



J&P HYDRAULICS CC
Hydraulic Marine and Industrial Suppliers



Commercial Shearing (Pty) Ltd




CONTARINI
Interpump Hydraulics International



HOF
Hydraulic Components



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Part Number	VALVES MONOBLOCK		01-01-2014 B
	<u>MB - 3 - TAK - BOK SERIES</u>		
	(45 LITRES FLOW RATE ALL PORTS 3/8" & 1/2" UP TO 3 BANK)		
MB-3/1S-3/18L/G-3/M3	MB - 3 / 1 S - 3 / 1 8 L / G - 3 / M 3	ONE SPOOL	
MB-3/2S-3/18L/G-3/M3	MB - 3 / 2 S - 3 / 1 8 L / G - 3 / M 3	TWO SPOOL	
MB-3/3S-3/18L/G-3/M3	MB - 3 / 3 S - 3 / 1 8 L / G - 3 / M 3	THREE SPOOL	
MB-3/4S-3/18L/G-3/M3	MB - 3 / 4 S - 3 / 1 8 L / G - 3 / M 3	FOUR SPOOL	
MB-3/5S-3/18L/G-3/M3	MB - 3 / 5 S - 3 / 1 8 L / G - 3 / M 3	FIVE SPOOL	
MB-3/6S-3/18L/G-3/M3	MB - 3 / 6 S - 3 / 1 8 L / G - 3 / M 3	SIX SPOOL	
	<u>POSSIBLE OPTIONS</u>		
4NN-04	POWER BEYOND POSSIBLE ; USE 1/4" NPT INHEX PLUG		
4B-06 + DW-06	CLOSED CENTER POSSIBLE ; USE ABOVE & 3/8" BSPP HEX NUT ADAPTOR & WASHER		
	<u>SPOOL TYPE</u>		
YLMB33001	SPOOL DOUBLE ACTING ON PORT (A & B) (SPOOL TYPE 1)		
YLMB33002	SPOOL MOTOR ACTING ON PORT (A & B) (SPOOL TYPE 2)		
YLMB33003	SPOOL SINGLE ACTING ON PORT (A) (SPOOL TYPE 3) (SPOOL OUT) LEVER IN		
	<u>SPOOL CONTROL</u>		
YLMB44061	3 POSITION DETENT KIT TYPE (6-1)		
YLMB44092	3 POSITION DETENT KIT TYPE (9-2) DETENTED PORT B (SPOOL IN) LEVER OUT		
YLMB44093	3 POSITION DETENT KIT TYPE (9-3) DETENTED PORT A (SPOOL OUT) LEVER IN		
YLMB44080	PNEUMATIC CONTROL KIT TYPE (8P)		
YLMB45002	JOYSTICK KIT TYPE (LCB)		
YLMB44200	DUAL CONTROL KIT TYPE (8D2)		
YLMB	ROTARY DETENT KIT TYPE ()		
	<u>ACCESSORIES</u>		
YLMB45000	LEVER BOX KIT TYPE (L)		
YLMB44008	END CAP KIT TYPE (8)		
YLMB35001	DUST CAP KIT TYPE (SPL)		
YLMB08160	LEVER KIT TYPE (YLO2M8X160)		
YLMB32002S	RELIEF VALVE SPRING KIT TYPE (DG-2) RANGE 40 - 80 BAR		
YLMB32003S	RELIEF VALVE SPRING KIT TYPE (DG-3) RANGE 63 - 200 BAR		
YLMB32004S	RELIEF VALVE SPRING KIT TYPE (DG-4) RANGE 160 - 315 BAR		
<u>TECHNICAL SPECIFICATIONS</u>			
<u>THREADS AND SIZES:</u>			
A - PORT ON TOP	3/8" BSPP		
B - PORT ON TOP	3/8" BSPP		
P - PORT ON TOP	3/8" BSPP		
T - PORT ON TOP	3/8" BSPP		
C/O - PORT ON SIDE	3/8" BSPP		
<u>RECOMMENDED FLOW RATE:</u>			
45 LITRES PER MIN.			
<u>PRESET OPERATING PRESSURE:</u>			
120 BAR			
<u>MAXIMUM OPERATING PRESSURE:</u>			
315 BAR			
<u>TANK LINE PRESSURE:</u>			
25 BAR			
<u>PORT IDENTIFICATION</u>			
PORT (A) CLOSEST TO SPRING			
PORT (B) CLOSEST TO LEVER			
			
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY			PAGE 1

Part Number	VALVES MONOBLOCK		01-01-2014 B
	<u>MB - 4 - TAK - BOK SERIES</u>		
	(60 LITRES FLOW RATE 1/2" PORTS)		
MB-4/1-S-3/18L/G-4/M3	MB - 4 / 1 - S - 3 / 1 8 L / G - 4 / M 3	ONE SPOOL	
MB-4/2-S-3/18L/G-4/M3	MB - 4 / 2 - S - 3 / 1 8 L / G - 4 / M 3	TWO SPOOL	
MB-4/3-S-3/18L/G-4/M3	MB - 4 / 3 - S - 3 / 1 8 L / G - 4 / M 3	THREE SPOOL	
MB-4/4-S-3/18L/G-4/M3	MB - 4 / 4 - S - 3 / 1 8 L / G - 4 / M 3	FOUR SPOOL	
MB-4/5-S-3/18L/G-4/M3	MB - 4 / 5 - S - 3 / 1 8 L / G - 4 / M 3	FIVE SPOOL	
MB-4/6-S-3/18L/G-4/M3	MB - 4 / 6 - S - 3 / 1 8 L / G - 4 / M 3	SIX SPOOL	
	<u>POSSIBLE OPTIONS</u>		
4NN-04	POWER BEYOND POSSIBLE ; USE 1/4" NPT INHEX PLUG		
4B-08 + DW-08	CLOSED CENTER POSSIBLE ; USE ABOVE & 1/2" BSPP HEX NUT ADAPTOR & WASHER		
	<u>SPOOL TYPE</u>		
YLMB43001	SPOOL DOUBLE ACTING ON PORT (A & B) (SPOOL TYPE 1)		
YLMB43002	SPOOL MOTOR ACTING ON PORT (A & B) (SPOOL TYPE 2)		
YLMB43003	SPOOL SINGLE ACTING ON PORT (A) (SPOOL TYPE 3) (SPOOL IN) LEVER OUT		
YLMB43004	SPOOL SINGLE ACTING ON PORT (B) (SPOOL TYPE 4) (SPOOL OUT) LEVER IN		
	<u>SPOOL CONTROL</u>		
YLMB44061	3 POSITION DETENT KIT TYPE (6-1)		
YLMB44092	3 POSITION DETENT KIT TYPE (9-2) DETENTED PORT (A) (SPOOL IN) LEVER OUT		
YLMB44093	3 POSITION DETENT KIT TYPE (9-3) DETENTED PORT (B) (SPOOL OUT) LEVER IN		
YLMB44080	PNEUMATIC CONTROL KIT TYPE (8P)		
YLMB45002	JOYSTICK KIT TYPE (LCB)		
YLMB44200	DUAL CONTROL KIT TYPE (8D2)		
YLMB	ROTARY DETENT KIT TYPE ()		
	<u>ACCESSORIES</u>		
YLMB45000	LEVER BOX KIT TYPE (L)		
YLMB44008	END CAP KIT TYPE (8)		
YLMB45001	DUST CAP KIT TYPE (SPL)		
YLMB08160	LEVER KIT TYPE (YLO2M8X160)		
YLMB42002S	RELIEF VALVE SPRING KIT TYPE (DG-2) RANGE 40 - 80 BAR		
YLMB42003S	RELIEF VALVE SPRING KIT TYPE (DG-3) RANGE 63 - 200 BAR		
YLMB42004S	RELIEF VALVE SPRING KIT TYPE (DG-4) RANGE 160 - 315 BAR		
	<u>TECHNICAL SPECIFICATIONS</u>		
	<u>THREADS AND SIZES:</u>		
	A - PORT ON TOP	1/2" BSPP	
	B - PORT ON TOP	1/2" BSPP	
	P - PORT ON TOP	1/2" BSPP	
	T - PORT ON TOP	1/2" BSPP	
	C/O - PORT ON SIDE	1/2" BSPP	
	<u>RECOMMENDED FLOW RATE:</u>		
	60 LITRES PER MIN.		
	<u>PRESET OPERATING PRESSURE:</u>		
	120 BAR		
	<u>MAXIMUM OPERATING PRESSURE:</u>		
	315 BAR		
	<u>TANK LINE PRESSURE:</u>		
	25 BAR		
	<u>PORT IDENTIFICATION</u>		
	PORT (B) CLOSEST TO SPRING		
	PORT (A) CLOSEST TO LEVER		
			
	PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY		

Part Number	VALVES MONOBLOCK		01-01-2014 B
	MB - 4 - TAK - BOK SERIES		SOLENOID OPERATED ONLY
	(35 LITRES FLOW RATE 100 BAR 1/2" PORTS)		
MB-4/1S-3/18ES3/G-4/M3	MB - 4 / 1 S - 3 / 1 8 E S 3 / G - 4 / M 3	ONE SPOOL	
MB-4/2S-3/18ES3/G-4/M3	MB - 4 / 2 S - 3 / 1 8 E S 3 / G - 4 / M 3	TWO SPOOL	
MB-4/3S-3/18ES3/G-4/M3	MB - 4 / 3 S - 3 / 1 8 E S 3 / G - 4 / M 3	THREE SPOOL	
MB-4/4S-3/18ES3/G-4/M3	MB - 4 / 4 S - 3 / 1 8 E S 3 / G - 4 / M 3	FOUR SPOOL	
MB-4/5S-3/18ES3/G-4/M3	MB - 4 / 5 S - 3 / 1 8 E S 3 / G - 4 / M 3	FIVE SPOOL	
MB-4/6S-3/18ES3/G-4/M3	MB - 4 / 6 S - 3 / 1 8 E S 3 / G - 4 / M 3	SIX SPOOL	
	<u>POSSIBLE OPTIONS</u>		
4NN-04	POWER BEYOND POSSIBLE ; USE 1/4" NPT INHEX PLUG		
4B-08 + DW-08	CLOSED CENTER POSSIBLE ; USE ABOVE & 1/2" BSPP HEX NUT ADAPTOR & WASHER		
	<u>SPOOL CONTROL</u>		
YLMB44511	3 POSITION DOUBLE ACTING SOLENOID CONTROL KIT TYPE (1 8 ES3) 12 VOLT DC		
YLMB44521	3 POSITION MOTOR ACTING SOLENOID CONTROL KIT TYPE (2 8 ES3) 12 VOLT DC		
YLMB44512	3 POSITION DOUBLE ACTING SOLENOID CONTROL KIT TYPE (1 8 ES3) 24 VOLT DC		
YLMB44522	3 POSITION MOTOR ACTING SOLENOID CONTROL KIT TYPE (2 8 ES3) 24 VOLT DC		
	<u>SPOOL CONTROL</u>		
	SOLENOID DIRECT CONTROL KIT TYPE (8ES3) 12 VOLT DC		
	SOLENOID DIRECT CONTROL KIT TYPE (8ES3) 24 VOLT DC		
	<u>ACCESSORIES</u>		
YLMB8ES12	SOLENOID ONLY FOR KIT TYPE (8ES3) 12 VOLT DC		
YLMB8ES24	SOLENOID ONLY FOR KIT TYPE (8ES3) 24 VOLT DC		
YLMB32002S	RELIEF VALVE SPRING KIT TYPE (DG-2) RANGE 40 - 80 BAR		
YLMB32003S	RELIEF VALVE SPRING KIT TYPE (DG-3) RANGE 63 - 200 BAR		
YLMB32004S	RELIEF VALVE SPRING KIT TYPE (DG-4) RANGE 160 - 315 BAR		
	<u>TECHNICAL SPECIFICATIONS</u>		
	<u>THREADS AND SIZES:</u>		
	A - PORT ON TOP	1/2" BSPP	
	B - PORT ON TOP	1/2" BSPP	
	P - PORT ON TOP	1/2" BSPP	
	T - PORT ON TOP	1/2" BSPP	
	C/O - PORT ON SIDE	1/2" BSPP	
	<u>RECOMMENDED FLOW RATE:</u>		
	35 LITRES PER MIN.		
	<u>PRESET PRESSURE:</u>		
	120 BAR		
	<u>MAXIMUM PRESSURE:</u>		
	120 BAR		
	<u>TANK LINE PRESSURE:</u>		
	25 BAR		
			
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Part Number	VALVES MONOBLOCK		01-01-2014 B
	<u>MB - 5 - TAK - BOK SERIES</u>		
	(90 LITRES FLOW RATE 1/2" PORTS)		
MB-5/1S-3/18L/G-4-6/M3	MB - 5 / 1 S - 3 / 1 8 L / G - 4 - 6 / M 3	ONE SPOOL	
MB-5/2S-3/18L/G-4-6/M3	MB - 5 / 2 S - 3 / 1 8 L / G - 4 - 6 / M 3	TWO SPOOL	
MB-5/3S-3/18L/G-4-6/M3	MB - 5 / 3 S - 3 / 1 8 L / G - 4 - 6 / M 3	THREE SPOOL	
MB-5/4S-3/18L/G-4-6/M3	MB - 5 / 4 S - 3 / 1 8 L / G - 4 - 6 / M 3	FOUR SPOOL	
MB-5/5S-3/18L/G-4-6/M3	MB - 5 / 5 S - 3 / 1 8 L / G - 4 - 6 / M 3	FIVE SPOOL	
MB-5/6S-3/18L/G-4-6/M3	MB - 5 / 6 S - 3 / 1 8 L / G - 4 - 6 / M 3	SIX SPOOL	
	<u>POSSIBLE OPTIONS</u>		
YLMB5COPG6	POWER BEYOND POSSIBLE ; USE POWER BEYOND SLEEVE		
4B-08 + DW-08	CLOSED CENTER POSSIBLE ; USE ABOVE & 1/2" BSPP HEX ADAPTOR & WASHER		
	<u>SPOOL TYPE</u>		
YLMB53001	SPOOL DOUBLE ACTING ON PORT (A & B) (SPOOL TYPE 1)		
YLMB53002	SPOOL MOTOR ACTING ON PORT (A & B) (SPOOL TYPE 2)		
YLMB53003	SPOOL SINGLE ACTING ON PORT (A) (SPOOL TYPE 3) (SPOOL IN) LEVER OUT		
YLMB53004	SPOOL SINGLE ACTING ON PORT (B) (SPOOL TYPE 4) (SPOOL OUT) LEVER IN		
	<u>SPOOL CONTROL</u>		
YLMB54061	3 POSITION DETENT KIT TYPE (6-1)		
YLMB54092	3 POSITION DETENT KIT TYPE (9-2) DETENTED PORT (A) (SPOOL OUT) LEVER IN		
YLMB54093	3 POSITION DETENT KIT TYPE (9-3) DETENTED PORT (B) (SPOOL IN) LEVER OUT		
YLMB54080	PNEUMATIC CONTROL KIT TYPE (8P)		
YLMB55002	JOYSTICK KIT TYPE (LCB)		
YLMB54082	DUAL CONTROL KIT TYPE (8D2)		
YLMB	ROTARY DETENT KIT TYPE (valviol)		
	<u>ACCESSORIES</u>		
YLMB55000	LEVER BOX	KIT TYPE (L)	
YLMB54008	END CAP	KIT TYPE (8)	
YLMB55001	DUST CAP	KIT TYPE (SPL)	
YLMB10200	LEVER	KIT TYPE (YLO1M10X200)	
YLMB52002S	RELIEF VALVE SPRING	KIT TYPE (DG-2) RANGE 80 - 160 BAR	
YLMB52003S	RELIEF VALVE SPRING	KIT TYPE (DG-3) RANGE 125 - 250 BAR	
YLMB52004S	RELIEF VALVE SPRING	KIT TYPE (DG-4) RANGE 200 - 315 BAR	
	<u>TECHNICAL SPECIFICATIONS</u>		
	<u>THREADS AND SIZES:</u>		
	A - PORT ON TOP	1/2" BSPP	
	B - PORT ON TOP	1/2" BSPP	
	P - PORT ON TOP	1/2" BSPP	
	T - PORT ON TOP	3/4" BSPP	
	C/O - PORT ON SIDE	3/4" BSPP	
	<u>RECOMMENDED FLOW RATE:</u>		
	80 LITRES PER MIN.		
	<u>PRESET OPERATING PRESSURE:</u>		
	120 BAR		
	<u>MAXIMUM OPERATING PRESSURE:</u>		
	315 BAR		
	<u>TANK LINE PRESSURE:</u>		
	25 BAR		
	<u>PORT IDENTIFICATION</u>		
	PORT (A) CLOSEST TO SPRING		
	PORT (B) CLOSEST TO LEVER		
			
	PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY		PAGE 4

Part Number	VALVES STACK		01-01-2014 B
	<u>SN - 4 - TAK - BOK SERIES</u>		
	(80 LITRES FLOW RATE 1/2" PORTS)		
SN-4/1S-3/18L/P3T/G-4-6/M3	SN - 4 / 1 S - 3 / 1 8 L / G - 4 - 6	ONE SPOOL	
SN-4/2S-3/18L/P3T/G-4-6/M3	SN - 4 / 2 S - 3 / 1 8 L / G - 4 - 6	TWO SPOOL	
SN-4/3S-3/18L/P3T/G-4-6/M3	SN - 4 / 3 S - 3 / 1 8 L / G - 4 - 6	THREE SPOOL	
SN-4/4S-3/18L/P3T/G-4-6/M3	SN - 4 / 4 S - 3 / 1 8 L / G - 4 - 6	FOUR SPOOL	
SN-4/5S-3/18L/P3T/G-4-6/M3	SN - 4 / 5 S - 3 / 1 8 L / G - 4 - 6	FIVE SPOOL	
SN-4/6S-3/18L/P3T/G-4-6/M3	SN - 4 / 6 S - 3 / 1 8 L / G - 4 - 6	SIX SPOOL	
SN-4/7S-3/18L/P3T/G-4-6/M3	SN - 4 / 7 S - 3 / 1 8 L / G - 4 - 6	SEVEN SPOOL	
SN-4/8S-3/18L/P3T/G-4-6/M3	SN - 4 / 8 S - 3 / 1 8 L / G - 4 - 6	EIGHT SPOOL	
SN-4/9S-3/18L/P3T/G-4-6/M3	SN - 4 / 9 S - 3 / 1 8 L / G - 4 - 6	NINE SPOOL	
SN-4/10S-3/18L/P3T/G-4-6/M3	SN - 4 / 10 S - 3 / 1 8 L / G - 4 - 6	TEN SPOOL	
SN-4/11S-3/18L/P3T/G-4-6/M3	SN - 4 / 11 S - 3 / 1 8 L / G - 4 - 6	ELEVEN SPOOL	
SN-4/12S-3/18L/P3T/G-4-6/M3	SN - 4 / 12 S - 3 / 1 8 L / G - 4 - 6	TWELVE SPOOL	
	<u>POSSIBLE OPTIONS :</u>		
18 X 1.5 INHEX	POWER BEYOND POSSIBLE ; USE 18 X 1.5 METRIC INHEX PLUG		
4B-12 + DW-12	CLOSED CENTER POSSIBLE ; USE ABOVE & 3/4" BSPP HEX NUT ADAPTOR & WASHER		
	<u>SPOOL TYPE</u>		
YLWSN42001	SPOOL DOUBLE ACTING ON PORT (A & B)	(SPOOL TYPE 1)	
YLWSN42002	SPOOL MOTOR ACTING ON PORT (A & B)	(SPOOL TYPE 2)	
YLWSN42003	SPOOL SINGLE ACTING ON PORT (A)	(SPOOL TYPE 3) (SPOOL OUT) LEVER IN	
YLWSN42004	SPOOL SINGLE ACTING ON PORT (B)	(SPOOL TYPE 4) (SPOOL IN) LEVER OUT	
YLWSN45004	PORT RELIEF VALVES PER PORT P(G4-200) RANGE 200 TO 315 BAR		
	<u>SPOOL CONTROL</u>		
YLWSN43061	3 POSITION DETENT KIT TYPE (6-1)		
YLWSN43092	3 POSITION DETENT KIT TYPE (9-2) DETENTED PORT (B) (SPOOL IN) LEVER OUT		
YLWSN43093	3 POSITION DETENT KIT TYPE (9-3) DETENTED PORT (A) (SPOOL OUT) LEVER IN		
YLWSN43080	PNEUMATIC CONTROL KIT TYPE (8P)		
YLWSN430810	HYDRAULIC PILOT CONTROL KIT TYPE (8IM)		
YLWSN44002	JOYSTICK	KIT TYPE (LCB)	
YLWSN43082	DUAL CONTROL	KIT TYPE (8D2)	
YLMB???????	ROTARY DETENT	KIT TYPE ()	
	<u>ACCESSORIES</u>		
YLWSN44000	LEVER BOX	KIT TYPE (L)	
YLWSN44001	DUST CAP	KIT TYPE (SPL)	
YLWSN43008	END CAP	KIT TYPE (8)	
YLWSN10200	LEVER	KIT TYPE (YLO1M10X200)	
YLPSN43003S	RELIEF VALVE SPRING	KIT TYPE (DG-3) RANGE 63 - 200 BAR	
YLPSN43004S	RELIEF VALVE SPRING	KIT TYPE (DG-4) RANGE 160 - 315 BAR	
	<u>TECHNICAL SPECIFICATIONS:</u>		
	P - PORT	1/2" BSPP	
	A - PORT (SPRING)	1/2" BSPP	
	B - PORT (LEVER)	1/2" BSPP	
	T - PORT	3/4" BSPP	
	CO - PORT	3/4" BSPP	
	<u>RECOMMENDED FLOW RATE:</u>		
	80 LITRES PER MIN.		
	<u>MAX OPERATING PRESSURE:</u>		
	315 BAR		
	<u>PORT PRESSURE:</u>		
	315 BAR		
	<u>TANK LINE PRESSURE:</u>		
	25 BAR		
			
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Part Number	VALVES STACK		01-01-2014 B
	SN - 6 - TAK - BOK SERIES		
	(150 LITRES FLOW RATE 3/4" PORTS)		
SN-6/1S-3/18L/P3T/G-6-1/M3	SN - 6 / 1 S - 3 / 1 8 L / P3T/ G - 6 - 1	ONE SPOOL	
SN-6/2S-3/18L/P3T/G-6-1/M3	SN - 6 / 2 S - 3 / 1 8 L / P3T/ G - 6 - 1	TWO SPOOL	
SN-6/3S-3/18L/P3T/G-6-1/M3	SN - 6 / 3 S - 3 / 1 8 L / P3T/ G - 6 - 1	THREE SPOOL	
SN-6/4S-3/18L/P3T/G-6-1/M3	SN - 6 / 4 S - 3 / 1 8 L / P3T/ G - 6 - 1	FOUR SPOOL	
SN-6/5S-3/18L/P3T/G-6-1/M3	SN - 6 / 5 S - 3 / 1 8 L / P3T/ G - 6 - 1	FIVE SPOOL	
SN-6/6S-3/18L/P3T/G-6-1/M3	SN - 6 / 6 S - 3 / 1 8 L / P3T/ G - 6 - 1	SIX SPOOL	
SN-6/7S-3/18L/P3T/G-6-1/M3	SN - 6 / 7 S - 3 / 1 8 L / P3T/ G - 6 - 1	SEVEN SPOOL	
SN-6/8S-3/18L/P3T/G-6-1/M3	SN - 6 / 8 S - 3 / 1 8 L / P3T/ G - 6 - 1	EIGHT SPOOL	
	POSSIBLE OPTIONS :		
18 X 1.5" INHEX	POWER BEYOND POSSIBLE ; USE 18 X 1.5 METRIC INHEX PLUG		
4B-16 + DW-16	CLOSED CENTER POSSIBLE ; USE ABOVE & 1" BSPP HEX NUT ADAPTOR & WASHER		
	SPOOL TYPE		
YLWSN62001	SPOOL DOUBLE ACTING ON PORT (A & B)	(SPOOL TYPE 1)	
YLWSN62002	SPOOL MOTOR ACTING ON PORT (A & B)	(SPOOL TYPE 2)	
YLWSN62003	SPOOL SINGLE ACTING ON PORT (A)	(SPOOL TYPE 3) (SPOOL OUT) LEVER IN	
YLWSN62004	SPOOL SINGLE ACTING ON PORT (B)	(SPOOL TYPE 4) (SPOOL IN) LEVER OUT	
YLWSN65004	PORT RELIEF VALVES PER PORT P(G4-200) RANGE 200 TO 315 BAR		
	SPOOL CONTROL		
YLWSN63061	3 POSITION DETENT KIT TYPE (6-1)		
YLWSN63092	3 POSITION DETENT KIT TYPE (9-2) DETENTED PORT (B) (SPOOL IN) LEVER OUT		
YLWSN63093	3 POSITION DETENT KIT TYPE (9-3) DETENTED PORT (A) (SPOOL OUT) LEVER IN		
YLWSN63080	PNEUMATIC CONTROL KIT TYPE (8P)		
YLWSN630810	HYDRAULIC PILOT CONTROL KIT TYPE (8IM)		
YLWSN64002	JOYSTICK	KIT TYPE (LCB)	
YLWSN63082	DUAL CONTROL	KIT TYPE (8D2)	
YLWSN	ROTARY DETENT	KIT TYPE ()	
	ACCESSORIES		
YLWSN64000	LEVER BOX	KIT TYPE (L)	
YLWSN64001	DUST CAP	KIT TYPE (SPL)	
YLWSN63008	END CAP	KIT TYPE (8)	
YLWSN10200	LEVER	KIT TYPE (YLO1M10X200)	
YLPSN63002S	RELIEF VALVE SPRING	KIT TYPE (DG-3) RANGE 63 - 200 BAR	
YLPSN63003S	RELIEF VALVE SPRING	KIT TYPE (DG-4) RANGE 160 - 315 BAR	
YLPSN63000	PILOT OPERATED RELIEF	KIT TYPE (XFG) RANGE 25 - 315 BAR	
	TECHNICAL SPECIFICATIONS:		
	P - PORT	3/4" BSPP	
	A - PORT (SPRING)	3/4" BSPP	
	B - PORT (LEVER)	3/4" BSPP	
	T - PORT	1" BSPP	
	CO - PORT	1" BSPP	
	RECOMMENDED FLOW RATE:		
	150 LITRES PER MIN.		
	MAX OPERATING PRESSURE:		
	315 BAR		
	PORT PRESSURE:		
	315 BAR		
	TANK LINE PRESSURE:		
	25 BAR		
			
	PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY		PAGE 6

K18 SERIES (COMMERCIAL SHEARING TYPE)**(90 LITRES FLOW RATE, SOLD COMPLETE WITH MAIN RELIEF VALVE AND LEVERS)**

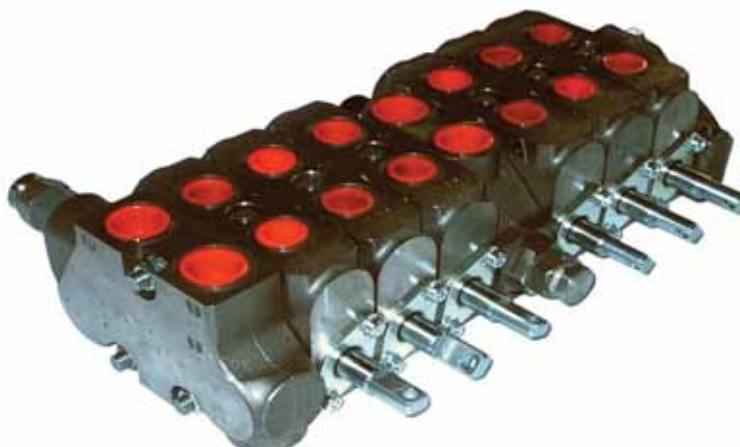
34 K18-1	ONE	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 K18-2	TWO	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 K18-3	THREE	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 K18-4	FOUR	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 K18-5	FIVE	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 K18-6	SIX	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 K18-7	SEVEN	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 K18-8	EIGHT	BANK DOUBLE ACTING SPOOL SPRING CENTERED

POSSIBLE OPTIONS TO BE ADDED TO K 18 SERIES STACK VALVES:

34 346 9172 011	DOUBLE ACTING SPOOL TYPE (STANDARD) WITH LEVER AND PORT PLUGS
34 346 9172 XXX	SINGLE ACTING SPOOL TYPE PORT (A) ACTIVE, PORT (B) BLOCKED, PUSH LEVER
34 346 9172 XXX	SINGLE ACTING SPOOL TYPE (B) PORT (B) ACTIVE, PORT (A) BLOCKED, PULL LEVER**
34 346 9172 016	MOTOR ACTING SPOOL TYPE
34 346 9172 040	DOUBLE ACTING SPOOL FLOAT IN DETENT 4 POSITION
34 391 1873 136	PORTS RELIEF PER PORT
34 346 9174 017	MID INLET SECTION (SPLIT FLOW)
34 391 1873 129	DETENT 3 POSITION
34 391 1873 131	DETENT OUT
34 391 1873 132	DETENT IN
34 391 1873 192	ROTARY CONTROL
34 391 1873 235	POWER BEYOND SLEEVE (CO)
34 391 1873 XXX	CLOSED CENTER PLUG (CCP)
34 391 1873 176	LEVER HANDLE KIT INDUSTRIAL (PORT RELIEF POSSIBLE)
34 391 1873 257	LEVER HANDLE KIT BASIC (PORT RELIEF NOT POSSIBLE)
PCL 402 02 UT04	LEVER HANDLE KIT JOYSTICK
34 391 1873 134	SEAL KIT

NOTES;**A - PORT 1/2" BSPP (A - PORT CLOSEST TO LEVER)****** USE ON SINGLE ACTING CYLINDERS****TECHNICAL SPECIFICATIONS ON THE K 18 STACK VALVES:****(SPOOL 16 mm OD)**

PORTS BSP or SAE "O" SIZE	P	T	A	B	P1	T1
	3/4"	3/4"	1/2"	1/2"	3/4"	3/4"
FLOW RATE	90	LITRES				
MAX PRESSURE	320	Bar				
PORT PRESSURE	350	Bar				
TANK LINE PRESSURE	35	Bar				



DVA 20 SERIES (COMMERCIAL SHEARING TYPE)
 (150 LITRES FLOW RATE, SOLD COMPLETE WITH MAIN RELIEF VALVE AND LEVERS)

34 DVG 20-1	ONE BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 20-2	TWO BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 20-3	THREE BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 20-4	FOUR BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 20-5	FIVE BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 20-6	SIX BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 20-7	SEVEN BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 20-8	EIGHT BANK DOUBLE ACTING SPOOL SPRING CENTERED

POSSIBLE OPTIONS TO BE ADDED TO DVG 20 SERIES STACK VALVES:

34 347 9172 017	DOUBLE ACTING SPOOL TYPE (STANDARD) WITH LEVER AND PORT PLUGS
34 347 9172 XXX	SINGLE ACTING SPOOL TYPE PORT (A) ACTIVE, PORT (B) BLOCKED, PUSH LEVER
34 347 9172 XXX	SINGLE ACTING SPOOL TYPE (B) PORT (B) ACTIVE, PORT (A) BLOCKED, PULL LEVER**
34 347 9172 XXX	MOTOR ACTING SPOOL TYPE
34 347 9172 047	DOUBLE ACTING SPOOL FLOAT IN DETENT 4 POSITION
34 391 1873 018	PORTS RELIEF PER PORT
34 347 9174 011	MID INLET SECTION (SPLIT FLOW)
34 347 9174 018	MID INLET SECTION (COMB FLOW)
34 391 1873 030	DETENT 3 POSITION
34391 1873 045	DETENT OUT
34 391 1873 351	DETENT IN
34 391 1873 031	ROTARY CONTROL
34 391 1873 183	HYDRAULIC REMOTE
34 361 9171 020	HYDRAULIC REMOTE JOY STICK CONTROL STACKABLE (Starts at 6 Bar completed at 26 Bar)
34 391 1873 072	LEVER HANDLE KIT INDUSTRIAL (PORT RELIEF POSSIBLE)
34 DVG 20 SKIT	SEAL KIT

NOTES:

**** USE ON SINGLE ACTING CYLINDERS**

TECHNICAL SPECIFICATIONS ON THE DVG 20 STACK VALVES:

(SPOOL 19 mm OD)

PORTS BSP or SAE "O"	P	T	A	B	P1	T1
SIZE	1"	1"	3/4"	3/4"	1"	1"
FLOW RATE	150	LITRES				
MAX PRESSURE	210	Bar				
PORT PRESSURE	300	Bar				
TANK LINE PRESSURE	25	Bar				



DVA 35 SERIES (COMMERCIAL SHEARING TYPE)

(250 LITRES FLOW RATE, SOLD COMPLETE WITH MAIN RELIEF VALVE AND LEVERS)

34 DVG 35-1	ONE	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 35-2	TWO	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 35-3	THREE	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 35-4	FOUR	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 35-5	FIVE	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 35-6	SIX	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 35-7	SEVEN	BANK DOUBLE ACTING SPOOL SPRING CENTERED
34 DVG 35-8	EIGHT	BANK DOUBLE ACTING SPOOL SPRING CENTERED

POSSIBLE OPTIONS TO BE ADDED TO DVG 35 SERIES STACK VALVES:

34 348 9172 017	DOUBLE ACTING SPOOL TYPE (STANDARD) WITH LEVER AND PORT PLUGS
34 348 9172 XXX	SINGLE ACTING SPOOL TYPE PORT (A) ACTIVE, PORT (B) BLOCKED, PUSH LEVER
34 348 9172 XXX	SINGLE ACTING SPOOL TYPE (B) PORT (B) ACTIVE, PORT (A) BLOCKED, PULL LEVER**
34 348 9172 XXX	MOTOR ACTING SPOOL TYPE
34 348 9172 042	DOUBLE ACTING SPOOL FLOAT IN DETENT 4 POSITION
34 391 1873 018	PORTS RELIEF PER PORT
34 348 9174 017	MID INLET SECTION (SPLIT FLOW)
34 348 9174 019	MID INLET SECTION (COMB FLOW)
34 391 1873 037	DETENT 3 POSITION
34 391 1873 038	ROTARY CONTROL
34 391 1873 180	HYDRAULIC REMOTE
34 361 9171 020	HYDRAULIC REMOTE JOY STICK CONTROL STACKABLE (Starts at 5.2 Bar completed at 25 Bar)
34 391 1873 075	LEVER HANDLE KIT INDUSTRIAL (PORT RELIEF POSSIBLE)
34 DVG 35 SKIT	SEAL KIT

NOTES;

** USE ON SINGLE ACTING CYLINDERS

TECHNICAL SPECIFICATIONS ON THE DVG 35 STACK VALVES:

(SPOOL 22 mm OD)

PORTS BSP or SAE "O"	P	T	A	B	P1	T1
SIZE	11/4"	11/4"	1"	1"	11/4"	11/4"
FLOW RATE	250	LITRES				
MAX PRESSURE	210	Bar				
PORT PRESSURE	300	Bar				
TANK LINE PRESSURE	25	Bar				



DVA 80 SERIES (COMMERCIAL SHEARING TYPE)
 (450 LITRES FLOW RATE, SOLD COMPLETE WITH MAIN RELIEF VALVE NO LEVERS)

- 34 DVG 80-1 ONE BANK DOUBLE ACTING SPOOL SPRING CENTERED
- 34 DVG 80-2 TWO BANK DOUBLE ACTING SPOOL SPRING CENTERED
- 34 DVG 80-3 THREE BANK DOUBLE ACTING SPOOL SPRING CENTERED

POSSIBLE OPTIONS TO BE ADDED TO DVG 80 SERIES STACK VALVES:

- 34 349 9172 011 DOUBLE ACTING SPOOL TYPE (STANDARD) WITH LEVER AND PORT PLUGS
- 34 349 9172 XXX SINGLE ACTING SPOOL TYPE PORT (A) ACTIVE, PORT (B) BLOCKED, PUSH LEVER
- 34 349 9172 XXX SINGLE ACTING SPOOL TYPE (B) PORT (B) ACTIVE, PORT (A) BLOCKED, PULL LEVER*
- 34 349 9172 XXX MOTOR ACTING SPOOL TYPE
- 34 391 1873 018 PORTS RELIEF PER PORT
- 34 391 1873 168 DETENT 3 POSITION
- 34 391 1873 326 POWER BEYOND SLEEVE (CO)
- 34 DVG 80 SKIT SEAL KIT

NOTES:

* USE ON SINGLE ACTING CYLINDERS




TECHNICAL SPECIFICATIONS ON THE DVG 80 STACK VALVES:

(SPOOL 32 mm OD)

PORTS SAE SPLIT SIZE	P	T	A	B	P1	T1
	1-1/2"	1-1/2"	1-1/4"	1-1/4"	1-1/2"	1-1/2"
FLOW RATE	450	LITRES				
MAX PRESSURE	210	Bar				
PORT PRESSURE	300	Bar				
TANK LINE PRESSURE	25	Bar				



<u>Part Number</u>	VALVES SOLENOID		01-01-2014 B
	NG 6 DIRECTIONAL CONTROL VALVES (63 Litres Flow Rate)		
DSG-3C2-N-01-XXX-30	NG 6 DOUBLE SOLENOID VALVE	ALL PORTS BLOCKED	CODE (E)
DSG-3C3-N-01-XXX-30	NG 6 DOUBLE SOLENOID VALVE	ALL PORTS OPEN	CODE (H)
DSG-3C4-N-01-XXX-30	NG 6 DOUBLE SOLENOID VALVE	P CLOSED ; A & B & T OPEN	CODE (J)
DSG-3C6-N-01-XXX-30	NG 6 DOUBLE SOLENOID VALVE	P TO T ; A & B BLOCKED	CODE (G)
DSG-2B2-N-01-XXX-30	NG 6 SINGLE SOLENOID VALVE	P TO A ; T TO B ; IN TRANS CLOSED	CODE (D)
DSG-2B3-N-01-XXX-30	NG 6 SINGLE SOLENOID VALVE	P TO A ; T TO B ; IN TRANS OPEN	CODE (C)
DSG-2B3B-N-01-XXX-30	NG 6 SINGLE SOLENOID VALVE	ALL PORTS OPEN ; TWO POSITION	CODE (2B3B)
	VOLTAGE OPTIONS		
	DC 12 VOLT OR DC 24 VOLT		
	AC 110 VOLT OR AC 220 VOLT		
	NG 6 BASE PLATES		
M01 - 03 - 4B - BSPP	NG 6 3/8" P & T SIDE A & B SIDE		
M01 - 03 - 4S4B - BSPP	NG 6 3/8" P & T REAR A & B REAR		
M01 - 04 - 4B - BSPP	NG 6 1/2" P & T SIDE A & B SIDE		
M01 - 04 - 4S4B - BSPP	NG 6 1/2" P & T REAR A & B REAR		
	MODULAR CONTROLS		
MB P - 01 - H - 20	NG 6 RELIEF VALVE ON PORT P	(H - 35 - 250 Bar Pressure)	
MB W - 01 - H - 20	NG 6 RELIEF VALVE ON PORT A & B	(H - 35 - 250 Bar Pressure)	
MC P - 01 - 2 - 20	NG 6 CHECK VALVE ON PORT P	(2 Bar Cracking Pressure)	
MS P - 01 - 20	NG 6 THROTTLE CONTROL ON PORT P		
MP W - 01 - 2 - 20	NG 6 CHECK VALVE PILOT CONTROL ON PORT A & B	(2 Bar Cracking Pressure)	
MS W - 01 - X - 20	NG 6 THROTTLE & CHECK METERING OUT ON PORT A & B		
MS W - 01 - Y - 20	NG 6 THROTTLE & CHECK METERING IN ON PORT A & B		
MH A - 01 - C - 20	NG 6 OVERCENTRE VALVE SINGLE ACTING ON PORT A	(C - 70 - 250 Bar Pressure)	
MR P - 01 - H - 20	NG 6 MODULAR PRESURE REDUCING VALVE	(H - 70 - 210 Bar Pressure)	
	NG 6 ACCESSORIES		
GO1002 (A110/A220)	NG 6 AC COIL 110V & 220V		
GO1002 (D12/D24)	NG 6 DC COIL 12V & 24V		
43650AC	HIRSHMAN & LED AC		
43650DC	HIRSHMAN & LED DC		
M5X125L	BOLTS NG 6 M 5 X 125 (each)		
M5X165L	BOLTS NG 6 M 5 X 165 (each)		
M5X205L	BOLTS NG 6 M 5 X 205 (each)		
MDC - 01 - A	NG6 END CAP BLANKING SCREW		
	NG 6 DOUBLE SOLENOID VALVE	NG 6 SINGLE SOLENOID VALVE	
			
		NG 6 SUB PLATES	

Part Number	VALVES SOLENOID		01-01-2014 B
	NG 10 DIRECTIONAL CONTROL VALVES (120 Litres Flow Rate)		
DSG-3C2-N-03-XXX-30	NG 10 DOUBLE SOLENOID VALVE	ALL PORTS BLOCKED	CODE (E)
DSG-3C3-N-03-XXX-30	NG 10 DOUBLE SOLENOID VALVE	ALL PORTS OPEN	CODE (H)
DSG-3C4-N-03-XXX-30	NG 10 DOUBLE SOLENOID VALVE	P CLOSED ; A & B & T OPEN	CODE (J)
DSG-3C6-N-03-XXX-30	NG 10 DOUBLE SOLENOID VALVE	P TO T ; A & B BLOCKED	CODE (G)
DSG-2B2-N-03-XXX-30	NG 10 SINGLE SOLENOID VALVE	P TO A ; T TO B ; IN TRANS CLOSED	CODE (D)
DSG-2B3-N-03-XXX-30	NG 10 SINGLE SOLENOID VALVE	P TO A ; T TO B ; IN TRANS OPEN	CODE (C)
DSG-2B3B-N-03-XXX-30	NG 10 SINGLE SOLENOID VALVE	ALL PORTS OPEN ; TWO POSITION	CODE (2B3B)
	VOLTAGE OPTIONS		
	DC 12 VOLT OR DC 24 VOLT		
	AC 110 VOLT OR AC 220 VOLT		
	NG 10 SUB PLATES		
M03 - 04 - 4B - BSPP	NG 10 1/2" P & T SIDE	A & B SIDE	
M03 - 04 - 4S4B - BSPP	NG 10 1/2" P & T REAR	A & B REAR	
M03 - 06 - 4B - BSPP	NG 10 3/4" P & T SIDE	A & B SIDE	
M03 - 06 - 4S4B - BSPP	NG 10 3/4" P & T REAR	A & B REAR	
	MODULAR CONTROLS		
MB P - 03 - H - 20	NG 10 RELIEF VALVE ON PORT P		(H - 35 - 250 Bar Pressure)
MB W - 03 - H - 20	NG 10 RELIEF VALVE ON PORT A & B		(H - 35 - 250 Bar Pressure)
MC P - 03 - 2 - 20	NG 10 CHECK VALVE ON PORT P		(2 Bar Cracking Pressure)
MS P - 03 - 20	NG 10 THROTTLE CONTROL ON PORT P		
MP W - 03 - 2 - 20	NG 10 CHECK VALVE PILOT CONTROL ON PORT A & B		(2 Bar Cracking Pressure)
MS W - 03 - X - 20	NG 10 THROTTLE & CHECK METERING OUT ON PORT A & B		
MS W - 03 - Y - 20	NG 10 THROTTLE & CHECK METERING IN ON PORT A & B		
MH A - 03 - C - 20	NG 10 OVERCENTRE VALVE SINGLE ACTING ON PORT A		(C - 70 - 250 Bar Pressure)
MR P - 03 - H - 20	NG 10 MODULAR PRESURE REDUCING VALVE		(H - 70 - 210 Bar Pressure)
	NG 10 ACCESSORIES		
DSGN3 (DI / D2)	NG 10 AC COIL	110V & 220V	
DSGN3 (AI / A2)	NG 10 DC COIL	12V & 24V	
43650AC	HIRSHMAN & LED	AC	
43650DC	HIRSHMAN & LED	DC	
M5X125L	BOLTS NG 6 M 5 X 125	(each)	
M5X165L	BOLTS NG 6 M 5 X 165	(each)	
M5X205L	BOLTS NG 6 M 5 X 205	(each)	
MDC - 03 - A	NG6 END CAP	BLANKING SCREW	
	NG 10 DOUBLE SOLENOID	NG 10 SINGLE SOLENOID	
			
			
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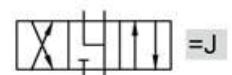
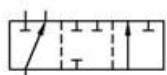
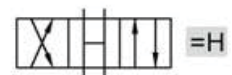
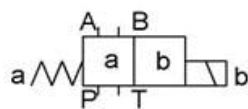
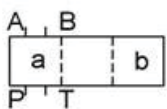
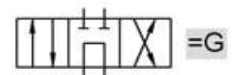
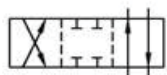
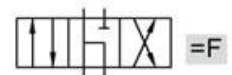
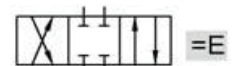
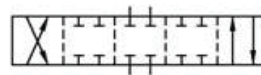
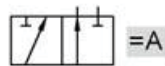
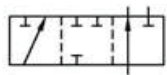
Part Number	MANIFOLD BLOCKS		01-01-2014 B
	<u>NG 6 MANIFOLD BLOCKS</u> (3/8" PORTS)		
MM01 - 1S - BSPP	NG 6 ONE	STATION BASE	
MM01 - 2S - BSPP	NG 6 TWO	STATION BASE	
MM01 - 3S - BSPP	NG 6 THREE	STATION BASE	
MM01 - 4S - BSPP	NG 6 FOUR	STATION BASE	
MM01 - 5S - BSPP	NG 6 FIVE	STATION BASE	
MM01 - 6S - BSPP	NG 6 SIX	STATION BASE	
	<u>NG 6 MANIFOLD BLOCKS WITH RELIEF & CHECK</u> (3/8" PORTS)		
MM01 - 1S - BSPP	NG 6 ONE	STATION BASE	
MM01 - 2S - BSPP	NG 6 TWO	STATION BASE	
MM01 - 3S - BSPP	NG 6 THREE	STATION BASE	
MM01 - 4S - BSPP	NG 6 FOUR	STATION BASE	
MM01 - 5S - BSPP	NG 6 FIVE	STATION BASE	
MM01 - 6S - BSPP	NG 6 SIX	STATION BASE	
	RELIEF VALVE ADJUSTMENT RANGE (35 - 210 Bar) OR (55 - 315 Bar)		
	<u>NG 10 MANIFOLD BLOCKS</u> (1/2" PORTS)		
MM03 - 1S - BSPP	NG 10 ONE	STATION BASE	
MM03 - 2S - BSPP	NG 10 TWO	STATION BASE	
MM03 - 3S - BSPP	NG 10 THREE	STATION BASE	
MM03 - 4S - BSPP	NG 10 FOUR	STATION BASE	
MM03 - 5S - BSPP	NG 10 FIVE	STATION BASE	
	<u>NG 10 MANIFOLD BLOCKS WITH RELIEF & CHECK</u> (1/2" PORTS)		
MM03 - 1S - BSPP	NG 10 ONE	STATION BASE	
MM03 - 2S - BSPP	NG 10 TWO	STATION BASE	
MM03 - 3S - BSPP	NG 10 THREE	STATION BASE	
MM03 - 4S - BSPP	NG 10 FOUR	STATION BASE	
MM03 - 5S - BSPP	NG 10 FIVE	STATION BASE	
	<u>ACCESSORIES</u>		
NG6REIF210BAR	RELIEF VALVE ADJUSTMENT RANGE (35 - 210 Bar)		
NG6REIF315BAR	RELIEF VALVE ADJUSTMENT RANGE (55 - 315 Bar)		
NG6BP	NG 6 STATION BLANKING PLATE		
NG10BP	NG 10 STATION BLANKING PLATE		
	<u>NG 6 / 10 ONE STATION BASE</u>	<u>NG 6 / 10 SIX STATION BASE</u>	
			
	<u>NG 6 / DC COIL</u>	<u>NG 6 / AC COIL</u>	<u>NG 6 / 10 THROTTLE & CHECK</u>
			
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY			PAGE 13

SOLENOID VALVE SPOOL TYPES

SPOOL TYPE - OUR TYPE

SPRING OFFSET 2 POSITION	GRAPHIC SYMBOLS (STANDARD)	SPRING CENTERED 3 POSITION	GRAPHIC SYMBOLS (STANDARD)	NO SPRING DETENTED 2 POSITION	GRAPHIC SYMBOLS (STANDARD)
2A2		3C2		2D2	
2A3		3C3		2D3	
2A14		3C4		2D4	
2A2L		3C40		2D40	
2A3L		3C5		2D7	
2A14L		3C6		2D2A	
2B2		3C60		2D3A	
2B3		3C7		2D4A	
2B8		3C8		2D40A	
2B29		3C9		2D5A	
2B2L		3C10		2D60A	
2B3L		3C11		2D7A	
2B8L		3C12		2D9A	
2B29L		3C25		2D10A	
		3C29		2D11A	
		3C48		2D12A	
		3C94			

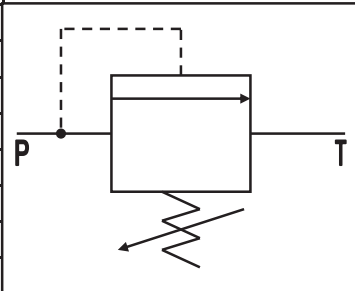
SPOOL TYPE - OTHER TYPE



RELIEF VALVES DIRECT ACTING

V0120.0006	VMP 3/8"	3/8" BSPP THREADS	45 LITRE INLET
V0120.0008	VMP 1/2"	1/2" BSPP THREADS	70 LITRE INLET
V0120.0012	VMP 3/4"	3/4" BSPP THREADS	120 LITRE INLET
V0120.3516	VMPP 1"	1" BSPP THREADS	180 LITRE INLET

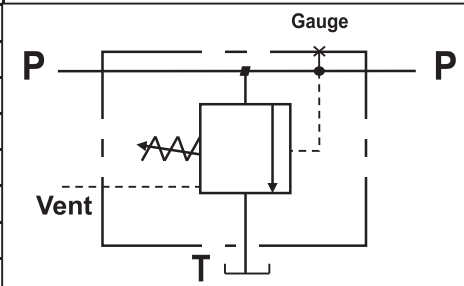
3 PORT BLOCK TYPE IN-LINE RELIEF VALVES (P + P + T)
MAXIMUM OPERATING PRESSURE: 350 BAR
MATERIAL: STEEL



PILOT OPERATED RELIEF VALVES BALANCED PISTON TYPE

RVT 04330	RB - T04 - C	1/2" NPT THREADS	80 LITRE INLET
RVT 06 330	RB - T06 - C	3/4" NPT THREADS	175 LITRE INLET
RV T 10330	RB - T10 - C	1 1/4" NPT THREADS	454 LITRE INLET
RM - T02 - C	RM - T02 - C	1/4" NPT THREADS	PANEL MOUNT REMOTE CONTROL RELIEF

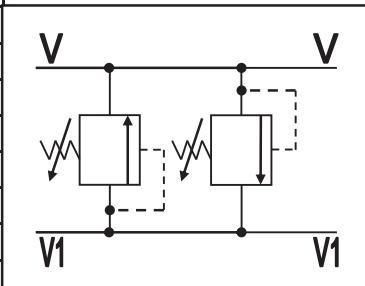
3 PORT BLOCK TYPE IN-LINE RELIEF VALVES (P + P + T)
OPTIONAL VENT AND GAUGE PORT
MAXIMUM OPERATING PRESSURE: 210 BAR
MATERIAL: CAST IRON



DUAL CROSS OVER RELIEF VALVE

V0590.0440	VAU / DE 3/8"	3/8" BSPP THREADS	45 LITRE INLET
V0590.0450	VAU / DE 1/2"	1/2" BSPP THREADS	70 LITRE INLET
V0590.0460	VAU / DE 3/4"	3/4" BSPP THREADS	120 LITRE INLET

DUAL ACTING RELIEFS, INLINE TYPE
MAXIMUM OPERATING PRESSURE: 300 BAR
MATERIAL: STEEL



PRIORITY FLOW DIVIDER ADJUSTABLE

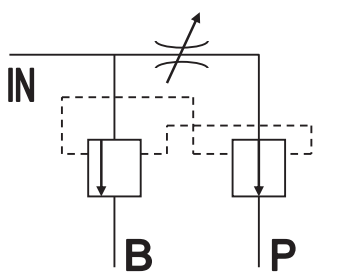
V6215.0320 RF40/P 1/2" BSPP THREADS 40 LITRE INLET

V6215.0322 RF70/P 3/4" BSPP THREADS 70 LITRE INLET

3 PORT BLOCK TYPE WITH ADJUSTABLE KNOB

MAXIMUM OPERATING PRESSURE 250 BAR

MATERIAL: CAST IRON



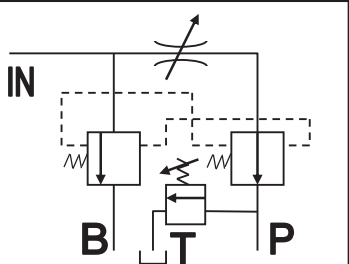
PRIORITY FLOW DIVIDER ADJUSTABLE WITH RELIEF VALVE

V6215.0323 RF70/PV 3/4" BSPP THREADS 70 LITRE INLET

3 PORT BLOCK TYPE WITH ADJUSTABLE KNOB

MAXIMUM OPERATING PRESSURE: 250 BAR

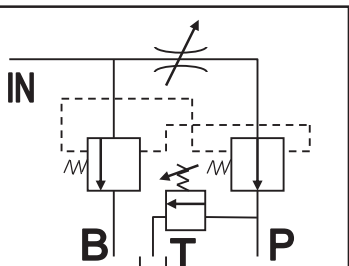
MATERIAL: CAST IRON



PRESSURE COMPENSATED FLOW CONTROL ADJUSTABLE WITH RELIEF ON P PORT

LKF-60 -1/2 NPT LKF-60 1/2 NPT THREADS 60 LITRE INLET

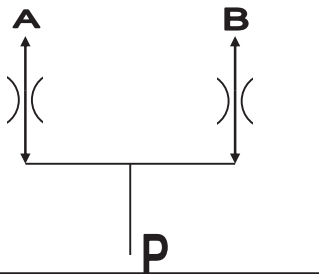

LKF-114-3/4 NPT LKF-114 3/4 NPT THREADS 114 LITRE INLET

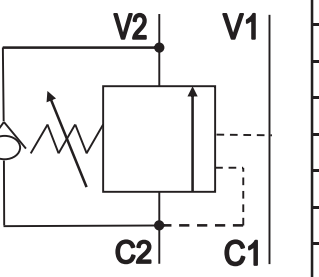
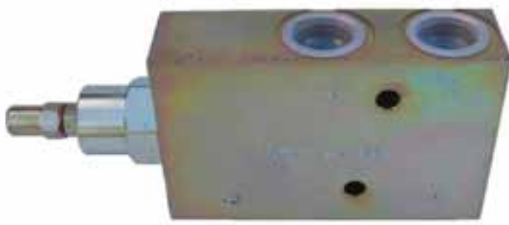


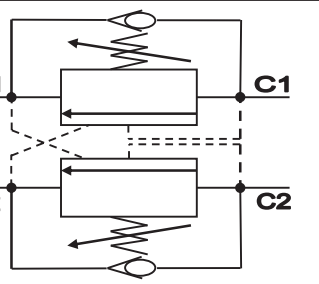

3 PORT BLOCK TYPE: IN, CF, AND EX, THE EX PORT CAN ALSO BE PRESSURISED
FLOW ADJUSTABLE LEVER

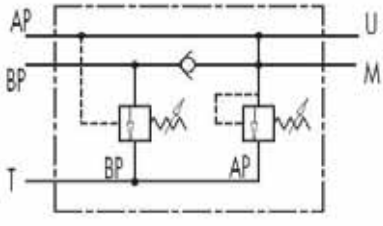


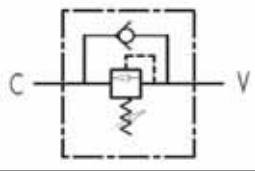



MAXIMUM OPERATING PRESSURE : 210 BAR RELIEVES THROUGH THE EX PORT

MATERIAL: CAST IRON

Part Number	HYDRAULIC COMPONENTS			01-01-2014 B
<u>FLOW DIVIDER 50 / 50 SPLIT</u>				
V3615.0316	VEQ-25	1/2" BSPP THREADS	INLET 25 / 40 LITRES	
V3615.0317	VEQ-30	1/2" BSPP THREADS	INLET 40 / 60 LITRES	
MAXIMUM OPERATING PRESSURE 250 BAR				
MATERIAL: CAST IRON				
				

<u>OVERCENTRE VALVE SINGLE ACTING</u>				
V2190.A600	VBCD/A 06 SE	3/8" BSPP THREADS	35 LITRE INLET	
V2190.A800	VBCD/A 08 SE	1/2" BSPP THREADS	70 LITRE INLET	
V2190.A120	VBCD/A 12 SE	3/4" BSPP THREADS	90 LITRE INLET	
SINGLE ACTING: 4 PORTED A + B ; C1 + C2:				
MAXIMUM OPERATING PRESSURE: 250 BAR				
MATERIAL: STEEL				
				

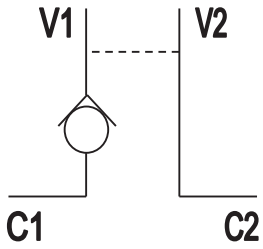
<u>OVERCENTRE VALVE DOUBLE ACTING</u>				
V2290.A600	VBCD/A 06 DE	3/8" BSPP THREADS	35 LITRE INLET	
V2290.A800	VBCD/A 08 DE	1/2" BSPP THREADS	70 LITRE INLET	
V2290.A120	VBCD/A 12 DE	3/4" BSPP THREADS	90 LITRE INLET	
DOUBLE ACTING: 4 PORTED A + B ; C1 + C2:				
MAXIMUM OPERATING PRESSURE: 250 BAR				
MATERIAL: STEEL				
				

Part Number	HYDRAULIC COMPONENTS					01-01-2014 B
HI - LOW UNLOADING VALVE						
V1290.0514	VABP 3/4" BD 100 LITER MAX FLOW PORTS INLET 3/4" BSPP & 1" BSPP TANK					
	MAXIMUM OPERATING HIGH PRESSURE; PORT (AP) 50 : 350 Bar					
	MAXIMUM OPERATING LOW PRESSURE; PORT (BP) 20 : 80 Bar					
		5 PORTS MATERIAL: STEEL				
SEQUENCE VALVE						
V1390.0640	VS2C 3/8"	3/8" BSPP THREADS	35 LITRE INLET			
V1390.0660	VS2C 1/2"	1/2" BSPP THREADS	70 LITRE INLET			
V1390.0665	VS2C 3/4"	3/4" BSPP THREADS	100 LITRE INLET			
	MAXIMUM OPERATING PRESSURE RANGE: 10 : 180 BAR					
	MAXIMUM OPERATING PRESSURE: 350 BAR					
		MATERIAL: STEEL				
PORT ADAPTOR FLANGES 90° DIAMOND 3 BOLT (EU TYPE)						
AFRG030060	RG 30 / 13.5	3/8" BSPP THREADS	PCD 30mm	13.5mm DIA PORT		
AFRG030080	RG 30 / 13.5	1/2" BSPP THREADS	PCD 30mm	13.5mm DIA PORT		
AFRG040080	RG 40 / 20.0	1/2" BSPP THREADS	PCD 40mm	20.0mm DIA PORT		
AFRG040120	RG 40 / 20.0	3/4" BSPP THREADS	PCD 40mm	20.0mm DIA PORT		
AFRG051120	RG 51 / 27.0	3/4" BSPP THREADS	PCD 51mm	27.0mm DIA PORT		
AFRG051160	RG 51 / 27.0	1" BSPP THREADS	PCD 51mm	27.0mm DIA PORT		
PORT ADAPTOR FLANGES 90° SQUARE 4 BOLT (BOSCH TYPE)						
AFRGB35080	RGB 35 / 08	1/2" BSPP THREADS	PCD 35mm	15mm DIA PORT		
AFRGB40120	RGB 40 / 12	3/4" BSPP THREADS	PCD 40mm	20mm DIA PORT		
AFRGB55160	RGB 55 / 16	1" BSPP THREADS	PCD 55mm	26mm DIA PORT		
DESCENT CONTROL VALVE						
VCG505.20A000	VALVE	VSC 020 - A 3	3/8" BSPP THREADS	350 Bar	2 LITRE FLOW CONTROL	
VCG506.200000	ADAPTOR	CMFXVSC 020	3/8" BSPP THREADS	MALE & FEMALE		
BURST VALVE						
VCG390.201500	VUBA 020	3/8" Thread	45 l/min	350 bar		
VCG390.301800	VUBA 030	1/2" Thread	70 l/min	350 bar		
VCG390.402200	VUBA 040	3/4" Thread	140 l/min	350 bar		
VCG391.200000	ADAPTOR	CMFX VUMBA-020	3/8" BSPP THREADS	MALE & FEMALE		
VCG391.300000	ADAPTOR	CMFX VUMBA-030	1/2" BSPP THREADS	MALE & FEMALE		
VCG391.400000	ADAPTOR	CMFX VUMBA-040	3/4" BSPP THREADS	MALE & FEMALE		
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY						
						PAGE 18

PILOT OPERATED CHECK VALVE SINGLE ACTING

VSG311.F10454	VRSE-F 010 FF	1/4"		
VSG311.F15454	VRSE-F 015 FF	3/8" BSPP THREADS	30 LITRE INLET	
VSG311.F25404	VRSE-F 025 FF	1/2" BSPP THREADS	50 LITRE INLET	

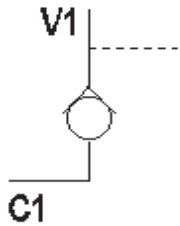
MAXIMUM OPERATING PRESSURE 350 BAR,
 PILOT RATIO 1:4 OPENING PRESSURE 0,5 bar
 4 PORTS
 MATERIAL: STEEL



PILOT OPERATED CHECK VALVE SINGLE ACTING

VSG341.206000	VBPS 020	3/8" BSPP THREADS	35 LITRE INLET	320 BAR
VSG341.304300	VBPS 030	1/2" BSPP THREADS	45 LITRE INLET	300 BAR
VSG341.404000	VBPS 040	3/4" BSPP THREADS	80 LITRE INLET	250 BAR
VSG341.503500	VBPS 050	1" BSPP THREADS	120 LITRE INLET	250 BAR

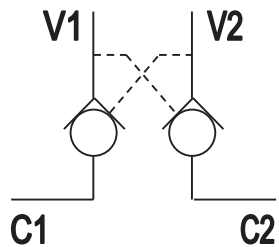
PILOT RATIO 1:4 OPENING PRESSURE 0,5 bar



PILOT OPERATED CHECK VALVE DOUBLE ACTING

VSG312.F10454	VRDE-F 010 FF	1/4" BSPP THREADS	30 LITRE INLET	
VSG312.F15454	VRDE-F 015 FF	3/8" BSPP THREADS	30 LITRE INLET	
VSG312.F25404	VRDE-F 025 FF	1/2" BSPP THREADS	50 LITRE INLET	

MAXIMUM OPERATING PRESSURE 350 BAR,
 PILOT RATIO 1:4 OPENING PRESSURE 0,5 bar
 4 PORTS
 MATERIAL: STEEL

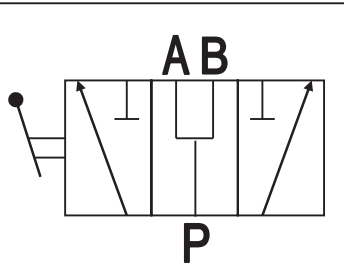


DIVERTER VALVE THREE WAY OPEN CENTRE

V70367.A00600	DDF3-A 020	3/8" BSPP THREADS	60 LITRE FLOW
V70367.A00800	DDF3-A 030	1/2" BSPP THREADS	90 LITRE FLOW
V70367.A01200	DDF3-A 040	3/4" BSPP THREADS	120 LITRE FLOW
V70367.A01600	DDF3-A 050	1" BSPP THREADS	180 LITRE FLOW
V70367.A02400	DDF3-A 070	1 1/2" BSPP THREADS	280 LITRE FLOW

MAXIMUM OPERATING PRESSURE: 280 BAR

MATERIAL: CAST IRON

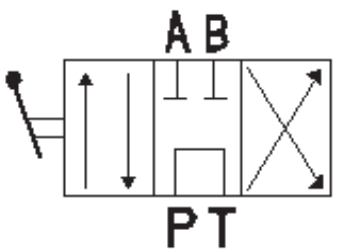


DIVERTER VALVE FOUR WAY OPEN CENTRE

V70467.A00600	IDF4-A 020	3/8" BSPP THREADS	35 LITRE FLOW
V70467.A00800	IDF4-A 030	1/2" BSPP THREADS	50 LITRE FLOW
V70467.A01200	IDF4-A 040	3/4" BSPP THREADS	90 LITRE FLOW

MAXIMUM OPERATING PRESSURE: 280 BAR

MATERIAL: CAST IRON

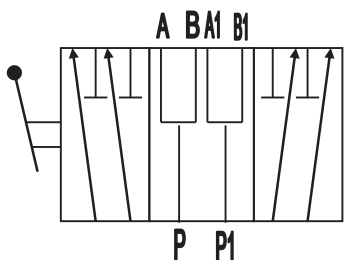


DIVERTER VALVE SIX WAY OPEN CENTRE

V70667.A00800	DDF6-A 030	1/2" BSPP THREADS	90 LITRE FLOW
V70667.A01200	DDF6-A 040	3/4" BSPP THREADS	120 LITRE FLOW
V70667.A01600	DDF6-A 050	1" BSPP THREADS	180 LITRE FLOW

MAXIMUM OPERATING PRESSURE: 280 BAR

MATERIAL: CAST IRON

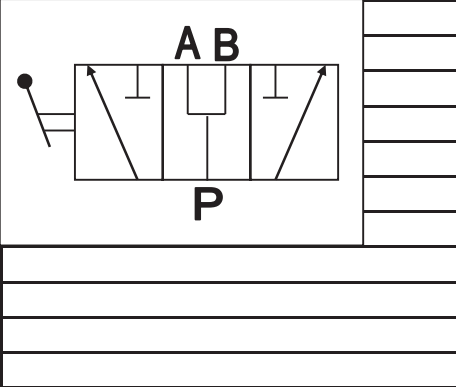


DIVERTER VALVE THREE WAY OPEN CENTRE

34 S 50	S - 50	1/2" NPT PORTS	56 LITRE FLOW
34 S 75	S - 75	3/4" NPT PORTS	90 LITRE FLOW
34 S 100	S - 100	1" NPT PORTS	151 LITRE FLOW

MAXIMUM OPERATING PRESSURE: 210 BAR

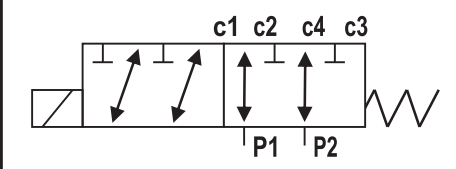
MATERIAL: CAST IRON



DIVERTER VALVE TWO WAY 6 PORT SOLENOID OPERATED

ELVSF240112DC	VS241/F1	3/8" BSPP THREADS	50 LITRE FLOW	12 VOLTS
ELVSF280112DC	VS281/F1	1/2" BSPP THREADS	90 LITRE FLOW	12 VOLTS

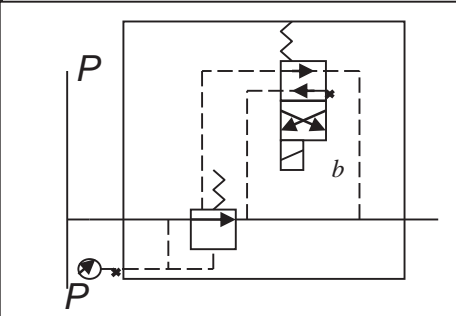
MAXIMUM OPERATING PRESSURE: 310 BAR
STACKABLE UP TO 5 BODIES
MATERIAL: CAST IRON



SOLENOID OPERATED RELIEF VALVE

BST061PN3DXX	BST-06-1PN-3-30-D-XXX-20	AVAILABLE IN 12 & 24 VOLT DC
BST061PN3DXX	BST-06-1PN-3-30-D-XXX-20	AVAILABLE IN 110 & 220 VOLT AC

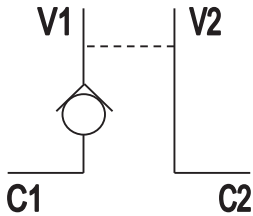
MAXIMUM OPERATING PRESSURE: 250 BAR
FLOW RATE : 200 LITRES PER MINUTE
PORTS: 3/4" NPT



PILOT OPERATED CHECK VALVE S/A WITH MANUAL LOCK

VSG331.154504	VRPSE 015-FL	LEFT HAND TYPE	3/8" BSPP THREADS	30 LITRE INLET
VSG332.154504	VRPSE 015-FR	RIGHT HAND TYPE	3/8" BSPP THREADS	30 LITRE INLET

MAXIMUM OPERATING PRESSURE: 350 BAR
PILOT RATIO 1:4,5 OPENING PRESSURE 0,5 bar
MATERIAL: STEEL

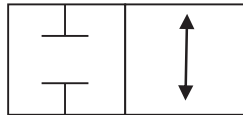


END - STROKE VALVE

HIGH PRESSURE BALL VALVE 2 WAY

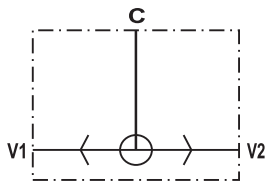
DRS2040000	RS 2 DN 6	1/4" BSPP THREADS	500 BAR	
DRS2060000	RS 2 DN 10	3/8" BSPP THREADS	500 BAR	PONEX CHECK
DRS2080000	RS 2 DN 13	1/2" BSPP THREADS	500 BAR	
DRS2120000	RS 2 DN 20	3/4" BSPP THREADS	500 BAR	

MATERIAL: STEEL



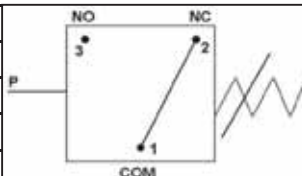
SHUTTLE VALVE

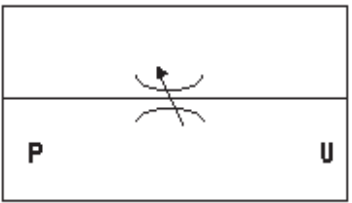

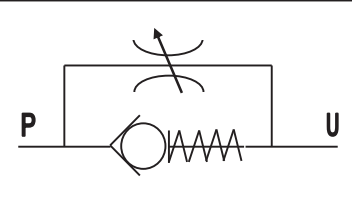

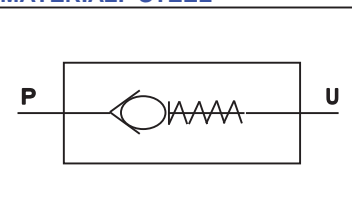

VSG390.100000	VU/SF 010	1/4" BSPP THREADS	500 BAR
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PRESSURE SWITCH

60 P- 02	P - 02	SPRING LOADED PISTON TYPE
	RANGE 10 - 400 bar (diff % 15-20bar @ 400bar)	
	AC 110 - 250	
	DC 24V	
	1/4" BSPP	



Part Number	HYDRAULIC COMPONENTS				01-01-2014 B				
<u>FLOW RESTRICTOR ADJUSTABLE (NEEDLE TYPE)</u>									
VSG522.100000	VRFB 04 1/4"	1/4" BSPP THREADS	15 LITRE INLET						
VSG522.200000	VRFB 06 3/8"	3/8" BSPP THREADS	30 LITRE INLET						
VSG522.300000	VRFB 08 1/2"	1/2" BSPP THREADS	45 LITRE INLET						
VSG522.400000	VRFB 12 3/4"	3/4" BSPP THREADS	80 LITRE INLET						
MAXIMUM OPERATING PRESSURE 350 BAR									
RESTRICTED BOTH WAYS									
MATERIAL: STEEL									
									
<u>FLOW RESTRICTOR ADJUSTABLE (NEEDLE TYPE + CHECK)</u>									
VSG521.100000	VRFU 04 1/4"	1/4" BSPP THREADS	15 LITRE INLET						
VSG521.200000	VRFU 06 3/8"	3/8" BSPP THREADS	30 LITRE INLET						
VSG521.300000	VRFU 08 1/2"	1/2" BSPP THREADS	45 LITRE INLET						
VSG521.400000	VRFU 12 3/4"	3/4" BSPP THREADS	80 LITRE INLET						
MAXIMUM OPERATING PRESSURE 350 BAR									
CHECKED ONE WAY FREE FLOW OTHER									
MATERIAL: STEEL									
									
<u>CHECK VALVE</u>									
VSG303.C1000	VUR 010 1/4"	1/4" BSPP THREADS	25 LITRE FLOW	0,5 BAR CRACKING					
VSG303.C2000	VUR 020 3/8"	3/8" BSPP THREADS	40 LITRE FLOW	0,5 BAR CRACKING					
VSG303.C3000	VUR 030 1/2"	1/2" BSPP THREADS	80 LITRE FLOW	0,5 BAR CRACKING					
VSG303.C4000	VUR 040 3/4"	3/4" BSPP THREADS	110 LITRE FLOW	0,5 BAR CRACKING					
VSG303.C5000	VUR 050 1"	1" BSPP THREADS	140 LITRE FLOW	0,5 BAR CRACKING					
VSG303.C6000	VUR 060 1 1/4"	1 1/4" BSPP THREADS	200 LITRE FLOW	0,5 BAR CRACKING					
VSG303.C7000	VUR 070 1 1/2"	1 1/2" BSPP THREADS	300 LITRE FLOW	0,5 BAR CRACKING					
VSG303.C50004	VUR 050 16-1"	1" BSPP THREADS	150 LITRE FLOW	5 BAR CRACKING					
MAXIMUM OPERATING PRESSURE 320 BAR									
CHECKED ONE WAY FREE FLOW OTHER									
MATERIAL: STEEL									
									
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY					PAGE 23				

Part Number	HYDRAULIC COMPONENTS		01-01-2014 B
<u>P.T.O. GEAR BOXES FEMALE DRIVE 12 Kw</u>			
<u>GROUP 2 PUMP</u>			
BM60002050	GBML32-2- F-1/3,5 DRIVE FEMALE 1"3/8		
BF31000800	SPLINE ADAPTOR Z=14 BF2T GROUP 2 PUMP		
RATIO : 1/3,5 P.T.O. SPEED 540 rpm 12 Kw			
COMMON ROTATION C/W VIEWED FROM			
BACK OF TRACTOR. MATERIAL: ALUMINIUM			
<u>P.T.O. GEAR BOXES FEMALE DRIVE 20Kw</u>			
<u>GROUP 3 & 2 PUMP</u>			
BM70002050	GBML 52 - F - 1/3.4 DRIVE FEMALE 1"3/8		
BF31003500	SPLINE ADAPTOR Z=18 BF3 GROUP 3 PUMP		
BF31004000	SPLINE ADAPTOR Z=18 BF3/2T GROUP 2 PUMP		
RATIO : 1/3,4 P.T.O. SPEED 540 rpm 20 Kw			
COMMON ROTATION C/W VIEWED FROM			
BACK OF TRACTOR . MATERIAL: ALUMINIUM			
<u>P.T.O. GEAR BOXES MALE DRIVE 20Kw</u>			
<u>GROUP 3 & 2 PUMP</u>			
BM70001040	GBML 52 - M - 1/3 DRIVE FEMALE 1"3/8		
BF31003500	SPLINE ADAPTOR Z=18 BF3 GROUP 3 PUMP		
BF31004000	SPLINE ADAPTOR Z=18 BF3/2T GROUP 2 PUMP		
RATIO : 1/3 P.T.O. SPEED 540 rpm 20 Kw			
COMMON ROTATION C/W VIEWED FROM			
BACK OF TRACTOR . MATERIAL: ALUMINIUM			
<u>P.T.O. GEAR BOXES MALE / FEMALE THROUGH DRIVE 20Kw</u>			
<u>GROUP 3 & 2 PUMP</u>			
BM12390003	GBML 52/B - 8 - 1/3 THROUGH DRIVE FEMALE / MALE 1"3/8		
BF31003500	SPLINE ADAPTOR Z=18 BF3 GROUP 3 PUMP		
BF31004000	SPLINE ADAPTOR Z=18 BF3/2T GROUP 2 PUMP		
RATIO : 1/3 P.T.O. SPEED 540 rpm 20 Kw			
COMMON ROTATION C/W VIEWED FROM			
BACK OF TRACTOR . MATERIAL: ALUMINIUM			
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY			

HYDRAULIC COMPONENTS

01-01-2014 B

GROUP 2 PUMP OUTBOARD BEARING SUPPORT

BU12020001	STSUR / 2 C <u>18 mm SHAFT</u>
BF31000800	SPLINE ADAPTOR BF2Tz 14 TOOTH GROUP 2
	TO TAKE A GROUP 2 PUMP 1 : 8 TAPER
	18 mm PARALLEL KEY SHAFT SPIGOT 36.5mm
	MOUNTING 4 BOLT 71.4 mm X 96mm
	LOAD 1300 N @ 2000 RPM distance (X) 40 mm
BU12020007	STSUR / 2 C <u>22 mm SHAFT</u>
BF31002000	SPLINE ADAPTOR BF2Tz 15 TOOTH GROUP 2
	TO TAKE A GROUP 2 PUMP 1 : 8 TAPER
	22 mm PARALLEL KEY SHAFT SPIGOT 50.8mm
	MOUNTING 4 BOLT 71.4 mm X 96mm
	LOAD 1400 N @ 2000 RPM distance (X) 50 mm



GROUP 3 PUMP OUTBOARD BEARING SUPPORT

BU12030001	SU / 3 C <u>24 mm SHAFT</u>
BF31003500	SPLINE ADAPTOR BF3 18 TOOTH GROUP 3
	TO TAKE A GROUP 3 PUMP 1 : 8 TAPER
	24 mm PARALLEL KEY SHAFT SPIGOT 50.8mm
	MOUNTING 4 BOLT 98.2 mm X 128 mm
	LOAD 1450 N @ 2000 RPM distance (X) 48 mm



SPLINED COUPLINGS

MALE

BF31000400	BF1-1	GR.1	MALE SPLINE 12 TOOTH 20 X 17 GROUP 1 TAPER 1 : 8
BF31000800	BF2TV	GR.2T	MALE SPLINE 14 TOOTH 25 X 22 GROUP 2 TAPER 1 : 8
BF31002000	BF2Tz15	GR.2T	MALE SPLINE 15 TOOTH 28 X 25 GROUP 2 TAPER 1 : 8
BF31004000	BF3/2T	GR.2T	MALE SPLINE 18 TOOTH 35 X 31 GROUP 2 TAPER 1 : 8
BF31003500	BF3	GR.3	MALE SPLINE 18 TOOTH 35 X 31 GROUP 3 TAPER 1 : 8

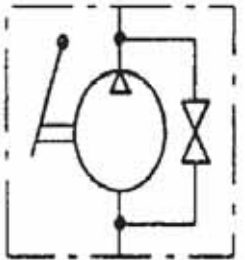


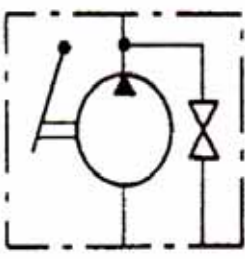


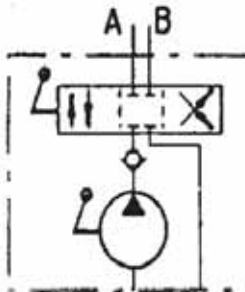


FEMALE

BS31200500	BFM1	FEMALE SPLINE 12 TOOTH 20 X 17
BS31200600	BFM2	FEMALE SPLINE 14 TOOTH 25 X 22
BS31200900	BFM3	FEMALE SPLINE 18 TOOTH 35 X 31



OUTBOARD BEARING SUPPORT WITH PUMP



Part Number	HAND PUMPS			01-01-2014 B
	<u>INLINE TYPE</u>			
PAM0142005	PAM - 20 - VS	20cc per rev	300 bar	
PAM0144005	PAM - 40 - VS	40cc per rev	230 bar	
PAM0290000	HAND LEVER			
	SUPPLIED WITH RUBBER BELLOWS AND RELEASE VALVE			
				
	<u>TANK TYPE FOR SINGLE ACTING CYLINDER</u>			
PAM0141203	PAM - T - VS 12	12cc per rev	380 bar	
PAM0142503	PAM - T - VS 25	25cc per rev	300 bar	
PAM0144503	PAM - T - VS 45	45cc per rev	230 bar	
PAM0290000	HAND LEVER			
	SUPPLIED WITH RUBBER BELLOWS, RELIEF VALVE, AND RELEASE VALVE			
				
	<u>TANK TYPE WITH DIVERTER FOR DOUBLE ACTING CYLINDER</u>			
PAM0151203	PAM-TD - VS 12	12cc per rev	380 bar	
PAM0152503	PAM-TD - VS 25	25cc per rev	300 bar	
PAM0154503	PAM-TD - VS 45	45cc per rev	230 bar	
PAM0290000	HAND LEVER			
	SUPPLIED WITH RUBBER BELLOWS, RELIEF VALVE, AND 4 WAY DIVERTER			
				
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY				PAGE 26

STEEL TANKS FOR HAND PUMPS

CAPACITY

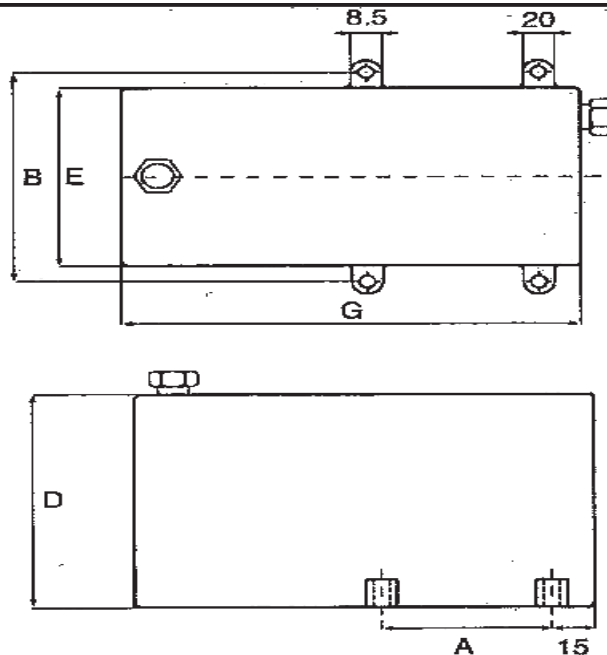
PM00220001	1 LITRE
PM00220003	3 LITRE
PM00220005	5 LITRE
PM00220010	10 LITRE

TANKS SUPPLIED WITH PUMP GASKET, MOUNTING BOLTS, FILLER BREATHER, DRAIN PLUG AND SUCTION PIPE



DIMENSIONS

CAPACITY	A	B	D	E	G
1 LITRE	90mm	120mm	150mm	100mm	120mm
3 LITRE	90mm	120mm	150mm	100mm	247mm
5 LITRE	90mm	195mm	175mm	175mm	200mm
10 LITRE	90mm	195mm	175mm	175mm	376mm



HEAT EXCHANGERS by Tak-Bok

WARNING; TO PROTECT COOLER FROM BURSTING A BY-PASS VALVE SHOULD ALWAYS BE FITTED

	MODEL	kcal/h	SYSTEM	FLOW	PORTS	PRESS	FAN	SIZES	
	TYPE	$\Delta t=30C$	KW	L/min	NPT	DROP	CURRENT	L X H X W	Kg
AH10 12 - DC-12 V	AH10 12	6000	3.7 / 5.5	100	1"	1 bar	12 V DC	417 X 360 X 200	10
AH10 12 - DC-24 V	AH10 12	6000	3.7 / 5.5	100	1"	1 bar	24 V DC	417 X 360 X 200	10
AH10 12 - AC-220 V	AH10 12	6000	3.7 / 5.5	100	1"	1 bar	220 V AC 1 PHASE	417 X 360 X 200	10
AH10 12 - AC-380 V	AH10 12	6000	3.7 / 5.5	100	1"	1 bar	380 V AC 3 PHASE	417 X 360 X 200	10
AH14 17 - DC-12 V	AH14 17	10,000	5.6 / 7.5	100	1"	0.8	12 V DC	570 X 411 X 200	11
AH14 17 - DC-24 V	AH14 17	10,000	5.6 / 7.5	100	1"	0.8	24 V DC	570 X 411 X 200	11
AH14 17 - AC-220 V	AH14 17	10,000	5.6 / 7.5	100	1"	0.8	220 V AC 1 PHASE	570 X 411 X 200	11
AH14 17 - AC-380 V	AH14 17	10,000	5.6 / 7.5	100	1"	0.8	380 V AC 3 PHASE	570 X 411 X 200	11
AH14 70 - DC-12 V	AH14 70	14,000	7.5 / 11.5	200	1-1/4"	1 bar	12 V DC	570 X 407 X 225	13
AH14 70 - DC-24 V	AH14 70	14,000	7.5 / 11.5	200	1-1/4"	1 bar	24 V DC	570 X 407 X 225	13
AH14 70 - AC-220 V	AH14 70	14,000	7.5 / 11.5	200	1-1/4"	1 bar	220 V AC 1 PHASE	570 X 407 X 225	13
AH14 70 - AC-380 V	AH14 70	14,000	7.5 / 11.5	200	1-1/4"	1 bar	380 V AC 3 PHASE	570 X 407 X 225	13

BY-PASS ASS INST **INSTALLED BY-PASS SYSTEM ; NO WARRANTEE ON COOLERS IF NOT BOUGHT WITH COOLER**

SPARE FAN MOTORS AH10 12 SERIES

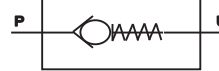
FAN 10 - DC-12 V	DC 12 VOLT FAN MOTOR
FAN 10 - DC-24 V	DC 24 VOLT FAN MOTOR
FAN 10 - AC-220 V	AC 220 VOLT FAN MOTOR 1 PHASE
FAN 10 - AC-380 V	AC 380 VOLT FAN MOTOR 3 PHASE

SPARE FAN MOTORS AH 14 17 & AH14 70 SERIES

FAN 14 - DC-12 V	DC 12 VOLT FAN MOTOR
FAN 14 - DC-24 V	DC 24 VOLT FAN MOTOR
FAN 14 - AC-220 V	AC 220 VOLT FAN MOTOR 1 PHASE
FAN 14 - AC-380 V	AC 380 VOLT FAN MOTOR 3 PHASE

BY - PASS PROTECTION VALVE 5 BAR

V1402.1605	VU 16-1"	1" BSPP THREADS	150 LITRE FLOW	5 BAR CRACKING
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AH10 12 1" PORTS AH14 17 1" PORTS & AH14 70 1 1/4" PORTS



ACCUMULATORS HR SERIES (DIAPHRAGM TYPE)

	TYPE	MAX PRESS	NITROGEN VOL	MAX PRELOAD	MAX FLOW	CONNECTION
		BAR	LITRE	BAR	LITRE / MIN	mm
ACH0000100	H100R	250	0.15	150	15	M 18X1.5
ACH0000350	H350R	250	0.35	150	35	M 18X1.5
ACH0000500	H500R	250	0.45	150	45	M 18X1.5
ACH0000700	H700R	250	0.7	150	70	M 18X1.5
ACH0001000	H1000R	250	1.0	150	100	M 18X1.5
ACH0001400	H1400R	250	1.4	150	140	M 18X1.5
ACH0002000	H2000R	250	2.0	150	200	M 18X1.5
ACH0004000	H4000R	250	4.0	150	380	M 18X1.5

NITROGEN FILLING AND TESTING

RHACCUFILLNEW	FILLING AND TESTING LABOUR FOR A NEW UNIT
RHACCUFILL	FILLING AND TESTING LABOUR
ACAR500000	TYPE A R CHARGING VALVE KIT 5/8" UNF THREAD SUPPLIED IN BOX
1JH-08-18	HYDRAULIC HOSE CONNECTOR 1/2" JIC MALE TO M18 X 1.5

ACCUMULATORS H 210 SERIES



STEEL TANKS FOR POWER PACKS

	USABLE CAPACITY	VOLUMETRIC CAPACITY	POSSIBLE LID MOUNT PUMP TYPE
RH000025	25 LITRE	42 LITRE	GP1 SINGLE
RH000040	40 LITRE	62 LITRE	GP1 SINGLE & GP2 SINGLE
RH000075	75 LITRE	108 LITRE	GP2 SINGLE & GP3 SINGLE
RH000100	100 LITRE	162 LITRE	GP2 DOUBLE & GP3 SINGLE
RH000160	160 LITRE	225 LITRE	GP2 DOUBLE & GP3 DOUBLE
RH000250	250 LITRE	360 LITRE	GP3 DOUBLE

DIMENSIONS

TANK	LENGTH	WIDTH	HEIGHT	+ LEG HEIGHT
25 LITRE	400mm	350mm	300mm	+50mm
40 LITRE	500mm	400mm	300mm	+50mm
75 LITRE	600mm	400mm	450mm	+50mm
100 LITRE	800mm	450mm	450mm	+50mm
160 LITRE	900mm	500mm	500mm	+50mm
250 LITRE	1000mm	600mm	600mm	+50mm

TECHNICAL SPECIFICATIONS

TANK SIDES 2mm THICK SIDES WELDED INSIDE AND OUTSIDE

TANK LID 4mm THICK WITH ROUNDED 90° EDGES FOR CONTAMINATION PROTECTION

TANKS SUPPLIED WITH LID, LID GASKET, LID BOLTS, 1/2" BSP DRAIN

FILLER BREATHERS

70 TM450G65 (29mm O/D MESH) 40 micron

70 TM478G78 (50mm O/D MESH) 40 micron

TAP 9010-C120 TAP 9010-C120-L (Anti-splash)

**LEVEL GAUGES**

EAV761TM12 LOT - 2012 - 76 - 3" (76mm BOLT CENTER)

EAV1271TM12 LOT - 3022 - 127 - 5" (127mm BOLT CENTER)

EAV2541TM12 LOT - 3022 - 254 - 10" (254mm BOLT CENTER)

**LEVEL GAUGES PLUG TYPE**

EAPP-3/4"G 3/4" BSPP THREAD ALUMINUM ALLOY PLUG TYPE LEVEL GAUGE

EAPP-1"G 1" BSPP THREAD ALUMINUM ALLOY PLUG TYPE LEVEL GAUGE

EAPP-1 1/4"G 1-1/4" BSPP THREAD ALUMINUM ALLOY PLUG TYPE LEVEL GAUGE


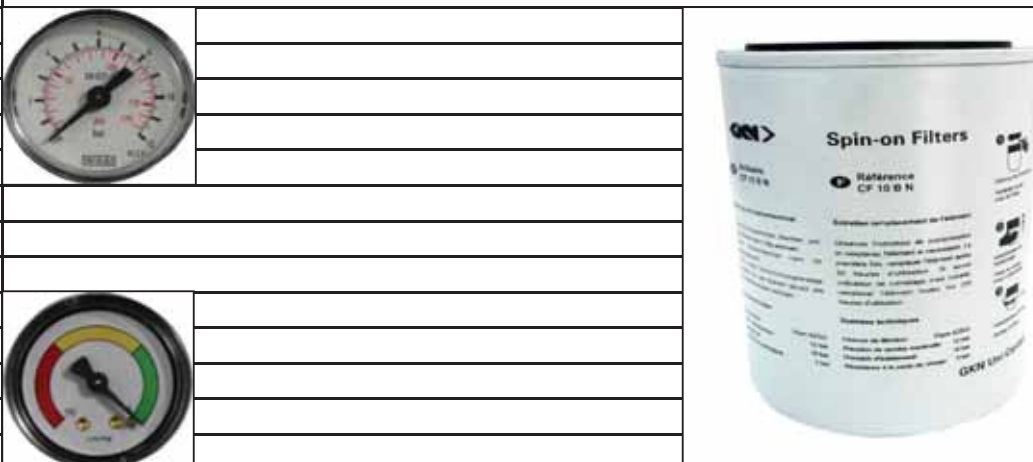

**ELECTRICAL LEVEL INDICATOR**

70 LME150B5 ELECTRICAL LEVEL INDICATER

70 LME250B5 ELECTRICAL LEVEL INDICATER

RH ALEX-BUZZ BUZZER WARNING 24 v



Part Number	FILTRATION ACCESSORIES			01-01-2014 B
<u>SPIN - ON FILTER HEAD RETURN LINE</u>				
	DESCRIPTION	PORTS	FLOW RATE @ 40 KPA	
EFPS1 BC6 ZL101 G	FILTER HEAD	3/4" BSP	75 LITRES	
EFPS3 BE6B ZL101G	FILTER HEAD	1- 1/4" BSP	200 LITRES	
EFPS5 BF6B G1-1/2"	FILTER HEAD	1- 1/2" BSP	350 LITRES	TWIN HEADS
MAX WORKING PRESSURE 18 bar BY-PASS 170 Kpa 1 bar = 100 Kpa				
				
<u>SPIN - ON FILTER CANS</u>				
	DESCRIPTION	FILTER HEAD	FLOW RATE	MICRON
EEPS1-BP10B	SPIN-ON CAN	3/4" BSP	70 LITRES @ 20 Kpa	10
EEPS1-BP20B	SPIN-ON CAN	3/4" BSP	120 LITRES @ 20 Kpa	25
EEPS3-BP10B	SPIN-ON CAN	1-1/4" BSP & 1-1/2" BSP	200 LITRES @ 20 Kpa	10
EEPS3-BP20B	SPIN-ON CAN	1-1/4" BSP & 1-1/2" BSP	300 LITRES @ 20 Kpa	25
				
<u>VISUAL INDICATORS</u>				
22 RLBT	GAUGE RETURN SIDE	1/8" BSP	GAUGE 0 - 12 bar	
12 RLBT	GAUGE SUCTION SIDE	1/8" BSP	GAUGE 0 - 76 cm Hg	
<u>SUCTION STRAINERS</u> (SUCTION LINE ONLY 125 MICRON)				
	DESCRIPTION	PORTS	FLOW RATE	
EESA1-00W250	SUCTION STRAINER	3/8" BSP PORT	15 LITRES	
EESA2-00W250	SUCTION STRAINER	1/2" BSP PORT	22 LITRES	
EESA5-00W250	SUCTION STRAINER	3/4" BSP PORT	56 LITRES	
EESA6-00W250	SUCTION STRAINER	1" BSP PORT	100 LITRES	
EESA10-00W250	SUCTION STRAINER	1-1/4" BSP PORT	140 LITRES	
EESA11-00W250	SUCTION STRAINER	1-1/2" BSP PORT	200 LITRES	
EESA17-00W250	SUCTION STRAINER	2" BSP PORT	340 LITRES	
				
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY				PAGE 31

Part Number	FILTRATION ACCESSORIES				01-01-2014 B
	<u>TANK TOP RETURN FILTER BODY</u> (INCLUDES 20 MICRON ELEMENT)				
EFRM2BBB-06P20-00	TANK TOP & FILTER ELEMENT	1/2" BSP	110 LITRES		
EFRM6BCB-06P20-00	TANK TOP & FILTER ELEMENT	3/4" BSP	150 LITRES		
EFRM8BDB-06P20-00	TANK TOP & FILTER ELEMENT	1" BSP	210 LITRES		
EFRM11BEB-06P20-00	TANK TOP & FILTER ELEMENT	1-1/4" BSP	300 LITRES		
EFRM15BFB-06P20-00	TANK TOP & FILTER ELEMENT	1-1/2" BSP	425 LITRES		
EFRM17BHB-06P20-00	TANK TOP & FILTER ELEMENT	2" BSP	600 LITRES		
	MAX WORKING PRESSURE 3 bar	BY-PASS 170 Kpa	1 bar = 100 Kpa		
	<u>TANK TOP RETURN ELEMENTS</u> (RETURN LINE ONLY, BY-PASS SET 170 KPA)				
	DESCRIPTION	FILTER HEAD	FLOW RATE @ 15 KPA	MICRON	
EERM2B-06P20	FILTER ELEMENT	1/2" BSP	60 LITRES	20	
EERM6B-06P20	FILTER ELEMENT	3/4" BSP	100 LITRES	20	
EERM8B-06P20	FILTER ELEMENT	1" BSP	150 LITRES	20	
EERM11B-06P20	FILTER ELEMENT	1-1/4" BSP	150 LITRES	20	
EERM15B-06P20	FILTER ELEMENT	1-1/2" BSP	450 LITRES	20	
EERM17B-06P20	FILTER ELEMENT	2" BSP	550 LITRES	20	
	<u>TANK TOP RETURN ELEMENTS</u> (RETURN LINE ONLY, BY-PASS SET 170 KPA)				
	DESCRIPTION	FILTER HEAD	FLOW RATE @ 40 KPA	MICRON	
EERM2B-06P10	FILTER ELEMENT	1/2" BSP	45 LITRES	10	
EERM6B-06P10	FILTER ELEMENT	3/4" BSP	85 LITRES	10	
EERM8B-06P10	FILTER ELEMENT	1" BSP	150 LITRES	10	
EERM11B-06P10	FILTER ELEMENT	1-1/4" BSP	150 LITRES	10	
EERM15B-06P10	FILTER ELEMENT	1-1/2" BSP	350 LITRES	10	
EERM17B-06P10	FILTER ELEMENT	2" BSP	450 LITRES	10	
	<u>VISUAL INDICATORS</u>				
22 RLBT	GAUGE RETURN SIDE 1/8" BSP	GAUGE 0 - 12 bar			
12 RLBT	GAUGE SUCTION SIDE 1/8" BSP	GAUGE 0 - 76 cm Hg			
					
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY					

Part Number	FILTRATION ACCESSORIES			01-01-2014 B
	<u>HIGH PRESSURE FILTER HEAD 3/4" BSP 120 LITRES FLOW</u>			
	DESCRIPTION	PORTS	FLOW RATE @ 80 Kpa	
70MHT152FV1CB4K2	FILTER HEAD	3/4" BSP	120 LITRES	
	INCLUDES FILTER ELEMENT VISUAL INDICATOR & BY-PASS VALVE			
	MAX WORKING PRESSURE 420 bar BY-PASS 6 bar 1 bar = 100 Kpa			
	<u>HIGH PRESSURE FILTER ELEMENTS 3/4" (INORGANIC FIBRE ONLY)</u>			
	DESCRIPTION	FILTER HEAD	FLOW RATE @ 140 Kpa MICRON	
70CCH152FD1	FILTER ELEMENT	3/4" BSP	95 LITRES 10	
70CCH152FV1	FILTER ELEMENT	3/4" BSP	95 LITRES 25	
	<u>HIGH PRESSURE FILTER HEAD 1" BSP 200 LITRES FLOW</u>			
	DESCRIPTION	PORTS	FLOW RATE @ 80 Kpa	
70MHT302FV1CB5K2	FILTER HEAD	1" BSP	200 LITRES	
	INCLUDES FILTER ELEMENT VISUAL INDICATOR & BY-PASS VALVE			
	MAX WORKING PRESSURE 420 bar BY-PASS 6 bar 1 bar = 100 Kpa			
	<u>HIGH PRESSURE FILTER ELEMENTS 1" (INORGANIC FIBRE ONLY)</u>			
	DESCRIPTION	FILTER HEAD	FLOW RATE @ 140 Kpa MICRON	
70CCH302FD1	FILTER ELEMENT	1" BSP	160 LITRES 10	
70CCH302FV1	FILTER ELEMENT	1" BSP	200 LITRES 25	
	<u>HIGH PRESSURE FILTER HEAD 1-1/4" BSP 400 LITRES FLOW</u>			
	DESCRIPTION	PORTS	FLOW RATE @ 80 Kpa	
70MHT803FV1CB4K2	FILTER HEAD	1-1/4" BSP	200 LITRES	
	INCLUDES FILTER ELEMENT VISUAL INDICATOR & BY-PASS VALVE			
	MAX WORKING PRESSURE 420 bar BY-PASS 6 bar 1 bar = 100 Kpa			
	<u>HIGH PRESSURE FILTER ELEMENTS 1-1/4" (INORGANIC FIBRE ONLY)</u>			
	DESCRIPTION	FILTER HEAD	FLOW RATE @ 140 Kpa MICRON	
70CCH803FD1	FILTER ELEMENT	1-1/4" BSP	340 LITRES 10	
CC803FV1	FILTER ELEMENT	1-1/4" BSP	400 LITRES 25	
	<u>HIGH PRESSURE FILTER HEAD 1-1/2" BSP 440 LITRES FLOW</u>			
	DESCRIPTION	PORTS	FLOW RATE @ 80 Kpa	
70MHT804FV1CB7K2	FILTER HEAD	1-1/2" BSP	440 LITRES	
	INCLUDES FILTER ELEMENT VISUAL INDICATOR & BY-PASS VALVE			
	MAX WORKING PRESSURE 420 bar BY-PASS 6 bar 1 bar = 100 Kpa			
	<u>HIGH PRESSURE FILTER ELEMENTS 1-1/2" (INORGANIC FIBRE ONLY)</u>			
	DESCRIPTION	FILTER HEAD	FLOW RATE @ 140 Kpa MICRON	
70CCH804FD1	FILTER ELEMENT	1-1/2" BSP	380 LITRES 10	
70CCH804FV1	FILTER ELEMENT	1-1/2" BSP	440 LITRES 25	
	<u>HIGH PRESSURE FILTER BY-PASS ACCESSORIES</u>			
70U C F D V 500	U C F D V 500	1/2" BSP	GAUGE 0-5 BAR	
				
				
				
	PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY			

GAUGE BOTTOM ENTRY

	<u>PRESSURE RANGE</u>	<u>FACE O/D</u>	<u>THREAD BSP</u>
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AMGR063010	0 / 10 Bar	63 mm	1/4"
AMGR063025	0 / 25 Bar	63 mm	1/4"
AMGR063060	0 / 60 Bar	63 mm	1/4"
AMGR063100	0 / 100 Bar	63 mm	1/4"
AMGR063160	0 / 160 Bar	63 mm	1/4"
AMGR063250	0 / 250 Bar	63 mm	1/4"
AMGR063400	0 / 400 Bar	63 mm	1/4"
AMGR063600	0 / 600 Bar	63 mm	1/4"

**GAUGE REAR ENTRY**

	<u>PRESSURE RANGE</u>	<u>FACE O/D</u>	<u>THREAD BSP</u>
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AMGF063010	0 / 10 Bar	63 mm	1/4"
AMGF063025	0 / 25 Bar	63 mm	1/4"
AMGF063060	0 / 60 Bar	63 mm	1/4"
AMGF063100	0 / 100 Bar	63 mm	1/4"
AMGF063160	0 / 160 Bar	63 mm	1/4"
AMGF063250	0 / 250 Bar	63 mm	1/4"
AMGF063400	0 / 400 Bar	63 mm	1/4"
AMGF063600	0 / 600 Bar	63 mm	1/4"

**GAUGE DIGITAL BOTTOM ENTRY 0 : 700 Bar**

	<u>PRESSURE RANGE</u>	<u>FACE O/D</u>	<u>THREAD BSP</u>
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SD12.5-L-3-1-700	0 / 700 Bar	63 mm	1/4"
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SPECS:

DIGITAL READ OUT 0 : 700 Bar

ON / OFF BUTTON

AUTO OFF BUTTON

LIGHT BUTTON

MAX RECALL PRESSURE BUTTON

RESET BUTTON

**GAUGE HOSE ASSEMBLIES & TEST POINTS**

	<u>PRESSURE RANGE ;</u>	<u>GAUGE THREAD</u>	<u>MINI MESS THREAD</u>	<u>LENGTH</u>
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RHMMH6400.10	0 / 700 Bar	1/4" BSPP	M16X2	1000 mm
RHMMH6400.15	0 / 700 Bar	1/4" BSPP	M16X2	1500 mm
RHMMH6400.20	0 / 700 Bar	1/4" BSPP	M16X2	2500 mm

RHMMMP-04P MINI MESS POINT 1/4" BSPP

RHMMMP-06R MINI MESS POINT 3/8" BSPP

RHMMMP-04N MINI MESS POINT 1/4" NPT

RHMMMP-06N MINI MESS POINT 3/8" NPT

QUADRIGAUGE

	<u>PRESSURE RANGE</u>	<u>0 - 5000 PSI</u>	<u>0 - 350 BAR</u>
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03-740-019 1/8" NPT FEMALE FITTING ON GAUGE MALE ON HOSE



Part Number	DRIVE COUPLINGS								01-01-2014 B
PARALLEL SHAFT COUPLINGS H R C (TAPER LOCK)									
	MOTOR SHAFT	TAPER LOCK BUSH	PUMP SHAFT	TAPER LOCK BUSH	COUPLING HRC TYPE	RUBBER ELEMENT	ELECTRIC FRAME	ELECTRIC K.W.	
HRC 090 F 1108	19	1108 19	5/8"	1108 5/8	090F	090	80	0.55 - 0.75	
HRC 090 F 1108	19	1109 19	3/4"	1108 3/4	090F	090	80	0.55 - 0.75	
HRC 090 F 1108	24	1108 24	3/4"	1108 3/4	090F	090	90	1.1 - 1.5	
HRC 090 F 1108	24	1109 24	7/8"	1108 7/8	090F	090	90	1.1 - 1.5	
HRC 110 F 1610	28	1610 028	5/8"	1610 010	110 F	110	100 / 112	2.20 - 4.00	
HRC 110 F 1610	28	1610 028	3/4"	1610 012	110 F	110	100 / 112	2.20 - 4.00	
HRC 110 F 1610	38	1610 038	5/8"	1610 010	110 F	110	132	5.50 - 9.00	
HRC 110 F 1610	38	1611 038	3/4"	1610 012	110 F	110	132	5.50 - 9.00	
HRC 130 F 1610	42	1610 042	5/8"	1610 010	130 F	130	160	11.00 - 15.00	
HRC 130 F 1610	42	1611 042	3/4"	1610 012	130 F	130	160	11.00 - 15.00	
HRC 130 F 1610	42	1612 042	7/8"	1610 014	130 F	130	160	11.00 - 15.00	
HRC 130 F 1610	42	1613 042	1"	1610 100	130 F	130	160	11.00 - 15.00	
HRC 130 F 1610	42	1614 042	1-1/8"	1610 102	130 F	130	160	11.00 - 15.00	
HRC 130 F 1610	42	1615 042	1-1/4"	1610 104	130 F	130	160	11.00 - 15.00	
HRC 150 F 2012	48	2012 048	7/8"	2012 014	150 F	150	180	18.00 - 22.00	
HRC 150 F 2012	48	2013 048	1"	2012 100	150 F	150	180	18.00 - 22.00	
HRC 150 F 2012	48	2014 048	1-1/8"	2012 102	150 F	150	180	18.00 - 22.00	
HRC 150 F 2012	48	2015 048	1-1/4"	2012 104	150 F	150	180	18.00 - 22.00	
HRC 180 F 2517	55	2517 055	1"	2517 100	180 F	180	200	30.00	
HRC 180 F 2517	55	2518 055	1-1/8"	2517 102	180 F	180	200	30.00	
HRC 180 F 2517	55	2519 055	1-1/4"	2517 104	180 F	180	200	30.00	
TAPER LOCK BUSH METRIC									
1108 METRIC	1108 SIZES : 16 mm 18 mm 19 mm 20 mm 22 mm 24 mm								
1610 METRIC	1610 SIZES : 16 mm 19 mm 22 mm 25 mm 28 mm 30 mm 32 mm 38 mm 42 mm								
2012 METRIC	2012 SIZES : 22 mm 25 mm 28 mm 30 mm 32 mm 38 mm 42 mm 48 mm								
2517 METRIC	2517 SIZES : 25 mm 28 mm 30 mm 32 mm 38 mm 42 mm 48 mm 55 mm								
TAPER LOCK BUSH IMPERIAL									
1108 IMPERIAL	TYPE 1108 SIZES : 5/8" 7/8" 3/4" 1"								
1610 IMPERIAL	TYPE 1610 SIZES : 5/8" 7/8" 3/4" 1" 1-1/8" 1-1/4"								
2012 IMPERIAL	TYPE 2012 SIZES : 7/8" 3/4" 1" 1-1/8" 1-1/4"								
2517 IMPERIAL	TYPE 2517 SIZES : 1" 1-1/8" 1-1/4"								
COUPLING FLANGE									
HRC 090 F	TYPE HRC 090 F								
HRC 110 F	TYPE HRC 110 F								
HRC 130 F	TYPE HRC 130 F								
HRC 150 F	TYPE HRC 150 F								
HRC 180 F	TYPE HRC 180 F								
COUPLING RUBBER									
HRC090 ELEM	TYPE HRC 090 NATURAL ELEMENT								
HRC110 ELEM	TYPE HRC 110 NATURAL ELEMENT								
HRC130 ELEM	TYPE HRC 130 NATURAL ELEMENT								
HRC150 ELEM	TYPE HRC 150 NATURAL ELEMENT								
HRC180 ELEM	TYPE HRC 180 NATURAL ELEMENT								
POWER RATINGS WORKED OUT AS BELOW									
SERVICE FACTOR X 2,5 @ 1440 RPM									



PARALLEL SHAFT COUPLING (BLANK)

	DESC	Nm @ 1500 rpm	MAX Kw cont	MAX rpm	MAX BORE	LENGTH	NYLON OD	STEEL OD
40HOF28	UCC-28	20	3	5000	28	84	67	44
40HOF42	UCC-42	76	11	5000	42	88	87	60
40HOF55	UCC-55	133	22	5000	55	124	121	80

NYLON SLEEVE ONLY

40HOF28NS	SLEEVE HOF 28 NS
40HOF42NS	SLEEVE HOF 42 NS
40HOF55NS	SLEEVE HOF 55 NS



PARALLEL SHAFT COUPLING (BORED)

HUBS PRE - BORED ; **PRICED PER SIDE**, 2 SIDES TO BE ADDED TO A BLANK UNIT PRICE

	HOF-28-DESCRIPTION	BORE	KEY	LENGTH	NYLON OD	STEEL OD
40HOF-28-1/2"	HOF-28-1/2"	1/2"	3.2mm x 3.2mm	84	67	44
40HOF-28-5/8"	HOF-28-5/8"	5/8"	4.8mm X 4.8mm	84	67	44
40HOF-28-3/4"	HOF-28-3/4"	3/4"	4.8mm X 4.8mm	84	67	44
40HOF-28-7/8"	HOF-28-7/8"	7/8"	6.3mm X 6.3mm	84	67	44
40HOF-28-1"	HOF-28-1"	1"	6.3mm X 6.3mm	84	67	44
40HOF-28-1-1/8"	HOF-28-1-1/8"	1-1/8"	6.3mm X 6.3mm	84	67	44
40HOF-28-16mm	HOF-28-16mm	16mm	4mm X 4mm	84	67	44
40HOF-28-19mm	HOF-28-19mm	19mm	6mm X 6mm	84	67	44
40HOF-28-24mm	HOF-28-24mm	24mm	8mm X 8mm	84	67	44
40HOF-28-28mm	HOF-28-28mm	28mm	8mm X 8mm	84	67	44

	HOF-42-DESCRIPTION	BORE	KEY	LENGTH	NYLON OD	STEEL OD
40HOF-42-3/4"	HOF-42-3/4"	3/4"	4.8mm X 4.8mm	88	87	60
40HOF-42-7/8"	HOF-42-7/8"	7/8"	6.3mm X 6.3mm	88	87	60
40HOF-42-1"	HOF-42-1"	1"	6.3mm X 6.3mm	88	87	60
40HOF-42-1-1/8"	HOF-42-1-1/8"	1-1/8"	6.3mm X 6.3mm	88	87	60
40HOF-42-1-1/4"	HOF-42-1-1/4"	1-1/4"	8mm X 8mm	88	87	60
40HOF-42-19mm	HOF-42-19mm	19mm	6mm X 6mm	88	87	60
40HOF-42-24mm	HOF-42-24mm	24mm	8mm X 8mm	88	87	60
40HOF-42-28mm	HOF-42-28mm	28mm	8mm X 8mm	88	87	60
40HOF-42-38mm	HOF-42-38mm	38mm	10mm X 10mm	88	87	60
40HOF-42-42mm	HOF-42-42mm	42mm	12mm X 12mm	89	87	60

SPLINED BILLETS

FEMALE

RHBILLET09DIN	09 TOOTH	D.I.N.	(16.2 mm)	OD
RHBILLET09	09 TOOTH	SAE A	5/8" (15.8 mm)	OD
RHBILLET10	10 TOOTH		17mm	OD
RHBILLET11	11 TOOTH		3/4"	OD
RHBILLET13	13 TOOTH	SAE B	7/8"	OD
RHBILLET14	14 TOOTH	SAE C	1-1/4"	OD
RHBILLET15	15 TOOTH	SAE BB	1"	OD



MALE / FEMALE ADAPTORS

RHADAPT09-13	9 - 13 TOOTH ADAPTOR
RHADAPT13-14	13 - 14 TOOTH ADAPTOR



GROUP 1 (1:8 TAPER)						
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	PUMP GROUP:	DESCRIPTION:	CODE:	K.W:	FRAME:	SHAFT:
BH10200002	1	14/1	HE2	0.25 - 0.37	71	14
BH10200006	1	19/1	HE6	0.55 - 0.75	80	19
BH10200037	1	24/1	HE41	1.10 - 1.50	90	24
BH10200014	1	28/1	HE16	2.20 - 4.00	100	28

GROUP 2 (1:8 TAPER)						
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	PUMP GROUP:	DESCRIPTION:	CODE:	K.W:	FRAME:	SHAFT:
BH10200043	2	19/2	HE47	0.55 - 0.75	80	19
BH10200013	2	24/2	HE15	1.1 - 1.5	90	24
BH10200018	2	28/2	HE20	2.20 - 4.00	112	28
BH10200025	2	38/2	HE29	5.50 - 9.00	132	38
BH10200029	2	42/2	HE33	11.00 - 15.00	160	42
1048S10102UN	2	48/2	HEXX	18.00 - 22.00	180	48

GROUP 3 (1:8 TAPER)						
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	PUMP GROUP:	DESCRIPTION:	CODE:	K.W:	FRAME:	SHAFT:
BH10200084	3	28/3	HE48	2.20 - 4.00	112	28
BH10200026	3	38/3	HE30	5.50 - 9.00	132	38
BH10200030	3	42/3	HE34	11.00 - 15.00	160	42
BH10200033	3	48/3	HE37	18.00 - 22.00	180	48
1055FGS10103UN	3	55/3	GB55	30.00 - 30.00	200	55

GROUP 2 (1:5 TAPER)						
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	PUMP GROUP:	DESCRIPTION:	CODE:	K.W:	FRAME:	SHAFT:
BH10200056	2	19/2	HE120	0.55 - 0.75	80	19
BH10200046	2	24/2	HE108	1.1 - 1.5	90	24
BH10200048	2	28/2	HE111	2.20 - 4.00	112	28
BH10200050	2	38/2	HE114	5.50 - 9.00	132	38
BH10200052	2	42/2	HE116	11.00 - 15.00	160	42

RUBBER INSERTS						
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BT39200300	FLEXIBLE INSERT FOR : 14/1 , 19/1
BT39200400	FLEXIBLE INSERT FOR : 24/1 , 28/1 , 24/2 , 28/2 , 28/28
BT39200500	FLEXIBLE INSERT FOR : 38/2 , 38/3
BT39200600	FLEXIBLE INSERT FOR : 42/2 , 48/2 , 42/3 , 48/3

NOTE: ABOVE DATA TAKEN FROM METRIC THREE PHASE 4 POLE 50Hz ELECTRIC MOTORS, SPEED 1450 RPM
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GROUP1 (SPIGOT 25.4)

	PUMP GROUP	DESCRIPTION	CODE	ELECTRIC MOTOR		
				Kw.	FRAME	SPIGOT
AH30100200	1	160/1	HL02	0.25-0.37	71/71	110
AH30202800	1	200/1	HL05L	0.55-1.50	80/90	130
AH30302500	1	250/1	HL08/1L	2.20-4.00	100/112	180

GROUP2 (SPIGOT 36.5)

	PUMP GROUP	DESCRIPTION	CODE	ELECTRIC MOTOR		
				Kw.	FRAME	SPIGOT
AH30203500	2	200/2	HL07/SL	0.55-1.5	80/90	130
AH30302600	2	250/2	HL09L	2.20-4.00	100/112	180
AH30400800	2	300/2	HL12	5.50-9.20	132/132	230
AH15000001	2	350/2	HL15	11.00-22.00	160/180	250

GROUP3 (SPIGOT 50.8)

	PUMP GROUP	DESCRIPTION	CODE	ELECTRIC MOTOR		
				Kw.	FRAME	SPIGOT
AH15050005	3	250/3	HL11	2.2-4.00	100/112	180
AH30400900	3	300/3	HL13	5.50-9.00	132/132	230
AH30509200	3	350/3	HL16	11.00-22.00	160/180	250
AH15010000	3	400/3	HL/20/1	30.00-30.00	200/200	300

BELLHOUSING GROUP 1, 2, 3



MATERIAL: ALUMINIUM

NOTE: ALL BELLHOUSINGS MACHINED FOR ASSEMBLY

NOTE: ABOVE DATA TAKEN FROM METRIC THREE PHASE 4 POLE 50 Hz ELECTRIC

S.A.E. 3-1/4" SPIGOT

	PUMP SPIGOT	DESCRIPTION S.A.E. A	CODE	ELECTRIC SPIGOT	ELECTRIC FRAME	MOTOR K.W.
TH2825A	3-1/4"	250 / 3-1/4"	TH2 - 825A	180	100 / 112	2.2 - 4.00
TH3825A	3-1/4"	300 / 3-1/4"	TH3 - 825A	230	132 / 132	5.50 - 9.00
TH4825A	3-1/4"	350 / 3-1/4"	TH4 - 825A	250	160 / 180	11.00 - 22.00

S.A.E. 4" SPIGOT

	PUMP SPIGOT	DESCRIPTION S.A.E. B	CODE	ELECTRIC SPIGOT	ELECTRIC FRAME	MOTOR K.W.
TH2101A	4"	250 / 4"	TH2-101A	180	100 / 112	2.2 - 4.00
TH3101A	4"	300 / 4"	TH3-101A	230	132 / 132	5.50 - 9.00
TH4101A	4"	350 / 4"	TH4-101A	250	160 / 180	11.00 - 22.00
TH15101A	4"	400 / 4"	TH15-101A	300	200 / 200	30.00 - 30.00

PILOT BORE BLANK

	PUMP SPIGOT	DESCRIPTION	CODE	ELECTRIC SPIGOT	ELECTRIC FRAME	MOTOR K.W.
TH263X	63	BLANK	WM2550	180	100 / 112	2.2 - 4.00
TH380X	80	BLANK	WM2551	230	132 / 132	5.50 - 9.00
TH480X	80	BLANK	CB35	250	160 / 180	11.00 - 22.00

S.A.E. 3-1/4" SPIGOT



S.A.E. 4" SPIGOT



MATERIAL: ALUMINIUM

NOTE: ALL BELLHOUSINGS MACHINED FOR ASSEMBLY

NOTE: ABOVE DATA TAKEN FROM METRIC THREE PHASE 4 POLE 50 Hz ELECTRIC

MOTORS SPEED 1450 RPM

PUMPS GEAR ALUMINIUM

01-01-2014 B

PUMP GROUP 1 SINGLE STAGE

1 PF SERIES FROM TAK - BOK

	DESCRIPTION:	cc / rev:	PORTS:	ROTATION:
1PF1.1L46Z02	1PF - 1.1	1.1 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF1.3L46Z02	1PF - 1.3	1.3 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF1.6L46Z02	1PF - 1.6	1.6 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF1.8L46Z02	1PF - 1.8	1.8 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF2.1L46Z02	1PF - 2.1	2.1 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF2.7L46Z02	1PF - 2.7	2.7 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF3.2L46Z02	1PF - 3.2	3.2 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF3.7L46Z02	1PF - 3.7	3.7 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF4.2L46Z02	1PF - 4.2	4.2 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF4.8L46Z02	1PF - 4.8	4.8 cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF5.8L46Z02	1PF - 5.8	5.8cc per rev	3/8" BSPP x 3/8" BSPP	C/W
1PF8.0L46Z02	1PF - 8.0	8.0 cc per rev	3/8" BSPP x 3/8" BSPP	C/W

1PF - S PUMP SEAL KIT

PUMP DISPLACEMENTS	CONT PRESSURE	INT PRESSURE	SPEED RANGE
1.1 cc per rev	200 bar	250 bar	600 to 6000
1.3 cc per rev	200 bar	250 bar	600 to 6000
1.6 cc per rev	200 bar	250 bar	600 to 6000
1.8 cc per rev	200 bar	250 bar	600 to 6000
2.1 cc per rev	200 bar	250 bar	600 to 6000
2.7 cc per rev	200 bar	250 bar	600 to 6000
3.2 cc per rev	200 bar	250 bar	600 to 6000
3.7 cc per rev	200 bar	250 bar	600 to 6000
4.2 cc per rev	200 bar	250 bar	600 to 6000
4.8 cc per rev	160 bar	200 bar	600 to 6000
5.8 cc per rev	160 bar	200 bar	600 to 6000
8.0 cc per rev	160 bar	200 bar	600 to 6000

TECHNICAL SPECS FOR GROUP 1

SHAFT 1 : 8 TAPER
 SMALL O/D 8 mm TO BIG O/D 10 mm
 OVER 15 mm LENGTH
 SPIGOT 25,4 mm
 FLANGE 52.2 X 72 4 BOLT
 PORTS 3/8" BSPP SUCTION & PRESSURE



PUMP GROUP 2 SINGLE STAGE

2 ABPF SERIES FROM TAK - BOK

B.S.P. PORTS

	<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>B.S.P. PORTS:</u>	<u>ROTATION:</u>	<u>W/P:</u>
2ABPF4L08Z03	2ABPF4L08Z03	04cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF6L08Z03	2ABPF6L08Z03	06cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF8L08Z03	2ABPF8L08Z03	08cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF10L08Z03	2ABPF10L08Z03	10cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF12L08Z03	2ABPF12L08Z03	12cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF14L08Z03	2ABPF14L08Z03	14cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF16L08Z03	2ABPF16L08Z03	16cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF18L08Z03	2ABPF18L08Z03	18cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF20L08Z03	2ABPF20L08Z03	20cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF23L08Z03	2ABPF23L08Z03	23cc per rev	3/4" BSPP x 1/2" BSPP	C/W	200 Bar
2ABPF25L03Z03	2ABPF25L03Z03	25cc per rev	1" BSPP x 3/4" BSPP	C/W	200 Bar
2ABPF28L03Z03	2ABPF28L03Z03	28cc per rev	1" BSPP x 3/4" BSPP	C/W	160 Bar
2ABPF30L03Z03	2ABPF30L03Z03	30cc per rev	1" BSPP x 3/4" BSPP	C/W	160 Bar

2BPF - S PUMP SEAL KIT

<u>PUMP DISPLACEMENTS</u>	<u>CONT PRESSURE</u>	<u>INT PRESSURE</u>	<u>SPEED RANGE</u>
04 cc per rev	200 bar	250 bar	500 to 3500
06 cc per rev	200 bar	250 bar	500 to 3500
08 cc per rev	200 bar	250 bar	500 to 3500
10 cc per rev	200 bar	250 bar	500 to 3500
12 cc per rev	200 bar	250 bar	500 to 3500
14 cc per rev	200 bar	250 bar	500 to 3500
16 cc per rev	200 bar	250 bar	500 to 3500
18 cc per rev	200 bar	250 bar	500 to 3500
20 cc per rev	200 bar	250 bar	500 to 3500
23 cc per rev	200 bar	250 bar	500 to 3500
25 cc per rev	200 bar	250 bar	500 to 3500
28 cc per rev	160 bar	200 bar	500 to 2000
30 cc per rev	160 bar	200 bar	500 to 2000

TECHNICAL SPECS FOR GROUP 2 2 ABPF SERIES :

SHAFT 1 : 8 TAPER SMALL O/D 15 mm TO BIG O/D 17 mm OVER 18 mm LENGTH

SPIGOT 36,5 mm

FLANGE 96,2 X 71,5 4 BOLT

ROTATION CHANGE SWOP INTERNALS



Part Number	MOTOR GEAR ALUMINIUM					01-01-2014 B
	<u>GROUP 2 BI ROTATION MOTORS FROM TAK - BOK</u>					
	2 ABMF SERIES					
	<u>SHAFT 1 ; 8 TAPER SPIGOT 36.4 MOUNT 4 BOLT</u>					
	<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>B.S.P. PORTS:</u>	<u>ROTATION:</u>	<u>W/P:</u>	
2ABMF6L04Z03B	2ABMF6L04Z03	06cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF8L04Z03B	2ABMF8L04Z03	08cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF10L04Z03B	2ABMF10L04Z03	10cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF12L04Z03B	2ABMF12L04Z03	12cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF14L04Z03B	2ABMF14L04Z03	14cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF18L04Z03B	2ABMF18L04Z03	18cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF23L04Z03B	2ABMF23L04Z03	23cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2BMF - S	PUMP SEAL KIT		1/4" CASE DRAIN ON ALL			
	2 ABMF SERIES					
	<u>SHAFT 16mm SPIGOT 3-1/4" MOUNT 2 BOLT</u>					
	<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>B.S.P. PORTS:</u>	<u>ROTATION:</u>	<u>W/P:</u>	
2ABMF6L04P151B	2ABMF6L04P151B	06cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF8L04P151B	2ABMF8L04P151B	08cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF10L04P151B	2ABMF10L04P151B	10cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF12L04P151B	2ABMF12L04P151B	12cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF14L04P151B	2ABMF14L04P151B	14cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF18L04P151B	2ABMF18L04P151B	18cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2ABMF23L04P151B	2ABMF23L04P151B	23cc per rev	1/2" BSPP x 1/2" BSPP	B / I	200 Bar	
2BMF - S	PUMP SEAL KIT		1/4" CASE DRAIN ON ALL			
	<u>EXTRA CHOICES</u>					
	BI ROTATION PORT END COVER NO CASE DRAIN INTERNAL CHECK VALVES					
	REAR PORTS; 3/4" BSPP MAX					
	RELIEF VALVE PORT END COVER 50 - 250 Bar					
	<u>PUMP DISPLACEMENTS</u>	<u>CONT PRESSURE</u>	<u>INT PRESSURE</u>	<u>SPEED RANGE</u>		
	06 cc per rev	200 bar	250 bar	600 to 4000		
	08 cc per rev	200 bar	250 bar	600 to 3500		
	10 cc per rev	200 bar	250 bar	600 to 3500		
	12 cc per rev	200 bar	250 bar	600 to 3500		
	14 cc per rev	200 bar	250 bar	600 to 3500		
	18 cc per rev	200 bar	250 bar	600 to 3000		
	23 cc per rev	200 bar	250 bar	500 to 2500		
						
	<p>PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY</p>					

PUMP GROUP 2 SINGLE STAGE

2 ABPF SERIES FROM TAK - BOK

DIAMOND PORTS

<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>DIAMOND</u>	<u>PORTS:</u>	<u>ROTATION:</u>
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<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>DIAMOND</u>	<u>PORTS:</u>	<u>ROTATION:</u>
2ABPF4F02Z03	2ABPF4F02Z03	04cc per rev	13mm PCD 30 mm x 13 mm PCD 30 mm	C/W
2ABPF6F02Z03	2ABPF6F02Z03	06cc per rev	13mm PCD 30 mm x 13 mm PCD 30 mm	C/W
2ABPF8F02Z03	2ABPF8F02Z03	08cc per rev	13mm PCD 30 mm x 13 mm PCD 30 mm	C/W
2ABPF10F02Z03	2ABPF10F02Z03	10cc per rev	13mm PCD 30 mm x 13 mm PCD 30 mm	C/W
2ABPF12F06Z03	2ABPF12F06Z03	12cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W
2ABPF14F06Z03	2ABPF14F06Z03	14cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W
2ABPF16F06Z03	2ABPF16F06Z03	16cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W
2ABPF18F06Z03	2ABPF18F06Z03	18cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W
2ABPF20F06Z03	2ABPF20F06Z03	20cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W
2ABPF23F06Z03	2ABPF23F06Z03	23cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W
2ABPF25F06Z03	2ABPF25F06Z03	25cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W
2ABPF28F06Z03	2ABPF28F06Z03	28cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W
2ABPF30F06Z03	2ABPF30F06Z03	30cc per rev	13mm PCD 30 mm x 20 mm PCD 40 mm	C/W

2BPF - S PUMP SEAL KIT

<u>PUMP DISPLACEMENTS</u>	<u>CONT PRESSURE</u>	<u>INT PRESSURE</u>	<u>SPEED RANGE</u>
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04 cc per rev	200 bar	250 bar	500 to 3500
06 cc per rev	200 bar	250 bar	500 to 3500
08 cc per rev	200 bar	250 bar	500 to 3500
10 cc per rev	200 bar	250 bar	500 to 3500
12 cc per rev	200 bar	250 bar	500 to 3500
14 cc per rev	200 bar	250 bar	500 to 3500
16 cc per rev	200 bar	250 bar	500 to 3500
18 cc per rev	200 bar	250 bar	500 to 3500
20 cc per rev	200 bar	250 bar	500 to 3500
23 cc per rev	200 bar	250 bar	500 to 3500
25 cc per rev	200 bar	250 bar	500 to 3500
28 cc per rev	160 bar	200 bar	500 to 2000
30 cc per rev	160 bar	200 bar	500 to 2000

TECHNICAL SPECS FOR GROUP 2 2ABPF SERIES :

SHAFT 1 : 8 TAPER SMALL O/D 15 mm TO BIG O/D 17 mm OVER 18 mm LENGTH

SPIGOT 36,5 mm

FLANGE 96,2 X 71,5 4 BOLT

ROTATION CHANGE SWOP INTERNALS



Part Number	PUMPS GEAR ALUMINIUM DIRECT SWOP		01-01-2014 B
	<u>PUMP GROUP 2</u>		
	<u>2 ABPF SERIES FROM TAK-BOK : BOSCH SWOP</u>		
	<u>BOSCH SINGLE : SPIGOT 80 mm MOUNT 4 BOLT TAPER 1:5</u>		
	DESCRIPTION:	cc/rev:	CW / CCW
2ABPF4F60Z17	2ABPF4F60Z17	04cc per rev	0510 225 006 / 306
2ABPF6F60Z17	2ABPF6F60Z17	06cc per rev	0510 235 006 / 306
2ABPF8F52Z17	2ABPF8F52Z17	08cc per rev	0510 425 009 / 307
2ABPF12F52Z17	2ABPF12F52Z17	12cc per rev	0510 525 009 / 311
2ABPF14F52Z17	2ABPF14F52Z17	14cc per rev	0510 525 018 / 319
2ABPF16F52Z17	2ABPF16F52Z17	16cc per rev	0510 625 022 / 315
2ABPF89F52Z17	2ABPF18F52Z17	19cc per rev	0510 625 013 / 314
2ABPF23F52Z17	2ABPF23F52Z17	23cc per rev	0510 725 030 / 330
	<u>DEUTZ SINGLE : SPIGOT 50 mm MOUNT 2 BOLT TAPER 1:5</u>		
	DESCRIPTION:	cc/rev:	CCW / CW
2ABPF4F60Z11L	2ABPF4F60Z11L	04cc per rev	0510 215 309 / 009
2ABPF6F60Z11L	2ABPF6F60Z11L	06cc per rev	0510 315 307 / 006
2ABPF8F52Z11L	2ABPF8F52Z11L	08cc per rev	0510 415 316 / 010
2ABPF12F52Z11L	2ABPF12F52Z11L	12cc per rev	0510 515 309 / 007
2ABPF14F52Z11L	2ABPF14F52Z11L	14cc per rev	0510 515 316 / 018
2ABPF16F52Z11L	2ABPF16F52Z11L	16cc per rev	0510 615 317 / 010
2ABPF18F52Z11L	2ABPF18F52Z11L	19cc per rev	0510 615 318 / 005
2ABPF23F52Z11L	2ABPF23F52Z11L	23cc per rev	0510 715 306
	<u>DEUTZ DOUBLE : SPIGOT 50 mm MOUNT 2 BOLT TAPER 1:5</u>		
	DESCRIPTION:	cc/rev:	CCW / CW
2ADPF16/11DF05Z11L	2ADPF16/11DF52DF52Z11L	16cc / 11cc per rev	0510 665 335 /
2ADPF23/16DF05Z11L	2ADPF23/16DF52DF52Z11L	23cc / 16cc per rev	0510 765 310 /
	<u>BOSCH OUTBOARD BEARING : PUMP SINGLE ROTATION</u>		
	DESCRIPTION:	cc/rev:	CCW / CW
2PF8F52Z18L-O / 18-O	2PF8F52Z18L-O / 2PF8F52Z18-O	08cc per rev	0510 445 300 / 001
2PF12F52Z18L-O / 18-O	2PF12F52Z18L-O / 2PF12F52Z18-O	12cc per rev	0510 545 300 / 001
	<u>OPTIONAL SPARES:</u>		
2BPF - S	PUMP SEAL KIT		
	MOTOR SEAL KIT		
	PUMP SEAL KIT OUTBOARD BEARING TYPE		
	<u>TECHNICAL SPECS FOR GROUP 2 P 511 ALPHA SERIES :</u>		
	STANDARD SHAFT : 1 : 5 TAPER SMALL OD 14 mm TO BIG OD 17 mm OVER 17 mm LENGTH		
	OUTBOARD SHAFT : 1 : 5 TAPER SMALL OD 16.3 mm TO BIG OD 20 mm OVER 20 mm LENGTH		
	BOSCH SPIGOT 80 mm FLANGE 100 X 72 4 BOLT MOUNT		
	DEUTZ SPIGOT 50 mm FLANGE 60 X 60 2 BOLT MOUNT		



BOSCH



DEUTZ



DEUTZ DOUBLE

P 511 ALPHA SERIES FROM COMMERCIAL SHEARING

B.S.P. PORTS

	<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>B.S.P.</u>	<u>PORTS:</u>	<u>ROTATION:</u>
RH 344 9111 721	P511A133BEBA 04 - 86	04cc per rev	3/4" BSPP x 1/2" BSPP		C/W
RH 334 9111 722	P511A133BEBA 06 - 86	06cc per rev	3/4" BSPP x 1/2" BSPP		C/W
RH 334 9111 723	P511A133BEBA 08 - 86	08cc per rev	3/4" BSPP x 1/2" BSPP		C/W
RH 334 9111 724	P511A133BEBA 11 - 86	11cc per rev	3/4" BSPP x 1/2" BSPP		C/W
RH 334 9111 725	P511A133BEBA 14 - 86	14cc per rev	3/4" BSPP x 1/2" BSPP		C/W
RH 334 9111 726	P511A133BEBA 16 - 86	16cc per rev	3/4" BSPP x 1/2" BSPP		C/W
RH 334 9111 727	P511A133BEBA 19 - 86	19cc per rev	3/4" BSPP x 1/2" BSPP		C/W
RH 334 9111 728	P511A133BEBA 23 - 86	23cc per rev	3/4" BSPP x 1/2" BSPP		C/W
RH 334 9111 729	P511A133BEBB 27 - 86	27cc per rev	1" BSPP x 3/4" BSPP		C/W
RH 334 9111 730	P511A133BEBB 31 - 86	31cc per rev	1" BSPP x 3/4" BSPP		C/W
RH 334 9111 731	P511A133BEBB 33 - 86	33cc per rev	1" BSPP x 3/4" BSPP		C/W

PUMPS DIAMOND PORTS

	<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>DIAMOND</u>	<u>PORTS:</u>	<u>ROTATION:</u>
RH 334 9111 366	P511A133BEDB 04 - 86	04cc per rev	13mm PCD 30 mm x 13 mm PCD 30 mm		C/W
RH 334 9111 367	P511A133BEDB 06 - 86	06cc per rev	13mm PCD 30 mm x 13 mm PCD 30 mm		C/W
RH 334 9111 368	P511A133BEDB 08 - 86	08cc per rev	13mm PCD 30 mm x 13 mm PCD 30 mm		C/W
RH 334 9111 369	P511A133BEDB 11 - 86	11cc per rev	13mm PCD 30 mm x 13 mm PCD 30 mm		C/W
RH 334 9111 494	P511A133BEDA 14 - 86	14cc per rev	13mm PCD 30 mm x 19 mm PCD 40 mm		C/W
RH 334 9111 371	P511A133BEDA 16 - 86	16cc per rev	13mm PCD 30 mm x 19 mm PCD 40 mm		C/W
RH 334 9111 372	P511A133BEDA 19 - 86	19cc per rev	13mm PCD 30 mm x 19 mm PCD 40 mm		C/W
RH 334 9111 373	P511A133BEDA 23 - 86	23cc per rev	13mm PCD 30 mm x 19 mm PCD 40 mm		C/W
RH 334 9111 374	P511A133BEDA 27 - 86	27cc per rev	19mm PCD 40 mm x 23 mm PCD 40 mm		C/W
RH 334 9111 575	P511A133BEDA 31 - 86	31cc per rev	19mm PCD 40 mm x 23 mm PCD 40 mm		C/W
RH 334 9111 576	P511A133BEDA 33 - 86	33cc per rev	19mm PCD 40 mm x 23 mm PCD 40 mm		C/W

OPTIONAL SPARES:

RHP511SKIT	PUMP SEAL KIT
RHM511MKIT	MOTOR SEAL KIT
RHP511SKITO/B	PUMP SEAL KIT OUTBOARD BEARING TYPE
RHM511MKITO/B	MOTOR SEAL KIT OUTBOARD BEARING TYPE

PUMP DISPLACEMENTS CONT PRESSURE INT PRESSURE SPEED RANGE

04 / 16cc per rev	275 bar	300 bar	500 to 3500
19 cc per rev	250 bar	275 bar	500 to 3250
23 cc per rev	225 bar	245 bar	500 to 2750
27 cc per rev	190 bar	210 bar	500 to 2350
31 cc per rev	165 bar	180 bar	500 to 2100
33 cc per rev	155 bar	170 bar	500 to 2000



Part Number	PUMPS GEAR ALUMINIUM			01-01-2014 B
<u>BOSCH SINGLE : SPIGOT 80 mm MOUNT 4 BOLT TAPER 1:5</u>				
	DESCRIPTION:	cc/rev:	CW / CCW	
RH 334 9111 345	P511 A134BEEJ 04 - 85	04cc per rev	0510 225 006 / 306	
RH 334 9111 346	P511 A134BEEJ 06 - 85	06cc per rev	0510 235 006 / 306	
RH 334 9111 347	P511 A134BEEJ 08 - 85	08cc per rev	0510 425 009 / 307	
RH 334 9111 338	P511 A134BEEJ 11 - 85	11cc per rev	0510 525 009 / 311	
RH 334 9111 339	P511 A134BEEJ 14 - 85	14cc per rev	0510 525 018 / 319	
RH 334 9111 342	P511 A134BEEJ 16 - 85	16cc per rev	0510 625 022 / 315	
RH 334 9111 343	P511 A134BEEJ 19 - 85	19cc per rev	0510 625 013 / 314	
RH 334 9111 344	P511 A134BEEJ 23 - 85	23cc per rev	0510 725 030 / 330	
<u>DEUTZ SINGLE : SPIGOT 50 mm MOUNT 2 BOLT TAPER 1:5</u>				
	DESCRIPTION:	cc/rev:	CCW / CW	
RH 334 9112 402	P511 A239BEEJ 04 - 85	04cc per rev	0510 215 309 / 009	
RH 334 9112 287	P511 A239BEEJ 06 - 85	06cc per rev	0510 315 307 / 006	
RH 334 9112 285	P511 A239BEEJ 08 - 85	08cc per rev	0510 415 316 / 010	
RH 334 9112 221	P511 A239BEEJ 11 - 85	11cc per rev	0510 515 309 / 007	
RH 334 9112 085	P511 A239BEEJ 14 - 85	14cc per rev	0510 515 316 / 018	
RH 334 9112 286	P511 A239BEEJ 16 - 85	16cc per rev	0510 615 317 / 010	
RH 334 9112 228	P511 A239BEEJ 19 - 85	19cc per rev	0510 615 318 / 005	
RH 334 9112 310	P511 A239BEEJ 23 - 85	23cc per rev	0510 715 306	
<u>DEUTZ DOUBLE : SPIGOT 50 mm MOUNT 2 BOLT TAPER 1:5</u>				
	DESCRIPTION:	cc/rev:	CCW / CW	
RH 334 9122 042	P511 B239BEEJ 16 - 85 DEEJ 11 - 1	16cc / 11cc per rev	0510 665 335 /	
RH 334 9122 131	P511 B239BEEJ 23 - 85 DEEJ 14 - 1	23cc / 14cc per rev	0510 765 309 /	
RH 334 9122 105	P511 B239BEEJ 23 - 85 DEEJ 16 - 1	23cc / 16cc per rev	0510 765 310 /	
<u>BOSCH OUTBOARD BEARING : PUMP SINGLE ROTATION</u>				
	DESCRIPTION:	cc/rev:	CCW / CW	
RH334 9114 035	P511 A434BEEJ 08 - 85	08cc per rev	0510 445 300 / 001	
RH334 9114 066	P511 A434BEEJ 11 - 85	11cc per rev	0510 545 300 / 001	
<u>OPTIONAL SPARES:</u>				
PUMP SEAL KIT				
MOTOR SEAL KIT				
PUMP SEAL KIT OUTBOARD BEARING TYPE				
<u>TECHNICAL SPECS FOR GROUP 2 P 511 ALPHA SERIES :</u>				
STANDARD SHAFT : 1 : 5 TAPER SMALL OD 14 mm TO BIG OD 17 mm OVER 17 mm LENGTH				
OUTBOARD SHAFT : 1 : 5 TAPER SMALL OD 16.3 mm TO BIG OD 20 mm OVER 20 mm LENGTH				
BOSCH SPIGOT 80 mm FLANGE 100 X 72 4 BOLT MOUNT				
DEUTZ SPIGOT 50 mm FLANGE 60 X 60 2 BOLT MOUNT				



PUMP GROUP 2 MADE TO ORDER

P511 ALPHA SERIES (MADE TO ORDER OUT OF VIRGIN PARTS)

SINGLE PUMP DISPLACEMENTS AVAILABLE:

334 XXXX XXX	04cc ; 06cc ; 08cc ; 10cc ; 11cc ; 14cc
334 XXXX XXX	16cc ; 19cc ; 23cc
334 XXXX XXX	27cc ; 31cc ; 33cc

TANDEM PUMP DISPLACEMENTS AVAILABLE: (ADD PRICE TO SINGLE PUMP'S PRICE)

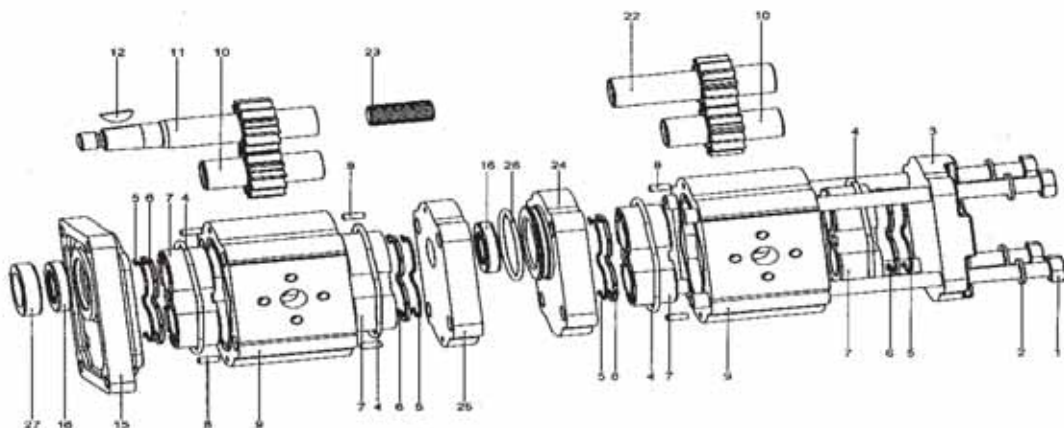
334 XXXX XXX	04cc ; 06cc ; 08cc ; 10cc ; 11cc ; 14cc
334 XXXX XXX	16cc ; 19cc ; 23cc
334 XXXX XXX	27cc ; 31cc ; 33cc


(CODE) CHOICE OF PUMP SPIGOTS:

RH 334 5041 212	(33) GROUP 2	36,4mm SPIGOT	4-BOLT MOUNTING
RH 334 5041 213	(34) BOSCH	80mm SPIGOT	4-BOLT MOUNTING
RH 334 5051 212	(39) DEUTZ	50mm SPIGOT	2-BOLT THRU-MOUNTING (10 & 4)
RH 334 5021 225	(93) SAE A	3"-1/4" SPIGOT	2-BOLT MOUNTING
RH 334 5021 214	(96) SAE B	4" SPIGOT	2-BOLT MOUNTING
RH 334 5051 2SP	(37) NEUSE	50mm SPIGOT	2-BOLT THRU-MOUNTING (8 & 2)
RH 334 5050 212	(38) (36) IH	52mm SPIGOT	2-BOLT THRU-MOUNTING (10 & 4)(8&2)
RH 334 5021 229	(XX) MASSEY	52,3mm SPIGOT	2-BOLT THRU-MOUNTING
RH 334 5021 225	(xx) CAT	X" SPIGOT	X-BOLT MOUNTING
RH 334 5029 216	(xx) PERKINS	X" SPIGOT	X-BOLT MOUNTING
1PX F01 F12	(XX) KAYABA 85 A	X" SPIGOT	X-BOLT MOUNTING

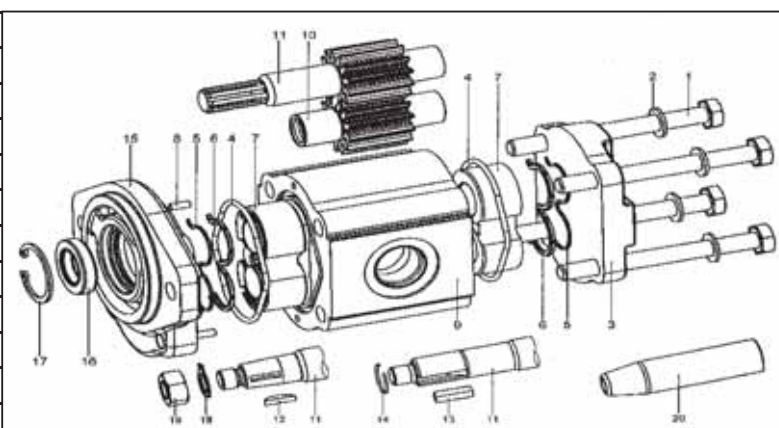
(CODE) CHOICE OF PUMP SHAFTS:

RH 334 19XX 611	(86) 1 : 8	TAPER SHAFT	SMALL O/D 15mm TO BIG O/D 17mm OVER 18mm
RH 334 19XX 610	(85) 1 : 5	TAPER SHAFT	SMALL O/D 14mm TO BIG O/D 17mm OVER 17mm
RH 334 12XX 210	(96) 9	TOOTH SPLINE SAE A	O/D 15,5mm
RH 334 12XX 710	(81) 9	TOOTH SPLINE DIN 5482	O/D 16,5mm
RH 334 17XX 210	(97) 5/8"	P / KEY SHAFT	O/D 15,8mm
RH 334 17XX 310	(24) 3/4"	P / KEY SHAFT	O/D 19mm
RH 334 17XX 205	(XX) 16mm	P / KEY SHAFT	O/D 16mm
RH 334 17XX 214	(P) 11/16"	KEY SHAFT WITH THREAD	O/D 17,4mm
RH 334 12XX 910	(94) 10	TOOTH SPLINE SHAFT	O/D 17mm
RH 334 12XX 310	(92) 11	TOOTH SPLINE SHAFT	O/D 18.5mm
RH 332 1000 011	(XX) CAT	14 TOOTH OUTBOARD	O/D 31mm
RH 334 7623 218	(XX) KAYABA 85	P / KEY SHAFT	O/D 16mm
RH 334 13XX 510	(XX) TANG DRIVE	P / SHAFT	O/D 18mm W/D 8mm
RH 334 12XX 711	(XX) SPLINE TOOTH SPLINE KALMAR		O/D 7/8"



Part Number	PUMPS GEAR ALUMINIUM		01-01-2014 B
	<u>PUMP GROUP 2 MADE TO ORDER</u>		
	<u>P511 & M511 ALPHA SERIES</u> (ADD ON TO BASE PRICE OF PUMP OR MOTOR)		
	<u>CHOICE OF MOTORS:</u>		
RH 332 3000 110	MOTOR CONVERSION BI-ROTATIONAL WITH 1/4" BSPP CASE DRAIN		
RH 332 3020 910	MOTOR CONVERSION BI-ROTATIONAL WITH CHECK VALVES NO CASE DRAIN		
IMRC67B1B1B1L	MOTOR CONVERSION BI-ROTATIONAL WITH 1/4" BSPP CASE DRAIN AND SINGLE RELIEF		
733404110107	MOTOR CONVERSION BI-ROTATIONAL WITH 1/4" BSPP CASE DRAIN AND DUAL RELIEF		
	<u>CHOICE OF PORT END COVERS:</u>		
RH 350 9611 071	PRIORITY FLOW DIVIDER WITH RELIEF VALVE 1 : 30 LITRES REG FLOW REAR PORTS		
RH 350 9612 030	PRIORITY FLOW DIVIDER WITH RELIEF VALVE 1 : 30 LITRES REG FLOW SIDE PORTS		
RH 332 9414 017	RELIEF VALVE INTERNAL DUMP 250 BAR MAX		
RH 332 3030 110	REAR PORTS AVAILABLE 1" & 1/2" BSPP / SAE "O" OR 3/4" MAX BOTH PORTS		
	<u>CHOICE OF SHAFT END COVERS:</u>		
BU12020007	V BELT PULLEY SUPPORT GROUP 2 PUMP 1 : 8 TAPER TO A 22 mm PARALLEL KEY SHAFT		
RH 332 5041 225	OUTBOARD BEARING 80mm SPIGOT FOR PULLEY DRIVE 1 : 5 TAPER		
	<u>CHOICE OF FLOW DIVIDERS:</u>		
	FLOW DIVIDERS (ADD UP STAGES OF SINGLE MOTOR DISPLACEMENT PRICES)		
	<u>SPECIAL REQUESTS</u>		
	SEALED MULTIPLE UNITS PER SECTION		
	UNSEALED MULTIPLE UNITS P511 TO P3 SEALED FOR ; 0.8 - 1.2 - 1.6 - 2.5 - 3.6 - 4.8		
	TWIN SHAFT SINGLE PUMP FOR FAN ON REAR		
	<u>LABOUR ADD ON CHARGES</u>		
	LABOUR TO MODIFY OLD PRIORITY FLOW DIVIDER TO FIT P11		
	LABOUR TO MODIFY S. E. C.		
	LABOUR TO DRILL AND TAP SHAFT		
	LABOUR TO DRILL PRIORITY FLOW DIVIDER ORIFICE		
	LABOUR TO TEST PUMP / MOTOR		
	<u>POPULAR SPIGOTS</u>		
			
	SPIGOT 36,4mm	SPIGOT 80mm	SPIGOT 69,8mm
	SPIGOT 52,3mm	SPIGOT 3" & 4"	SPIGOT 50mm

Part Number	PUMPS GEAR ALUMINIUM				01-01-2014 B
<u>PUMP GROUP 3 SINGLE STAGE</u>					
3 PF SERIES FROM TAK - BOK					
	<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>PORTS:</u>	<u>ROTATION:</u>	
3PF22L03Z05	3 PF 22 L03 Z05	22cc per rev	1" BSPP x 3/4" BSPP	C/W	
3PF26L03Z05	3 PF 26 L03 Z05	26cc per rev	1" BSPP x 3/4" BSPP	C/W	
3PF34L11Z05	3 PF 34 L11 Z05	34cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
3PF39L11Z05	3 PF 39 L11 Z05	39cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
3PF44L11Z05	3 PF 44 L11 Z05	44cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
3PF51L11Z05	3 PF 51 L11 Z05	51cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
3PF60L11Z05	3 PF 60 L11 Z05	60cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
3PF - S	PUMP SEAL KIT				
	<u>PUMP DISPLACEMENTS</u>	<u>CONT PRESSURE</u>	<u>INT PRESSURE</u>	<u>SPEED RANGE</u>	
	22 cc per rev	200 bar	250 bar	400 to 3000	
	26 cc per rev	200 bar	250 bar	400 to 3000	
	34 cc per rev	200 bar	250 bar	400 to 3000	
	39 cc per rev	200 bar	250 bar	400 to 3000	
	44 cc per rev	200 bar	250 bar	400 to 3000	
	51 cc per rev	200 bar	250 bar	400 to 3000	
	60 cc per rev	200 bar	250 bar	400 to 3000	
<u>P 17 ALPHA SERIES FROM COMMERCIAL SHEARING</u>					
	<u>DESCRIPTION:</u>	<u>cc / rev:</u>	<u>PORTS:</u>	<u>ROTATION:</u>	
RH 333 9111 464	P17A187BEBC 25 - 59	25cc per rev	1" BSPP x 3/4" BSPP	C/W	
RH 333 9111 465	P17A187BEBC 28 - 59	28cc per rev	1" BSPP x 3/4" BSPP	C/W	
RH 333 9111 466	P17A187BEBC 33 - 59	33cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
RH 333 9111 467	P17A187BEBC 38 - 59	38cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
RH 333 9111 468	P17A187BEVI 44 - 59	44cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
RH 333 9111 633	P17A187BEVI 50 - 59	50cc per rev	1 1/4" BSPP x 1" BSPP	C/W	
	<u>PUMP DISPLACEMENTS</u>	<u>CONT PRESSURE</u>	<u>INT PRESSURE</u>	<u>SPEED RANGE</u>	
	25 cc per rev	250 bar	275 bar	500 to 3100	
	28 cc per rev	250 bar	275 bar	500 to 3100	
	33 cc per rev	250 bar	275 bar	500 to 3000	
	38 cc per rev	250 bar	275 bar	500 to 3000	
	44 cc per rev	220 bar	245 bar	500 to 2800	
	50 cc per rev	200 bar	220 bar	500 to 2700	
<u>TECHNICAL SPECS ON P17 ALPHA SERIES COMMERCIAL SHEARING</u>					
SHAFT 1 : 8 TAPER SMALL O/D 19 mm TO BIG O/D 22 mm OVER 22 mm LENGTH					
SPIGOT 50,8 mm					
FLANGE 128.2 X 98.4 4 BOLT					
ROTATION CHANGE SWOP INTERNALS					
<u>OPTIONAL SPARES:</u>					
PUMP SEAL KIT					
MOTOR SEAL KIT					
					
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY					
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Part Number	PUMPS GEAR ALUMINIUM			01-01-2014 B
	<u>PUMP GROUP 3 MADE TO ORDER</u>			
	<u>P17 & M17 ALPHA SERIES (MADE TO ORDER OUT OF VIRGIN PARTS)</u>			
	<u>SINGLE PUMP DISPLACEMENTS AVAILABLE:</u>			
333 XXX XXX	14cc ; 16cc ; 19cc ; 23cc			
333 XXX XXX	25cc ; 28cc ; 33cc ;			
333 XXX XXX	38cc ; 44cc ; 50cc ; 52cc ; 65cc			
	<u>TANDEM PUMP DISPLACEMENTS AVAILABLE: (ADD PRICE TO SINGLE PUMP'S PRICE)</u>			
333 XXX XXX	14cc ; 16cc ; 19cc ; 23cc			
333 XXX XXX	25cc ; 28cc ; 33cc ;			
333 XXX XXX	38cc ; 44cc ; 50cc ; 65cc			
	<u>PUMP SPIGOT OPTIONS:</u>			
RH 333 5040 215	(87) GROUP 3	50mm SPIGOT	4-BOLT MOUNTING	
RH 333 5020 212	(93) SAE A	3 1/4" SPIGOT	2-BOLT MOUNTING	
RH 333 5020 213	(96) SAE B	4" SPIGOT	2 BOLT MOUNTING	
RH 333 5040 216	(86) EURO	105mm SPIGOT	4 BOLT MOUNTING	
RH 333 5026 610	(00) DIN	80mm SPIGOT	4 BOLT MOUNTING	
RH 333 5016 610	(00) UNI	52mm SPIGOT	3 BOLT MOUNTING	
	<u>SHAFT OPTIONS:</u>			
RH 333 29XX 783	(59)	1 : 8 TAPER SHAFT	SMALL O/D 19mm TO BIG O/D 22mm OVER 22mm LENGTH	
RH 333 29XX 784	(57)	1 : 5 TAPER SHAFT	SMALL O/D 13.5mm TO BIG O/D 17.4mm OVER 20mm LENGTH	
RH 333 29XX 951	(66)	7/8"	PARALLEL KEY SHAFT O/D 22.2mm	
RH 333 29XX 990	(67)	1"	PARALLEL KEY SHAFT O/D 25.4mm	
RH 333 29XX 450	(65)	13	TOOTH SPLINE SHAFT SAE B O/D 22.2mm	
RH 333 29XX 490	(100)	15	TOOTH SPLINE SHAFT SAE B B O/D 24.97mm	
	<u>POSSIBLE OPTIONS TO BE ADDED TO PUMPS & MOTORS:</u>			
RH 333 3030 110	MOTOR CONVERSION BI-ROTATIONAL WITH 1/4" BSPP CASE DRAIN			
	MOTOR CONVERSION BI-ROTATIONAL WITH CHECK VALVES NO CASE DRAIN			
RH 350 9713 028	PRIORITY FLOW DIVIDER WITH RELIEF VALVE 5 : 38 LITRES REG FLOW			
RH 333 3030 110	REAR PORTS AVAILABLE MOTOR TYPE	1"	MAX BSPP OR S.A.E.	
RH 333 3031 110	REAR PORTS AVAILABLE SPECIAL TYPE	1 1/2"	MAX BSPP OR S.A.E.	
RH 333 3030 108	RELIEF VALVE INTERNAL DUMP 250 BAR MAX			
	<u>CHOICE OF FLOW DIVIDERS:</u>			
	FLOW DIVIDERS (ADD UP STAGES OF SINGLE MOTOR DISPLACEMENT PRICES)			
RH 333 3040 110	STEP DOWN ADAPTOR P17 - P11			
RH 333 3040 1SP	STEP DOWN ADAPTOR P17 - P11 SEPARATE OILS LABOUR			
	8 - 13 TOOTH ADAPTOR P.T.O. TYPE			
	LABOUR TO DRILL AND TAP SHAFT			
	DRILL PRIORITY FLOW DIVIDER ORIFICE			
	TEST PUMP / MOTOR			
	SEAL KIT PUMP			
	SEAL KIT MOTOR			
				
	PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY			

1FDF SERIES FLOW DIVIDER UP TO 4 STAGES

	DISPL	L P M	L P M	INLET	OUTLET	DRAIN	CONT DIFF	MAXIMUM
	CC / REV	MIN / FLOW	MAX / FLOW	PORT	PORT	PORT	PRESSURE	OUTLET PRESS
	GEAR SET	GEAR SET	GEAR SET	BSP	BSP	BSP	INLET/OUTLET	ANY SECTION
1FDF1.6ML04 - *	1.6 cc	3	6.4	1/2"	1/2"	NONE	124 Bar	240 Bar
1FDF4.2ML04 - *	4.2 cc	9.5	18.9	1/2"	1/2"	NONE	124 Bar	240 Bar

TECHNICAL SPECS

COMBINER TYPE; REVERSIBLE FLOW WITH BUILT IN RELIEFS TO SYNCHRONISE
 EACH PUMP HOUSING HAS SEPARATE BUILT IN RELIEF VALVES NO TANK LINE REQUIRED

2FDF SERIES FLOW DIVIDER UP TO 8 STAGES

	DISPLACE	L P M	L P M	INLET	OUTLET	DRAIN	CONT DIFF	MAXIMUM
	CC / REV	MIN / FLOW	MAX / FLOW	PORT	PORT	PORT	PRESSURE	OUTLET PRESS
	GEAR SET	GEAR SET	GEAR SET	BSP	BSP	BSP	INLET/OUTLET	ANY SECTION
2FDF06ML08 - *	6cc	3	18	3/4"	1/2"	3/8"	220	250
2FDF08ML08 - *	8cc	4	22	3/4"	1/2"	3/8"	220	250
2FDF11ML08 - *	11cc	5.5	27	3/4"	1/2"	3/8"	220	250
2FDF14ML08 - *	14cc	7	34	3/4"	1/2"	3/8"	200	220
2FDF17ML08 - *	17cc	8.5	37	3/4"	1/2"	3/8"	220	250
2FDF25ML08 - *	25cc	12	53	3/4"	1/2"	3/8"	200	220

TECHNICAL SPECS

COMBINER TYPE; REVERSIBLE FLOW WITH BUILT IN RELIEFS TO SYNCHRONISE
 EACH PUMP HOUSING HAS SEPARATE BUILT IN RELIEF VALVE AND HAS TO BE PIPED TO
 TANK IF YOU NEED IT TO SYNCHRONISE

2FDF SERIES FLOW DIVIDER



1FDF SERIES FLOW DIVIDER



CBT SERIES HI / LOW PUMPS



TECHNICAL SPECS ON CBT SERIES 210 Bar

SHAFT	SPIGOT	MOUNT	SUCTION	PRESSURE	ROTATION
1/2" P/Key	45.25mm	4 BOLT 50.08 X 50.08	25.4mm PIPE	1/2" NPT	C/W
5/8" P/KEY	3-1/4"	2 BOLT	1" NPT	3/4" NPT	C/W

NOTE; TO WORK OUT Kw REQUIRED, YOU ONLY NEED TO TAKE THE HIGHEST VALUE IN Kw AND THEN USE COLUMN G OR COLUMN J , NOT BOTH

	A	B	C	D	E	F	G	H	J
	PUMP	CC/REV	CC/REV	Bar	Bar	FLOW	MAX K.w.	FLOW	MAX K.w.
	R P M	HI	LOW	HI	LOW	COMBINED	REQUIRED	LOW	REQUIRED
CBT - 10.9 - 2.1	1450	10.9	2.1	210	30 - 60	18.8 LITER	.7 - 1.4	3.0 LITER	1.2
CBT - 10.9 - 2.1	1800	10.9	2.1	210	30 - 60	23.4 LITER	1.4 - 2.8	3.8 LITER	1.6
CBT - 10.9 - 2.1	3600	10.9	2.1	210	30 - 60	46.8 LITER	2.8 - 5.5	7.6 LITER	3.1

	A	B	C	D	E	F	G	H	J
	PUMP	CC/REV	CC/REV	Bar	Bar	FLOW	MAX K.w.	FLOW	MAX K.w.
	R P M	HI	LOW	HI	LOW	COMBINED	REQUIRED	LOW	REQUIRED
CBT - 10.9 - 3.6	1450	10.9	3.6	210	30 - 60	21 LITER	1.2 - 2.5	5.2 LITER	2.1
CBT - 10.9 - 3.6	1800	10.9	3.6	210	30 - 60	26 LITER	1.5 - 3.1	6.4 LITER	2.6
CBT - 10.9 - 3.6	3600	10.9	3.6	210	30 - 60	52 LITER	3.1 - 6.1	12.9 LITER	5.3

	A	B	C	D	E	F	G	H	J
	PUMP	CC/REV	CC/REV	Bar	Bar	FLOW	MAX K.w.	FLOW	MAX K.w.
	R P M	HI	LOW	HI	LOW	COMBINED	REQUIRED	LOW	REQUIRED
CBT - 22 - 7.6	1450	22.9	7.6	210	30 - 60	44.2 LITER	2.6 - 5.2	11.0 LITER	4.5
CBT - 22 - 7.6	1800	22.9	7.6	210	30 - 60	54.9 LITER	3.2 - 6.5	13.7 LITER	5.6
CBT - 22 - 7.6	3600	22.9	7.6	210	30 - 60	109.8 LITER	6.4 - 12.9	27.4 LITER	11.3

CYLINDER SHAFT SPEEDS IN SECONDS


INPUT	SHAFT OUT	SHAFT IN	SHAFT OUT	SHAFT IN	SHAFT OUT	SHAFT IN
FLOW	76.2mm BORE	76.2mm BORE	101.6mm BORE	101.6mm BORE	127mm BORE	127mm BORE
IN	CYLINDER	38mm SHAFT	CYLINDER	50.8mm SHAFT	CYLINDER	50.8mm SHAFT
LITER	500 mm	500 mm	500m	500 mm	500 mm	500 mm
3	45	34	81	61	127	106
5.2	26	20	47	35	73	61
11	12	9.3	22	17	35	29
12.1	11.2	8.4	19.8	14.8	31.3	26.3
21	6.5	4.8	12	8.7	18	15
44.2	3	2.3	5.5	4.1	8.6	7.2


LS-TW LOG SPLITTER VALVE & CYLINDER

LS-TW-20F	CONTROL VALVE HAND OPERATED WITH ONE WAY DETENT PRESSURE RELEASE DETENT				
TK-C-125-75-457	CYLINDER DOUBLE ACTING BORE 125mm ID SHAFT 75 mm OD STROKE 457mm LONG				
FLOW	PORTS	PORTS	DETENT ONE WAY	SPOOL	MAX
RATE	P&T	A&B	PRESSURE RELEASE	TYPE	PRESSURE
95 L	3/4" NPT	1/2" NPT	30 - 70 Bar	CYLINDER	210


HYDRAULIC MINI POWER PACKS



Part Number	PUMPS GEAR CAST IRON					01-01-2014 B
P20 SERIES FROM COMMERCIAL SHEARING						
	CODE	GEAR WIDTH	4073	CONT / PRESS	CODE	
P20 - 05	05	1/2"	16.34	200 Bar	05	
P20 - 07	07	3/4"	24.21	200 Bar	07	
P20 - 10	10	1"	32.29	200 Bar	10	
P20 - 12	12	1-1/4"	40.36	200 Bar	12	
P20 - 15	15	1 -1/2"	48.43	200 Bar	15	
P20 - 17	17	1 -3/4"	56.50	170 Bar	17	
P20 - 20	20	2"	64.58	170 Bar	20	
ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P20 - 05 - XX	05	1/2"	16.34	200 Bar	05	
P20 - 07 - XX	07	3/4"	24.21	200 Bar	07	
P20 - 10 - XX	10	1"	32.29	200 Bar	10	
P20 - 12 - XX	12	1-1/4"	40.36	200 Bar	12	
P20 - 15 - XX	15	1 -1/2"	48.43	200 Bar	15	
P20 - 17 - XX	17	1 -3/4"	56.50	170 Bar	17	
P20 - 20 - XX	20	2"	64.58	170 Bar	20	
ADD ON PRICES						
MOTOR						
TELL TAIL DRAIN (DOUBLE SHAFT SEAL)						
	SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED	
	*3/4" P/KEY	2-5/8" 6 BOLT	BSPP	C / W	600 MIN rpm	
	7/8" P/KEY	3-1/4" 2 BOLT	NPT	CC / W	2400 MAX rpm	
	1" P/KEY	4" 2 BOLT	SAE "O"	B I		
	*1-1/4" P/KEY	4" 4 BOLT	S/F 4 BOLT			
	9 TOOTH					
	13 TOOTH					
	*14 TOOTH					
* DENOTES : CONTI SHAFT, USE ONLY AFTER CONSULTING SIDE LOAD SPECS						
						
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY						

Part Number	PUMPS GEAR CAST IRON					01-01-2014 B
P25X SERIES FROM COMMERCIAL SHEARING						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P25X - 05	05	1/2"	20.89	140 Bar	05	
P25X - 07	07	3/4"	31.34	140 Bar	07	
P25X - 10	10	1"	41.79	140 Bar	10	
P25X - 12	12	1-1/4"	50.54	140 Bar	12	
P25X - 15	15	1 -1/2"	62.68	140 Bar	15	
P25X - 17	17	1 -3/4"	73.13	140 Bar	17	
P25X - 20	20	2"	83.58	140 Bar	20	
P25X - 22	22	2 -1/4"	94.00	140 Bar	22	
P25X - 25	25	2- 1/2"	104.47	140 Bar	25	
ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P25X - 05 - XX	05	1/2"	20.89	140 Bar	05	
P25X - 07 - XX	17	3/4"	31.34	140 Bar	07	
P25X - 10 - XX	10	1"	41.79	140 Bar	10	
P25X - 12 - XX	12	1-1/4"	50.54	140 Bar	12	
P25X - 15 - XX	15	1 -1/2"	62.68	140 Bar	15	
P25X - 17 - XX	17	1 -3/4"	73.13	140 Bar	17	
P25X - 20 - XX	20	2"	83.58	140 Bar	20	
P25X - 22 - XX	22	2- 1/4"	94.00	140 Bar	22	
P25X - 25 - XX	25	2- 1/5"	104.47	140 Bar	25	
ADD ON PRICES						
MOTOR						
LONG NECK S. E. C.						
	SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED	
	*7/8" P/KEY	2-5/8" 6 BOLT	BSPP	C / W	600 MIN rpm	
	*1" P/KEY	4" 2 BOLT	NPT	CC / W	2400 MAX rpm	
	*1-1/4" P/KEY	4" 4 BOLT	SAE "O"	B I		
	*13 TOOTH	5" 2 BOLT	S/F 4 BOLT			
	*14 TOOTH	5" 4 BOLT				
* DENOTES : CONTI SHAFT, USE ONLY AFTER CONSULTING SIDE LOAD SPECS						
						
<p style="text-align: center;">PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY</p>						

Part Number	PUMPS GEAR CAST IRON					01-01-2014 B
P30 SERIES FROM COMMERCIAL SHEARING						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P30 - 05	05	1/2"	16.34	170 Bar	05	
P30 - 07	07	3/4"	24.21	170 Bar	07	
P30 - 10	10	1"	32.29	170 Bar	10	
P30 - 12	12	1-1/4"	40.36	170 Bar	12	
P30 - 15	15	1 -1/2"	48.43	170 Bar	15	
P30 - 17	17	1 -3/4"	56.50	150 Bar	17	
P30 - 20	20	2"	64.58	150 Bar	20	
P30 - 25	25	2- 1/2"	80.00	150 Bar	25	
ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P30 - 05 - XX	05	1/2"	16.34	170 Bar	05	
P30 - 07 - XX	07	3/4"	24.21	170 Bar	07	
P30 - 10 - XX	10	1"	32.29	170 Bar	10	
P30 - 12 - XX	12	1-1/4"	40.36	170 Bar	12	
P30 - 15 - XX	15	1 -1/2"	48.43	170 Bar	15	
P30 - 17 - XX	17	1 -3/4"	56.50	150 Bar	17	
P30 - 20 - XX	20	2"	64.58	150 Bar	20	
P30 - 25 - XX	25	2- 1/2"	80.00	150 Bar	25	
ADD ON PRICES						
MOTOR						
DOWELS INCLUDED IN PRICE						
TELL TAIL DRAIN (DOUBLE SHAFT SEAL)						
PIGGY BACK P30 - P30						
PRIORITY FLOW DIVIDER						
	SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED	
	*3/4" P/KEY	2-5/8" 6 BOLT	BSPP	C / W	600 MIN rpm	
	7/8" P/KEY	3-1/4" 2 BOLT	NPT	CC / W	2400 MAX rpm	
	1" P/KEY	4" 2 BOLT	SAE "O"	B I		
	*1-1/4" P/KEY	4" 4 BOLT	S/F 4 BOLT			
	9 TOOTH	5" 4 BOLT				
	13 TOOTH					
	*14 TOOTH					
* DENOTES : CONTI SHAFT, USE ONLY AFTER CONSULTING SIDE LOAD SPECS						
						
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY						PAGE 57

Part Number	PUMPS GEAR CAST IRON					01-01-2014 B
<u>P50 SERIES FROM COMMERCIAL SHEARING</u>						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P50 - 05	05	1/2"	20.89	170 Bar	05	
P50 - 07	07	3/4"	31.34	170 Bar	07	
P50 - 10	10	1"	41.79	170 Bar	10	
P50 - 12	12	1-1/4"	50.54	170 Bar	12	
P50 - 15	15	1 -1/2"	62.68	170 Bar	15	
P50 - 17	17	1 -3/4"	73.13	140 Bar	17	
P50 - 20	20	2"	83.58	140 Bar	20	
P50 - 22	22	2 -1/4"	94.00	140 Bar	22	
P50 - 25	25	2- 1/2"	104.47	140 Bar	25	
<u>ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION</u>						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P50 - 05 - XX	05	1/2"	20.89	170 Bar	05	
P50 - 07 - XX	07	3/4"	31.34	170 Bar	07	
P50 - 10 - XX	10	1"	41.79	170 Bar	10	
P50 - 12 - XX	12	1-1/4"	50.54	170 Bar	12	
P50 - 15 - XX	15	1 -1/2"	62.68	170 Bar	15	
P50 - 17 - XX	17	1 -3/4"	73.13	140 Bar	17	
P50 - 20 - XX	20	2"	83.58	140 Bar	20	
P50 - 22 - XX	22	2- 1/4"	94.00	140 Bar	22	
P50 - 25 - XX	25	2- 1/2"	104.47	140 Bar	25	
<u>ADD ON PRICES</u>						
MOTOR						
DOWELS INCLUDED IN PRICE						
TELL TAIL DRAIN (DOUBLE SHAFT SEAL)						
PIGGY BACK P50 - P30						
PRIORITY FLOW DIVIDER						
	SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED	
	1" P/KEY	PAD MOUNT	BSPP	C / W	600 MIN rpm	
	1-1/4" P/KEY	4" 2 BOLT	NPT	CC / W	2400 MAX rpm	
	13 TOOTH	4" 4 BOLT	SAE "O"	B I		
	14 TOOTH	5" 2 BOLT	S/F 4 BOLT			
	*15 TOOTH	5" 4 BOLT				
						
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY						PAGE 58

P75 SERIES FROM COMMERCIAL SHEARING

	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE
P75 - 10	10	1"	67.00	170 Bar	10
P75 - 12	12	1-1/4"	84.00	170 Bar	12
P75 - 15	15	1 -1/2"	100.80	170 Bar	15
P75 - 17	17	1 -3/4"	117.60	170 Bar	12
P75 - 20	20	2"	134.40	150 Bar	20
P75 - 22	22	2 -1/4"	151.20	150 Bar	22
P75 - 25	25	2- 1/2"	168.00	150 Bar	25
P75 - 27	27	2 -3/4"	184.80	150 Bar	27
P75 - 30	30	3"	210.60	150 Bar	30

ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION

	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE
P75 - 07 - XX	07	3/4"	50.00	170 Bar	07
P75 - 10 - XX	10	1"	67.00	170 Bar	10
P75 - 12 - XX	12	1-1/4"	84.00	170 Bar	12
P75 - 15 - XX	15	1 -1/2"	100.80	170 Bar	15
P75 - 17 - XX	17	1 -3/4"	117.60	170 Bar	17
P75 - 20 - XX	20	2"	134.40	150 Bar	20
P75 - 22 - XX	22	2 -1/4"	151.20	150 Bar	22
P75 - 25 - XX	25	2- 1/2"	168.00	150 Bar	25
P75 - 27 - XX	27	2 -3/4"	184.80	150 Bar	27
P75 - 30 - XX	30	3"	210.60	150 Bar	30

ADD ON PRICES

MOTOR

DOWELS INCLUDED IN PRICE

TELL TAIL DRAIN (DOUBLE SHAFT SEAL)

PIGGY BACK P75 - 50 - 30

SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED
1-1/4" P/KEY	4" 4 BOLT	BSPP	C / W	600 MIN rpm
14 TOOTH	5" 2 BOLT	NPT	CC / W	2400 MAX rpm
	5" 4 BOLT	SAE "O"	B I	
	6" 4 BOLT	S/F 4 BOLT		



P315 SERIES FROM COMMERCIAL SHEARING

	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE
P315 - 05	05	1/2"	10.33	245 Bar	05
P315 - 07	07	3/4"	15.41	245 Bar	07
P315 - 10	10	1"	20.49	245 Bar	10
P315 - 12	12	1-1/4"	25.57	245 Bar	12
P315 - 15	15	1 -1/2"	30.81	225 Bar	15
P315 - 17	17	1 -3/4"	35.89	200 Bar	17
P315 - 20	20	2"	40.58	175 Bar	20

ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION

	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE
P315 - 05 - XX	05	1/2"	10.33	245 Bar	05
P315 - 07 - XX	07	3/4"	15.41	245 Bar	07
P315 - 10 - XX	10	1"	20.49	245 Bar	10
P315 - 12 - XX	12	1-1/4"	25.57	245 Bar	12
P315 - 15 - XX	15	1 -1/2"	30.81	225 Bar	15
P315 - 17 - XX	17	1 -3/4"	35.89	200 Bar	17
P315 - 20 - XX	20	2"	40.58	175 Bar	20

ADD ON PRICES

- MOTOR
- P.E.C. 1 -1/2- SPLIT FLANGE PORTS
- BRG/CARR 1- 1/2 SPLIT FLANGE PORTS
- PRIORITY FLOW DIVIDER

SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED
7/8" P/KEY	3-1/4" 2 BOLT	BSPP	C / W	600 MIN rpm
13 TOOTH	4" 2 BOLT	NPT	CC / W	2400 MAX rpm
		SAE "O"		
		S/F 4 BOLT		



P330 SERIES FROM COMMERCIAL SHEARING

	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE
P330 - 05	05	1/2"	16.24	245 Bar	05
P330 - 07	07	3/4"	24.21	245 Bar	07
P330 - 10	10	1"	32.29	245 Bar	10
P330 - 12	12	1-1/4"	40.36	245 Bar	12
P330 - 15	15	1 -1/2"	48.43	245 Bar	15
P330 - 17	17	1 -3/4"	56.5	225 Bar	17
P330 - 20	20	2"	64.58	210 Bar	20

ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION

	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE
P330 - 05 - XX	05	1/2"	16.24	245 Bar	05
P330 - 07 - XX	07	3/4"	24.21	245 Bar	07
P330 - 10 - XX	10	1"	32.29	245 Bar	10
P330 - 12 - XX	12	1-1/4"	40.36	245 Bar	12
P330 - 15 - XX	15	1 -1/2"	48.43	245 Bar	15
P330 - 17 - XX	17	1 -3/4"	56.5	225 Bar	17
P330 - 20 - XX	20	2"	64.58	210 Bar	20


ADD ON PRICES

- MOTOR
- TELL TAIL DRAIN (DOUBLE SHAFT SEAL)
- MULTIPLE UNITS STEP SIZE P330/P315
- MULTIPLE UNITS STEP SIZE P330/P11
- PRIORITY FLOW DIVIDER
- UNLOADING VALVE P330/315 BRG/CARR

SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED
7/8" P/KEY	4" 2 BOLT	BSPP	C / W	600 MIN rpm
1" P/KEY	4" 4 BOLT	NPT	CC / W	2400 MAX rpm
*1-1/4" P/KEY	5" 2 BOLT	SAE "O"	B I	
13 TOOTH	5" 4 BOLT	S/F 4 BOLT		
*14 TOOTH				
15 TOOTH				

* DENOTES : CONTI SHAFT, USE ONLY AFTER CONSULTING SIDE LOAD SPECS



Part Number	PUMPS GEAR CAST IRON					01-01-2014 B
<u>P350 SERIES FROM COMMERCIAL SHEARING</u>						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P350 - 05	05	1/2"	20.89	245 Bar	05	
P350 - 07	07	3/4"	31.34	245 Bar	07	
P350 - 10	10	1"	41.79	245 Bar	10	
P350 - 12	12	1-1/4"	50.54	245 Bar	12	
P350 - 15	15	1 -1/2"	62.68	245 Bar	15	
P350 - 17	17	1 -3/4"	73.13	225 Bar	17	
P350 - 20	20	2"	83.58	210 Bar	20	
P350 - 22	22	2 -1/4"	94.00	190 Bar	22	
P350 - 25	25	2- 1/2"	104.47	170 Bar	25	
<u>ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION</u>						
	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE	
P350 - 05 - XX	05	1/2"	20.89	245 Bar	05	
P350 - 07 - XX	07	3/4"	31.34	245 Bar	07	
P350 - 10 - XX	10	1"	41.79	245 Bar	10	
P350 - 12 - XX	12	1-1/4"	50.54	245 Bar	12	
P350 - 15 - XX	15	1 -1/2"	62.68	245 Bar	15	
P350 - 17 - XX	17	1 -3/4"	73.13	225 Bar	17	
P350 - 20 - XX	20	2"	83.58	210 Bar	20	
P350 - 22 - XX	22	2 -1/4"	94.00	190 Bar	22	
P350 - 25 - XX	25	2- 1/2"	104.47	170 Bar	25	
<u>ADD ON PRICES</u>						
MOTOR						
ZF TYPE 4 BOLT P.T.O. S.E.C. & SHAFT						
TELL TAIL DRAIN (DOUBLE SHAFT SEAL)						
MULTIPLE UNITS STEP SIZE COMMON OIL COMMON SUCTION P350/P315						
MULTIPLE UNITS STEP SIZE COMMON OIL COMMON SUCTION P350/P11						
MULTIPLE UNITS STEP SIZE SEALED OILS TO S.A.E. B 4" 2 BOLT; B SPLINE 13 TOOTH						
	SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED	
	1" P/KEY	4" 2 BOLT	BSPP	C / W	600 MIN rpm	
	1-1/4" P/KEY	4" 4 BOLT	NPT	CC / W	2400 MAX rpm	
	13 TOOTH	5" 2 BOLT	SAE "O"	B I		
	14 TOOTH	5" 4 BOLT	S/F 4 BOLT			
* DENOTES : CONTI SHAFT, USE ONLY AFTER CONSULTING SIDE LOAD SPECS						
						
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY						

P365 SERIES FROM COMMERCIAL SHEARING

	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE
P365 - 10	10	1"	59.00	240 Bar	10
P365 - 12	12	1-1/4"	73.75	240 Bar	12
P365 - 15	15	1 -1/2"	88.50	240 Bar	15
P365 - 17	17	1 -3/4"	103.25	240 Bar	12
P365 - 20	20	2"	118.00	240 Bar	20
P365 - 22	22	2 -1/4"	132.75	242 Bar	22
P365 - 25	25	2- 1/2"	147.50	200 Bar	25

ADD ON PRICE FOR MULTIPLE STAGE PUMPS PER SECTION
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	CODE	GEAR WIDTH	CC / REV	CONT / PRESS	CODE
P365 - 07 - XX	07	3/4"	44.25	240 Bar	07
P365 - 10 - XX	10	1"	59.00	240 Bar	10
P365 - 12 - XX	12	1-1/4"	73.75	240 Bar	12
P365 - 15 - XX	15	1 -1/2"	88.50	240 Bar	15
P365 - 17 - XX	17	1 -3/4"	103.25	240 Bar	17
P365 - 20 - XX	20	2"	118.00	240 Bar	20
P365 - 22 - XX	22	2 -1/4"	132.75	242 Bar	22
P365 - 25 - XX	25	2- 1/2"	147.50	200 Bar	25



ADD ON PRICES

- MOTOR
- TELL TAIL DRAIN (DOUBLE SHAFT SEAL)
- MULTIPLE UNITS STEP SIZE COMMON OIL COMMON SUCTION P365/P330
- MULTIPLE UNITS STEP SIZE SEALED OILS TO S.A.E. B 4" 2 BOLT FLANGE
- MULTIPLE UNITS STEP SIZE SEALED OILS ADAPTOR SPLINES S.A.E. A & B

SHAFTS	SPIGOTS	PORTS	ROTATION	SPEED
1-1/4" P/KEY	4" 2 BOLT	BSPP	C / W	600 MIN rpm
14 TOOTH	4" 4 BOLT	NPT	CC / W	2400 MAX rpm
	5" 2 BOLT	SAE "O"	B I	
	5" 4 BOLT	S/F 4 BOLT		






Part Number	PUMPS GEAR O. E. M.						01-01-2014 B
	<u>MASSEY</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 334 9112 669	MASSEY	750 / 850	TLD	COMM	PX	STEER / TR/ NO GEAR	
RH 38 5749Y	MASSEY	750 / A60	TLD	COMM	PX	MAIN (15 SPLINE SHAFT)	
	<u>J C B</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 38 4080H	J C B	3 C X	TLD	COMM	PGP620	MAIN (1" P/ KEY SHAFT)	
RH 7029120016	J C B	3 C X	TLD	COMM	SITE MASTER	MAIN (15 SPLINE SHAFT)	
	<u>NEW HOLLAND</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 7029521066	NEW HOLLAND		TLD	COMM			
	<u>MANITOU</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 7029522013	MANITOU		FORK LIFT	PGP DOUBLE	OVCON		
RH 5729D	MANITOU		FORK LIFT	PGP / P511			
	<u>VOLVO</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 38 6047X	VOLVO	647	FEL	COMM	PX	STEER	
	<u>FINLEY / POWER SCREEN CRUSHER</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 334 9219 396	FINLEY	CRUSHER	P511	COMM			
	<u>HYSTER</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 334 9112 374	HYSTER FORK		LIFT	COMM	PGP511		
	<u>BELL / JOHN DEER</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 324 9529 049	JOHN DEER	315 SE	TLD	COMMER	P330/P315	MAIN	
	<u>CAT</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 38 7975H	CAT						
RH 334 9110 016	CAT						
	<u>CASE</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>SERIES</u>	<u>USE</u>	
RH 324 9110 085	CASE	580 G	TLD	COMMER	P330/15	MAIN	
RH 324 9120 118	CASE	580 K	TLD	COMMER	P330/15/05	MAIN	
RH 323 9529 084	CASE	580 SLE	TLD	COMMER	P350	MAIN	
RH 313 9622 461	CASE	W24C	FEL	COMMER		MAIN	
	<u>BOMAG</u>						
	<u>MAKE</u>	<u>SERIES</u>	<u>TYPE</u>	<u>MAKE</u>	<u>DESCRIPTION</u>	<u>USE</u>	
35 0036110048	BOMAG	212	GEAR	KRACHT	KP2-40-G20AK004DL1	PUMP	
35 0049350007	BOMAG	212	GEAR	KRACHT	KM2-50-G20AK002DL1	MOTOR	
	J C B 3 C X		MASSY 750				
							
	MANITOU		FINLEY				
							
	PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY						PAGE 64

<u>Part Number</u>	PISTON & TWIN SHAFT GEAR PUMPS P.T.O.							01-01-2014 B
	<u>D.I.N. TYPE</u>							
	<u>GPM 50 & 60 MK11 D.I.N. SINGLE FLOW TRUCK PUMPS</u>							
	<u>MOUNTINGS</u> : (D) DIN 4 BOLT							
	<u>SHAFTS</u> : (D) DIN 8 SPLINE							
	<u>ROTATION</u> : (BI) ROTATION							
	<u>TECHNICAL DATA 50 & 60 MK11 SINGLE FLOW</u>							
	<u>DESCRIPTION</u>	<u>PORTS</u>	<u>PORTS</u>	<u>PRESSURE</u>	<u>MAX SPEED</u>	<u>WEIGHT</u>	<u>FLOW</u>	
		<u>INLET</u>	<u>OUTLET x 1</u>	<u>Bar</u>	<u>RPM</u>	<u>Kg</u>	<u>cc/rev</u>	
GPM 50 MK11 DIN	MK11 - 50 - R	1-1/4" BSP	3/4" BSP	300	1400	10	50	
GPM 60 MK11 DIN	MK11 - 60 - R	1-1/4" BSP	3/4" BSP	300	1400	10	60	
GPM 80 MK11 DIN	MK11 - 80 - R	1-1/2" BSP	3/4" BSP	300	1400	12	80	
	<u>D.I.N.</u>							
								
	<u>TWIN SHAFT PUMP C151 (NO CONTROL VALVE)</u>							
GP113-22	C 151	100cc per rev	1 1/8" SHAFT	1-1/2" NPT x 3/4" SAE O'RING PORTS				
RH 315 9310 018								
	<u>TWIN SHAFT PUMP C101 (WITH CONTROL AND RELIEF VALVE)</u>							
GP110-20	C 101	80cc per rev	1" SHAFT	1-1/4" x 3/4" NPT PORTS				
RH 314 9310 215								
	<u>P.T.O. PUMPS ACCESSORIES</u>							
RH 391 2883 106	C 101 SHAFT SEALS (SET OF 2 AND 2 BODY GASKETS)							
RH 391 2883 129	G 101 SHAFT SEALS (SET OF 2 AND 2 BODY GASKETS)							
RH 391 2883 106	C 151 SHAFT SEALS (SET OF 2 AND 2 BODY GASKETS)							
RHP17SEALKIT	P17 SHAFT SEAL (SET OF 1 AND 2 BODY GASKETS)							
WGP-110-MB	C 101 PUMP MOUNTING BRACKET							
								

Part Number	GEAR PUMPS CAST IRON P.T.O.							01-01-2014 B
TYPE : D.I.N. P.T.O.								
G.P.M. - TRUCK PUMPS GP3 GENERATION								
MOUNTINGS : (D) DIN 4 BOLT								
SHAFTS : (D) DIN 8 SPLINE								
ROTATION : (R) CLOCKWISE								
(L) ANTI CLOCKWISE								
DESCRIPTION : GP3 (FLOW) (MOUNT) (ROTATION)								
EXAMPLE : GP3 - 080 - D - L								
TECHNICAL DATA D.I.N.								
	FLOW	PORTS	PORTS	PRESSURE	GEAR	FRAME	FLOW	
SINGLES	cc/rev	INLET	OUTLET x 2	Bar	SIZE	SIZE	cc/rev	
GP3-024-D-L	024	1" BSP	3/4" BSP	300	0.75	230	024	
GP3-032-D-L	032	1" BSP	3/4" BSP	300	1.00	230	032	
GP3-040-D-L	040	1" BSP	3/4" BSP	300	1.25	230	040	
GP3-048-D-L	048	1" BSP	3/4" BSP	300	1.50	230	048	
GP3-052-D-L	052	1" BSP	1" BSP	300	1.25	250	052	
GP3-062-D-L	062	1" BSP	1" BSP	300	1.50	250	062	
GP3-073-D-L	073	1-1/4" BSP	1" BSP	270	1.25	265	073	
GP3-080-D-L	080	1-1/4" BSP	1" BSP	270	1.38	265	080	
GP3-088-D-L	088	1-1/4" BSP	1" BSP	270	1.50	265	088	
GP3-102-D-L	102	1-1/4" BSP	1" BSP	240	1.75	265	102	
GP3-118-D-L	118	1-1/4" BSP	1" BSP	240	2.00	265	118.00	
GP3-132-D-L	132	1-1/2" BSP	1" BSP	220	2.25	265	132.00	
GP3-147-D-L	147	1-1/2" BSP	1" BSP	200	2.50	265	147.00	
GP3-SEAL KIT								
TANDEMS								
GP3T-052	52	1"	1"	250		250	52	
GP3T-052-32	52-32	1" & 1"	1" & 1"	250	250/250		52/52	
GP3T-062	62	1"	1"	250		250	62	
GP3T-062-32	62-32	1" & 1"	1" & 3/4"	250	250/230		62/32	
GP3T-073	73	1-1/4"	1"	250		265	73	
GP3T-073-32	73-32	1-1/4" & 1"	1" & 3/4"	250	265/230		73/32	
GP3T-080	80	1-1/4"	1"	250		265	80	
GP3T-080-32	80-32	1-1/4" & 1"	1" & 3/4"	250	265/230		80/32	
GP3T-088	88	1-1/4"	1"	250		265	88	
GP3T-088-32	88-32	1-1/4" & 1"	1" & 3/4"	250	265/230		88/32	
DIN 8 SPLINE								
								
GP3T-80-35								
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY								

Part Number	GEAR PUMPS CAST IRON P.T.O.							01-01-2014 B
TYPE : U. N. I. P.T.O.								
G.P.M. - TRUCK PUMPS GP3 GENERATION								
MOUNTINGS : (U) UNI 3 BOLT								
SHAFTS : (U) UNI 6 SPLINE								
ROTATION : (R) CLOCKWISE								
(L) ANTI CLOCKWISE								
DESCRIPTION : GP3 (FLOW) (MOUNT) (ROTATION)								
EXAMPLE : GP3 - 080 - U - L								
TECHNICAL DATA U. N. I.								
	FLOW	PORTS	PORPTS	PRESSURE	GEAR	FRAME	FLOW	
	cc/rev	INLET	OUTLET x 2	Bar	SIZE	SIZE	cc/rev	
GP3-024-U-L	024	1" BSP	3/4" BSP	300	0.75	230	024	
GP3-032-U-L	032	1" BSP	3/4" BSP	300	1.00	230	032	
GP3-040-U-L	040	1" BSP	3/4" BSP	300	1.25	230	040	
GP3-048-U-L	048	1" BSP	3/4" BSP	300	1.50	230	048	
GP3-052-U-L	052	1" BSP	1" BSP	300	1.25	250	052	
GP3-062-U-L	062	1" BSP	1" BSP	300	1.50	250	062	
GP3-073-U-L	073	1-1/4" BSP	1" BSP	270	1.25	265	073	
GP3-080-U-L	080	1-1/4" BSP	1" BSP	270	1.38	265	080	
GP3-088-U-L	088	1-1/4" BSP	1" BSP	270	1.50	265	088	
GP3-102-U-L	102	1-1/4" BSP	1" BSP	240	1.75	265	102	
GP3-118-U-L	118	1-1/4" BSP	1" BSP	240	2.00	265	118	
GP3-132-U-L	132	1-1/2" BSP	1" BSP	220	2.25	265	132	
GP3-147-U-L	147	1-1/2" BSP	1" BSP	200	2.50	265	147	
GP3-SEAL KIT								
	UNI 6 SPLINE				IN - CAB VALVE			
197 KFL 02000	8 - SPLINED SPICER 112 PROP SHAFT FLANGE							
198 KPP 02000	6 - SPLINED SLEEVE KIT							
606 X01 UNIZO	3 HOLE UNI TO 4 HOLE DIN ADAPTOR & SLEEVE KIT							
198 KPP 04Q00	STUD KIT 4 STUDS & GASKET FOR THE ABOVE USE WITH (606X01UN1Z0)							
400 KCP 1SS00	STANDARD SINGLE AIR SWITCH WITH ; LIGHT, NYLON TUBING AND FITTINGS							
400 KCP 2SS00	STANDARD DUAL AIR SWITCH WITH ; LIGHT, NYLON TUBING AND FITTINGS							
400 CP1S0000	SINGLE AIR SWITCH WITH LIGHT							
400 CP1 0000	SINGLE AIR SWITCH WITH NO LIGHT							
3VM PS0 00000	AIR OPERATED TIPPER CONTROL VALVE 140 Bar RELIEF SETTING							
M22 H/C/V	IN - CAB VALVE HAND OPERATED							
606 X14 S0000	PUMP ORIENTATING ADAPTOR FLANGE U.N.I .TYPE							
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY								

Part Number	FORKLIFT PUMPS				01-01-2014 B
	<u>TOYOTA</u>				
RH 334 9111 934	3 SERIES	3 TON	5P ENGINE	PETROL - GAS	
GAP-FL-T-3-25-R	3 SERIES	3 TON	5P ENGINE	PETROL - GAS	
RH 334 9111 934	3 SERIES	1.8 / 3 TON	2J ENGINE	DIESEL	
GAP-FL-T-3-25-R	3 SERIES	1.8 / 3 TON	2J ENGINE	DIESEL	
326 XXX XXX	3 SERIES	4 TON	2F ENGINE	PETROL - GAS	
326 XXX XXX	3 SERIES	4 TON	2H ENGINE	DIESEL	
RH 334 9111 934	4 SERIES	1.8 / 2 / 2.5 TON	5R ENGINE	PETROL - GAS	
GAP-FL-T-4-25-R	4 SERIES	3 TON	5P ENGINE	PETROL - GAS	
RH 334 9111 934	4 SERIES	2 / 2.5 TON	2J ENGINE	DIESEL	
GAP-FL-T-4-25-R	4 SERIES	2 / 2.5 TON	2J ENGINE	DIESEL	
332 XXX XXX	3 / 4 FBRE SERIES	1 / 1.3 / 1.5 / 3 TON	MOTOR	ELECTRIC	
RH 334 9111 934	5 SERIES	1.8 / 2 / 2.5 TON	5R ENGINE	PETROL - GAS	
GAP-FL-T-5-25-R	5 SERIES	3 TON	5P ENGINE	PETROL - GAS	
RH 334 9111 934	5 SERIES	2 / 2.5 TON	2J ENGINE	DIESEL	
GAP-FL-T-5-25-R	5 SERIES	2 / 2.5 TON	2J ENGINE	DIESEL	
333 XXX XXX	5 SERIES	4.5 / 4 TON	3F / 1FZ ENGINE	PETROL - GAS	
	5 SERIES	4.5 / 4 TON	SPLINE BEARING MODIFICATION		
333 XXX XXX	5 SERIES	4.5 / 4 TON	11Z ENGINE	DIESEL	
	5 SERIES	4.5 / 4 TON	SPLINE BEARING MODIFICATION		
332 XXX XXX	5 SERIES	1 / 1.3 / 1.5 / 3 TON	MOTOR	ELECTRIC	
	3 / 4 / 5 SERIES 1.8 / 2 / 2.5 / 3 / 5 TON		3 / 4 / 5 SERIES 4 TON		
					
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY					PAGE 68

Part Number	FORKLIFT PUMPS				01-01-2014 B
	TOYOTA				
RH 334 9111 935	6 SERIES	1.8 / 2 / 2.5 / 3 TON	4Y ENGINE	PETROL - GAS	
GAP-FL-T-6-25-R	6 SERIES	1.8 / 2 / 2.5 / 3 TON	4Y ENGINE	PETROL - GAS	
RH 334 9111 935	6 SERIES	1.8 / 2 / 2.5 / 3 TON	1DZ 2 ENGINE	DIESEL	
GAP-FL-T-6-25-R	6 SERIES	1.8 / 2 / 2.5 / 3 TON	1DZ 2 ENGINE	DIESEL	
332 9110 XXX	6 SERIES	2 / 2.5 / 3 TON	2Z ENGINE	DIESEL	
333 XXX XXX	6 SERIES	4.5 / 4 TON	3F / 1FZ ENGINE	PETROL - GAS	
	6 SERIES	4.5 / 4 TON	SPLINE BEARING MODIFICATION		
333 XXX XXX	6 SERIES	4.5 / 4 TON	11Z ENGINE	DIESEL	
	6 SERIES	4.5 / 4 TON	SPLINE BEARING MODIFICATION		
332 XXX XXX	6 FBRE SERIES	1 / 1.3 / 1.5 / 3 TON	MOTOR	ELECTRIC	
RH 334 9111 933	7 SERIES	1.8 / 2 / 2.5 / 3 TON	4Y ENGINE	PETROL - GAS	
GAP-FL-T-7-25-R	7 SERIES	1.8 / 2 / 2.5 / 3 TON	4Y ENGINE	PETROL - GAS	
RH 334 9111 933	7 SERIES	1.8 / 2 / 2.5 / 3 TON	1DZ 2 ENGINE	DIESEL	
GAP-FL-T-7-25-R	7 SERIES	1.8 / 2 / 2.5 / 3 TON	1DZ 2 ENGINE	DIESEL	
332 9110 XXX	7 SERIES	2 / 2.5 / 3 TON	2Z ENGINE	DIESEL	
333 XXX XXX	7 SERIES	4.5 / 4 TON	GM ENGINE	PETROL - GAS	
	7 SERIES	4.5 / 4 TON	SPLINE BEARING MODIFICATION		
333 XXX XXX	7 SERIES	4.5 / 4 TON	13Z ENGINE	DIESEL	
	7 SERIES	4.5 / 4 TON	SPLINE BEARING MODIFICATION		
332 XXX XXX	7 FBRE SERIES	1 / 1.3 / 1.5 / 3 TON	MOTOR	ELECTRIC	
	6 SERIES 1.8 / 2 / 2.5 / 3 TON		7 SERIES 1.8 / 2 / 2.5 / 3 TON		
					

TOYOTA

GAP-FL-T-8-27-R 2.5APF27LJ41S90BB	8 SERIES 1.8 / 2 / 2.5 / 3 TON 4Y ENGINE PETROL

GAP-FL-T-8-27-R 2.5APF27LJ41S90BB	8 SERIES 1.8 / 2 / 2.5 / 3 TON 1DZ 2 ENGINE DIESEL

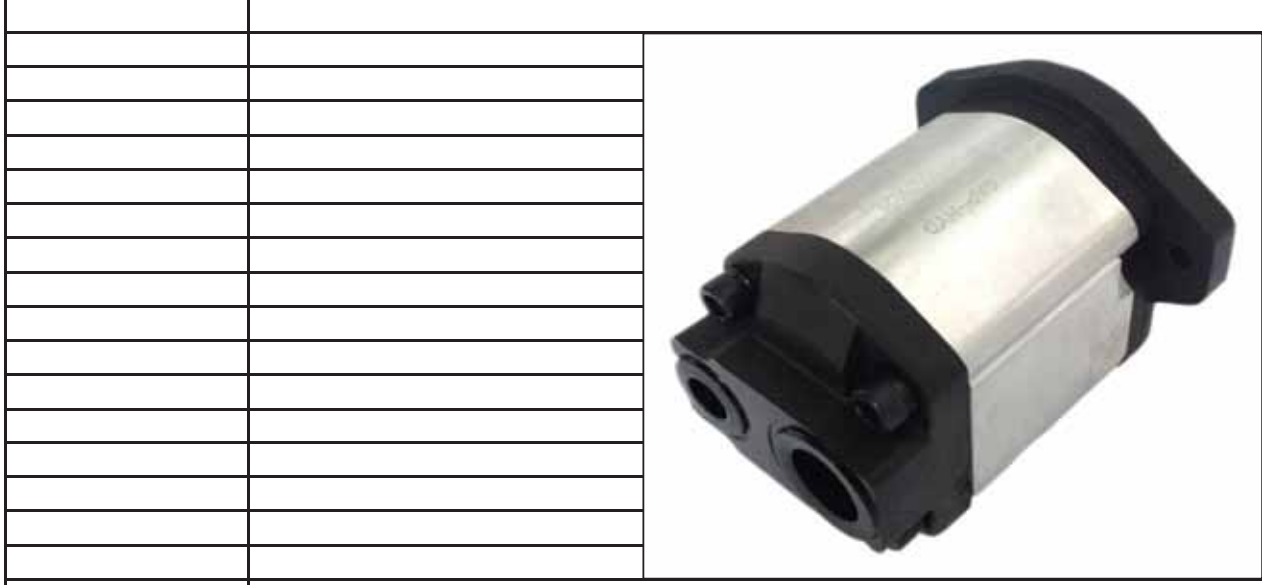
333 XXX XXX	8 SERIES 4.5 / 4 TON GM ENGINE PETROL - GAS
	8 SERIES 4.5 / 4 TON SPLINE BEARING MODIFICATION


333 XXX XXX	8 SERIES 4.5 / 4 TON 13Z ENGINE DIESEL
	8 SERIES 4.5 / 4 TON SPLINE BEARING MODIFICATION

8 SERIES 1.8 / 2 / 2.5 / 3 TON



8 SERIES 1.8 / 2 / 2.5 / 3 TON



Part Number	FORKLIFT PUMPS			01-01-2014 B
	<u>TCM</u>			
RH 334 9112 511	NF SERIES 2.5 TON	PETROL H20 OR Z24	C/W / C/U	
GAP-FL-TC-6-25-R	NF SERIES 2.5 TON	PETROL H20 OR Z24	C/W / C/U	
RH 334 9112 511	NF SERIES 2.5 TON	DIESEL C240 OR Z2	CC/W / C/U	
GAP-FL-TC-6-25-L	NF SERIES 2.5 TON	DIESEL C240 OR Z2	CC/W / C/U	
RH 334 KYB 85A	N6 SERIES 2.5 TON	DIESEL OR PETROL NISSAN H20	CC/W / C/U	
332 XXX XXX	FHD SERIES 2.5 TON	DIESEL C 240 / Z2	CCW / CU	
332 XXX XXX	FHG SERIES 2.5 TON	PETROL H 20 / Z 24	CW / CU	
332 XXX XXX	FRSB SERIES 2 TON 1150 15H2	ELECTRIC	CC/W / C/U	
332 XXX XXX	FRSB SERIES 2.5 TON 25 A 4 18 A 4	ELECTRIC	CC/W/C/U	
326 XXX XXX	FD 70 Z 7 SERIES 7 TON	P315 SPECIAL 80mm spigot diesel	CW&CCW	
NF SERIES				
				
P511 KYB 85 A FHD / FHG SERIES				
				
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY				PAGE 71

Part Number	FORKLIFT PUMPS		01-01-2014 B
	HYSTER		
	XL SERIES 2.5 TON	PETROL	C/W
RH 334 9112 288	P11A193PAX10XX23XX	XXXCHANGE ROTATION	
	XL SERIES 2.5 TON	DIESEL	CC/W
RH 334 9112 288	P11A293PAX10XX23XX		
	XL SERIES 4 / 5 TON F5 / G5	DIESEL	CC/W
RH 324 9110 127	P330A297XXAB17-25		
	XL SERIES H16 TON 5 HIGH	DIESEL	C/W
RH 322 9529 072	P365B178XXAB13-7/P330AXXAB10-XXPRV1V		
	XL SERIES 2 - 2.5 TON E2 / E3	ELECTRIC	C/W
332 XXX XXX	P11A193BEXX19-97	XXPORTS S/F M10X1.5 / SHAFT 5/8" P/KEY	
	XM SERIES 2.5 TON	DIESEL	CC/W
332 XXX XXX	P11 A293X PA / 10 XX 27 - 92	XXSEC CUT OUT / 11 TOOTH	
	XM SERIES 2.5 TON	PETROL / GAS	C/W
332 XXX XXX	P11 A193X PA / 10 XX 27 - 92	XXSEC CUT OUT / 11 TOOTH	
	H40H / H60H SERIES	DIESEL	CC/W
333 9110 222*	P17A193PE/10AJ38-65		
	H40H / H60H SERIES	PETROL	C/W
333 9110 222*	P17A193PE/10AJ38-65		
	H40H / H60H SERIES	GM ENGINE PETROL	CC/W
RH 333 9110 232*	P17A293PE/10AJ38-65		

PLZ. NOTE; * DENOTES : 1 HOUR ASSEMBLY XXX DENOTES 2 HOUR OR 24 HOUR ASSEMBLY


XL / XM SERIES




H40H SERIES



<u>Part Number</u>	PUMPS VANE		01-01-2014 B	
	MODEL VQ VANE PUMP CARTRIDGES (DIRECT SWOP WITH VICKERS)			
	<u>CARTRIDGE KIT 20VQ SERIES</u>			
60 20VQ-5	5	GALLON CARTRIDGE KIT		
60 20VQ-8	8	GALLON CARTRIDGE KIT		
60 20VQ-11	11	GALLON CARTRIDGE KIT		
60 20VQ-12	12	GALLON CARTRIDGE KIT		
60 20VQ-14	14	GALLON CARTRIDGE KIT		
	<u>CARTRIDGE KIT 25VQ SERIES</u>			
60 25VQ-12	12	GALLON CARTRIDGE KIT		
60 25VQ-14	14	GALLON CARTRIDGE KIT		
60 25VQ-17	17	GALLON CARTRIDGE KIT		
60 25VQ-21	21	GALLON CARTRIDGE KIT		
	<u>CARTRIDGE KIT 35VQ SERIES</u>			
60 35VQ-25	25	GALLON CARTRIDGE KIT		
60 35VQ-30	30	GALLON CARTRIDGE KIT		
60 35VQ-35	35	GALLON CARTRIDGE KIT		
60 35VQ-38	38	GALLON CARTRIDGE KIT		
	<u>CARTRIDGE KIT 45VQ SERIES</u>			
60 45VQ-42	42	GALLON CARTRIDGE KIT		
60 45VQ-50	50	GALLON CARTRIDGE KIT		
60 45VQ-60	60	GALLON CARTRIDGE KIT		
	<u>SHAFT SEALS PRIMARY (INSIDE PUMP)</u>			
60 20VQSEALSHAFT/P	20VQ			
60 25VQSEALSHAFT/P	25VQ			
60 35VQSEALSHAFT/P	35VQ			
60 45VQSEALSHAFT/P	45VQ			
	<u>SHAFT SEALS SECONDARY (OUTSIDE PUMP)</u>			
60 25VQSEALSHAFT/S	25/20VQ			
60 35VQSEALSHAFT/S	35VQ			
60 45VQSEALSHAFT/S	45VQ			
	<u>SHAFT BEARINGS</u>			
60 20VQ 6204	20VQ			
60 25VQ 6205	25VQ			
60 35VQ 6306	35VQ			
60 45VQ 6307	45VQ			
	<u>PUMP SHAFT KIT : SPIROLOCK , WASHER AND SNAPRING</u>			
60 20VQSPIROLOCK	20VQ			
60 25VQSPIROLOCK	25VQ			
60 35VQSPIROLOCK	35VQ			
60 45VQSPIROLOCK	45VQ			
	<u>PUMP SEAL KIT SINGLE</u>			
60 20VQSEALKIT S	20VQ			
60 25VQSEALKIT S	25VQ			
60 35VQSEALKIT S	35VQ			
60 45VQSEALKIT S	45VQ			
	<u>PUMP SEAL KIT DOUBLE</u>			
60 2520VQSEALKIT D	2520VQ			
60 3520VQSEALKIT D	3520VQ			
60 3525VQSEALKIT D	3525VQ			
60 4520VQSEALKIT D	4520VQ			
60 4525VQSEALKIT D	4525VQ			
60 4535VQSEALKIT D	4535VQ			

Part Number	PUMPS VANE		01-01-2014 B
	MODEL VQ VANE PUMP SHAFTS (DIRECT SWOP WITH VICKERS)		
	SHAFTS 20VQ SERIES SINGLE		
60 20VQ-1	PARR / KEY 7/8" SAE A SINGLE PUMP		
60 20VQ-151	13 SPLINE 7/8" SAE B SINGLE PUMP		
	SHAFTS 25VQ SERIES SINGLE		
60 25VQ-1	PARR / KEY 7/8" SAE A SINGLE PUMP		
60 25VQ-86	PARR / KEY 1" SAE BB SINGLE PUMP		
60 25VQ-11	13 SPLINE 7/8" SAE B SINGLE PUMP		
	SHAFTS 35VQ SERIES SINGLE		
60 35VQ-1	PARR / KEY 1-1/4" SAE C SINGLE PUMP		
60 35VQ-11	14 SPLINE 1-1/4" SAE C SINGLE PUMP		
60 35VQ-19	14 SPLINE 1-1/4" SAE C DOUBLE PUMP (TO BE USED WITH CAT S.E.C. ONLY)		
	SHAFTS 45VQ SERIES SINGLE		
60 45VQ-1	PARR / KEY 1-1/4" SAE C SINGLE PUMP		
60 45VQ-11	14 SPLINE 1-1/4" SAE C SINGLE PUMP		
60 45VQ-19	14 SPLINE 1-1/4" SAE C DOUBLE PUMP (TO BE USED WITH CAT S.E.C. ONLY)		
	SHAFTS 2520VQ SERIES DOUBLE		
60 2520VQ-1	PARR / KEY 7/8" SAE A DOUBLE PUMP		
60 2520VQ-86	PARR / KEY 1" SAE BB DOUBLE PUMP		
60 2520VQ-11	13 SPLINE 7/8" SAE B DOUBLE PUMP		
60 2520VQ-19	14 SPLINE 1-1/4" SAE C DOUBLE PUMP (TO BE USED WITH CAT S.E.C. ONLY)		
	SHAFTS 3520VQ SERIES DOUBLE		
60 3520VQ-1	PARR / KEY 1-1/4" SAE C DOUBLE PUMP		
60 3520VQ-11	14 SPLINE 1-1/4" SAE C DOUBLE PUMP		
60 3520VQ-19	14 SPLINE 1-1/4" SAE C DOUBLE PUMP (TO BE USED WITH CAT S.E.C. ONLY)		
	SHAFTS 3525VQ SERIES DOUBLE		
60 3525VQ-1	PARR / KEY 1-1/4" SAE C DOUBLE PUMP		
60 3525VQ-11	14 SPLINE 1-1/4" SAE C DOUBLE PUMP		
60 3525VQ-19	14 SPLINE 1-1/4" SAE C DOUBLE PUMP (TO BE USED WITH CAT S.E.C. ONLY)		
	SHAFTS 4520VQ SERIES DOUBLE		
60 4520VQ-1	PARR / KEY 1-1/4" SAE C DOUBLE PUMP		
60 4520VQ-11	14 SPLINE 1-1/4" SAE C DOUBLE PUMP		
	SHAFTS 4525VQ SERIES DOUBLE		
60 4525VQ-1	PARR / KEY 1-1/4" SAE C DOUBLE PUMP		
60 4525VQ-11	14 SPLINE 1-1/4" SAE C DOUBLE PUMP		
60 4525VQ-19	14 SPLINE 1-1/4" SAE C DOUBLE PUMP (TO BE USED WITH CAT S.E.C. ONLY)		
	SHAFTS 4535VQ SERIES DOUBLE		
60 4535VQ-1	PARR / KEY 1-1/4" SAE C DOUBLE PUMP		
60 4535VQ-11	14 SPLINE 1-1/4" SAE C DOUBLE PUMP		
60 4535VQ-19	14 SPLINE 1-1/4" SAE C DOUBLE PUMP (TO BE USED WITH CAT S.E.C. ONLY)		
			

Part Number	PUMPS VANE					01-01-2014 B
	MODEL VQ VANE PUMPS					(DIRECT SWOP WITH VICKERS)
	COMPLETE PUMPS SINGLE					
60 20VQ	5 TO 14 GALLON SHAFT PARR KEY 7/8" OR 13 SPLINE SPIGOT 4" 2 BOLT					
60 25VQ	12 TO 21 GALLON SHAFT PARR KEY 7/8" OR 1" OR 13 SPLINE SPIGOT 4" 2 BOLT					
60 35VQ	25 TO 38 GALLON SHAFT PARR KEY 1-1/4" OR 14 SPLINE 11/4" SPIGOT 5" 2 BOLT					
60 45VQ	42 TO 60 GALLON SHAFT PARR KEY 1-1/4" OR 14 SPLINE 11/4" SPIGOT 5" 2 BOLT					
60 2520VQ	12-21 TO 5-14 GALLON SHAFT PARR KEY 7/8" AND 1" OR 13 SPLINE SPIGOT 4" 2 BOLT					
60 3520VQ	25-38 TO 5-14 GALLON SHAFT PARR KEY 1-1/4" OR 14 SPLINE 1-1/4" SPIGOT 5" 2 BOLT					
60 3525VQ	25-38 TO 12-21 GALLON SHAFT PARR KEY 1-1/4" OR 14 SPLINE 1-1/4" SPIGOT 5" 2 BOLT					
60 4520VQ	42-60 TO 5-14 GALLON SHAFT PARR KEY 1-1/4" OR 14 SPLINE 1-1/4" SPIGOT 5" 2 BOLT					
60 4525VQ	42-60 TO 12-21 GALLON SHAFT PARR KEY 1-1/4" OR 14 SPLINE 1-1/4" SPIGOT 5" 2 BOLT					
60 4535VQ	42-60 TO 25-38 GALLON SHAFT PARR KEY 1-1/4" OR 14 SPLINE 1-1/4" SPIGOT 5" 2 BOLT					
	HOW TO IDENTIFY PUMP SERIES BY MEASURING CAM RING OD IN mm					
60 20VQ	20VQ CAM RING OD 82.6 mm					
60 25VQ	25VQ CAM RING OD 96.8 mm					
60 35VQ	35VQ CAM RING OD 114.3 mm					
60 45VQ	45VQ CAM RING OD 133.40 mm					
	TECHNICAL SPECIFICATIONS					
	MODEL	FLOW @ 1200RPM US GAL	CC/REV	MAX SPEED RPM	MAX PRESS BAR	
60 20VQ	20VQ	5	18	2700	206	
60 20VQ	20VQ	8	27	2700	206	
60 20VQ	20VQ	11	36	2700	206	
60 20VQ	20VQ	12	39	2700	158	
60 20VQ	20VQ	14	45	2700	138	
	MODEL	FLOW @ 1200RPM US GAL	CC/REV	MAX SPEED RPM	MAX PRESS BAR	
60 25VQ	25VQ	12	40	2700	206	
60 25VQ	25VQ	14	45	2700	206	
60 25VQ	25VQ	17	55	2500	206	
60 25VQ	25VQ	21	67	2500	206	
	MODEL	FLOW @ 1200RPM US GAL	CC/REV	MAX SPEED RPM	MAX PRESS BAR	
60 35VQ	35VQ	25	81	2500	206	
60 35VQ	35VQ	30	97	2500	206	
60 35VQ	35VQ	35	112	2400	206	
60 35VQ	35VQ	38	121	2400	206	
	MODEL	FLOW @ 1200RPM US GAL	CC/REV	MAX SPEED RPM	MAX PRESS BAR	
60 45VQ	45VQ	42	138	2200	172	
60 45VQ	45VQ	50	162	2200	172	
60 45VQ	45VQ	60	193	2200	172	
						

<u>Part Number</u>	PUMPS VANE		01-01-2014 B
	<u>MODEL V10 & V20 VANE PUMP SECTIONS</u> (DIRECT SWOP WITH VICKERS)		
	<u>PUMP SECTION KIT V10 SERIES</u>		
60 V10-1	1	GALLON SECTION KIT	
60 V10-2	2	GALLON SECTION KIT	
60 V10-3	3	GALLON SECTION KIT	
60 V10-4	4	GALLON SECTION KIT	
60 V10-5	5	GALLON SECTION KIT	
60 V10-6	6	GALLON SECTION KIT	
60 V10-7	7	GALLON SECTION KIT	
	<u>PUMP SECTION KIT V20 SERIES</u>		
60 V20-6	6	GALLON SECTION KIT	
60 V20-7	7	GALLON SECTION KIT	
60 V20-8	8	GALLON SECTION KIT	
60 V20-9	9	GALLON SECTION KIT	
60 V20-11	11	GALLON SECTION KIT	
60 V20-12	12	GALLON SECTION KIT	
60 V20-13	13	GALLON SECTION KIT	
	<u>PUMP SEAL KIT SINGLE</u>		
60 V10SEALKIT	V10		
60 V20SEALKIT	V20		
	<u>SHAFT BEARINGS</u>		
60 V10BEARING	V10		
60 V20BEARING	V20		
	<u>PUMP END PLATE</u>		
60 V10-PP	V10		
60 V20-PP	V20		
	<u>SHAFTS V10 SERIES SINGLE</u>		
60 V10-1	PARR / KEY 3/4" KEY 25mm LONG		
60 V10-3	PARR / KEY 5/8" THREADED WITH WOODRUFF KEY		
60 V10-11	9	SPLINE 5/8" SAE A	
60 V10-12	13	SPLINE 7/8" SAE B	
60 V10-38	11	SPLINE 3/4" SAE A	
	<u>SHAFTS V20 SERIES SINGLE</u>		
60 V20-1	PARR / KEY 3/4" KEY 41mm LONG		
60 V20-3	PARR / KEY 15/16" THREADED WITH WOODRUFF KEY		
60 V20-11	11	SPLINE 3/4" LONG SPLINE LENGTH 37.3mm	
60 V20-15	13	SPLINE 7/8" SAE B	
60 V20-38	11	SPLINE 3/4" SHORT SPLINE LENGTH 19.1mm	
	<u>DOUBLE PUMP SHAFTS FOR V2010 & V2020 SERIES AVAILABLE ON REQUEST</u>		
60 V2010-1	PARR / KEY 7/8" SAE B		
60 V2010-11	13 SPLINE 7/8" SAE B		
60 V2020-1	PARR / KEY 7/8" SAE B		
60 V2020-11	13 SPLINE 7/8" SAE B		
	<u>IDENTIFY PUMP SERIES BY MEASURING ROTOR OD</u>		
60 V10	V10 ROTOR OD 41.0 mm		
60 V20	V20 ROTOR OD 56.6 mm		
	PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY		PAGE 77

Part Number	PUMPS VANE					01-01-2014 B
	<u>MODEL V10, V20 & VTM 42 VANE PUMPS (DIRECT SWOP WITH VICKERS)</u>					
60 V10	PUMP SINGLE					
60 V20	PUMP SINGLE					
60 V10P	PUMP SINGLE PRIORITY VALVE COVER					
60 V20P	PUMP SINGLE PRIORITY VALVE COVER					
60 V10F	PUMP SINGLE FLOW CONTROL COVER					
60 V20F	PUMP SINGLE FLOW CONTROL COVER					
60 V2010	PUMP DOUBLE					
60 V2020	PUMP DOUBLE					
	<u>MODEL V 10 P VANE PUMP UNIT GALLION GRADER STEER PUMP</u>					
60 V10P1S7K11D7D	V10-P1S7K11D7D					
	SPECS : SPIGOT 3-1/4" 2 BOLT PORTS 1" SAE & 1/2" SAE SECONDARY 3/8" SAE PRIMARY DELIVERY 11 GAL PRIORITY 7 GAL PRESSURE 70 BAR SHAFT 9 TOOTH ROTATION C/W					
	<u>MODEL V 20 VANE PUMP UNIT DIRECT SWOP ON PART NUMBER</u>					
60 V20-1P11P-1C	V20-1P11P-1C					
	SPECS : SPIGOT 3-1/4" 2 BOLT PORTS 1-1/4" NPT & 3/4" NPT DELIVERY 11 GAL SHAFT 3/4" PARR KEY ROTATION C/W					
	<u>MODEL VTM 42 VANE PUMP UNIT DIRECT SWOP ON PART NUMBER</u>					
60 VTM-42-50-40	VTM-42-50-40-15-NO-R1-14					
	SPECS : SPIGOT 3-1/4" 2 BOLT DELIVERY 5 GAL CONTROLLED FLOW 4 GAL RELIEF 15 BAR ROTATION C/W SHAFT 7/8" PARR KEY + THREAD PRESSURE PORT 1/2" SAE "O"					
60 VTM - TANK	VTM TANK					
	<u>TECHNICAL SPECIFICATIONS</u>					
	<u>MODEL</u>	<u>FLOW @ 1200RPM US GAL</u>	<u>CC/REV</u>	<u>MAX SPEED RPM</u>	<u>MAX PRESS BAR</u>	
60 V10	V10	1	3.3	4800	172	
60 V10	V10	2	6.6	4500	172	
60 V10	V10	3	9.8	4000	172	
60 V10	V10	4	13.1	3400	172	
60 V10	V10	5	16.4	3200	172	
60 V10	V10	6	19.5	3000	152	
60 V10	V10	7	22.8	2800	138	
	<u>MODEL</u>	<u>FLOW @ 1200RPM US GAL</u>	<u>CC/REV</u>	<u>MAX SPEED RPM</u>	<u>MAX PRESS BAR</u>	
60 V20	V20	6	19.5	3400	172	
60 V20	V20	7	22.8	3000	172	
60 V20	V20	8	26.5	2800	172	
60 V20	V20	9	29.7	2800	172	
60 V20	V20	11	36.4	2500	172	
60 V20	V20	12	39.0	2400	152	
60 V20	V20	13	42.4	2400	152	
						

MODEL T6C & T6CC HIGH PRESSURE 240 BAR (continuous pressure)		
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MAKE : HOF " A DENISON REPLACEMENT "		
USE : MOBILE AND INDUSTRIAL		

ORDERING CODE SINGLE PUMP: T6C - 022 - 1 R 00 - B 1		
ORDERING CODE DOUBLE PUMP: T6CC - 022 - 06- 1 R 00 - C100		

60 T6C-XX	SINGLE PUMP T6C	SINGLE PUMP	
60 T6CC-XXX-XXX	DOUBLE PUMP T6CC	DOUBLE PUMP	
60HOF-T6C-XXX-S	RING SIZES SINGLE	T6C - 006 - 008 - 010 - 012 - 014 - 017 - 020 - 022 - 025 - 028 - 031	
60HOF-T6CC-XXX-D-F	RING SIZE DOUBLE FRONT	T6CC - 006 - 008 - 010 - 012 - 014 - 017 - 020 - 022 - 025 - 028 - 031	
60HOF-T6CC-XXX-D-R	RING SIZE DOUBLE REAR	T6CC - 006 - 008 - 010 - 012 - 014 - 017 - 020 - 022 - 025 - 028 - 032	

MODEL T6C SINGLE PUMP		
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SHAFT 1	7/8" PARALLEL KEY S.A.E. B
SHAFT 3	13 TOOTH S.A.E. B
SHAFT 4	15 TOOTH S.A.E. BB



MODEL T6CC DOUBLE PUMP		
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SHAFT 1	7/8" PARALLEL KEY S.A.E. B
SHAFT 3	15 TOOTH S.A.E. BB
SHAFT 5	13 TOOTH S.A.E. B

ROTATION R CLOCKWISE	
ROTATION L ANTI-CLOCKWISE	
INLET PORT 00 OPPOSITE OUTLET	

DESIGN B SINGLE C DOUBLE

SEAL 1 BUNA



T6C	PORTS		MOUNT	SPIGOT	WEIGHT
SINGLE	SUCTION	PRESSURE	HOLES	INCH	SINGLE
3000	1-1/2" 4 bolt	1" 4 bolt	2	4"	15kg
series	1/2" unc bolts	3/8" unc bolts			

T6CC	PORTS		MOUNT	SPIGOT	WEIGHT
DOUBLE	SUCTION	PRESSUREX2	HOLES	INCH	DOUBLE
3000	2-1/2" 4 bolt	3/4" 4 bolt	2	4"	26KG
series	1/2" unc bolts	3/8" unc bolts			

CAM size	Displacement cc / rev	CONT PRESSURE bar	INT PRESSURE bar	MAX SPEED rpm	MIN SPEED rpm
006	21.3	240	280	2800	600
008	26.4	240	280	2800	600
010	34.1	240	280	2800	600
012	37.1	240	280	2800	600
014	46.0	240	280	2800	600
017	58.3	240	280	2800	600
020	63.8	240	280	2800	600
022	70.3	240	280	2800	600
025	79.3	240	280	2800	600
028	88.8	160	210	2800	600
031	100	160	210	2800	600

MODEL T6D & T6DC HIGH PRESSURE 240 BAR (continuous pressure)

60T6D-042-3 L 00	SINGLE PUMP T6D SINGLE PUMP
60T6DC-038-10-3 L 00	DOUBLE PUMP T6DC DOUBLE PUMP
60HOF-T6D-XXX-S	RING SIZES SINGLE T6D - 035 - 038 - 042 - 045 - 050
60HOF-T6DC-XXX-DF	RING SIZES DOUBLE FRONT T6DC - 035 - 038 - 042 - 045 - 050
60HOF-T6DC-XXX-DR	RING SIZES DOUBLE REAR T6DC - 006 - 008 - 010 - 012 - 014 - 017 - 020 - 022 - 025 - 028

MODEL T6D SINGLE PUMP

SHAFT 1 11/4" PARALLEL KEY S.A.E. C
 SHAFT 3 14 TOOTH S.A.E. C

MODEL T6DC DOUBLE PUMP

SHAFT 1 11/4" PARALLEL KEY S.A.E. C
 SHAFT 3 14 TOOTH S.A.E. C

ROTATION R CLOCKWISE
 ROTATION L ANTI-CLOCKWISE
 INLET PORT 00 OPPOSITE OUTLET



T6D			MOUNT	SPIGOT	WEIGHT
SINGLE			HOLES	INCH	SINGLE
series	1/2" unc bolts	7/16" unc bolts			
T6DC	PORTS	PRESSURE	MOUNT	SPIGOT	WEIGHT
DOUBLE	SUCTION	PRESSUREX2	HOLES	INCH	DOUBLE
HOF	3" 4 bolt	1" & 1-1/4" 4 bolt	2	5"	37Kg
series	1/2" unc bolts	3/8" & 7/16" unc			

CAM	Displacement	CONT PRESSURE	INT PRESSURE	MAX SPEED	MIN SPEED
size	cc / rev	bar	bar	rpm	rpm
REAR CARTRIDGE 006	21.3	240	280	2500	600
REAR CARTRIDGE 008	26.4	240	280	2500	600
REAR CARTRIDGE 010	34.1	240	280	2500	600
REAR CARTRIDGE 012	37.1	240	280	2500	600
REAR CARTRIDGE 014	46.0	240	280	2500	600
REAR CARTRIDGE 017	58.3	240	280	2500	600
REAR CARTRIDGE 020	63.8	240	280	2500	600
REAR CARTRIDGE 022	70.3	240	280	2500	600
REAR CARTRIDGE 025	79.3	240	280	2500	600
REAR CARTRIDGE 028	88.8	160	210	2500	600
FRONT CARTRIDGE 035	111.0	210	240	2500	600
FRONT CARTRIDGE 038	120.3	210	240	2500	600
FRONT CARTRIDGE 042	136.0	210	240	2500	600
FRONT CARTRIDGE 045	145.7	210	240	2500	600
FRONT CARTRIDGE 050	158.0	160	210	2500	600

Part Number	MOTORS GEROLOR TAK - BOK							01-01-2014 B
<u>BMM SERIES</u>								
COMPETITOR MODELS (OMM - DANFOSS) (EPMM - M&S) (J - CHAR - LYNN)								
	Type	cc/rev	Cont. Speed	Cont. Inlet	Cont. Press Drop	Cont. Torque	Cont. Kw	Rotor Height
45 BMM -12-F-A-1E	BMM	12	1550 rpm	140 bar	100 bar	16 Nm	2.4	5.5 mm
45 BMM -20-F-A-1E	BMM	20	1000 rpm	140 bar	100 bar	25 Nm	2.4	8.5 mm
45 BMM -32-F-A-1E	BMM	32	630 rpm	140 bar	100 bar	40 Nm	2.4	13.5 mm
45 BMM -40-F-A-1E	BMM	40	500 rpm	140 bar	90 bar	45 Nm	2.2	17 mm
<u>OPTIONS</u>								
44 BMM -XX-X-X-1E	CODE FOR REAR PORTS 3/8" BSPP							
45 BMM -XX-X-X-E	CODE FOR SIDE PORTS 3/8" BSPP							
46 BMM -XX-F-X-X	CODE FOR 2 BOLT FLANGE 63mm SPIGOT							
46 BMM -XX-U-X-X	CODE FOR 3 BOLT MOUNT 31.5mm SPIGOT							
45 BMM -XX-X-A-X	CODE FOR SHAFT P/KEY 16mm O/D							
46 BMM -XX-X-C-X	CODE FOR SHAFT 9 SPLINE 16.5mm O/D							
<u>MOTOR DATA</u>								
	TYPE	SPIGOT	MOUNT	SHAFT	PORTS	DRAIN		
45 BMM-XX-F-A-1E	BMM GEROTOR	63mm	2	16mm P/K	3/8"BSPP	1/8"BSPP		
<u>BRAKE DATA</u>								
	TYPE	SPIGOT	MOUNT	SHAFT	Min Static Torque	Min Opening Pressure	Max Open Pressure	
45 ZD-Q-2	ZD-2-Q	3-1/4"	4 BOLT	25mm	410-450	17-23Bar	300Bar	
 <p>BMM-16-U-A-1E</p>								
 <p>ZD-Q-2</p>								
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY								PAGE 81

<u>BMR SERIES</u>	25mm SHAFT 82.5 SPIGOT 2 BOLT MOUNT
COMPETITOR MODELS (OMR - DANFOSS) (EPRM - M&S) (S - CHAR - LYNN)	

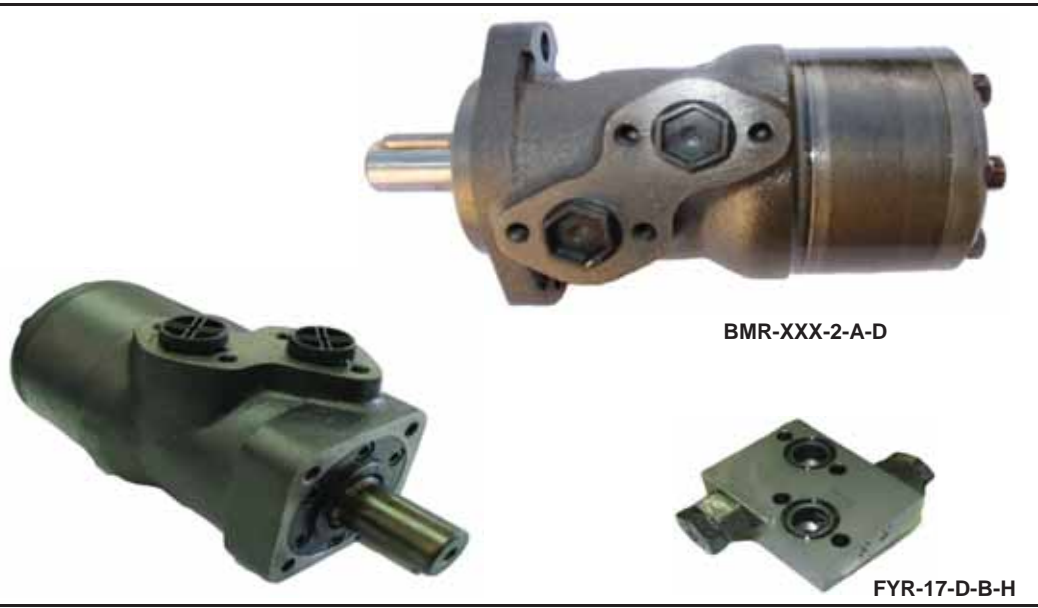
	Type	cc/rev	Cont. Speed	Cont. Inlet	Cont. Press Drop	Cont. Torque	Cont. Kw	Rotor Height
BMR- 36P1 AIIY10/T7	BMR	36	970 rpm	175 bar	140 bar	90 Nm	7.7	8.0 mm
BMR- 50P1 AIIY10/T7	BMR	50	970 rpm	175 bar	140 bar	100 Nm	7.7	10 mm
BMR- 80P1 AIIY10/T7	BMR	80	940 rpm	175 bar	175 bar	190 Nm	15	16 mm
BMR-100P1 AIIY10/T7	BMR	100	750 rpm	175 bar	175bar	240 Nm	15	20 mm
BMR-125P1 AIIY10/T7	BMR	125	600 rpm	175 bar	175 bar	292 Nm	14	25 mm
BMR-160P1 AIIY10/T7	BMR	160	470 rpm	175 bar	165 bar	363 Nm	14	31.5 mm
BMR-200P1 AIIY10/T7	BMR	200	375 rpm	175 bar	130 bar	358 Nm	11	40 mm
BMR-250P1 AIIY10/T7	BMR	250	300 rpm	175 bar	110 bar	352 Nm	9	50 mm
BMR-315P1 AIIY10/T7	BMR	315	240 rpm	175 bar	85 bar	360 Nm	7	62 mm
BMR-400P1 AIIY10/T7	BMR	400	200 rpm	175 bar	85 bar	420 Nm	8.6	74 mm

<u>BMR SERIES</u>	1" SHAFT 1-3/4" SPIGOT 4 BOLT SQUARE MOUNT
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	Type	cc/rev	Cont. Speed	Cont. Inlet	Cont. Press Drop	Cont. Torque	Cont. Kw	Rotor Height
BMR- 36P3 C1Y10/T7	BMR	36	970 rpm	175 bar	140 bar	90 Nm	7.7	8.0 mm
BMR- 50P3 C1Y10/T7	BMR	50	970 rpm	175 bar	140 bar	100 Nm	7.7	10 mm
BMR- 80P3 C1Y10/T7	BMR	80	940 rpm	175 bar	175 bar	190 Nm	15	16 mm
BMR- 100P3 C1Y10/T7	BMR	100	750 rpm	175 bar	175bar	240 Nm	15	20 mm
BMR- 125P3 C1Y10/T7	BMR	125	600 rpm	175 bar	175 bar	292 Nm	14	25 mm
BMR- 160P3 C1Y10/T7	BMR	160	470 rpm	175 bar	165 bar	363 Nm	14	31.5 mm
BMR- 200P3 C1Y10/T7	BMR	200	375 rpm	175 bar	130 bar	358 Nm	11	40 mm
BMR- 250P3 C1Y10/T7	BMR	250	300 rpm	175 bar	110 bar	352 Nm	9	50 mm
BMR- 315P3 C1Y10/T7	BMR	315	240 rpm	175 bar	85 bar	360 Nm	7	62 mm
BMR- 400P3 C1Y10/T7	BMR	400	200 rpm	175 bar	85 bar	420 Nm	8.6	74 mm

45 BMR SEAL KIT	BMR SEAL KIT
BMR-XX-H4-E-D	4 BOLT MOUNT 6 SPLINE USE BMR-XXP1 A11Y10/T7 PRICE AND ADD
45 FYR -17-D-B-H	CROSS OVER PORT RELIEF SET TO 170 Bar

<u>MOTOR DATA</u>							
	TYPE		SPIGOT	MOUNT	SHAFT	PORTS	DRAIN
45 BMR-XX-2-A-D	BMR	GEROLOR	3-1/4"	2 BOLT	25mm P/K	1/2"BSPP	1/4"BSPP
45 BMR-XX-2-B-D	BMR	GEROLOR	3-1/4"	2 BOLT	32mm P/K	1/2"BSPP	1/4"BSPP
45 BMR-XX-H4-E-D	BMR	GEROLOR	1-3/4"	4 BOLT	6 SPLINE	1/2"BSPP	1/4"BSPP
45 BMR-XX-H4-C-D	BMR	GEROLOR	1-3/4"	4 BOLT	1" P/K	1/2"BSPP	1/4"BSPP




Part Number	MOTORS GEROLOR TAK - BOK							01-01-2014 B
	<u>TKRE SERIES</u> 1-1/4" SHAFT 82.5 SPIGOT 4 BOLT MAGNETO MOUNT							
	COMPETITOR MODELS; (TG - PARKER) (RE - WHITE) (5001 - WHITE)							
	<u>Type</u>	<u>cc/rev</u>	<u>Cont. Speed</u>	<u>Cont. flow</u>	<u>Cont. Press Drop</u>	<u>Cont. Torque</u>	<u>Cont. Kw</u>	<u>Rotor Height</u>
TKRE-1-125-MD-G2-00	TKRE 125	125	360 rpm	60 liters	200.5 bar	325 Nm	12	10.2 mm
TKRE-1-160-MD-G2-00	TKRE 160	160	375 rpm	60 liters	200.5 bar	450 Nm	15	13.5 mm
TKRE-1-200-MD-G2-00	TKRE 200	200	330 rpm	60 liters	200.5 bar	530 Nm	17	17.0 mm
TKRE-1-230-MD-G2-00	TKRE 230	230	290 rpm	60 liters	200.5 bar	625 Nm	16	19.5 mm
TKRE-1-250-MD-G2-00	TKRE 250	250	290 rpm	60 liters	200.5 bar	700 Nm	17.5	22.0 mm
TKRE-1-300-MD-G2-00	TKRE 300	300	250 rpm	60 liters	200.5 bar	810 Nm	18	25.4 mm
TKRE-1-350-MD-G2-00	TKRE 350	350	220 rpm	60 liters	200.5 bar	905 Nm	17.5	29.4 mm
TKRE-1-375-MD-G2-00	TKRE 375	375	200 rpm	60 liters	200.5 bar	990 Nm	16.5	31.8 mm
TKRE-1-475-MD-G2-00	TKRE 475	475	160 rpm	60 liters	170.5 bar	1085 Nm	14.5	39.4 mm
TKRE-1-540-MD-G2-00	TKRE 540	540	140 rpm	60 liters	140 bar	980 Nm	11.5	47.3 mm
TKRE-1-750-MD-G2-00	TKRE 750	750	100 rpm	60 liters	100.5 bar	1050 Nm	8	63.5 mm
TKRE-S- KIT	TKRE SEAL KIT							
	<u>OPTIONS</u>							
TKRE-1-125-MD-RW-00	CODE FOR SHAFT P/KEY		1" O/D					
TKRE-1-125-MD-G2-00	CODE FOR SHAFT P/KEY		1-1/4" O/D					
TKRE-1-125-MD-FD1-00	CODE FOR SHAFT 14 spline		1-1/4" O/D					
	<u>MOTOR DATA</u>							
	TYPE		SPIGOT	MOUNT	SHAFT	PORTS	DRAIN	
TKRE-1-125-MD-RW-00	TKRE GEROLOR		3-1/4"	4 BOLT	1" P/K	1/2"BSPP	1/4"BSPP	
TKRE-1-125-MD-G2-00	TKRE GEROLOR		3-1/4"	4 BOLT	1-1/4" P/K	1/2"BSPP	1/4"BSPP	
TKRE-1-125-MD-FD1-00	TKRE GEROLOR		3-1/4"	4 BOLT	14 SPLINE	1/2"BSPP	1/4"BSPP	
	<u>USEFULL DATA</u>							
	CODE; TKRE 125 = (118cc = 07cu.in)			CODE; TKRE 160 = (156cc = 10cu.in)				
	CODE; TKRE 200 = (196cc = 12cu.in)			CODE; TKRE 230 = (228cc = 14cu.in)				
	CODE; TKRE 250 = (257cc = 16cu.in)			CODE; TKRE 300 = (296cc = 18cu.in)				
	CODE; TKRE 350 = (345cc = 20cu.in)			CODE; TKRE 375 = (371cc = 24cu.in)				
	CODE; TKRE 475 = (462cc = 26cu.in)			CODE; TKRE 540 = (540cc = 32cu.in)				
	CODE; TKRE 750 = (745cc = 48cu.in)							
								
	TKRE-XXX							

Part Number	MOTORS GEROLOR							01-01-2014 B
	BMS SERIES 25mm SHAFT 82.5 SPIGOT 4 BOLT MAGNETO MOUNT							
	COMPETITOR MODELS (OMS-DANFOSS) (EPMS-M&S) (2000 - CHAR-LYNN)							
	Type	cc/rev	Cont. Speed	Cont. Inlet	Cont. Press Drop	Cont. Torque	Cont. Kw	Rotor Height
BM3-100P5AIVY/T7	BM3	100	748 rpm	250 bar	175 bar	240 Nm	18.8	17 mm
BM3-125P5AIVY/T7	BM3	125	600 rpm	250 bar	175 bar	310 Nm	19.5	22 mm
BM3-160P5AIVY/T7	BM3	160	470 rpm	250 bar	150 bar	316 Nm	15.6	27.5 mm
BM3-200P5AIVY/T7	BM3	200	375 rpm	250 bar	140 bar	400 Nm	15.7	35.1 mm
BM3-250P5AIVY/T7	BM3	250	300 rpm	250 bar	125 bar	450 Nm	14.1	47 mm
BM3-315P5AIVY/T7	BM3	315	240 rpm	250 bar	120 bar	560 Nm	14.1	59 mm
BM3-400P5AIVY/T7	BM3	400	200 rpm	250 bar	100 bar	536 Nm	11.8	71 mm
BM3 K10 SHAFT	BM3 14 SPLINE SHAFT & NUT TYPE F ADD ON TO PRICE							
45BMSS160DD	BMSS	160	470 rpm	250 bar	150bar	316 Nm	15.6	27.5 mm
BM3 SEAL KIT	BMS SEAL KIT							
	BMT SERIES 40mm SHAFT 125 SPIGOT 4 BOLT SQUARE MOUNT							
	COMPETITOR MODELS (OMT-DANFOSS) (EPMT-M&S) (4000 - CHAR-LYNN)							
	Type	cc/rev	Cont. Speed	Cont. Inlet	Cont. Press Drop	Cont. Torque	Cont. Kw	Rotor Height
BM4U-200P3A4Y	BM4	200	495 rpm	210 Bar	200 Bar	727 Nm	34.5	16.5 mm
BM4U-250P3A4Y	BM4	250	495 rpm	210 Bar	200 Bar	727 Nm	34.5	22.0 mm
BM4U-320P3A4Y	BM4	320	380 rpm	210 Bar	200 Bar	962 Nm	34.9	29.0mm
BM4U-400P3A4Y	BM4	400	302 rpm	210 Bar	180 Bar	1095 Nm	31.2	38.0 mm
BM4U-500P3A4Y	BM4	500	237 rpm	210 Bar	160 Bar	1245 Nm	28.8	56.0 mm
BM4U-600P3A4Y	BMT	630	196 rpm	210 Bar	140 Bar	1318 Nm	25.3	
BM4U-725P3A4Y	BMT	800	154 rpm	210 Bar	125 Bar	1464 Nm	22.2	
45 BMT SEAL KIT	BMT SEAL KIT							
	MOTOR DATA							
	TYPE	SPIGOT	MOUNT	SHAFT	PORTS	DRAIN		
45 BMS-XXX-E6-G-D	BMS GEROLOR	3-1/4"	4 Magneto	1-1/4" P/K	1/2"BSPP	1/4"BSPP		
45 BMS-XXX-E6-F-D	BMS GEROLOR	3-1/4"	4 Magneto	14 SPLINE	1/2"BSPP	1/4"BSPP		
45 BMS-XXX-E4-F-D	BMS GEROLOR	3-1/4"	4 BOLT	14 SPLINE	1/2"BSPP	1/4"BSPP		
45 BMSS-XXX-D-D	BMSS GEROLOR	100mm	4 BOLT	12 SPLINE	1/2"BSPP	1/4"BSPP		
45 BMT-XXX-4-M-D	BMT GEROLOR	125mm	4 BOLT	40mm P/K	3/4"BSPP	1/4"BSPP		
45 BMTS-XXX-4-D-D	BMTS GEROLOR	125mm	4 BOLT	16 SPLINE	3/4"BSPP	1/4"BSPP		
								

PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY

Part Number	STEERING UNITS					01-01-2014 B
<u>HKU / 4 SERIES</u>						
<u>OPEN CENTRE NON LOAD REACTIVE</u>						
COMPETITOR MODELS ; DANFOSS (OSPB***ON) M&S (HKU***/4)						
<u>HKU / 4 SERIES DISPLACEMENT MAX INPUT MAX PRESSURE ROTOR HEIGHT</u>						
45 101-1-50-F	HKU 50 / 4 / A	49.5cc per rev	6 LPM	160 bar	6.6 mm	
45 101-1-63-F	HKU 63 / 4 / A	65.5cc per rev	6 LPM	160 bar	9.0 mm	
45 101-1-80-F	HKU 80 / 4 / A	79.2cc per rev	9 LPM	160 bar	10.5 mm	
45 101-1-100-F	HKU 100 / 4 / A	99.0cc per rev	9 LPM	160 bar	13.0 mm	
45 101-1-125-F	HKU 125 / 4 / A	123.8cc per rev	12 LPM	160 bar	16.0 mm	
45 101-1-160-F	HKU 160 / 4 / A	158.4cc per rev	12 LPM	160 bar	21.0 mm	
45 101-1-200-F	HKU 200 / 4 / A	198.0cc per rev	17 LPM	160 bar	26.0 mm	
45 101-1-250-F	HKU 250 / 4 / A	247.5cc per rev	24 LPM	160 bar	32.0 mm	
45 101-1-280-F	HKU 280 / 4 / A	280.0cc per rev	28 LPM	160 bar	37.0 mm	
45 101-1-315-F	HKU 315 / 4 / A	314.0cc per rev	30 LPM	160 bar	42.0 mm	
45 101-1-400-F	HKU 400 / 4 / A	396.0cc per rev	40 LPM	160 bar	52.0 mm	
45 BZZ1-E500B	HKU 500 / 4 / A	495.0cc per rev	53 LPM	160 bar	65.0 mm	
45 BZZ1-E630B	HKU 630 / 4 / A	618.8cc per rev	63 LPM	140 bar	84.0 mm	
45 BZZ1-E800B	HKU 800 / 4 / A	793.0cc per rev	80 LPM	140 bar	104.0 mm	
562E130001	HKU & S SEAL KIT					
564V115003	BKH 1 MAIN RELIEF + CROSS OVER PORT RELIEFS					
564V300012	BKH 3 PORT RELIEFS ONLY					
<u>HKUS / 4 SERIES</u>						
<u>OPEN CENTRE NON LOAD REACTIVE WITH P PORT RELIEF VALVE</u>						
COMPETITOR MODELS ; DANFOSS (OSPC***ON) M&S (HKUS***/4)						
<u>HKUS / 4 SERIES DISPLACEMENT MAX INPUT MAIN PRESSURE SET</u>						
BPBS1-50-A15-Y4	HKUS 50 / 4 / A	49.5cc per rev	6 LPM	175 bar		
BPBS1-63-A15-Y4	HKUS 63 / 4 / A	65.5cc per rev	6 LPM	175 bar		
BPBS1-80-A15-Y4	HKUS 80 / 4 / A	79.2cc per rev	9 LPM	175 bar		
BPBS1-100-A15-Y4	HKUS 100 / 4 / A	99.0cc per rev	9 LPM	175 bar		
BPBS1-125-A15-Y4	HKUS 125 / 4 / A	123.8cc per rev	12 LPM	175 bar		
BPBS1-160-A15-Y4	HKUS 160 / 4 / A	158.4cc per rev	12 LPM	175 bar		
BPBS1-200-A15-Y4	HKUS 200 / 4 / A	198.0cc per rev	17 LPM	175 bar		
BPBS1-250-A15-Y4	HKUS 250 / 4 / A	247.5cc per rev	24 LPM	175 bar		
BPBS1-280-A15-Y4	HKUS 280 / 4 / A	280.0cc per rev	28 LPM	175 bar		
BPBS1-315-A15-Y4	HKUS 315 / 4 / A	320.5cc per rev	30 LPM	175 bar		
BPBS1-400-A15-Y4	HKUS 400 / 4 / A	400.5cc per rev	40 LPM	175 bar		
562E130001	HKU & S SEAL KIT					
<u>PORTS:</u>						
P + T 1/2" SAE "O"						
L + R 1/2" SAE "O"						
<u>POSSIBLE OPTIONS</u>						
HKU NO RELIEF VALVES						
HKUS RELIEF VALVES BUILT IN						
4 A OPEN CENTER						
5 T CLOSED CENTER LOAD SENSE						
7 A CLOSED CENTER						
PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY						PAGE 85



Part Number	STEERING UNITS				01-01-2014 B
<u>HKUS / 5 T SERIES</u>					
CLOSED CENTRE NON LOAD REACTIVE LOAD SENSING MAIN & PORT RELIEF VALVES					
COMPETITOR MODELS ; DANFOSS (OSPB***LS) M&S (HKUS***/5T)					
	<u>HKUS / 5T SERIES</u>	<u>DISPLACEMENT</u>	<u>MAX INPUT</u>	<u>MAX PRESSURE</u>	
45 101S-5T-50-15-F	HKUS 50 / 5 / T	49.5cc per rev	6 LPM	160 bar	
45 101S-5T-63-15-F	HKUS 63 / 5 / T	65.5cc per rev	6 LPM	160 bar	
45 101S-5T-80-15-F	HKUS 80 / 5 / T	79.2cc per rev	9 LPM	160 bar	
45 101S-5T-100-15-F	HKUS 100 / 5 / T	99.0cc per rev	9 LPM	160 bar	
45 101S-5T-125-15-F	HKUS 125 / 5 / T	123.8cc per rev	12 LPM	160 bar	
45 101S-5T-160-15-F	HKUS 160 / 5 / T	158.4cc per rev	12 LPM	160 bar	
45 101S-5T-200-15-F	HKUS 200 / 5 / T	198.0cc per rev	17 LPM	160 bar	
45 101S-5T-250-15-F	HKUS 250 / 5 / T	247.5cc per rev	24 LPM	160 bar	
45 101S-5T-280-15-F	HKUS 280 / 5 / T	280.0cc per rev	28 LPM	160 bar	
45 101S-5T-315-15-F	HKUS 315 / 5 / T	316.8cc per rev	30 LPM	160 bar	
45 101S-5T-400-15-F	HKUS 400 / 5 / T	396.0cc per rev	40 LPM	160 bar	
45 BZZ5-E500B	HKUS 500 / 5 / T	495.0cc per rev	53 LPM	160 bar	
45 BZZ5-E630B	HKUS 630 / 5 / T	618.8cc per rev	63 LPM	140 bar	
45 BZZ5-E800B	HKUS 800 / 5 / T	800.8cc per rev	63 LPM	140 bar	
562E243001	HKUS SEAL KIT				
564V115003	BKH 1 MAIN RELIEF + CROSS OVER PORT RELIEFS				
564V300012	BKH 3 PORT RELIEFS ONLY				
<u>HKU / 7 SERIES</u>					
CLOSED CENTRE NON LOAD REACTIVE					
COMPETITOR MODELS ; DANFOSS (OSPB***CN) M&S (HKUS***/7)					
	<u>HKU / 7 SERIES</u>	<u>DISPLACEMENT</u>	<u>MAX INPUT</u>	<u>MAIN PRESSURE</u>	
	HKU 50 / 7 / A	50cc per rev	9 LPM	175 bar	
	HKU 63 / 7 / A	63cc per rev	9 LPM	175 bar	
	HKU 80 / 7 / A	79.2cc per rev	9 LPM	175 bar	
	HKU 100 / 7 / A	99.0cc per rev	9 LPM	175 bar	
	HKU 125 / 7 / A	123.8cc per rev	12 LPM	175 bar	
	HKU 160 / 7 / A	158.4cc per rev	12 LPM	175 bar	
	HKU 200 / 7 / A	198.0cc per rev	17 LPM	175 bar	
	HKU 250 / 7 / A	247.5cc per rev	24 LPM	175 bar	
	HKU 280 / 7 / A	280.0cc per rev	28 LPM	175 bar	
	HKU 320 / 7 / A	316.8cc per rev	30 LPM	175 bar	
	HKU 400 / 7 / A	396.0cc per rev	40 LPM	175 bar	
	HKU 500 / 7 / A	495.0cc per rev	53 LPM	175 bar	
	HKU 630 / 7 / A	618.8cc per rev	63 LPM	175 bar	
	HKU 800 / 7 / A	792.0cc per rev	80 LPM	175 bar	
	HKU SEAL KIT				
	<u>PORTS:</u>				
	P + T 1/2" SAE "O"				
	L + R 1/2" SAE "O"				
	<u>POSSIBLE OPTIONS</u>				
	HKU NO RELIEF VALVES				
	HKUS RELIEF VALVES BUILT IN				
	4 A OPEN CENTER				
	5 T CLOSED CENTER LOAD SENSE				
	7 A CLOSED CENTER				
					
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HYDRAULIC WINCH

A H W SERIES

AHW01-B8000-KIY AHW 01 - B 8000 - KI Y

SPECS:

MAX IMPUT FLOW 75 LITERS
 ROPE DIAMETER 9 mm
 ROPE CAPACITY 20 METERS
 1ST PULL ; 3.6 TONS
 3RD PULL ; 2.4 TONS
 LENGTH 607 mm WIDTH 160 mm HIGHT 162 mm DRUM O/D 65 mm

AHW01-B8000-KIY	PULL ON	PULL ON	PRESS	SPEED	ROPE	ROPE	RATIO	MOTOR	WEIGHT
	FIRST	3 rd	Bar	RANGE	DIA	CAPACITY	GEAR	CC/rev	KG
	LAYER / N	LAYER / N		rpm	mm	METERS	BOX		
	36000	24000	100	1 - 62.5	9	20	6	200	42.5
METERS PER MIN FORMULAE = R P M X CIRCUMFERENCE = METERS PER MINUTE									
	FLOW	MOTOR	RATIO	SPEED	DRUM	PI	METERS	mm	1 METER
	LITERS	cc/rev	6	RPM	Dia	π	per/min	sec	sec
FAST	54	200	6	45	0.065 mm	3.14	9	150	6.6
MEDIUM	36	200	6	30	0.065 mm	3.14	6	100	10
SLOW	18	200	6	15	0.065mm	3.14	3	50	20



STEER WHEEL

AV SERIES

AV00320001 STEER WHEEL 350 OD mm TO FIT FZ COLUMN

STEER WHEEL COLUMN

ACI SERIES

ACI 0075000 STEER WHEEL COLUMN LENGTH 75 mm
 ACI 0150000 STEER WHEEL COLUMN LENGTH 150 mm
 ACI 0200000 STEER WHEEL COLUMN LENGTH 200 mm
 ACI 0400000 STEER WHEEL COLUMN LENGTH 400 mm
 ACI 0750000 STEER WHEEL COLUMN LENGTH 750 mm



		TAK - BOK										
		2" Bore Cylinders										
Part Number		TIE ROD TYPE										
	Bore x Stroke	Rod Dia.	Port Size	Clevis Pin Dia.	Bore x Stroke	Barrel Length	Closed Centre	Open Centre	Rod Force @ 180 bar (tons)	Piston Force @ 180 bar (tons)	Wt. Kgs +/-	
	inch	inch	NPT	1/2"	(mm)	mm	mm	mm				
TK 20006 - 106	2" x 6"	1-1/16"	3/8"	1"	50 x 152	210	413	565	2.37	3.53	7.1	
TK 20008 - 106	2" x 8"	1-1/16"	3/8"	1"	50 x 203	261	464	667	2.37	3.53	8	
TK 20008 - 106 A**	2" x 8"	1-1/16"	3/8"	1"	50 x 203	261	514	717	2.37	3.53	8	
TK 20010 - 106	2" x 10"	1-1/16"	3/8"	1"	50 x 254	311	514	768	2.37	3.53	8.4	
TK 20012 - 106	2" x 12"	1-1/16"	3/8"	1"	50 x 305	362	565	870	2.37	3.53	9.1	
TK 20014 - 106	2" x 14"	1-1/16"	3/8"	1"	50 x 356	413	616	972	2.37	3.53	9.8	
TK 20016 - 106	2" x 16"	1-1/16"	3/8"	1"	50 x 406	464	667	1073	2.37	3.53	10.4	
TK 20018 - 106	2" x 18"	1-1/16"	3/8"	1"	50 x 457	515	718	1175	2.37	3.53	11.1	
TK 20020 - 106	2" x 20"	1-1/16"	3/8"	1"	50 x 508	565	768	1276	2.37	3.53	11.7	
TK 20024 - 106	2" x 24"	1-1/16"	3/8"	1"	50 x 610	667	870	1480	2.37	3.53	13	
TK 20028 - 106	2" x 28"	1-1/16"	3/8"	1"	50 x 711	769	972	1683	2.37	3.53	14.3	
TK 20030 - 106	2" x 30"	1-1/16"	3/8"	1"	50 x 762	819	1022	1784	2.37	3.53	15.1	
TK 20036 - 106	2" x 36"	1-1/16"	3/8"	1"	50 x 914	972	1175	2089	2.37	3.53	17.1	
2640												
TK 20048 - 106	2" x 48"	1-1/16"	3/8"	1"	50 x 1219	1277	1480	2699	2.37	3.53	21.4	
TK 20080 - 106	2" x 80"	1-1/16"	3/8"	1"	50 x 2032	2090	2292	4324	2.37	3.53	32.5	

NOTE: A *** (CLOSED CENTRE) FOR 8" STROKE ASAE CYLINDER IS 2" OR (50.80 mm) LONGER



Part Number	TAK - BOK 3" Bore Cylinders TIE ROD TYPE										
	Bore x Stroke	Rod Dia.	Port Size	Clevis Pin Dia.	Bore x Stroke	Barrel Length	Closed Centre	Open Centre	Rod Force @ 180 bar (tons)	Piston Force @ 180 bar (tons)	Wt. Kgs +/-
TK 30006 - 125	3" x 6"	1-1/4"	1/2"	1"	76 x 152	210	413	565	6.74	8.16	10.1
TK 30008 - 125	3" x 8"	1-1/4"	1/2"	1"	76 x 203	261	464	667	6.74	8.16	11
TK 30008 - 150	3" x 8"	1-1/2"	1/2"	1"	76 x 203	261	464	667	6.11	8.16	12.1
TK 30008 - 125 A**	3" x 8"	1-1/4"	1/2"	1"	76 x 203	261	514	717	6.74	8.16	11.3
TK 30008 - 150 A**	3" x 8"	1-1/2"	1/2"	1"	76 x 203	261	514	717	6.11	8.16	12.4
TK 30010 - 125	3" x 10"	1-1/4"	1/2"	1"	76 x 254	311	514	768	6.74	8.16	13.7
TK 30010 - 150	3" x 10"	1-1/2"	1/2"	1"	76 x 254	311	514	768	6.11	8.16	15
TK 30012 - 125	3" x 12"	1-1/4"	1/2"	1"	76 x 305	362	565	870	6.74	8.16	12.8
TK 30012 - 150	3" x 12"	1-1/2"	1/2"	1"	76 x 305	362	565	870	6.11	8.16	14
TK 30014 - 125	3" x 14"	1-1/4"	1/2"	1"	76 x 356	413	616	972	6.74	8.16	13.7
TK 30014 - 150	3" x 14"	1-1/2"	1/2"	1"	76 x 356	413	616	972	6.11	8.16	15.1
TK 30016 - 125	3" x 16"	1-1/4"	1/2"	1"	76 x 406	464	667	1073	6.74	8.16	14.8
TK 30016 - 150	3" x 16"	1-1/2"	1/2"	1"	76 x 406	464	667	1073	6.11	8.16	16.3
TK 30018 - 125	3" x 18"	1-1/4"	1/2"	1"	76 x 457	515	718	1175	6.74	8.16	15.8
TK 30018 - 150	3" x 18"	1-1/2"	1/2"	1"	76 x 457	515	718	1175	6.11	8.16	17.4
TK 30020 - 125	3" x 20"	1-1/4"	1/2"	1"	76 x 508	565	768	1276	6.74	8.16	16.8
TK 30020 - 150	3" x 20"	1-1/2"	1/2"	1"	76 x 508	565	768	1276	6.11	8.16	18.5
TK 30024 - 150	3" x 24"	1-1/2"	1/2"	1"	76 x 610	667	870	1480	6.11	8.16	21
TK 30028 - 150	3" x 28"	1-1/2"	1/2"	1"	76 x 711	769	972	1683	6.11	8.16	23.6
TK 30030 - 150	3" x 30"	1-1/2"	1/2"	1"	76 x 762	819	1022	1784	6.11	8.16	24.4
TK 30036 - 150	3" x 36"	1-1/2"	1/2"	1"	76 x 914	972	1175	2089	6.11	8.16	28.2
TK 30048 - 150	3" x 48"	1-1/2"	1/2"	1"	76 x 1219	1277	1480	2699	6.11	8.16	43.2
TK 30080 - 150	3" x 80"	1-1/2"	1/2"	1"	76 x 2032	2090	2292	4324	6.11	8.16	52
TK 300120 - 150	3" x 120"	1-1/2"	1/2"	1"	76 x 3048	3105	3308	6356	6.11	8.16	75

NOTE; A *** (CLOSED CENTRE) FOR 8" STROKE ASAE CYLINDER IS 2" OR (50.80 mm) LONGER



Part Number	TIE ROD TYPE										
	Bore x Stroke inch	Rod Dia. inch	Port Size NPT	Clevis Pin Dia.	Bore x Stroke (mm)	Barrel Length mm	Closed Centre mm	Open Centre mm	Rod Force @ 180 bar (tons)	Piston Force @ 180 bar (tons)	Wt. Kgs +/-
TK 40008 - 200	4" x 8"	2"	1/2"	1"	101 x 203	261	464	667	10.76	14.41	18
TK 40008 - 200 A**	4" x 8"	2"	1/2"	1"	101 x 203	261	514	717	10.76	14.41	18.4
TK 40010 - 200	4" x 10"	2"	1/2"	1"	101 x 254	311	514	768	10.76	14.41	19.1
TK 40012 - 200	4" x 12"	2"	1/2"	1"	101 x 305	362	565	870	10.76	14.41	20.6
TK 40014 - 200	4" x 14"	2"	1/2"	1"	101 x 356	413	616	972	10.76	14.41	21.3
TK 40016 - 200	4" x 16"	2"	1/2"	1"	101 x 406	464	667	1073	10.76	14.41	23.5
TK 40018 - 200	4" x 18"	2"	1/2"	1"	101 x 457	515	718	1175	10.76	14.41	25.2
TK 40020 - 200	4" x 20"	2"	1/2"	1"	101 x 508	565	768	1276	10.76	14.41	28.5
TK 40024 - 200	4" x 24"	2"	1/2"	1"	101 x 610	667	870	1480	10.76	14.41	36.7
TK 40028 - 200	4" x 28"	2"	1/2"	1"	101 x 711	769	972	1683	10.76	14.41	40.2
TK 40030 - 200	4" x 30"	2"	1/2"	1"	101 x 762	819	1022	1784	10.76	14.41	42.2
TK 40036 - 200	4" x 36"	2"	1/2"	1"	101 x 914	972	1175	2089	10.76	14.41	47.5
TK 40048 - 200	4" x 48"	2"	1/2"	1"	101 x 1219	1277	1480	2699	10.76	14.41	56.2
TK 40080 - 200	4" x 80"	2"	1/2"	1"	101 x 2032	2090	2292	4324	10.76	14.41	89.3
TK 40120 - 200	4" x 120"	2"	1/2"	1"	101 x 3048	3105	3308	6356	10.76	14.41	128

NOTE; A *** (CLOSED CENTRE) FOR 8" STROKE ASAE CYLINDER IS 2" OR (50.80 mm) LONGER



TAK - BOK CYLINDER SPARES

Part Number	TIE ROD TYPE
DESCRIPTION FOR ; 2" SPARES	
TK 20 - KIT 106	2" SEAL KIT ; SHAFT 1-1/16"
TK 20 - UNI KIT 106	2" UNIVERSAL SEAL KIT ; SHAFT 1-1/16"
TK 20 - 56891	2" ROD CLEVIS 1-1/16" OD SHAFT ; THREAD 1-1/16"- UNFIT
TK 20 - 59626	2" ROD CLEVIS PIN ; 1" OD
TK 20 - 63512	2" R CLIP FOR PIN ; 1" OD
TK 20 - 62538	2" HEAD ROD CAP ; 1-1/16" SHAFT
TK 20 - 59842	2" BASE BOTTOM CLEVIS 2 PORTS 3/8" NPT
TK 20 - 59847	2" PISTON
TK 20 - P / NUT	2" PISTON NUT
TK 20 - BARREL 2"	2" HONED TUBE ; PER METER
TK 20 - SHAFT 106	1-1/16" OD CHROME SHAFT ; PER METER
TK 20 - TIE ROD M10	M 10 TIE ROD ; PER METER
DESCRIPTION FOR ; 3" SPARES	
TK 30 - KIT 125/150	3" SEAL KIT ; SHAFT 1-1/4" & 1-1/2"
TK 30 - UNI KIT 125/150	3" UNIVERSAL SEAL KIT ; SHAFT 1-1/4" & 1-1/2"
TK 30 - 56892	3" ROD CLEVIS 1-1/4" & 1-1/2" OD SHAFT ; THREAD 1-1/4"- UNF; FOR BOTH SHAFT O/D
TK 30 - 59626	3" ROD CLEVIS PIN ; 1" OD
TK 30 - 63512	3" R CLIP FOR PIN ; 1" OD
TK 30 - 62541	3" HEAD ROD CAP ; 1-1/4" SHAFT
TK 30 - 62542	3" HEAD ROD CAP ; 1-1/2" SHAFT
TK 30 - 59844	3" BASE BOTTOM CLEVIS 2 PORTS 1/2" NPT
TK 30 - 59849	3" PISTON
TK 30 - P / NUT	3" PISTON NUT
TK 30 - BARREL 3"	3" HONED TUBE ; PER METER
TK 30 - SHAFT 125	1-1/4" OD CHROME SHAFT ; PER METER
TK 30 - SHAFT 150	1-1/2" OD CHROME SHAFT ; PER METER
TK 30 - TIE ROD M12	M 12 TIE ROD ; PER METER
DESCRIPTION FOR ; 4" SPARES	
TK 40 - KIT 200	4" SEAL KIT ; SHAFT 2"
TK 40 - UNI KIT 200	4" UNIVERSAL SEAL KIT ; SHAFT 2"
TK 40 - 56893	4" ROD CLEVIS 2" OD SHAFT ; THREAD 1-1/2"- UNF
TK 40 - 59626	4" ROD CLEVIS PIN ; 1" OD
TK 40 - 63512	4" R CLIP FOR PIN ; 1" OD
TK 40 - 62549	4" HEAD ROD CAP ; 2" SHAFT
TK 40 - 59846	4" BASE BOTTOM CLEVIS 2 PORTS 1/2" NPT
TK 40 - 59851	4" PISTON
TK 40 - P / NUT	4" PISTON NUT
TK 40 - BARREL 4"	4" HONED TUBE ; PER METER
TK 40 - SHAFT 200	4" OD CHROME SHAFT ; PER METER
TK 40 - TIE ROD M16	M 16 TIE ROD ; PER METER



TIE ROD CYLINDER TECHNICAL

HOW TO IDENTIFY TAK - BOK CYLINDERS

Barrel	Barrel	Barrel	*** How to work out closed centre	Cylinder
I/D	I/D	O/D	Measure barrel length in (? mm + 203 mm)	Size
2"	50.8 mm	61 mm	Example ; TK 2008 -106 (261 + 203) = 464 mm C/C	2"
3"	76.2 mm	86 mm	Example ; TK 3008 -125 (261 + 203) = 464 mm C/C	3"
4"	101.6 mm	112 mm	Example ; TK 4008 -200 (261 + 203) = 464 mm C/C	4"

*** How to work out closed centre with no sample; use (260.4 mm) + (stroke mm) = closed centre in mm

*** SHAFT STROKE FOR **ASAE** TYPE CYLINDERS, YOU MUST ADD AN EXTRA **50.8 mm** OR **2"**

Barrel	Barrel	Barrel	*** How to work out open centre	Cylinder
I/D	I/D	O/D	Measure closed centre in (? mm + stroke in mm)	Size
2"	50.8 mm	61 mm	Example ; TK 2008 -106 (464 + 203) = 667 mm C/C	2"
3"	76.2 mm	86 mm	Example ; TK 3008 -125 (464 + 203) = 667 mm C/C	3"
4"	101.6 mm	112 mm	Example ; TK 4008 -200 (464 + 203) = 667 mm C/C	4"

*** SHAFT STROKE FOR **ASAE** TYPE CYLINDERS, YOU MUST ADD AN EXTRA **50.8 mm** OR **2"**

How to work out threads

Bore Diameter	2" (50.8 mm)	3" (76.2 mm)	4" (101.6 mm)
Shaft Diameter	1-1/16" (27mm)	1-1/4" (31.75mm)	1-1/2" (38.1mm)
Thread U N F	1-1/16" - 12 UNF	1-1/4" - 12 UNF	1-1/2" - 12 UNF
Ports N P T	3/8"	1/2"	1/2"

BUCKLING LOADS FOR TIE ROD CYLINDERS

2" CYLINDER

BUCKLING LOADS		STROKE		
Bore 2"	Shaft 1-1/16"	6" TO 18"	20" TO 24"	28" TO 36"
		Stable Region Safety 3:1	Safety 2:1	Safety 1:1

3" CYLINDER

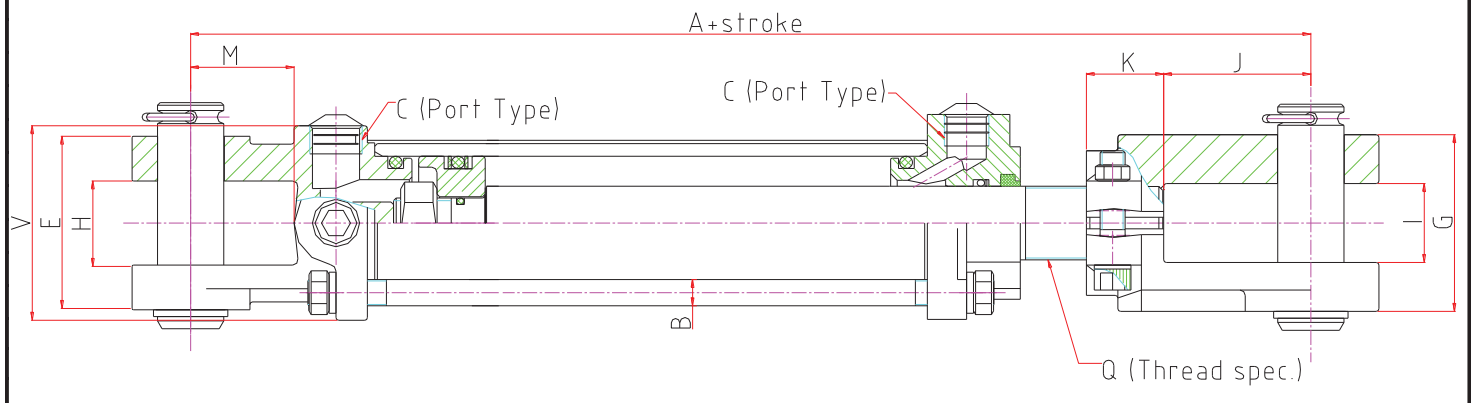
BUCKLING LOADS		STROKE		
Bore 3"	Shaft 1-1/4"	6" TO 16"	18" TO 20"	24" TO 36"
Bore 3"	Shaft 1-1/2"	6" TO 24"	28" TO 36"	
		Stable Region Safety 3:1	Safety 2:1	Safety 1:1

4" CYLINDER

BUCKLING LOADS		STROKE		
Bore 4"	Shaft 2"	8" TO 36"		
		Stable Region Safety 3:1	Safety 2:1	Safety 1:1

CYLINDER DIMENSIONS

BORE	A***	B	C	E & G	H & I	J	M	Q	V
2"	10.25"	0.188"	3/8"	2.441"	1.125"	2.125"	2"	1-1/16"	2.874"
50.8 mm	260.4 mm	4.8 mm	NPT	62 mm	29 mm	54 mm	50.8 mm	UNF	73 mm
3"	10.25"	0.188"	1/2"	2.717"	1.125"	2.125"	2"	1-1/4"	3.78"
76.2 mm	260.4 mm	4.8 mm	NPT	69 mm	29 mm	54 mm	50.8 mm	UNF	96mm
4"	10.25"	0.25"	1/2"	2.717"	1.125"	2.125"	2.118"	1-1/2"	5.039"
101.6 mm	260.4 mm	6.35 mm	NPT	69 mm	29 mm	54 mm	53.8 mm	UNF	128 mm





TAK - BOK TIPPING CYLINDERS



Part Number

BASE PIN MOUNTED TELESCOPIC CYLINDERS

MAXIMUM WORKING PRESSURE 200 bar

	TONS 142 Bar	STAGES	CLOSED CENTRES	OPEN CENTRES	STROKE	PIN HOLE Ø	BARREL Ø
TK DW 265	10/5.4	2	673 mm	1642 mm	969 mm	25.5	105 mm
TK DW 345	10/5.4	2	876 mm	2251 mm	1375 mm	25.5	105 mm
TK DW 365	10/6.4/4	3	924 mm	2917 mm	1993 mm	25.5	105 mm

SPECS;

	No OF STAGES	STROKE (m m)	PISTON DIAMETERS & TONS AT 142 Bar					MASS (kg)	OIL VOL (l)
			Ø60.0	Ø70.0	Ø76.2	Ø90.0	Ø95.0		
TK DW 265	2	969		5.4			10	25	4.5
TK DW 345	2	1375		5.4			10	31	7.6
TK DW 365	3	1993	4		6.4		10	38	9.8

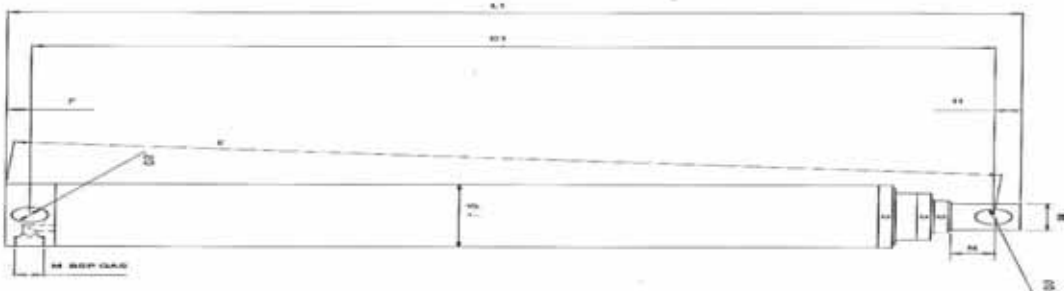
SPECS;

	ØB (m m)	C1 (m m)	ØD (mm)	F (m m)	H (m m)	N (m m)	ØJ (m m)	L1 (m m)	M (BSPP)	R (m m)
TK DW 265	45	673	25.5	20	19	45	105	712	½"	695
TK DW 345	45	876	25.5	20	19	45	105	915	½"	898
TK DW 365	45	924	25.5	20	19	72	105	963	½"	946

TKLOG - 5 - 18

LOG SPLITTER CYLINDER 25 TONS @ 210 BAR PISTON SIDE

BORE 125mm X CLOSE CENTRE 810mm X OPEN CENTRE 1267mm X STROKE 457mm X SHAFT OD 75mm



PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY

STANDARD PUMP PORTS

BSPB THREADED PORTS

PORT SIZE	THREAD	THREAD OD	DRILL SIZE
1/8"	1/8" - 28 tpi	9.5	8.8
1/4"	1/4" - 19 tpi	13	11.8
3/8"	3/8" - 19 tpi	16.5	15.5
1/2"	1/2" - 14 tpi	21	19
5/8"	5/8" - 14 tpi	22.7	21
3/4"	3/4" - 14 tpi	26.2	24.5
1"	1" - 11 tpi	33	31
1-1/4"	1-1/4"- 11 tpi	41.8	40
1-1/2"	1-1/2"- 11 tpi	47.4	45.5
2"	2" - 11 tpi	59.3	57

BOSCH SQUARE FLANGED PORTS

PORT SIZE mm	P C D mm	THREAD mm	DRILL SIZE
8	30	M6 x 1	5
12	30	M6 x 1	5
15	35	M6 x 1	5
20	40	M6 x 1	5
18	55	M8 x 1.25	6.5
26	55	M8 x 1.25	6.5

DIAMOND FLANGED PORTS

PORT SIZE mm	P C D mm	THREAD mm	DRILL SIZE
13	30	M6 x 1	5
19	40	M8 x 1.25	6.5
27	51	M10 x 1.5	8.5
34	56	M10 x 1.5	8.5
36	62	M10 x 1.5	8.5
45	72	M12 x 1.75	10

NPT THREADED PORTS

PORT SIZE	THREAD	THREAD OD	DRILL SIZE
1/8"	1/8" - 27 tpi	9.2	8.8
1/4"	1/4" - 18 tpi	13	10.7
3/8"	3/8" - 18 tpi	16.4	14.25
1/2"	1/2" - 14 tpi	20.5	17.5
3/4"	3/4" - 14 tpi	25.7	22.75
1"	1" - 11-1/2"	31.5	28.5
1-1/4"	1-1/4"- 11-1/2"	41.3	37.5
1-1/2"	1-1/2" - 11-1/2"	47.3	43.5
2"	2" - 11-1/2"	59.5	55

S.A.E 4 BOLT FLANGE 3000 SERIES

FLANGE SIZE	DIMENSIONS			SCREWS			
	C	E	H	METRIC	DRILL	UNC	DRILL
1/2"	38.1	17.48	16	M08	6.50	5/16	6.50
3/4"	47.63	22.23	18	M10	8.50	3/8	8.00
1"	52.37	26.19	18	M10	8.50	3/8	8.00
1 1/4"	58.72	30.18	21	M10	8.50	7/16	9.50
1 1/2"	69.85	35.71	25	M12	10.00	1/2	10.50
2"	77.77	42.88	25	M12	10.00	1/2	10.50
2 1/2"	88.9	50.80	25	M12	10.00	1/2	10.50
3"	106.38	61.93	27	M16	14.00	5/8	13.50
3 1/2"	120.65	69.85	27	M16	14.00	5/8	13.50
4"	130.18	77.77	27	M16	14.00	5/8	13.50

NOTE: NPT THREAD OD TAKEN FROM SMALLEST SIZE

S. A. E. "O" THREADED PORTS

PORT SIZE	THREAD	THREAD OD	DRILL SIZE
1/4"	7/16"- 20UNF	11	9.9
5/6"	1/2" - 20 UNF	12.5	11.6
3/8"	9/16"- 18UNF	14	13
1/2"	3/4" - 16UNF	19	17.5
5/8"	7/8" - 14UNF	22	20.5
3/4"	1"- 1/16- 12UN	26.8	24.5
1"	1"- 5/16- 12UN	32.2	31.2
1 1/4"	1"- 5/8 - 12UN	41	39
1 1/2"	1"- 7/8 - 12UN	47.2	45.5
2"	2"- 1/2 - 12UN	63	61

S.A.E 4 BOLT FLANGE 6000 SERIES

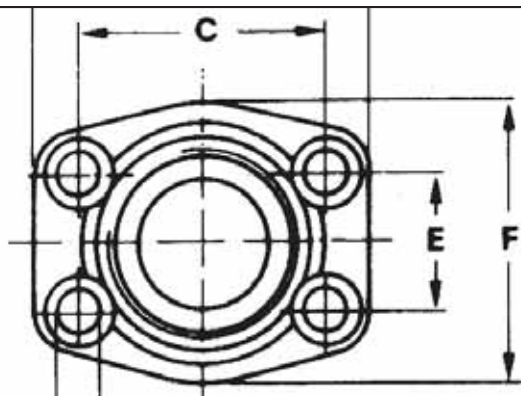
FLANGE SIZE	DIMENSIONS			SCREWS			
	C	E	H	METRIC	DRILL	UNC	DRILL
1/2"	40.49	18.24	16	M08	6.50	5/16	6.50
3/4"	50.80	23.80	21	M10	8.50	3/8	8.00
1"	57.15	27.76	25	M12	10.00	7/16	9.50
1 1/4"	66.68	31.75	27	M14	12.00	1/2	10.50
1 1/2"	79.38	36.50	30	M16	14.00	5/8	13.50
2"	96.82	44.45	37	M20	17.50	3/4	16.50

DOWTY FLANGED PORTS

PORT SIZE	P C D mm	THREAD mm	DRILL SIZE
P1 17.3	43	5/16" - 18UNC	6.6
P1 17.3	43	5/16" - 18UNC	6.6
P2 21.6	48	5/16" - 18UNC	6.6
P2 21.7	48	5/16" - 18UNC	6.6



DIAMOND
PORT FLANGE



S.A.E
4 BOLT FLANGE

HYDRAULIC WORKSHOP FORMULAE

CYLINDER FORCE ; IN KILOGRAMS (KG)

$$\text{Kg} = \text{AREA} \times \text{PRESSURE} = \text{DIAMETER (cm)} \times \text{DIAMETER (cm)} \times \text{PRESSURE (bar)} \times 3.14 \div 4$$

$$\text{Kg} = 10.1 \text{ cm} \times 10.1 \text{ cm} \times 180 \text{ Bar} \times 3.14 \div 4 = 14414 \text{ Kg}$$

$$\text{tons} = \text{Kg} \div 1000$$

$$14414 \text{ Kg} \div 1000 = 14.41 \text{ tons}$$

CYLINDER CAPACITY FLOW RATE ; IN LITRES PER MINUTE (L/min)

$$\text{L/min} = \text{AREA} \times \text{SPEED} = \text{DIAMETER (cm)} \times \text{DIAMETER (cm)} \times \text{SPEED (m/s)} \times 4.71$$

$$\text{L/min} = 10.1 \text{ cm} \times 10.1 \text{ cm} \times .02 \text{ m/s} \times 4.71 = 9 \text{ L/min}$$

CYLINDER SHAFT SPEED ; IN MILLIMETERS PER SEC (M/S)

$$\text{m/s} = \text{FLOW RATE} \div \text{AREA} = \text{FLOW RATE (L/min)} \div \text{DIAMETER (cm)} \div \text{DIAMETER (cm)} \times 0.21$$

$$\text{m/s} = 9 \text{ L/min} \div 10.1 \text{ cm} \div 10.1 \text{ cm} \times .21 = .02 \text{ m/s} = 20 \text{ mm/s}$$

CYLINDER STROKE TIME ; IN SECONDS PER STROKE

$$\text{sec} = \text{STROKE LENGTH (cm)} \div \text{SPEED (m/s)} \div 100$$

$$\text{sec} = 10 \text{ cm} \div .02 \text{ m/s} \div 100 = 5 \text{ sec}$$

PUMP FLOW : IN LITRES PER MINUTE (L/min)

$$\text{L/min} = \text{cc / Rev} \times \text{RPM} \div 1000$$

$$\text{L/min} = 14 \text{ cc/Rev} \times 1450 \text{ RPM} \div 1000 = 20.3 \text{ L/min}$$

PUMP INPUT POWER ; IN KILOWATTS (MILLIMETERS)

$$\text{Kw} = \text{FLOW} \times \text{PRESSURE} \div 600 \div 0.85$$

$$\text{Kw} = 20 \text{ LITRES} \times 180 \text{ Bar} \div 600 \div 0.85 = 7 \text{ KW (KILOWATT)}$$

MOTOR TORQUE ; IN NEWTON METER (Nm)

$$\text{Nm} = \text{PRESSURE (MPa)} \times \text{FLOW (L/min)} \times 159 \div \text{RPM}$$

$$\text{Nm} = 21 \text{ MPa} \times 9 \text{ L/min} \times 159 \div 1450 \text{ RPM} = 20.72 \text{ Nm}$$

MOTOR TORQUE ; IN NEWTON METER (Nm)

$$\text{Nm} = \text{PRESSURE (MPa)} \times \text{DISPLACEMENT (cm}^3\text{)} \div 6.28$$

$$\text{Nm} = 21 \text{ MPa} \times 10 \text{ cm}^3 \div 6.28 = 33.44 \text{ Nm}$$

PUMP SHAFT PL FACTOR ; IN TORQUE NEWTON METER (Nm)

$$\text{Nm} = \text{cc / Rev} \times \text{bar} / 57.2 = \text{Nm (NEWTON METER)}$$

$$\text{Nm} = 14 \text{ cc / Rev} \times 140 \text{ bar} \div 57.2 = 34 \text{ Nm}$$

CONVERSION FACTORS

$$1 \text{ Kw} = 1.34 \text{ HP}$$

$$1 \text{ HP} = 0.75 \text{ Kw}$$

$$1 \text{ Kw} = 1000 \text{ Watts}$$

$$1000 \text{ Kg} = 1 \text{ TON METRIC}$$

$$1 \text{ KILOGRAM} = 2.2 \text{ Lbs}$$

$$1 \text{ NEWTON METER (nm)} = 8.9 \text{ in-Lbs.}$$

$$1 \text{ NEWTON METER (nm)} = 0.74 \text{ ft-Lbs.}$$

$$10 \text{ NEWTON METERS (nm)} = 1 \text{ Dnm}$$

$$1 \text{ US Gal} = 3.79 \text{ Litre}$$

$$1 \text{ Imp. Gallon} = 4.5 \text{ LITRE}$$

$$1 \text{ cu Inch} = 16.4 \text{ cc}$$

$$1 \text{ Inch} = 25.4 \text{ mm}$$

$$1 \text{ METER} = 39.4 \text{ Inch}$$

$$0.01 \text{ mm} = 4 \text{ thousands of an Inch}$$

$$1 \text{ bar} = 14.5 \text{ PSI}$$

$$1 \text{ MPA} = 10 \text{ bar}$$

$$1 \text{ bar} = 100 \text{ Kpa}$$

HYDRAULIC FORMULA CALCULATOR

CYLINDER CALCULATIONS

NOTE; Put your amounts in where the **red figures** are and check out the answer where the **blue figures** are (click enter) !

CONVERSION CYLINDER; INCH TO METRIC	2" = 5.08 cm 3" = 7.62 cm 4" = 10.16 cm 5" = 12.7
CONVERSION SHAFT; INCH TO METRIC	1.06" = 2.70 cm 1.25" = 3.2 cm 1.50" = 3.80 cm 2" = 5.08 cm
	1-1/16" = 2.70 cm 1-1/4" = 3.2 cm 1-1/2" = 3.80 cm 2" = 5.08 cm

CONVERSIONS INCH TO METRIC

TO BE USED WHEN CALCULATING INCH TO METRIC (cm) AND METRIC (cm) TO INCH

1	FORMULA				
	Metric / Inch	INCH	METRIC ANSWER	METRIC (cm)	INCH ANSWER
		8	20.32	15.24	6

FORCE

TO BE USED WHEN CALCULATING THE FORCE OF A HYDRAULIC CYLINDER (LARGE PISTON AREA)

2	FORMULA	PRESSURE	CYLINDER DIAMETER	FORCE (tons)	FORCE (kg)
	tons	ENTER (Bar)	ENTER (cm)	(click enter) !	(click enter) !
		90	16	18.0864	18086.4

SPEED

TO BE USED WHEN CALCULATING THE SPEED USING THE PISTON AREA

3	FORMULA	ENTER FLOW RATE (L/min)	ENTER PISTON DIAMETER (cm)	SPEED (m/s)	SPEED (sec/25 mm)
	m/s	12.1	12.7	0.015927845	1.569578306
				mm /sec	SECONDS / METER
				15.92784502	62.78313223

SPEED

TO BE USED WHEN CALCULATING THE SPEED USING THE SHAFT AREA

4	FORMULA	ENTER FLOW RATE (L/min)	ENTER SHAFT DIAMETER (cm)	SPEED (m/s)	SPEED (sec/25 mm)
	m/s	12.1	5.08	0.099549031	0.251132529
				mm /sec	SECONDS / METER
				99.54903137	10.04530116

TIME TAKEN TO DO FULL STROKE

TO BE USED WHEN CALCULATING THE TIME TAKEN FOR THE SHAFT TO TRAVEL OVER A SET DISTANCE

5	FORMULA	PISTON (SIDE)	SHAFT (SIDE)		
	Seconds	ENTER STROKE (mm)	ENTER STROKE (mm)		
		500	500		
		SECONDS TAKEN	SECONDS TAKEN		
		31.39156612	26.36891554		

SWEPT VOLUME OF A CYLINDER ; PISTON SIDE

TO BE USED WHEN CALCULATING THE AMOUNT OF OIL NEEDED PISTON SIDE

6	FORMULA	ENTER CYL DIAMETER (cm)	ENTER STROKE (cm)	VOL OF PISTON SIDE (L)	
	liters	10.16	500	40.516048	

SWEPT VOLUME OF A CYLINDER ; SHAFT SIDE

TO BE USED WHEN CALCULATING THE AMOUNT OF OIL NEEDED SHAFT SIDE

7	FORMULA	ENTER DIAM OF SHAFT (cm)	ENTER STROKE (cm)	VOLUME OF SHAFT	
	liters	6	500	14.139	

MINIMUM TANK VOLUME SIZE ;

TO BE USED WHEN CALCULATING THE MINIMUM AMOUNT OF OIL NEEDED ON A DOUBLE ACTING CYLINDER

8	FORMULA	PISTON SIDE VOLUME	SHAFT SIDE VOLUME	TANK VOLUME	
	liters	40.516048	14.139	26.377048	

HYDRAULIC FORMULA CALCULATOR

PUMP CALCULATIONS

NOTE; Put your amounts where the **red figures** are and check out the answer where the **blue figures** are (click enter) !

FLOW RATE

TO BE USED WHEN CALCULATING THE FLOW RATE OF A HYDRAULIC PUMP

1	FORMULA				
	L/min	ENTER cc/Rev	ENTER RPM	FLOW (L/min)	cc/min
		6	1450	8.7	8700
2	FORMULA				
	L/min	ENTER SPEED (m/s)	ENTER CYL DIAMETER (cm)	FLOW (L/min)	cc/min
		0.047717	5.08	5.799912787	5799.912787
3	FORMULA				
	L/min	ENTER POWER (KW)	ENTER PRESSURE (Mpa)	FLOW (L/min)	cc/min
		0.568	5	5.7936	5793.6

POWER

TO BE USED WHEN CALCULATING THE POWER REQUIRED TO DRIVE A HYDRAULIC PUMP

4	FORMULA				
	kW	ENTER PRESSURE (bar)	ENTER FLOW RATE (L/min)	POWER (kW)	WATTS
		200	20	7.843137255	7843.137255
5	FORMULA			200	
	bar	ENTER PRESSURE (bar)	ENTER FLOW RATE (L/min)	POWER (kW)	WATTS
		198.9	20	7.8	7800
6	FORMULA				
	flow	ENTER PRESSURE (bar)	ENTER FLOW RATE (L/min)	POWER (kW)	WATTS
		200	19.89	7.8	

GEAR PUMP CAPACITY

TO BE USED WHEN CALCULATING THE APPROXIMATE FLOW RATE OF A GEAR PUMP

	FORMULA				
7	CC/REV	A	B	D - d	CC/REV
		CENTRE TO CENTRE	GEAR WIDTH	GEAR OD - ID	
		44.3	32	19.8	38.40329434

TORQUE

TO BE USED WHEN CALCULATING THE TORQUE PRODUCED BY A HYDRAULIC MOTOR

8	FORMULA				
	Nm	ENTER PRESSURE (Mpa)	ENTER DISPLACEMENT (cm ³)	TORQUE (Nm)	Dm
		5	4	3.184713376	31.84713376
9	FORMULA				
	Nm	ENTER PRESSURE (Mpa)	ENTER FLOW RATE (L/min)	ENTER RPM	TORQUE (Nm)
		5	5.8	1450	3.18

HOSE SIZING

TO BE USED WHEN CALCULATING THE HOSE SIZE FOR SUCTION AND DELIVERY

10	FORMULA				
	m/s	MAX. SPEED RATE	DISPLACEMENT	SUCTION PORT ID	
		(U/min)	(cm ³)	(mm)	
		1450	25.0	19.0	*** Special note;
		Velocity (m/s)	→	2.13	METERS/SECOND

*** Special note; The maximum recommended flow rate for a gear pump is **2,5 m/s** please do not exceed.

*** Special note; For delivery hose size, rule of thumb 25% smaller than suction hose

PLEASE NOTE: ALL O.E.M. NAMES OR NUMBERS ARE FOR REFERENCE USE ONLY

TO BE USED AT YOUR OWN RISK BY; Dr Christine Edmonds of Milwaukee Wisconsin

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PUMPS GEAR ALUMINIUM ROTATION CHANGE

P511 SERIES AND P17 SERIES

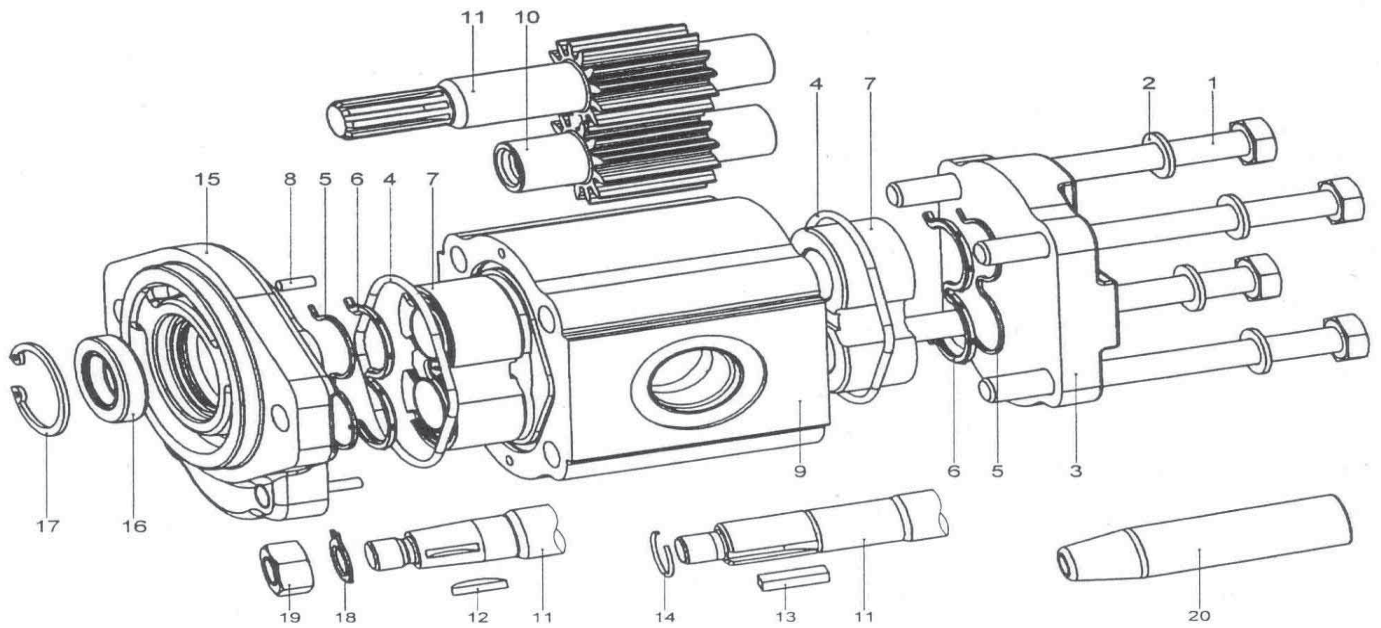
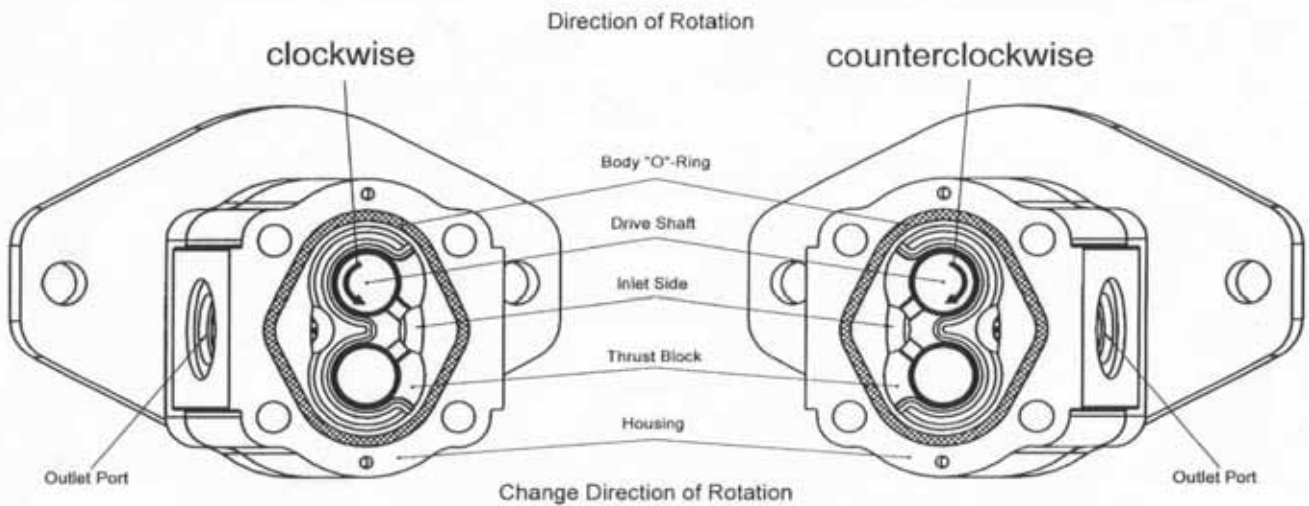
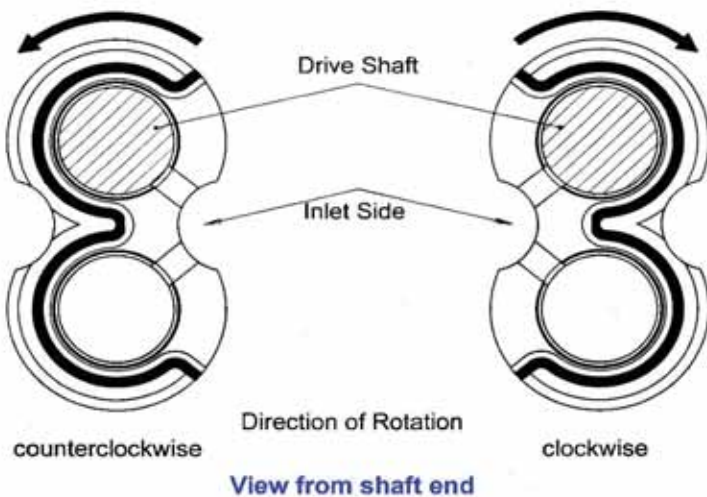


Fig. 4



Housing and Thrust Blocks turned 180°



View from shaft end

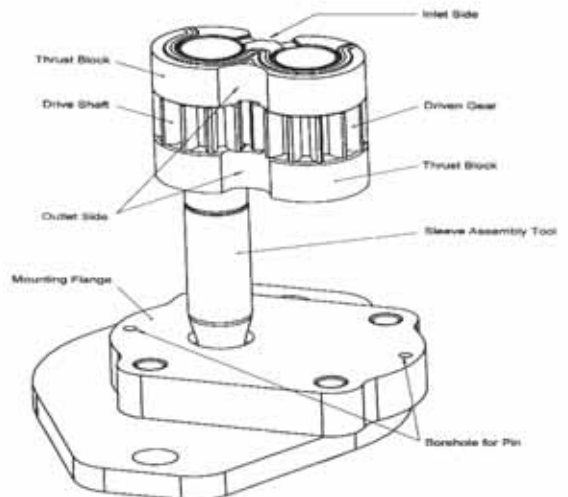
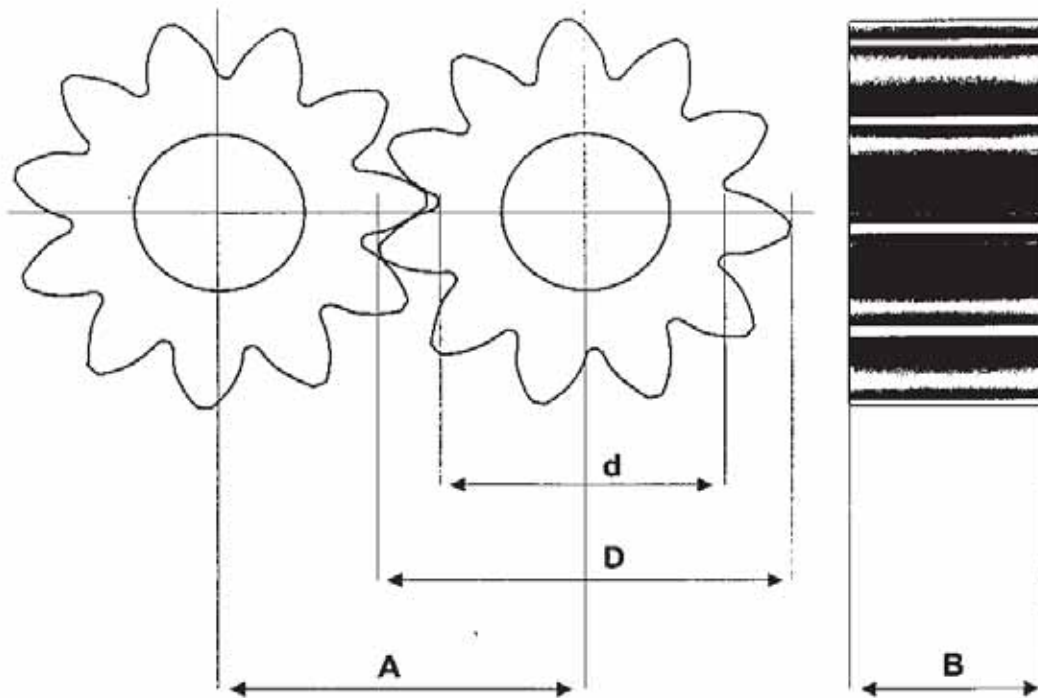


Fig. 5

FORMULA TO WORK OUT GEAR PUMP CAPACITY

**HOW TO WORK OUT APPROXIMATE FLOW CAPACITY
OF A GEAR PUMP IN LITRES PER MINUTE
AT 1450 RPM. (OR IN cm^3 PER REVOLUTION)**



FORMULA: USING TWO GEARS

NOTE: ALL DIMENSIONS IN MM \div BY 1000 TO GET CC/REV.

A = CENTRE TO CENTRE OF SHAFTS

B = GEAR WIDTH

D = GEAR OD

d = GEAR ID

$$\frac{1.3682 \times A \times B \times (D-d)}{1000}$$

EXAMPLE $1.3682 \times 44.3 \times 32 \times (53.3-33.5)$
 $= 38403.2 \div \text{BY } 1000 \text{ TO GET CC/REV.}$
38.4 CC/REV.

FORMULA: USING ONE GEAR (NOT AS ACCURATE)

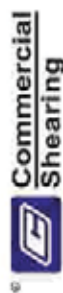
$$\text{FORMULA; } (D^2 - d^2) \times B \times \frac{\pi}{4}$$

J & P HYDRAULICS CC

Hydraulic Marine and Industrial Suppliers

No.1A 2nd Street, Walvis Bay, Namibia,
 P.O. Box 772, Walvis Bay, - www.jphdraulics.com
 Tel: (064) 204993 - Fax: (064) 207994 - Email: allan@jphdraulics.com

Distributor for:



1 kPa = 0,01 bar
 1 Mpa = 10,00 bar

1 kPa = 0,145 P.S.I.
 1 kg/cm² = 14,223 P.S.I.

Kg/cm² = 1,00 at
 1 P.S.I. = kPa

kPa	Mpa	bar	kg/cm²	P.S.I.
5	0,005	0,05	0,05	0,73
10	0,01	0,1	0,10	1,45
25	0,025	0,25	0,25	3,63
50	0,05	0,5	0,51	7,25
75	0,075	0,75	0,76	10,88
100	0,1	1	1,02	14,5
200	0,2	2	2,04	29,0
300	0,3	3	3,06	43,5
400	0,4	4	4,08	58
500	0,5	5	5,10	72,5
600	0,6	6	6,12	87
700	0,7	7	7,14	102
800	0,8	8	8,16	116
900	0,9	9	9,18	131
1000	1	10	10,2	145
2000	2	20	20,4	290
3000	3	30	30,6	435
4000	4	40	40,8	580
5000	5	50	51,0	725
6000	6	60	61,2	870
7000	7	70	71,4	1015
8000	8	80	81,6	1160
9000	9	90	91,8	1305
10000	10	100	102	1450
11000	11	110	112	1595
12000	12	120	122	1740
13000	13	130	133	1885
14000	14	140	143	2030

kPa	Mpa	bar	kg/cm²	P.S.I.
15000	15	150	152	2175
16000	16	160	163	2320
17000	17	170	173	2465
18000	18	180	183	2610
19000	19	190	194	2755
20000	20	200	204	2900
21000	21	210	214	3045
22000	22	220	224	3190
23000	23	230	235	3335
24000	24	240	245	3480
25000	25	250	255	3625
26000	26	260	265	3770
27000	27	270	275	3915
28000	28	280	286	4060
29000	29	290	296	4205
30000	30	300	306	4350
31000	31	310	316	4495
32000	32	320	326	4640
33000	33	330	337	4785
34000	34	340	347	4930
35000	35	350	357	5075
36000	36	360	367	5220
37000	37	370	377	5365
38000	38	380	387	5510
39000	39	390	398	5655
40000	40	400	408	5800
41000	41	410	418	5945
42000	42	420	428	6090

kPa	Mpa	bar	kg/cm²	P.S.I.
43000	43	430	438	6235
44000	44	440	449	6380
45000	45	450	459	6525
46000	46	460	469	6670
47000	47	470	479	6815
48000	48	480	489	6960
49000	49	490	500	7105
50000	50	500	510	7250
51000	51	510	520	7395
52000	52	520	530	7540
53000	53	530	540	7685
54000	54	540	551	7830
55000	55	550	561	7975
56000	56	560	571	8120
57000	57	570	581	8265
58000	58	580	591	8410
59000	59	590	602	8555
60000	60	600	612	8700
61000	61	610	622	8845
62000	62	620	632	8990
63000	63	630	642	9135
64000	64	640	653	9280
65000	65	650	663	9425
66000	66	660	673	9570
67000	67	670	683	9715
68000	68	680	693	9860
69000	69	690	704	10005
70000	70	700	714	10150