4 bolts	32.63 (14.80)	33.62 (15.25)	14.79 (20.05)	15.24 (20.66)
XA $\dot{\iota}$ 63 - 4 bolts	32.74 (14.85)	33.73 (15.30)	14.84 (20.12)	15.29 (20.73)

► Dimensions with by-pass valve

Pump reference	A	B	C	D	E	F	G	H	J
XA $\dot{\iota}$ 18 / 25	11.43 (290.4)	8.81 (223.9)	8.00 (203.2)	5.20 (132.1)	4.53 (115)	3.84 (97.6)	3/4" - 16UNF - 2B	2.13 (54)	4.25 (108)
XA $\dot{\iota}$ 32	11.67 (296.5)	9.06 (230)	8.24 (209.2)	5.41 (137.3)	4.73 (120.1)	4.04 (102.7)	3/4" - 16UNF - 2B	2.13 (54)	4.25 (108)
XA $\dot{\iota}$ 41	11.67 (296.5)	9.06 (230)	8.24 (209.2)	5.41 (137.3)	4.73 (120.1)	4.04 (102.7)	1 1/16" - 16UNF - 2B	2.13 (54)	4.25 (108)
XA $\dot{\iota}$ 50 / 63	12.13 (308.2)	9.52 (241.7)	8.70 (221)	5.79 (147)	5.11 (129.9)	4.43 (112.5)	1 1/16" - 16UNF - 2B	2.13 (54)	4.25 (108)

Dimensions in inches (mm).

