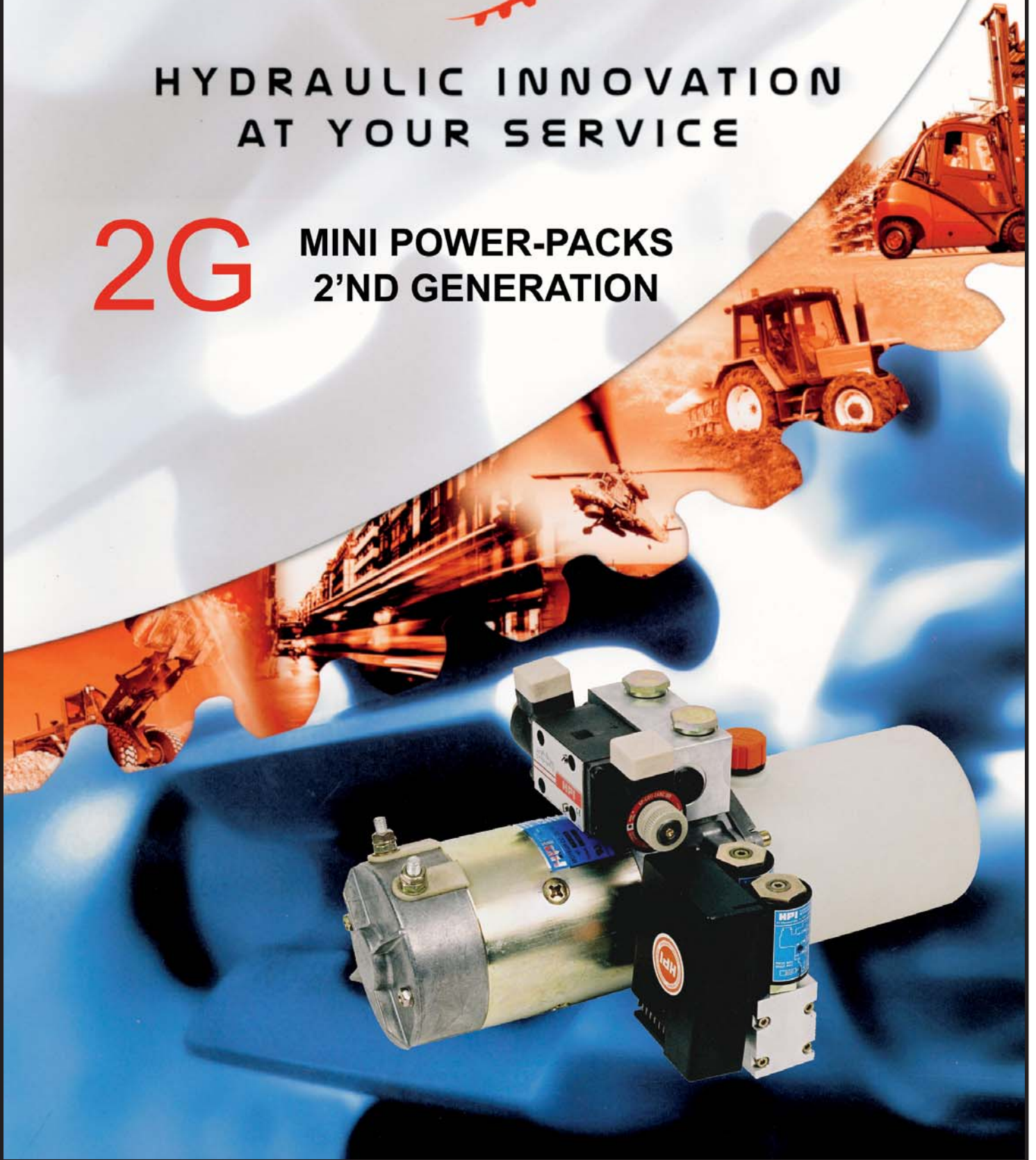


CAT: MINI 2G-07  
PUBLISHED: 07/2007  
North American Catalog



HYDRAULIC INNOVATION  
AT YOUR SERVICE

**2G** MINI POWER-PACKS  
2'ND GENERATION





# SALES ORGANIZATION

**Who are we?** HPI develops and manufactures hydraulic products and systems based on the gear pump technology. Over 500 people are employed in both sites in Chennevières (Paris surroundings) and Blois (Val de Loire). As a subsidiary of the Koyo Group (25000 employees all over the world), HPI is provided with first range development and testing capacities, thus conforming to an international quality system of reference.

HPI is supported by a subsidiary in North America and a network of over 50 distributors in France and throughout the world. This network offers our customers a daily local service, thus ensuring a maximum reactivity. Whenever needed, each member of our network can rely on the resources and structures of HPI in order to meet its customers requirements.



### Material Handling

Lifting systems for all stationary (AC) or mobile (DC) handling equipment.

### Aeronautics - Military applications

High tech pumps and electro-pump sets used for civil and military applications such as helicopters, fighters, military vehicles...

### Trucks - Coaches - Buses

Power assisted steering. Hydrostatic transmission for hydraulic or electro-hydraulic driven cooling system

### Agricultural Machinery

Tractor lifting systems and auxillary functions, harvest toppers, scrub clearing machines...

### Public works and Road Maintenance

Hydraulic systems for excavators, loaders, road rollers, garbage dumpers, snowploughs...



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<b>ALTERNATING CURRENT</b>	
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**North America**  
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# UNIT COMPOSITION COMPOSITION

**Direct Current Motor**  
Moteur à Courant Continu

**Relay**  
Relais

**Coupling**  
Noix

**Mini - power pack support**  
Support Mini - centrale

**Accessory Block**

**Cartridge valve**  
Electro valve à clapet pilote

**Flow restrictor**  
Limiteur de débit interne

**Strainer**  
filtre

**Alternating Current Motor**  
Moteur à Courant Alternatif

**Coupling Set**  
Noix d'accouplement

**Adjustable Relief Valve**  
Limiteur de pression réglable

**Check valve**  
Clapet Anti - Retour

**Return Port**  
Orifice Retour

**Pressure Port**  
Orifice Pression

**Pump**  
Pompe

**Outlet piping**  
Tuyauterie Retour

**Suction piping**  
Tuyauterie Aspiration

**7. Collerette**  
Collerette

**Filler breather cap**  
Bouchon de remplissage avec filtre

**Reservoirs**  
Réservoirs

**Clip**  
Couper

**Filler Elbow**

**Clamp Set**

**MINI POWER - PACKS**  
**MINI CENTRALES** **2G**





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### Selection Guidelines

#### Direct Current Models.

Based upon the flow and pressure requirements identify a motor and pump combination that will deliver the required performance. Attention should be paid to the duty ratings as well as the current draw to ensure it falls within acceptable levels.

#### Alternating Current Models.

Based upon the flow and pressure requirements select a pump that is capable of providing the necessary flow and pressure. It is generally recommended that the 3450 RPM motors are used. Once the pump has been identified it will be necessary to calculate the required HP to drive the pump. Refer to the "Common Calculations and Conversion factors" area.

#### Selecting a Reservoir.

In single acting applications it is generally recommended to use a reservoir size that is at least 25% larger than the total system oil capacity. In continuous duty applications several factors must be taken into consideration, most importantly the reservoir must be sized to provide sufficient oil cooling.

#### Selecting Control Valves.

The final step in constructing the powerpack is to determine the valve combination that will be required for controlling all the actuators. It should be noted that valve combinations may be created by using two or more different valves and/or blocks. For applications that are not listed in this catalog please contact an HPI representative.

### Installation Guidelines

#### Electrical Motor Connections.

The electric motor should be wired for CW rotation as per the wiring label. All electrical connections should be made using the appropriate gauge wire based on the motor amp draw. It is common for a motor to see two to three times its rated current draw for a few seconds while starting up under load.

#### Electrical Valve Connections.

Attention should be paid as to the type of connector that is supplied with the valve coils. HPI uses both straight voltage and rectified voltage coils. AC coils that require rectified connectors are usually marked as "VRAC" (Voltage Rectified Alternating Current.)

#### Hydraulic Fluid.

In General HPI recommends a high performance mineral based hydraulic fluid with a viscosity of 30 to 40 cSt at 40°C be used. Ethylene Glycol and Phostate Ester fluids are NOT to be used with HPI products. For fire resistant hydraulic fluids; only some polyol ester based fluids may be appropriate.

#### Adjusting the Relief Valve.

The relief valve may be adjusted to increase or decrease the maximum system pressure. This adjustment will only affect the pressure setting and will have no direct effect on the flow of the pump. Turning the adjustment screw clockwise will increase the pressure, turning counterclockwise will decrease the pressure.



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**MINI 2G POWERPACKS**  
 DIRECT CURRENT  
 (NORTH AMERICAN FORMAT)

REVISION 2 - 05/2007

North American **N**

**PUMP TYPE** 1

**GENERATION** 2

**MOTOR TYPE**

NO MOTOR	000
1.3 kW	DS1
2.1 kW	BK1
1.5 kW	DS2
2.2 kW	BK2
2.2 kW	BS2
3.0 kW	CI2
SPECIAL	***

**PUMP CAPACITY**

1 cc / rev	0,06 Cubic / inch	1
2 cc / rev	0,12 Cubic / inch	2
3 cc / rev	0,18 Cubic / inch	3
4 cc / rev	0,24 Cubic / inch	4
5 cc / rev	0,30 Cubic / inch	5
6 cc / rev	0,36 Cubic / inch	6

**SHAFT TYPE / RELAY**

TANG SHAFT, NO RELAY	TX
TANG SHAFT, WITH RELAY (<150 amp)	TR
TANG SHAFT, WITH RELAY (>150 amp)	TS

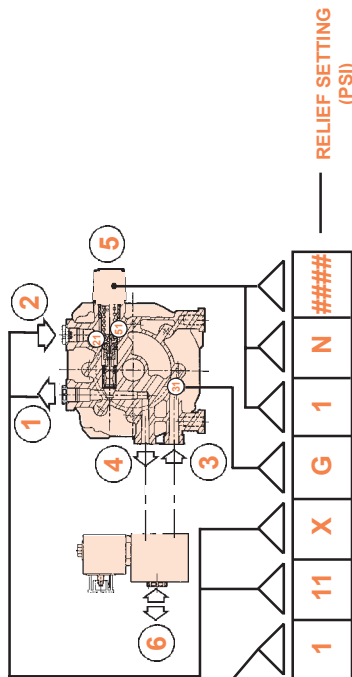
**VALVES - MOUNTED ON PORTS 3 & 4**

NONE, PORTS BLOCKED	XX					
Cartridge valves						
2 way						
VNF	VNO	VLB	VNF2G	CT3	CT2	
12VDC	12	22	32	42	52	72
24VDC	14	24	34	44	54	74
24VAC	15	25	35	45	55	75
48VAC	17	27	37	47	57	77
115VAC	11	21	31	41	51	71
230VAC	13	23	33	43	53	73
AIR PILOT	19	29	39			
4 way						
MANUAL LEVER VALVE, 2 WAY	20					
3 WAY WITH FREEFLOW	40					
PROPORTIONAL VALVE 10L/MIN	90					
PROPORTIONAL VALVE 20L/MIN	91					
SPECIAL	**					

VNF = NORMALLY CLOSED, <20L/M  
 VNF2G = NORMALLY CLOSED, <10L/M (no override)  
 VNO = NORMALLY OPEN  
 VLB = DOUBLE LOCK  
 CT3 - 4/3 WAY, TANDEM CENTRE  
 CT2 = 4/2 WAY

**TANKS**

NO RESERVOIR	X	6,0 L	1,58 Gal	Z	6,5 L	1,71 Gal	Qa
1,5 L	E	6,0 L	1,58 Gal	U	12 L	3,17 Gal	Da
2,0 L	A	6,3 L	1,66 Gal	G	20 L	5,28 Gal	La
2,5 L	H	7,5 L	1,98 Gal	K	30 L	7,92 Gal	Ma
3,0 L	B	10 L	2,64 Gal	D	44 L	11,6 Gal	Na
4,0 L	S	15 L	3,96 Gal	L	70 L	18,5 Gal	Oa
5,0 L	C	12 L	3,17 Gal	DS	12 L	3,17 Gal	Ya
5,0 L	R	34 L	8,98 Gal	MS			*
							SPECIAL



RELIEF SETTING (PSI) N #####

**RELIEF VALVE**  
 P SEALED  
 N NOT SEALED

**RELIEF RANGE**  
 1 10 TO 300 BAR (145 TO 4350 psi)  
 \* Special

**FLOW LIMITOR (Port 31)**  
 X Without flow restrictor or flow limiter

A	1,1 l/m	F	4,1 l/m	N	9,5 l/m	T	17,6 l/m
B	1,4 l/m	G	5,4 l/m	Q	11,2 l/m	U	20,3 l/m
C	2,2 l/m	J	6,6 l/m	R	13,2 l/m	V	22,3 l/m
E	3,1 l/m	L	8,0 l/m	S	15,3 l/m		
W	Adjustable flow limiter (Port 3 external)						
*	Special						

**VOLTAGE - OPTIONAL VALVES**

X	NOT APPLICABLE
2	12 VDC
4	24 VDC
5	24 VAC
1	115 VAC
3	230 VAC
9	AIR PILOT
*	SPECIAL

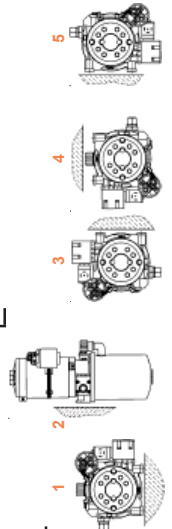
**PORTING / OPTIONAL VALVES MOUNTED ON PORTS 1 & 2**  
 (SEPERATE MULTIPLE OPTIONS WITH "/>)

10	Port 1 Only
11	Port 1 Only, with flow limiter on port 31
20	Port 1 & Port 2
21	Port 1 & Port 2, with flow limiter on port 31
60	Port 6 Only
61	Port 6 Only, with flow limiter on port 31
VF	VNF IN BLOCK (ANTI DRIFT)
VB	VLB IN BLOCK (ANTI DRIFT)
SA	2 SPEED BLOCK, PORTS 1 & 2
AF	ADJUSTABLE FLOW CONTROL - PORT 1
**	SPECIAL
25	CETOP 3 - BASEPLATE ONLY
C2	CETOP 3 - 2 POSITION
CC	CETOP 3 - 3 POS, CLOSED CENTRE
CO	CETOP 3 - 3 POS, OPEN CENTRE
CY	CETOP 3 - 3 POS, Y CENTRE
CT	CETOP 3 - 3 POS, TANDEM CENTRE
CP	CETOP 3 - DUAL PO CHECK
CF	CETOP 3 - DUAL FLOW CONTROL
CB	CETOP 3 - DUAL COUNTERBALANCE VALVE
PG	PRESSURE GAUGE
F3	FILTER, 5MIC, OIL THROUGH PORT 31
F2	FILTER, 5MIC, OIL THROUGH PORT 21

**MOUNTING POSITION**

See page 26 for more detailed information.

\* SPECIAL





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**MINI 2G POWERPACKS**  
 ALTERNATING CURRENT  
 (NORTH AMERICAN FORMAT)

REVISION 2 - 05/2007

North American **N**

**PUMP TYPE** 1

**GENERATION** 2

**MOTOR TYPE**

NO MOTOR	0
0.25 HP	A
0.33 HP	B
0.50 HP	D
0.75 HP	F
1.00 HP	G
1.50 HP	X
2.00 HP	Y
3.00 HP	W
4.00 HP(AIR)	Z
5.00 HP	R
SPECIAL	*

**VOLTAGE**

NO MOTOR	3
115/230	4
230/460	5
230/460	6
575	7
575	8
AIR MOTOR	9
SPECIAL	*

**MOTOR SPECIAL**

NONE	X
WASHDOWN	W
THERMAL PROTECTION	T
50 hz	E
8 VANE AIR MOTOR	V
SPECIAL	*

**PUMP CAPACITY**

1 cc / rev	1
2 cc / rev	2
3 cc / rev	3
4 cc / rev	4
5 cc / rev	5
6 cc / rev	6

**SHAFT TYPE / RELAY**

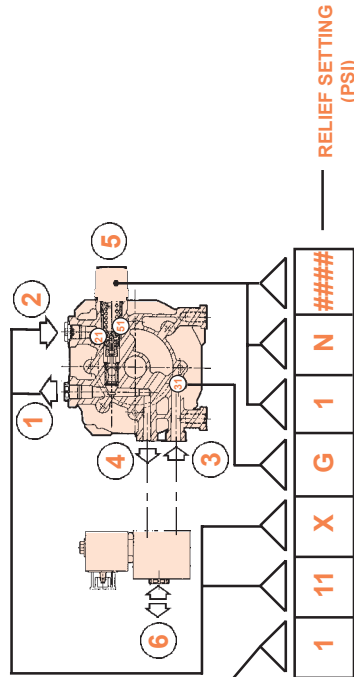
KEYED SHAFT, NO RELAY **CX**

**VALVES - MOUNTED ON PORTS 3 & 4**

NONE, PORTS BLOCKED	XX
12VDC	VNF 12 22 32 42 52 72
24VDC	14 24 34 44 54 74
24VAC	15 25 35 45 55 75
48VAC	17 27 37 47 57 77
115VAC	11 21 31 41 51 71
230VAC	13 23 33 43 53 73
AIR PILOT	19 29 39

**TANKS**

NO RESERVOIR	X	6.0 L	1.88 Gal	Z	6.5 L	1.71 Gal	Qa
1.5 L	E	0.40 Gal	1.58 Gal	U	12 L	3.17 Gal	Da
2.0 L	A	0.53 Gal	1.66 Gal	G	20 L	5.28 Gal	La
2.5 L	H	0.66 Gal	1.98 Gal	K	30 L	7.92 Gal	Ma
3.0 L	B	0.79 Gal	2.64 Gal	D	44 L	11.6 Gal	Na
4.0 L	S	1.05 Gal	15 L	L	70 L	18.5 Gal	Oa
5.0 L	C	1.32 Gal	12 L	Ds	12 L	3.17 Gal	Ya
5.0 L	R	1.32 Gal	34 L	Ms			*



RELIEF SETTING (PSI)

**RELIEF VALVE**

- P SEALED
- N NOT SEALED

**RELIEF RANGE**

- 1 10 TO 300 BAR (145 TO 4350 psi)
- \* Special

**FLOW LIMITOR (Port 31)**

X Without flow restrictor or flow limiter

A	1,1 l/m	F	4,1 l/m	N	9,5 l/m	T	17,6 l/m
B	1,4 l/m	G	5,4 l/m	Q	11,2 l/m	U	20,3 l/m
C	2,2 l/m	J	6,6 l/m	R	13,2 l/m	V	22,3 l/m
E	3,1 l/m	L	8,0 l/m	S	15,3 l/m		
W	Adjustable flow limiter (Port 3 external)						
*	Special						

**VOLTAGE - OPTIONAL VALVES**

- X NOT APPLICABLE
- 2 12 VDC
- 4 24 VDC
- 5 24 VAC
- 1 115 VAC
- 3 230 VAC
- 9 AIR PILOT
- \* SPECIAL

**PORTING / OPTIONAL VALVES MOUNTED ON PORTS 1 & 2**

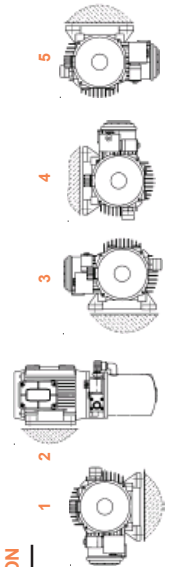
(SEPERATE MULTIPLE OPTIONS WITH "/>)

- 10 Port 1 Only
- 11 Port 1 Only, with flow limiter on port 31
- 20 Port 1 & Port 2
- 21 Port 1 & Port 2, with flow limiter on port 31
- 60 Port 6 Only
- 61 Port 6 Only, with flow limiter on port 31
- VF VNF IN BLOCK (ANTI DRIFT)
- VB VLB IN BLOCK (ANTI DRIFT)
- SA 2 SPEED BLOCK, PORTS 1 & 2
- AF ADJUSTABLE FLOW CONTROL - PORT 1
- \*\* SPECIAL
- 25 CETOP 3 - BASEPLATE ONLY
- C2 CETOP 3 - 2 POSITION
- CC CETOP 3 - 3 POS, CLOSED CENTRE
- CO CETOP 3 - 3 POS, OPEN CENTRE
- CY CETOP 3 - 3 POS, Y CENTRE
- CT CETOP 3 - 3 POS, TANDEM CENTRE
- CP CETOP 3 - DUAL PO CHECK
- CF CETOP 3 - DUAL FLOW CONTROL
- CB CETOP 3 - DUAL COUNTERBALANCE VALVE
- PG PRESSURE GAUGE
- F3 FILTER, 5 MIC, OIL THROUGH PORT 31
- F2 FILTER, 5 MIC, OIL THROUGH PORT 21

**MOUNTING POSITION**

See page 26 for more detailed information.

\* SPECIAL

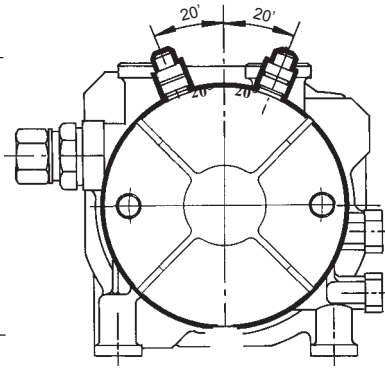
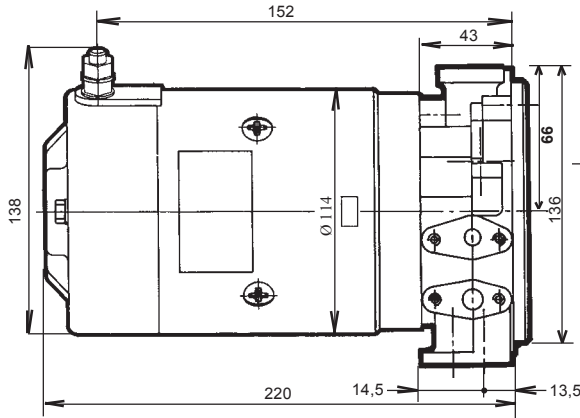




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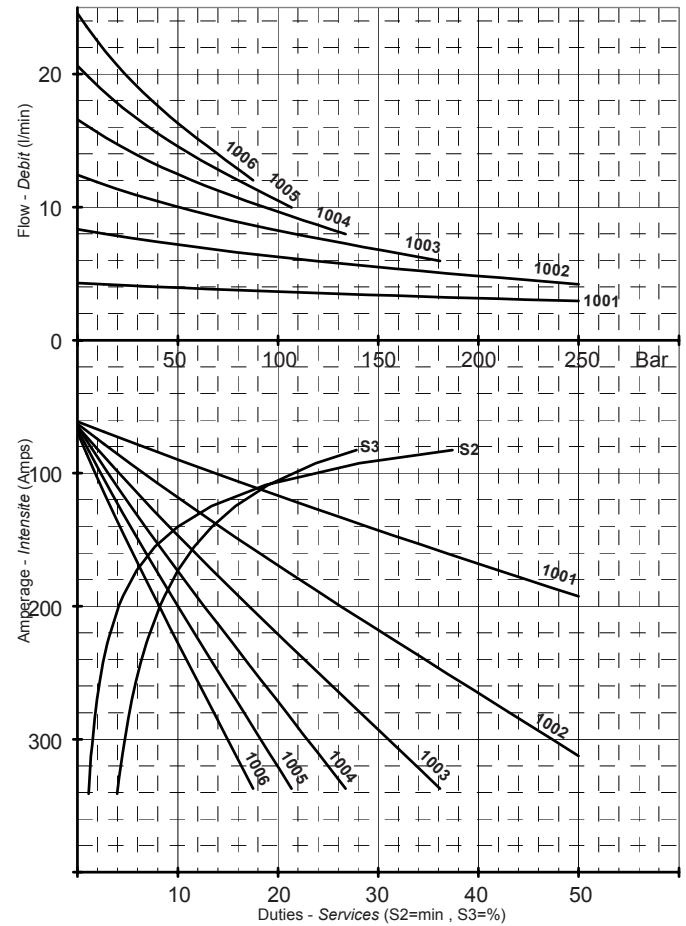
# MOTOR SPECIFICATIONS - DIRECT CURRENT

## SPECIFICATION MOTEUR - COURANT CONTINU



SPECIFICATIONS	
CODE CODE	<b>DS1</b>
VOLTAGE TENSION	<b>12VDC</b>
REFERENCE REFERENCE	114133
NOMINAL POWER PUISSANCE NOM.	<b>1,3 kW</b>
S3 S3	10%
PROTECTION PROTECTION	IP44
MASS MASSE	7,5 Kg

PUMPS POMPES		PRESSURE - PRESSION DUTIES - SERVICES							
		5 bar	50 bar	100 bar	150 bar	175 bar	200 bar	225 bar	250 bar
		72 PSI	725 PSI	1450 PSI	2175 PSI	2540 PSI	2900 PSI	3260 PSI	3630 PSI
1001	Q	4,3	4	3,7	3,4	3,3	3,2	3	2,9
	I	64,1	89,7	116,8	142,9	155,6	168,1	180,4	192,6
	S2	40	30,4	15,7	9,5	7,7	6,3	5,3	4,5
	S3	39,4	24,8	17,2	13,1	11,6	10,4	9,5	8,7
1002	Q	8,2	7,2	6,3	5,5	5,2	4,8	4,5	4,2
	I	68,6	118,3	169,4	218	241,7	265,4	288,9	312,6
	S2	40	15,2	6,2	3,3	2,6	2	1,6	1,3
	S3	35,9	16,9	10,3	7,3	6,3	5,6	5	4,4
1003	Q	12,2	10	8,2	6,8	6,1	180 bar max		
	I	73,4	146,8	221,1	292,8	328,7			
	S2	40	8,9	3,2	1,6	1,2			
	S3	32,7	12,6	7,2	4,9	4,1			
1004	Q	16,1	12,5	9,6	130 bar max				
	I	76,6	173,6	271,8					
	S2	40	5,9	1,9					
	S3	30,8	10	5,4					
1005	Q	19,9	14,6	10,5	105 bar max				
	I	81,4	199,8	320,9					
	S2	38,7	4,1	1,3					
	S3	28,3	8,2	4,3					
1006	Q	23,5	16,3	85 bar max					
	I	86,9	227,5						
	S2	32,8	3						
	S3	25,9	6,9						



- Q:** Flow (l/min) / Debit (l / min)
- I:** Amperage / Intensite en Amperes
- S1:** Continuous Duty / Service Continu
- S2:** Temporary Duty (min) / Service Temporaire (min)
- S3:** Intermittent Duty (10% of 10 min) / Service Intermittent (10% de 10 min)
- ID:** Starting Amperage / Intensite de demarrage:

SHELL TELLUST VISCOSITY : according to technical specifications  
 VISCOSITE : selon specifications techniques  
 VISKOSITÄT : gemäß technischen Spezifikationen

Curves drawn using Shell Tellust T46  
 Viscosity of 46 cST (+/- 10%) at 40°C  
 Ambient temperature 20°C

Note: Specifications subject to change

**MINI POWER - PACKS**  
 MINI CENTRALES **2G**

**TYPE DS - 12 VDC:**

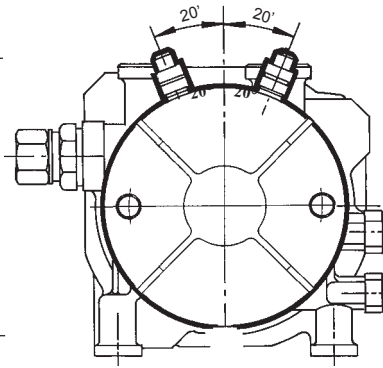
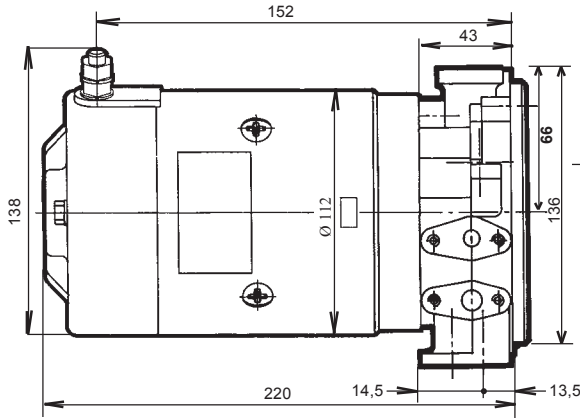




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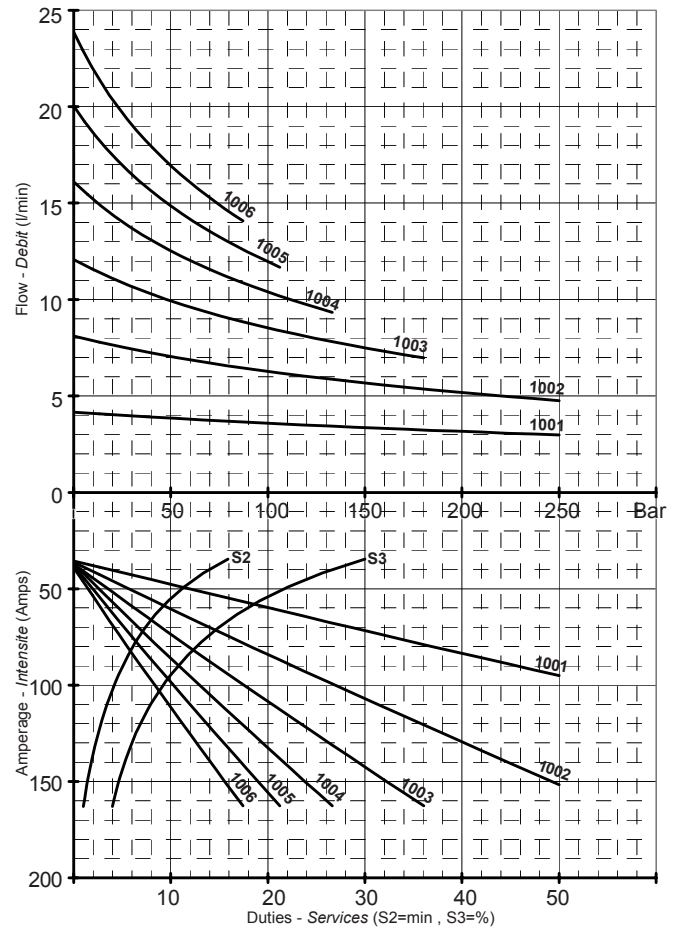
# MOTOR SPECIFICATIONS - DIRECT CURRENT

## SPECIFICATION MOTEUR - COURANT CONTINU



SPECIFICATIONS	
CODE CODE	<b>DS2</b>
VOLTAGE TENSION	<b>24VDC</b>
REFERENCE REFERENCE	<b>114134</b>
NOMINAL POWER PUISSANCE NOM.	<b>1,5 kW</b>
S3 S3	<b>10%</b>
PROTECTION PROTECTION	<b>IP44</b>
MASS MASSE	<b>7,5 Kg</b>

PUMPS POMPES		PRESSURE - PRESSION DUTIES - SERVICES							
		5 bar 72 PSI	50 bar 725 PSI	100 bar 1450 PSI	150 bar 2175 PSI	175 bar 2540 PSI	200 bar 2900 PSI	225 bar 3260 PSI	250 bar 3630 PSI
1001	Q	4,1	3,9	3,6	3,4	3,3	3,2	3,1	3
	I	36,9	47,7	59,8	71,8	77,7	83,5	89,3	95
	S2	15	11,7	9,1	7,1	6,4	5,7	5,1	4,6
	S3	28,5	22,7	18	14,5	13,1	11,9	10,9	9,9
1002	Q	8	7	6,3	5,7	5,4	5,2	5	4,8
	I	38,8	60,5	84,1	107	118,2	129,5	140,6	151,7
	S2	14,4	8,9	5,6	3,6	2,9	2,3	1,8	1,4
	S3	27,4	17,7	11,8	8,3	7,1	6	5,2	4,5
1003	Q	11,8	9,9	8,5	7,5	7,1	180 bar max		
	I	40,7	73,6	108,4	142,5	159,2			
	S2	13,7	6,9	3,5	1,7	1,1			
	S3	26,2	14,1	8,1	5,1	4,2			
1004	Q	15,6	12,5	10,4	130 bar max				
	I	42	86,1	132,6					
	S2	13,3	5,4	2,2					
	S3	25,5	11,4	5,8					
1005	Q	19,3	14,9	12	105 bar max				
	I	44,1	98,4	155,7					
	S2	12,7	4,3	1,2					
	S3	24,4	9,4	4,3					
1006	Q	22,9	16,9	85 bar max					
	I	46,4	111,5						
	S2	12	3,3						
	S3	23,2	7,8						



- Q:** Flow (l/min) / Debit (l / min)
- I:** Amperage / Intensite en Amperes
- S1:** Continuous Duty / Service Continu
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- S3:** Intermittent Duty (10% of 10 min) / Service Intermittent (10% de 10 min)
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avis recommande  
 empfiehlt

SHELL TELLUST VISCOSITY : according to technical specifications  
 VISCOSITE : selon specifications techniques  
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Curves drawn using Shell Tellust T46  
 Viscosity of 46 cST (+/- 10%) at 40°C  
 Ambient temperature 20°C

Note: Specifications subject to change

**MINI POWER - PACKS**  
 MINI CENTRALES **2G**

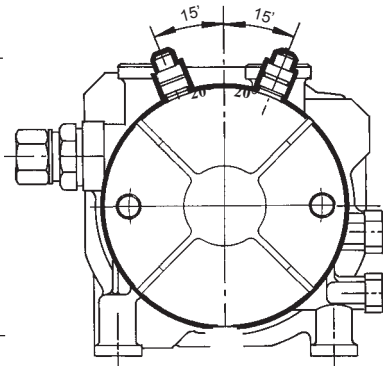
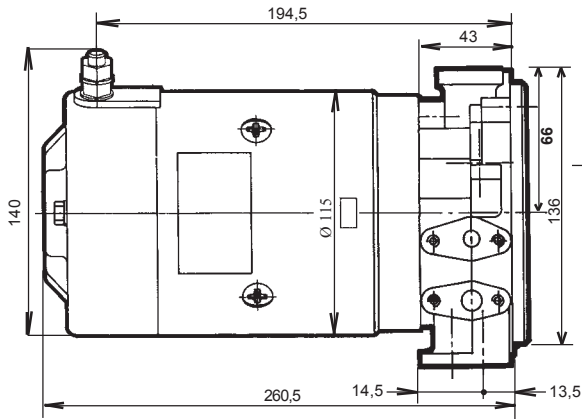
TYPE **DS - 24 VDC: 1,5kW**  
 TYPE



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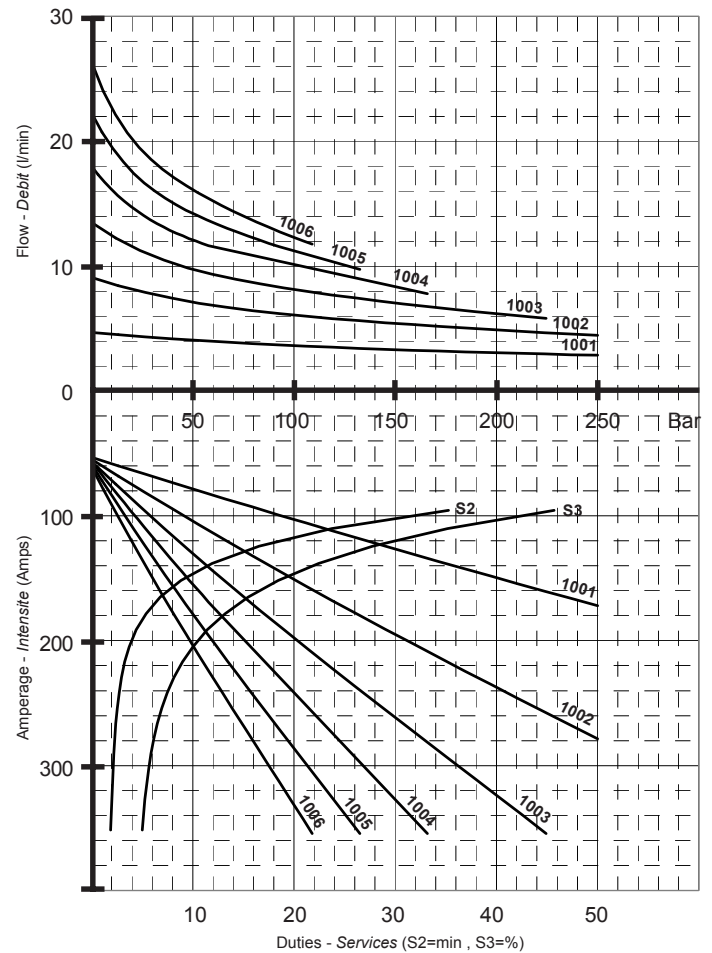
# MOTOR SPECIFICATIONS - DIRECT CURRENT

## SPECIFICATION MOTEUR - COURANT CONTINU



SPECIFICATIONS	
CODE CODE	<b>BK1</b>
VOLTAGE TENSION	<b>12VDC</b>
REFERENCE REFERENCE	114806
NOMINAL POWER PUISSANCE NOM.	<b>2,1 kW</b>
S3 S3	10%
PROTECTION PROTECTION	IP44
MASS MASSE	9,9 Kg

PUMPS POMPES	PRESSURE - PRESSION DUTIES - SERVICES								
	5 bar	50 bar	100 bar	150 bar	175 bar	200 bar	225 bar	250 bar	
	72 PSI	725 PSI	1450 PSI	2175 PSI	2540 PSI	2900 PSI	3260 PSI	3630 PSI	
1001	Q	4,6	4,1	3,6	3,3	3,2	3,1	3	2,9
	I	55,7	78,4	102,9	126,6	138,2	149,6	160,9	172
	S2	30	30	28,8	15,6	11,9	9,2	7,4	6
	S3	45	45	40	26,8	22,4	19	16,3	14,2
1002	Q	8,8	7,1	6,1	5,4	5,1	4,9	4,7	4,5
	I	59,7	104,2	150,8	195	216,3	237,3	258,1	278,6
	S2	30	27,8	9	4,2	3,3	2,8	2,5	2,3
	S3	45	39	18,7	11	9	7,7	6,8	6,2
1003	Q	12,9	9,7	8,1	7	6,6	6,2	220 bar max	
	I	64	130,1	197,8	261,5	292,6	323,6		
	S2	30	14,3	4,1	2,5	2,2	2		
	S3	45	25,3	10,7	6,7	5,8	5,3		
1004	Q	17	12,1	9,8	8,2	165 bar max			
	I	66,8	154,6	243	327,3				
	S2	30	8,3	2,7	2				
	S3	45	17,7	7,4	5,3				
1005	Q	20,8	14,2	11,2	130 bar max				
	I	71,1	178,5	285,9					
	S2	30	5,4	2,3					
	S3	45	13,2	6					
1006	Q	24,3	16,1	12,3	105 bar max				
	I	76	203,5	331,4					
	S2	30	3,8	2					
	S3	45	10,1	5,2					



- Q:** Flow (l/min) / Debit (l / min)
- I:** Amperage / Intensite en Amperes
- S1:** Continuous Duty / Service Continu
- S2:** Temporary Duty (min) / Service Temporaire (min)
- S3:** Intermittent Duty (10% of 10 min) / Service Intermittent (10% de 10 min)
- ID:** Starting Amperage / Intensite de demarrage:

advises  
recommande  
empfiehlt

Lubrifiants

VISCOSITY : according to technical specifications  
 SHELL TELLUST VISCOSITE : selon specifications techniques  
 VISKOSITÄT : gemäß technischen Spezifikationen

Curves drawn using Shell Tellust T46  
 Viscosity of 46 cST (+/- 10%) at 40°C  
 Ambient temperature 20°C

Note: Specifications subject to change

**MINI POWER - PACKS**  
 MINI CENTRALES **2G**

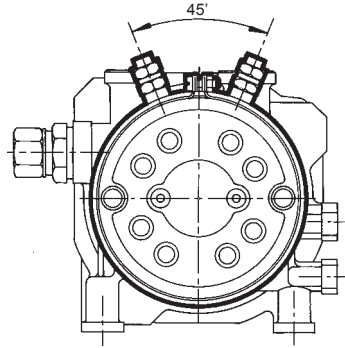
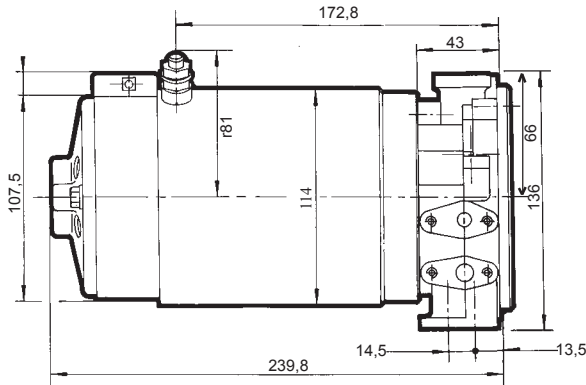
TYPE **BK - 12 VDC: 2,1 kW**  
 TYPE



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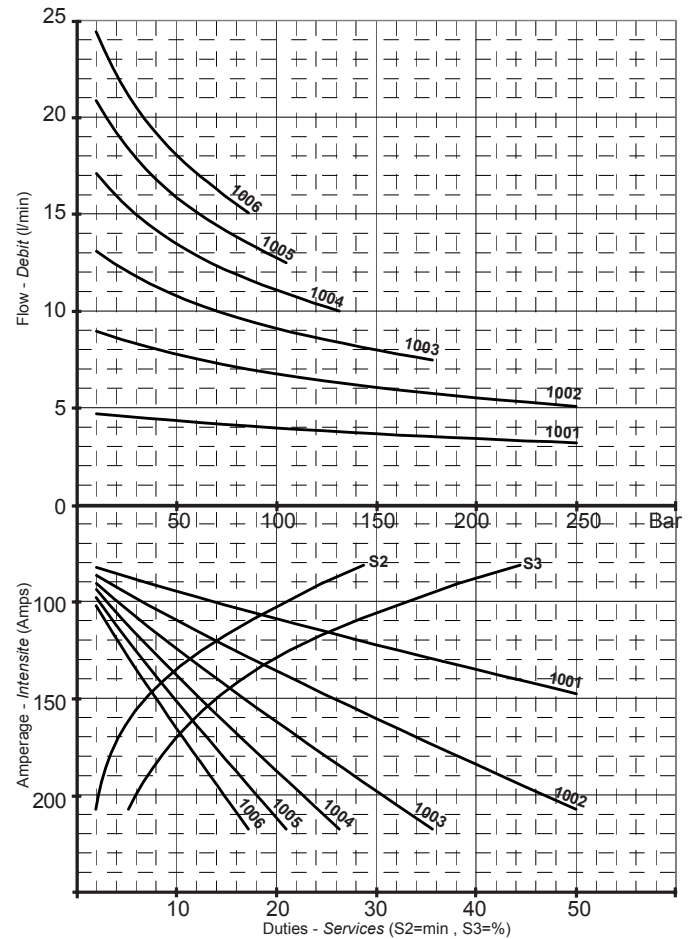
# MOTOR SPECIFICATIONS - DIRECT CURRENT

## SPECIFICATION MOTEUR - COURANT CONTINU



SPECIFICATIONS	
CODE CODE	<b>BK2</b>
VOLTAGE TENSION	<b>24VDC</b>
REFERENCE REFERENCE	<b>113349</b>
NOMINAL POWER PUISSANCE NOM.	<b>2,2 kW</b>
S3 S3	<b>10%</b>
PROTECTION PROTECTION	<b>IP44</b>
MASS MASSE	<b>7,4 Kg</b>

PUMPS POMPES		PRESSURE - PRESSION DUTIES - SERVICES							
		5 bar 72 PSI	50 bar 725 PSI	100 bar 1450 PSI	150 bar 2175 PSI	175 bar 2540 PSI	200 bar 2900 PSI	225 bar 3260 PSI	250 bar 3630 PSI
1001	Q	4,7	4,3	4	3,6	3,5	3,4	3,3	3,2
	I	31	45	59	73	79	86	92	98
	S2	29	23,1	17,8	13,4	11,6	10	8,6	7,4
	S3	44,8	36,1	28,5	22,5	20,1	18	16,2	14,6
1002	Q	9,1	7,8	6,8	6	5,8	5,5	5,3	5,1
	I	34	60	86	111	123	135	146	158
	S2	27,7	17,5	9,8	5,4	4	3,1	2,4	2
	S3	42,8	28,1	17,8	11,8	9,7	7,9	6,4	5,2
1003	Q	13,5	10,8	9,1	8	7,5	175 bar max		
	I	37	75	113	148	166			
	S2	26,5	12,8	5,2	2,3	1,7			
	S3	41	21,7	11,5	6,2	4,6			
1004	Q	17,8	13,5	11,1	130 bar max				
	I	38	89	138					
	S2	25,8	9,3	2,9					
	S3	40	17,2	7,5					
1005	Q	21,8	15,9	12,5	105 bar max				
	I	41	102	168					
	S2	24,7	6,7	1,7					
	S3	38,5	13,7	4,5					
1006	Q	25,7	18,1	85 bar max					
	I	44	116						
	S2	23,6	4,8						
	S3	36,8	10,9						



- Q:** Flow (l/min) / Debit (l / min)
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- S3:** Intermittent Duty (10% of 10 min) / Service Intermittent (10% de 10 min)
- ID:** Starting Amperage / Intensite de demarrage:

advises  
 recommande  
 empfiehlt

**Lubrificants**

VISCOSITY : according to technical specifications  
 VISCOISITE : selon spécifications techniques  
 VISKOSITÄT : gemäß technischen Spezifikationen

Curves drawn using Shell Tellus T46  
 Viscosity of 46 cST (+/- 10%) at 40°C  
 Ambient temperature 20°C

Note: Specifications subject to change

**MINI POWER - PACKS**  
 MINI CENTRALES **2G**

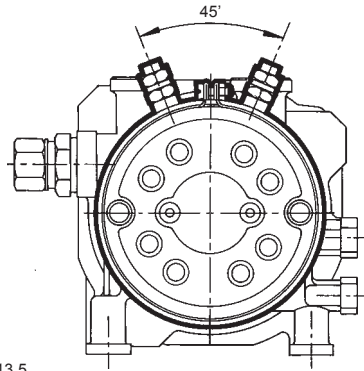
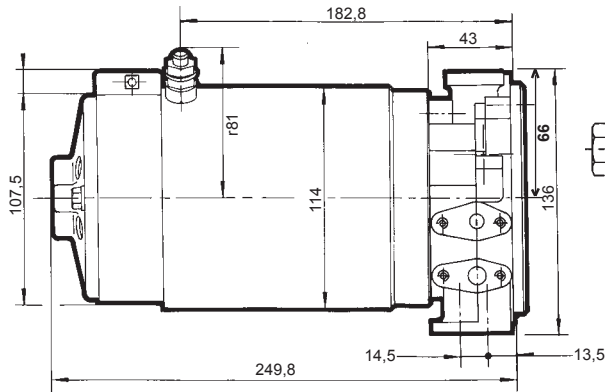
TYPE **BK - 24 VDC: 2,2 kW**  
 TYPE



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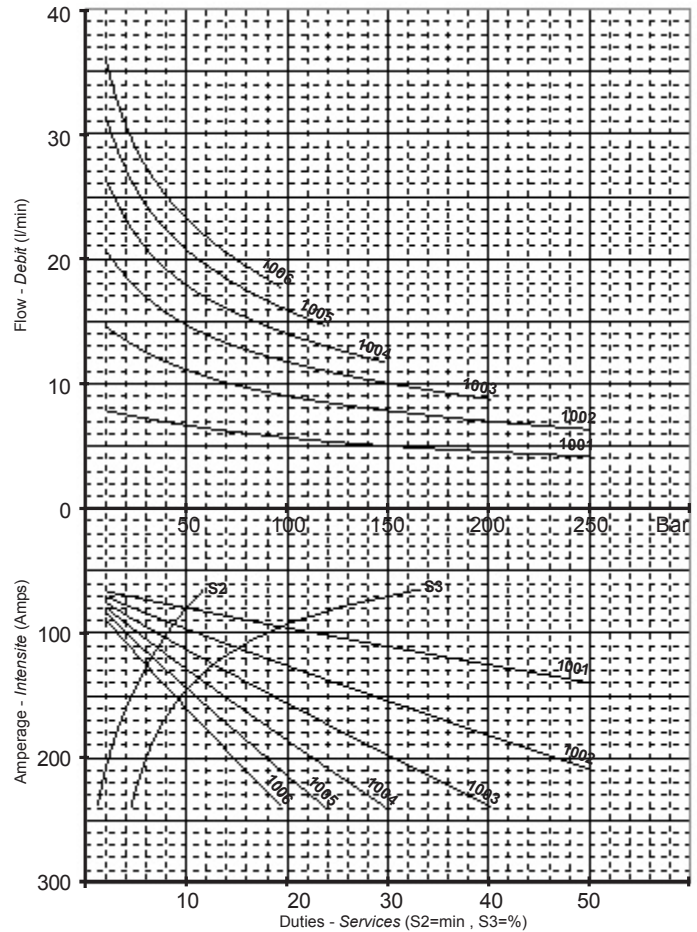
# MOTOR SPECIFICATIONS - DIRECT CURRENT

## SPECIFICATION MOTEUR - COURANT CONTINU



SPECIFICATIONS	
CODE CODE	<b>BS2</b>
VOLTAGE TENSION	<b>24VDC</b>
REFERENCE REFERENCE	113305
NOMINAL POWER PUISSANCE NOM.	<b>2,2 kW</b>
S3 S3	10%
PROTECTION PROTECTION	IP44
MASS MASSE	8,4 Kg

PUMPS POMPES	PRESSURE - PRESSION DUTIES - SERVICES								
	5 bar	50 bar	100 bar	150 bar	175 bar	200 bar	225 bar	250 bar	
	72 PSI	725 PSI	1450 PSI	2175 PSI	2540 PSI	2900 PSI	3260 PSI	3630 PSI	
1001	Q	8	6,7	5,7	5	4,8	4,5	4,4	4,2
	I	65	80	96	111	119	126	133	140
	S2	11,7	10	8,5	7,2	6,6	6,1	5,6	5,2
	S3	33,2	24,8	19,1	15,3	13,8	12,6	11,6	10,6
1002	Q	15,2	11,1	9	7,8	7,4	7	6,6	6,3
	I	68	97	127	155	169	182	196	210
	S2	11,4	8,4	6,1	4,3	3,6	3	2,4	2
	S3	31,5	18,8	12,5	9,1	7,9	7	6,2	5,6
1003	Q	21,9	14,7	11,8	10	9,4	8,8	200 bar max	
	I	71	114	157	198	219	239		
	S2	11	7	4,2	2,3	1,7	1,2		
	S3	29,6	14,8	8,9	6,1	5,2	4,5		
1004	Q	28,4	17,9	14	145 bar max				
	I	73	129	186					
	S2	10,8	5,9	2,8					
	S3	28,4	12,1	6,7					
1005	Q	34,4	20,7	15,9	115 bar max				
	I	76	145	215					
	S2	10,4	4,9	1,8					
	S3	26,9	10,1	5,4					
1006	Q	39,7	23,3	95 bar max					
	I	79	161						
	S2	10,1	4						
	S3	25,3	8,5						



- Q:** Flow (l/min) / Debit (l / min)
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- S3:** Intermittent Duty (10% of 10 min) / Service Intermittent (10% de 10 min)
- ID:** Starting Amperage / Intensite de demarrage:

SHELL TELLUST  
 VISCOSITY : according to technical specifications  
 VISCOSITE : selon specifications techniques  
 VISKOSITAT : gemäß technischen Spezifikationen

Curves drawn using Shell Tellust T46  
 Viscosity of 46 cSt (+/- 10%) at 40°C  
 Ambient temperature 20°C

Note: Specifications subject to change

**MINI POWER - PACKS**  
 MINI CENTRALES **2G**

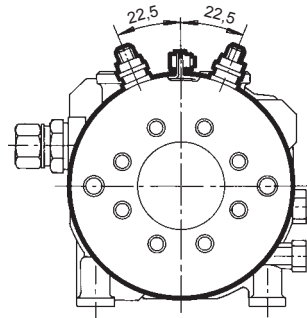
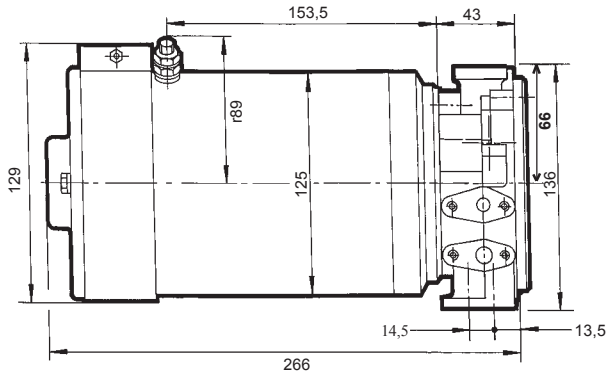
**TYPE BS - 24 VDC: 2,2kW**



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 Fax: (905) 791-7322

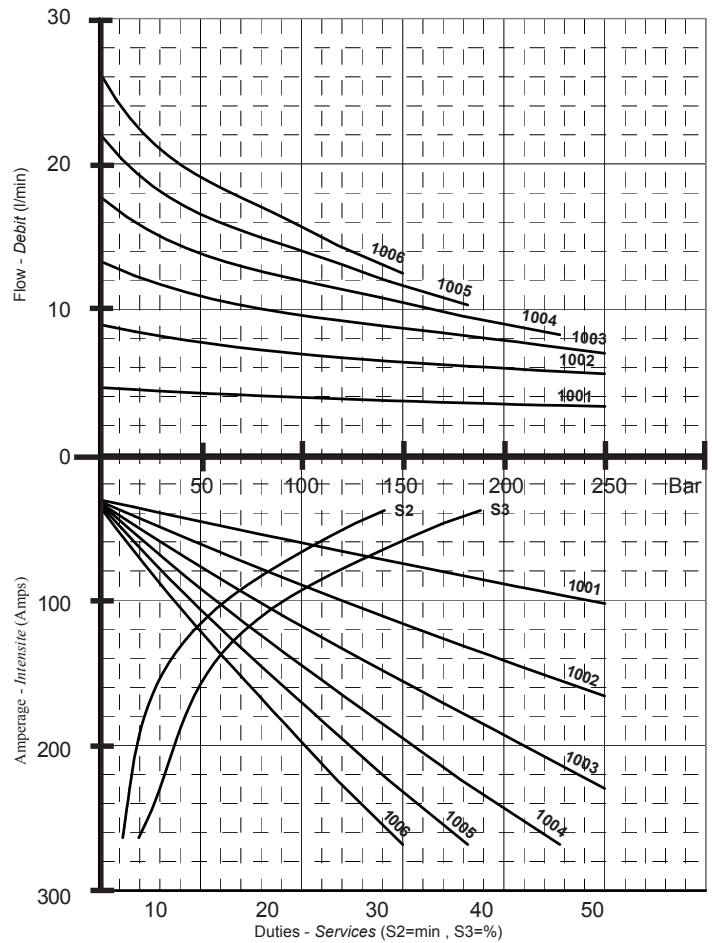
# MOTOR SPECIFICATIONS - DIRECT CURRENT

## SPECIFICATION MOTEUR - COURANT CONTINU



SPECIFICATIONS	
CODE CODE	<b>CI2</b>
VOLTAGE TENSION	<b>24VDC</b>
REFERENCE REFERENCE	111895
NOMINAL POWER PUISSANCE NOM.	<b>3 kW</b>
S3 S3	15%
PROTECTION PROTECTION	IP44
MASS MASSE	13 Kg

PUMPS POMPES		PRESSURE - PRESSION DUTIES - SERVICES							
		5 bar	50 bar	100 bar	150 bar	175 bar	200 bar	225 bar	250 bar
		72 PSI	725 PSI	1450 PSI	2175 PSI	2540 PSI	2900 PSI	3260 PSI	3630 PSI
1001	Q	4,6	4,2	3,9	3,7	3,6	3,5	3,4	3,3
	I	32,5	45,9	60,6	75	82	88,9	95,7	102,4
	S2	30	25,7	21,6	18	16,3	14,8	13,4	12,2
	S3	41,6	34,5	29,6	25,1	23	21,1	19,4	17,8
1002	Q	8,8	7,7	6,9	6,4	6,1	5,9	5,7	5,6
	I	34,8	61,4	89,6	116,2	129	141,5	153,8	166
	S2	29,7	21,4	14,7	10	8,3	7	6	5,2
	S3	39,8	29,3	20,9	15,1	13,1	11,6	10,3	9,4
1003	Q	13	10,9	9,6	8,7	8,3	7,9	7,4	7
	I	37,4	77,1	118	155,9	174,4	192,8	211,3	229,6
	S2	28,6	17,5	9,7	5,9	4,7	4	3,4	3
	S3	38,2	24,4	14,8	10,2	8,8	7,8	6,9	6
1004	Q	17,2	13,8	12	10,5	9,7	8,9	8,3	225 bar max
	I	39	92	145	195,1	220	244,3	266,2	
	S2	27,9	14,2	6,7	3,9	3,2	2,7	2,3	
	S3	37,4	20,3	11,2	7,7	6,5	5,2	3,7	
1005	Q	21,3	16,6	14	11,6	10,5	180 bar max		
	I	41,6	106,5	170,5	232,5	261,1			
	S2	27,1	11,5	4,9	2,9	2,4			
	S3	36,2	17	9,1	5,8	4,1			
1006	Q	25,1	19,1	15,7	12,5	150 bar max			
	I	44,5	121,5	197,6	268,3				
	S2	26,2	9,3	3,8	2,2				
	S3	35,1	14,2	7,6	3,6				



- Q:** Flow (l/min) / Debit (l / min)
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- S3:** Intermittent Duty (10% of 10 min) / Service Intermittent (10% de 10 min)
- ID:** Starting Amperage / Intensite de demarrage: 900 Amps

HPI advises recommending Shell  
 SHELL TELLUST VISCOSITE : according to technical specifications  
 VISCOSITE : selon specifications techniques  
 VISCOSITÄT : gemäß technischen Spezifikationen

Curves drawn using Shell Tellus T46  
 Viscosity of 46 cST (+/- 10%) at 40°C  
 Ambient temperature 20°C

Note: Specifications subject to change

**MINI POWER - PACKS**  
 MINI CENTRALES **2G**

TYPE  
 TYPE

**CI - 24 VDC: 3 kW**

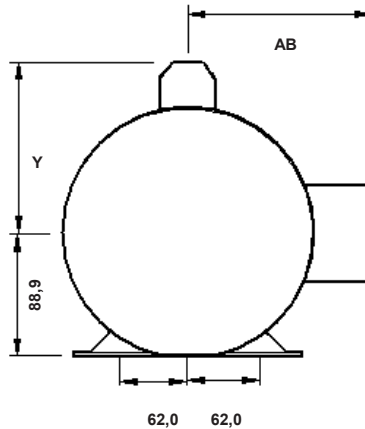
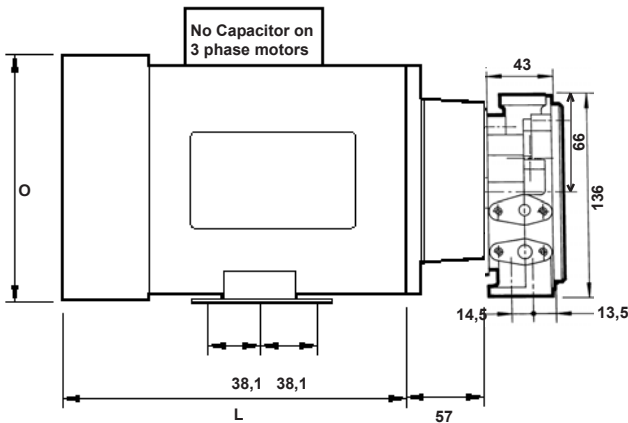




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# MOTOR SPECIFICATIONS - AC CURRENT

## SPECIFICATION MOTEUR - COURANT CA



MODEL	Capacity	P3	Nominal Flow	
	cm <sup>3</sup> /rev		Bar	1725 RPM l/min
MODELE	Capacité	P3	Debit Nominal	
	cm <sup>3</sup> /t	Bar	1725 t/min l/min	3450 t/min l/min
1001	1,02	300	1,7	3,4
1002	2,05	300	3,4	6,9
1003	3,07	300	5,1	10,4
1004	4,09	250	6,8	13,9
1005	5,12	200	8,6	17,5
1006	6,14	150	10,4	21,0

Note! Above flow ratings are calculated using the maximum continuous pressure and volumetric efficiency at the specified RPM. Consult performance graphs for further info.

MOTOR MOTEUR		115 / 230V, SINGLE PHASE SPECIFICATIONS - SPECIFICATION							
HP	RPM t/min	L	O	Y	AB	Amps Intensite	Weight Masse	Reference Reference	
0.25	1725	194	167	111	117	2,1	9,6	101053C/L	
	3450								
0.33	1725	227	181	125	135	2,9	9,6	M002256C/L <sup>6</sup>	
	3600	207	162	113	na	2,2	9,1	G534	
0.50	1725	227	181	125	135	3,9	10,9	M009086C/L <sup>6</sup>	
	3450	223	180	141	136	3,6	10	110399C/L	
0.75	1725	235	180	141	135	5,4	11,8	110087C/L <sup>6,7</sup>	
	3600	261		123	142	5,3	12,7	D312	
1.00	1725	248	180	141	136	7,0	15,9	114466 <sup>6</sup>	
	3450	248	180	141	136	6,0	13,6	114475C/L <sup>6</sup>	
1.50	1725	273	180	119	135	8,6	18,6	110089C/L <sup>6,7</sup>	
	3450	261	180	134	135	8,5	15,5	110909	
2.00	1725	297	180	126	135	9,2	19,5	110090C/L <sup>6,7,8</sup>	
	3450	286	180	134	135	10	20,9	113931	
3.00	1725								
	3450	297	182	128	136	14	21	120341MOD <sup>8</sup>	

MOTOR MOTEUR		230 / 460V, THREE PHASE SPECIFICATIONS - SPECIFICATION							
HP	RPM t/min	L	O	Y	AB	Amps Intensite	Weight Masse	Reference Reference	
0.25	1725	194	167	0	117	0,7	8,7	101078C/L	
	3450								
0.33	1725	194	168	0	117	0,8	8,2	101079C/L	
	3600	213	172	0	na	0,9	9,5	D390	
0.50	1725	201	169	0	117	1,0	10,9	100913C/L	
	3450	212	172	0	na	0,75	11,4	110143C/L	
0.75	1725	223	183	0	135	1,4	10	110034C/L	
	3600	248		0	142	1,6	10,5	D392	
1.00	1725	235	183	0	135	1,9	11,4	110035CL	
	3450	223	183	0	133	1,6	10,9	110181	
1.50	1725	248	180	0	135	2,5	13,6	110444C/L	
	3450	248	180	0	133	2,1	13,2	110917	
2.00	1725	272	180	0	135	3,1	15,7	113026C/L	
	3450	261	180	0	133	2,8	15,5	113927	
3.00	1725								
	3450	273	180	0	135	4,0	17,1	114615	
5.00	1725	0	0	0	0	0	0		
	3450	299	182	0	135	6,5	20,7	116417	

MOTOR MOTEUR		575V, THREE PHASE SPECIFICATIONS - SPECIFICATION							
HP	RPM t/min	L	O	Y	AB	Amps Intensite	Weight Masse	Reference Reference	
0.25	1725	194	167	0	117	0,5	6,8	101050C/L	
	3450								
0.33	1725	194	167	0	117	0,6	8,7	101052C/L	
	3600	na	175	0	131	0,8	9,5	K702	
0.50	1725	201	169	0	117	na	na	101907C/L	
	3600	248	187	0	142	0,9	na	K704	
0.75	1725	223	183	0	135	1,1	10	110178C/L	
	3600	248	187	0	142	1,3	na	K706	
1.00	1725	248	180	0	136	1,4	14,1	114467 <sup>1</sup>	
	3450	223	180	0	136	1,3	10,9	114468 <sup>1</sup>	
1.50	1725	248	180	0	135	2,0	13,6	110893C/L	
	3600	248	187	0	142	1,85	na	K721	
2.00	1725	261	180	0	136	2,5	16,8	114327C/L	
	3450	261	180	0	135	2,2	15,5	111611C/L	
3.00	1800	324	187	0	142	3,4	20	G591	
	3450	273	180	0	136	3,2	19,6	115597	
5.00	1725	0	0	0	0	0	0	160280MOD <sup>5</sup>	
	3450	0	0	0	0	0	0	117026	

Specifications subject to change, we reserve the right to substitute motors, please advise sales dept of any specific requirements.  
Amp ratings are at the "high" voltage.

**Footnotes**

1. Dual rated 50/60hz (2850/3450 RPM) (1425/1725 RPM)
5. 182 Frame Modified to 56C face
6. Manual thermal protection
7. Red industrial motor
8. 230V only

Pump Flow Output	HP Required for continuous duty.	Common Conversion Factors
LPM = $\frac{\text{cm}^3/\text{rev} \times \text{RPM} \times \text{Eff}(v)}{1000}$	HP = $\frac{\text{LPM} \times \text{Bar}}{402}$	GPM = LPM / 3.785
GPM = $\frac{\text{cm}^3/\text{rev} \times \text{RPM} \times \text{Eff}(v)}{3785}$	HP = $\frac{\text{GPM} \times \text{PSI}}{1542}$	psi = Bar x 14.5
	Note! efficiency is already taken into account in above formulas.	lbs = Kg x 2.2
		In <sup>3</sup> = cm <sup>3</sup> / 16.39
		HP = kW / 0.745
		CFM = (l/s) / 0.467

Eff(v) may be estimated at between 0.93 and 0.98 Efficiency increases with pump size and RPM.

**MINI POWER - PACKS**  
MINI CENTRALES **2G**

**TYPE AC-NEMA FRAME**

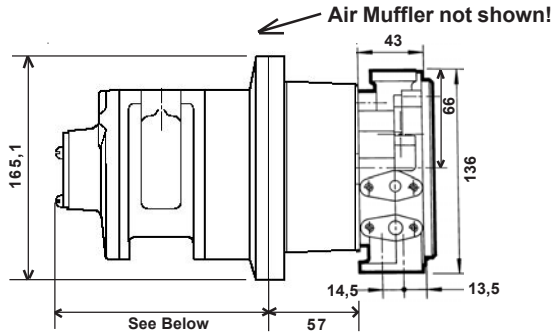


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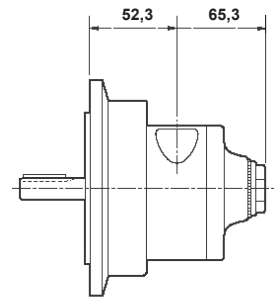
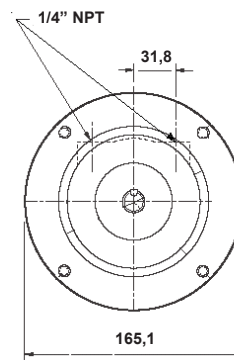
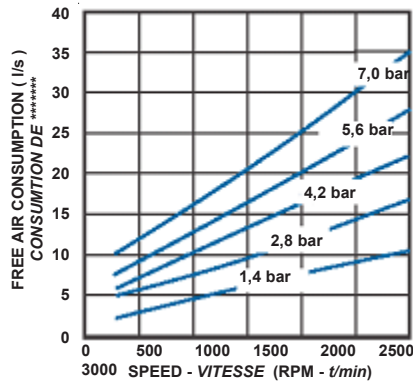
## MOTOR SPECIFICATIONS - AIR MOTORS SPECIFICATION MOTEUR - AIR MOTEUR

MODEL	Capacity	P3 Bar	Nominal Flow	
	cm <sup>3</sup> /rev		2500 RPM l/min	3000 RPM l/min
MODELE	Capacité cm <sup>3</sup> /t	P3 Bar	Debit Nominal 2500 t/min l/min	3000 t/min l/min
1001	1,02	300	2,3	2,9
1002	2,05	300	4,7	5,8
1003	3,07	300	7,0	8,8
1004	4,09	250	9,5	11,7
1005	5,12	200	12,1	14,8
1006	6,14	150	14,6	17,8

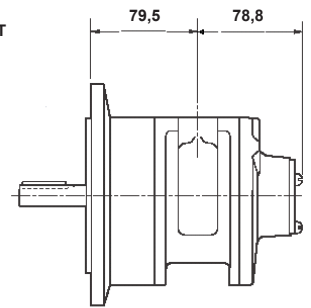
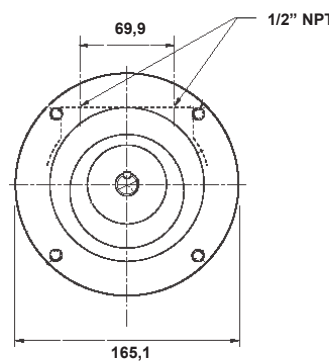
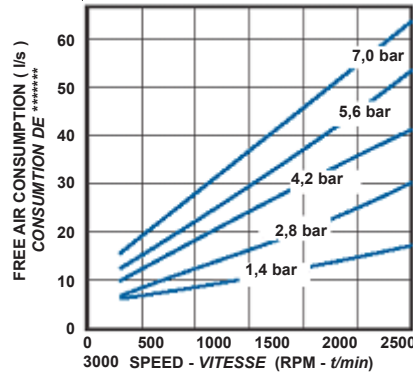
Note! Above flow ratings are calculated using the maximum continuous pressure and volumetric efficiency at the specified RPM. Consult performance graphs for further info.



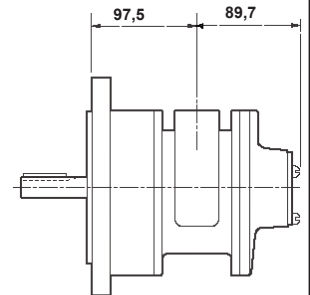
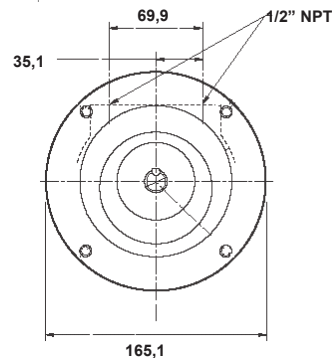
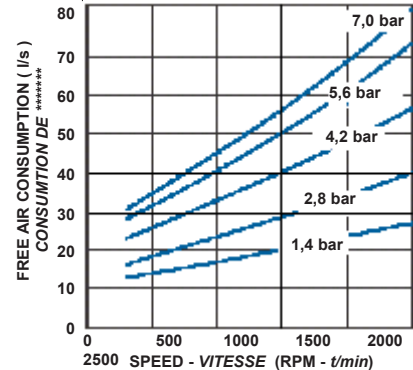
SPECIFICATIONS	
REFERENCE REFERENCE	4AM-NRV-50C -4VANE 4AM-NRV-70C -8VANE
MAXIMUM HP PUISSANCE MAXI	<b>1.7 HP</b>
MAX SPEED VITESSE MAXI	<b>3000 RPM</b>
MAX PRESSURE PRESSION MAXI	<b>6.9 BAR</b>
FRAME SIZE TAILLE	<b>56C</b>
MASS MASSE	<b>5,4 Kg</b>



SPECIFICATIONS	
REFERENCE REFERENCE	6AM-NRV-11A -4 VANE 6AM-NRV-22A -8 VANE
MAXIMUM HP PUISSANCE MAXI	<b>4.0 HP</b>
MAX SPEED VITESSE MAXI	<b>3000 RPM</b>
MAX PRESSURE PRESSION MAXI	<b>6.9 BAR</b>
FRAME SIZE TAILLE	<b>56C</b>
MASS MASSE	<b>10,8 Kg</b>



SPECIFICATIONS	
REFERENCE REFERENCE	8AM-NRV-28A -4 VANE 8AM-NRV-32A -8 VANE
MAXIMUM HP PUISSANCE MAXI	<b>5.0 HP</b>
MAX SPEED VITESSE MAXI	<b>2500 RPM</b>
MAX PRESSURE PRESSION MAXI	<b>6.9 BAR</b>
FRAME SIZE TAILLE	<b>145C</b>
MASS MASSE	<b>12,6 Kg</b>



**MINI POWER - PACKS** 2G  
 MINI CENTRALES

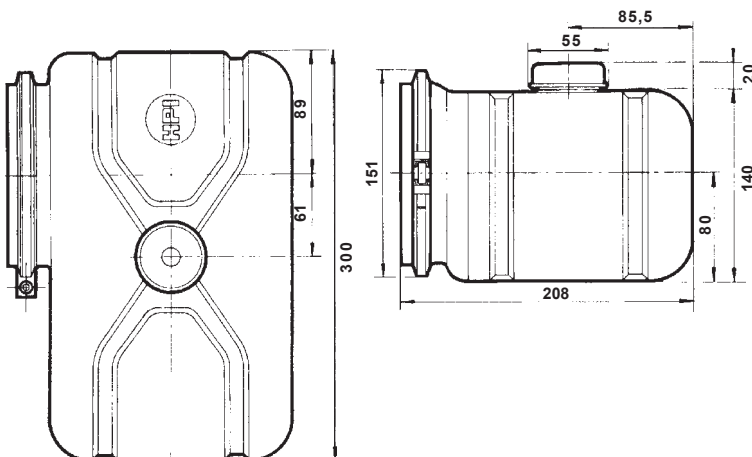
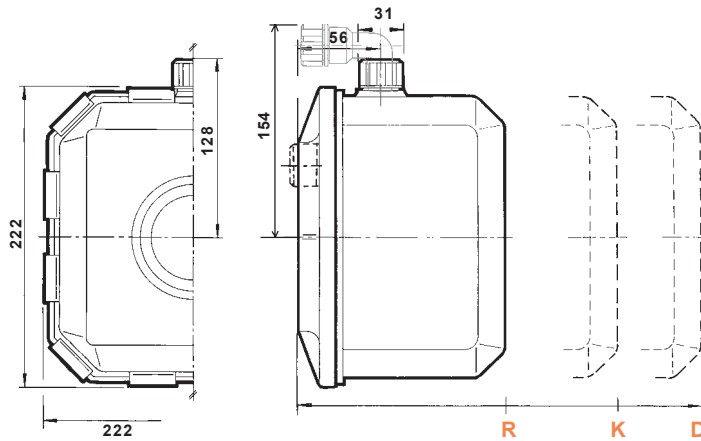
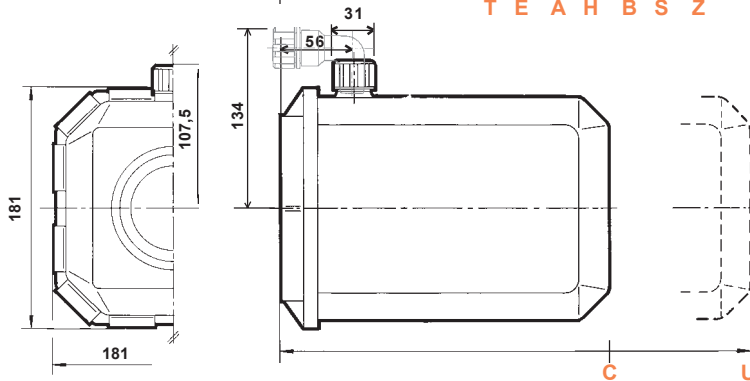
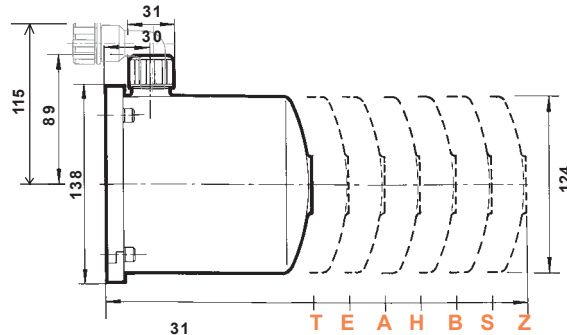
**TYPE AIR MOTORS**  
 TYPE MOTEUR L'A



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## RESERVOIRS - PLASTIC RESERVOIRS - PLASTIQUE

The information contained on this page is specific to hydraulic units assembled in North America. Volumes may differ for units assembled in France.



RESERVOIRS RÉSERVOIRS		USEABLE CAPACITY CAPACITÉS UTILES		
CODE CODE	TYPE TYPE	HORIZONTAL Horis	VERTICAL Veric	Dimensions Dimensions
T	1,1 L			105
E	1,5 L	1,06 L	0,58 L	142
A	2,0 L	1,21 L	0,97 L	187,5
H	2,5 L	1,60 L	1,56 L	238
B	3,0 L	1,89 L	2,05 L	278,5
S	4,0 L	2,62 L	3,23 L	384
Z	6,0 L	5,57 L	5,08 L	600

RESERVOIRS RÉSERVOIRS		USEABLE CAPACITY CAPACITÉS UTILES		
CODE CODE	TYPE TYPE	HORIZONTAL Horis	VERTICAL Veric	Dimensions Dimensions
C	5,0 L	3,75 L	3,22 L	220
U	6,0 L	4,64 L	4,61 L	275

Note! 56C face motor base must be raised 2 mm from mounting surface when used with C and U reservoirs.

RESERVOIRS RÉSERVOIRS		USEABLE CAPACITY CAPACITÉS UTILES		
CODE CODE	TYPE TYPE	HORIZONTAL Horis	VERTICAL Veric	Dimensions Dimensions
R	5,0 L	3,87 L	2,34 L	120
K	7,5 L	5,95 L	4,92 L	205
D	10,0 L	7,24 L	6,41 L	249

Note! 56C face motor base must be raised 23mm from mounting surface when used with R, K and D reservoirs.

RESERVOIRS RÉSERVOIRS		USEABLE CAPACITY CAPACITÉS UTILES		
CODE CODE	TYPE TYPE	HORIZONTAL Horis	VERTICAL Veric	Dimensions Dimensions
G	6,3 L	5,4 L		na

Usable Reservoir Capacity is the amount of oil that can be withdrawn from the tank using the standard suction strainer setup.

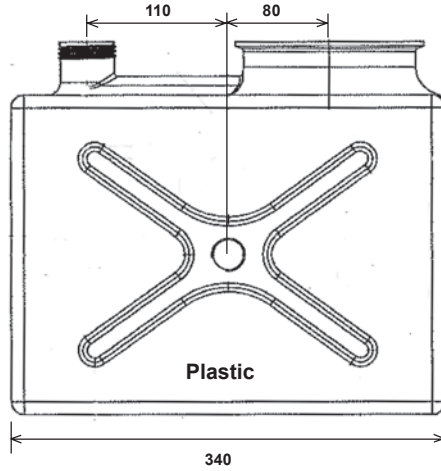
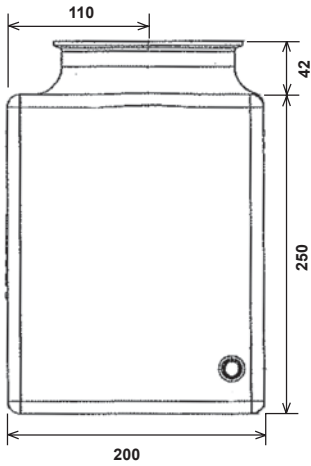
In vertical applications, the fill line is to the bottom of the filler elbow. Vertical capacity may be increased by sealing the filler elbow threads and repositioning the intake strainer.

**MINI POWER - PACKS** **2G**  
**MINI CENTRALES**

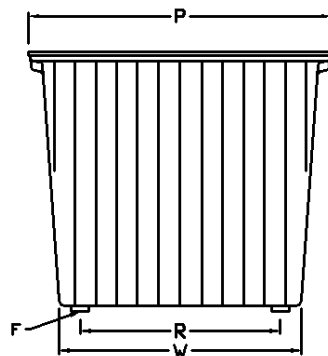
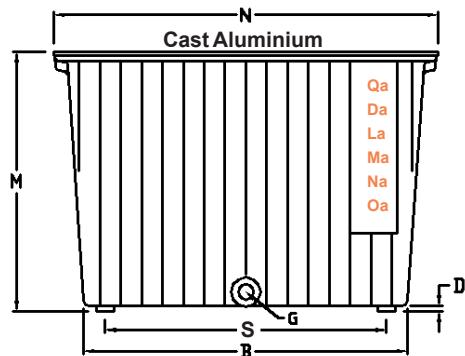
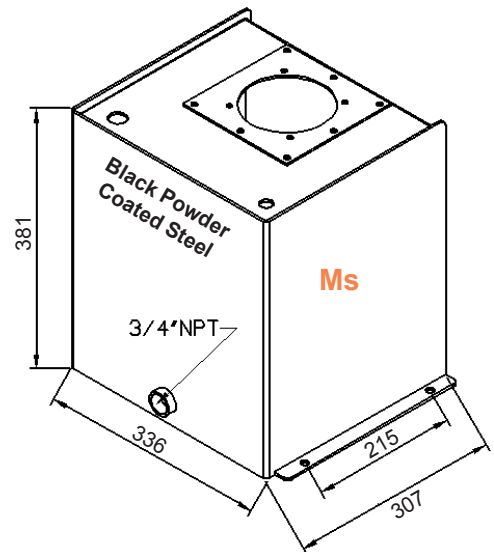
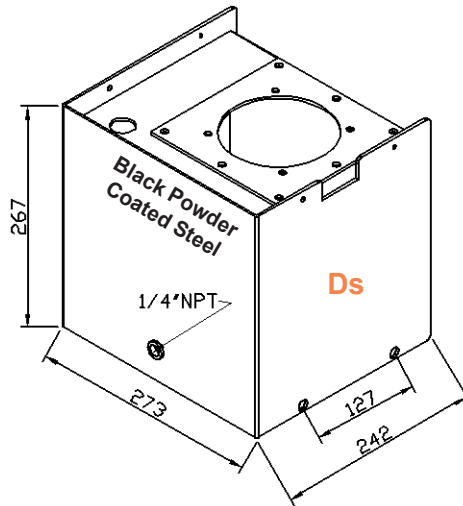
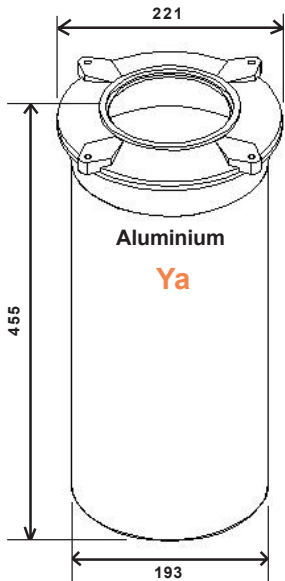


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## RESERVOIRS - MISC RESERVOIRS - MISC



RESERVOIRS RÉSERVOIRS		USEABLE CAPACITY CAPACITÉS UTILES		
CODE CODE	TYPE TYPE	HORIZONTAL Horis	VERTICAL Veric	Weight Masse
Y	14,0 L		12,7 L	2,5 Kg
Ya	12,0 L		10,0 L	2 Kg
Ds	12,0 L		10,7 L	9 Kg
Ms	33,0 L		30,4 L	16 Kg



RESERVOIRS RÉSERVOIRS		USEABLE CAPACITY CAPACITÉS UTILES		
CODE CODE	TYPE TYPE	HORIZONTAL Horis	VERTICAL Veric	Weight Masse
Qa	6,5 L		6,0 L	3 Kg
Da	12,0 L		10,0 L	4 Kg
La	18,0 L		15,0 L	6 Kg
Ma	30,0 L		27,0 L	8 Kg
Na	44,0 L		40,0 L	13 Kg
Oa	70,0 L		63,0 L	17 Kg

CODE CODE	DIMENSIONS									
	B	D	F	G	N	M	P	R	S	W
Qa	225	10	M6	3/8	260	187	220	160	200	185
Da	270	5	M8	3/8	310	227	240	155	225	200
La	315	5	M8	1/2	366	257	288	192	270	235
Ma	410	10	M10	1/2	490	292	340	176	326	260
Na	425	10	M10	1/2	515	323	415	241	341	325
Oa	510	10	M10	1/2	605	373	465	282,5	422,5	370

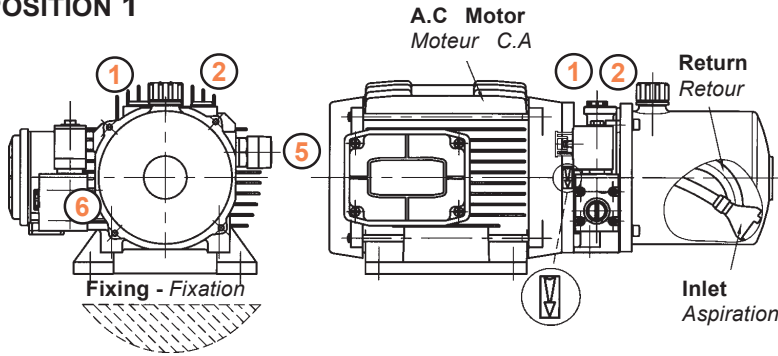
**MINI POWER - PACKS** 2G  
 MINI CENTRALES



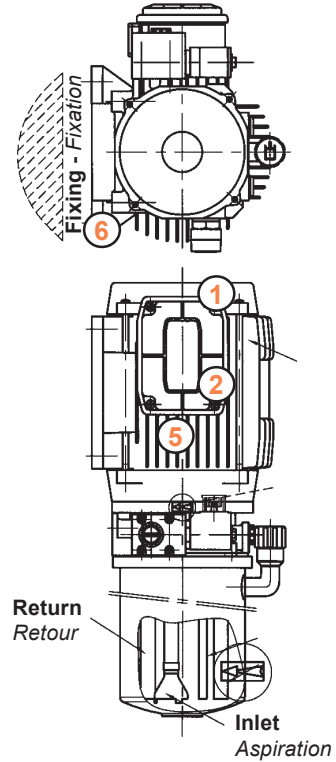
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# MOUNTING POSITIONS - ALTERNATING CURRENT POSITION DE MONTAGE - COURANT ALTERNATIF

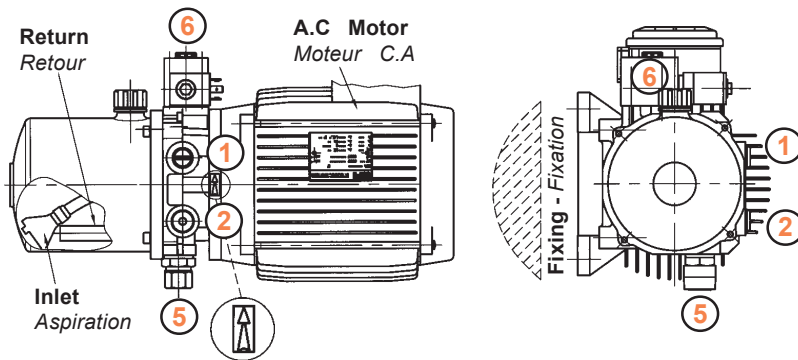
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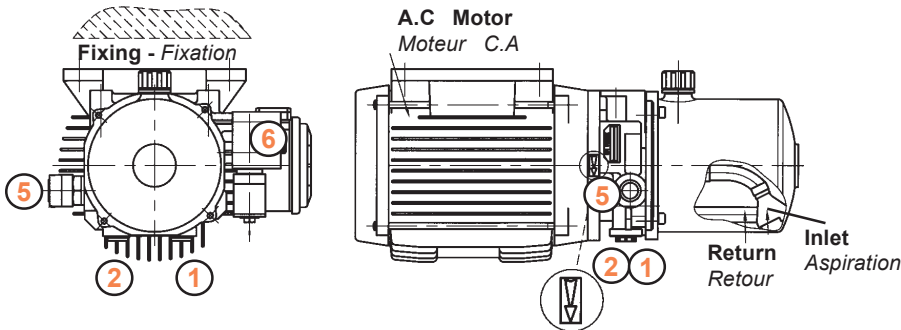
## POSITION 2



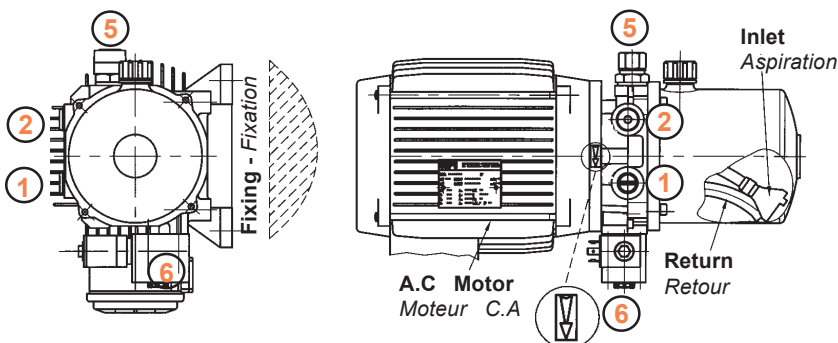
## POSITION 3



## POSITION 4



## POSITION 5



## LEGEND

- ① Pressure Port / Orifice Pression
- ② Return Port / Orifice Retour
- ⑤ Relief Valve / Limiteur de Pression
- ⑥ Auxillary Pressure Port

Note! Motor configuration may vary based upon model. Capacitor and junction box locations may differ. Please consult with the sales department for clarification.

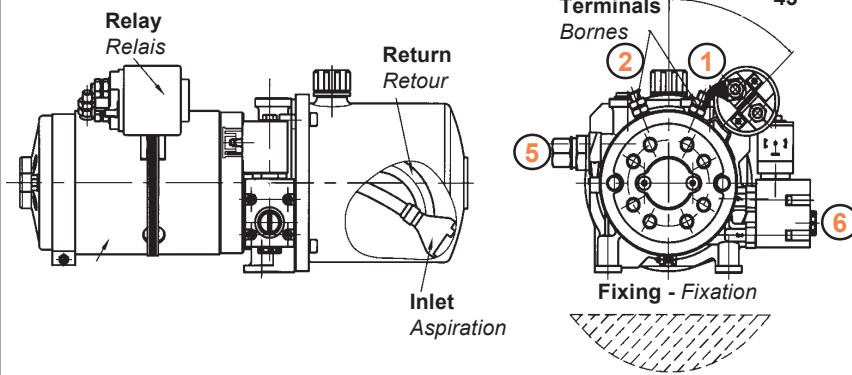




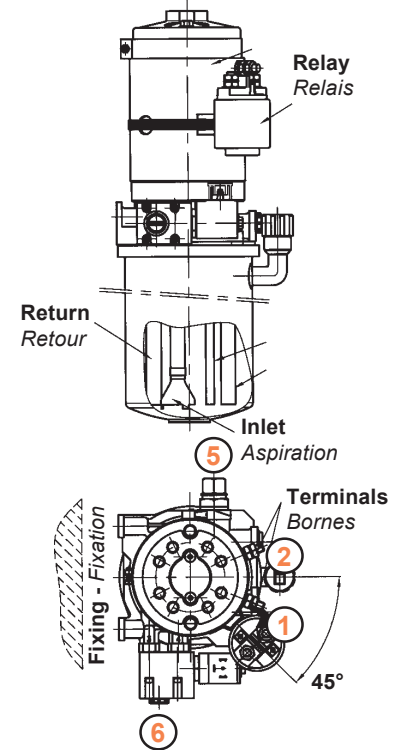
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**MOUNTING POSITIONS - DIRECT CURRENT**  
**POSITION DE MONTAGE - COURANT CONTINU**

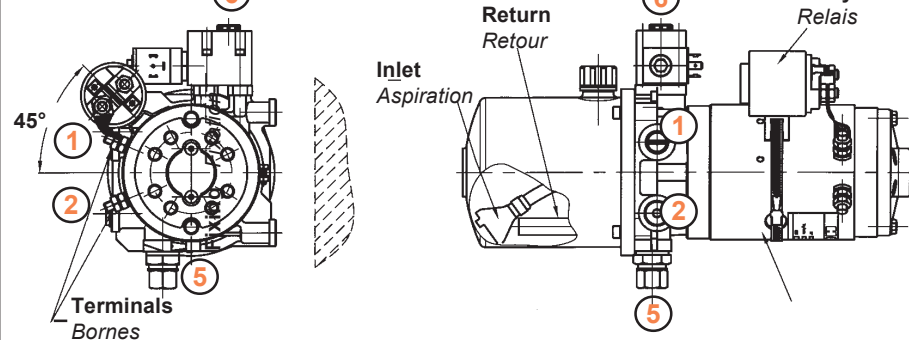
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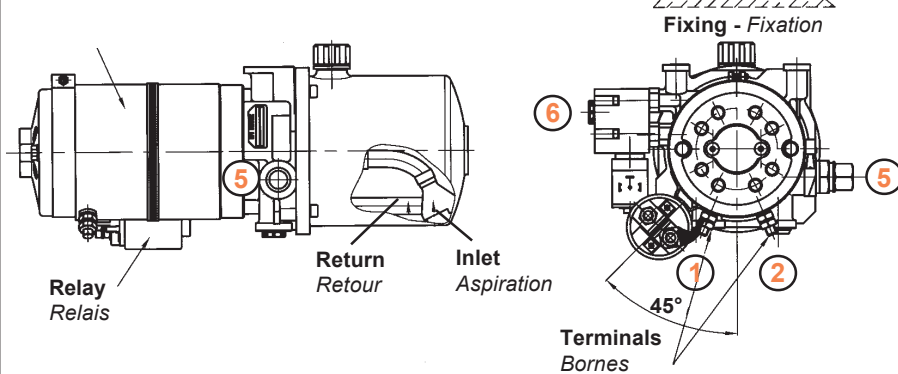
**POSITION 2**



**POSITION 3**



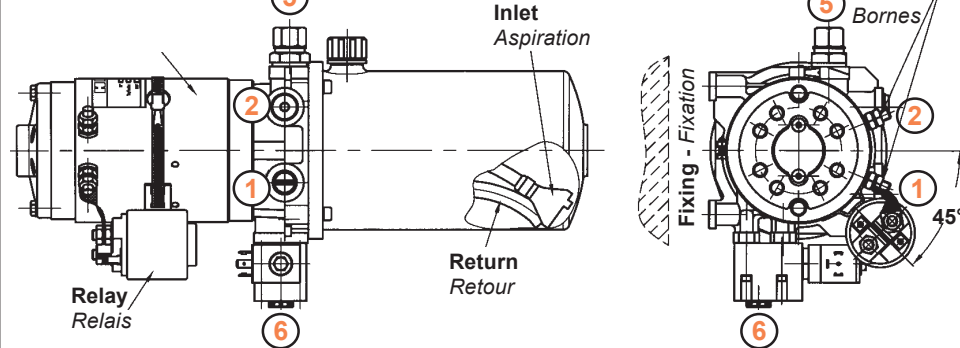
**POSITION 4**



**LEGEND**

- ① Pressure Port / Orifice Pression
- ② Return Port / Orifice Retour
- ⑤ Relief Valve / Limiteur de Pression
- ⑥ Auxillary Pressure Port

**POSITION 5**





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**VALVE MOUNTING ACCESSORIES**  
**ACCESSOIRES POUR MONTAGE**

<p><b>STANDARD MOUNTING CONFIGURATION</b></p> <p>MONTAGE STANDARD</p>		<p><b>OPTIONAL ACCESSORIES</b></p> <p>Port 1 &amp; 2 Adaptors      #6 JIC Male (Included as Standard)      1/4" NPT Female      #6 SAE Female</p>
<p>Mounting block for electro poppet valves. (1G and 2G)</p> <p>Montage avec bloc support electro-valve à clapet (1G et 2G)</p> <p>Reference:      10 l/min: K5091997      20 l/min: K5091998</p>		
<p>Mounting block for electro poppet valves. With auxiliary pressure port #6 (1G and 2G)</p> <p>Montage avec bloc support electro-valve à clapet (1G et 2G)</p> <p>Reference:      10 l/min: K5090149      20 l/min: K5090148</p>		



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**VALVE MOUNTING ACCESSORIES**  
**ACCESSOIRES POUR MONTAGE**

<p>3-way valve with free flow assembly.        (Dock-leveler)</p> <p><i>Clapet 3 voies à passage libre        (free flow)</i></p> <p>Reference: K5089114</p>		
<p>Mounting block for directional valve.        4 Way, 2 Position</p> <p><i>Montage avec Valve        4 Voies, 2 Positions</i></p> <p>Reference: K5090020</p>		
<p>Mounting block for directional valve.        4 Way, 3 Position</p> <p><i>Montage avec Valve        4 Voies, 3 Positions</i></p> <p>Reference: K5090020</p>		

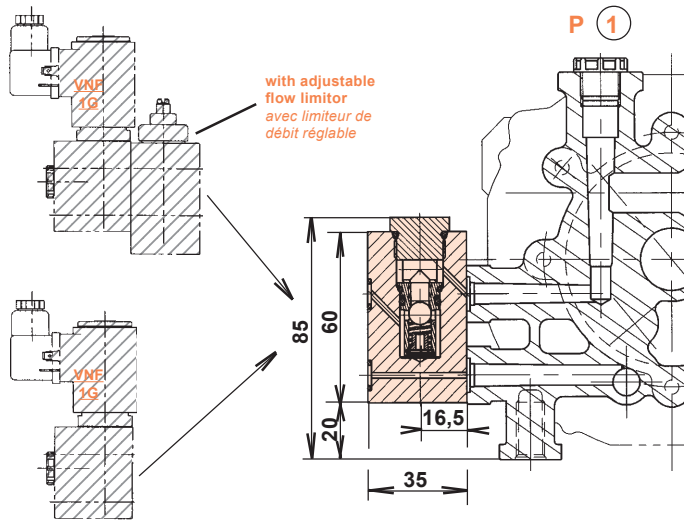


<p>External flow limiter assembly. (non adjustable)</p> <p><i>Limiteur de débit externe (Non Réglable)</i></p>		
<p>Adjustable flow limiter assembly.</p> <p><i>Limiteur de débit réglable</i></p>		
<p>Mounting block for two speed function. (1G and 2G)</p> <p><i>Montage avec bloc pour fonction bi - vitesse (1G et 2G)</i></p> <p>Reference:</p>		

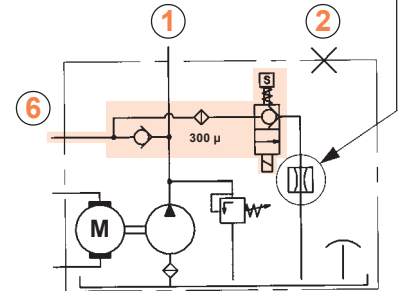


External check valve assembly.  
 (for use with 1G only)

Clapet anti-retour.

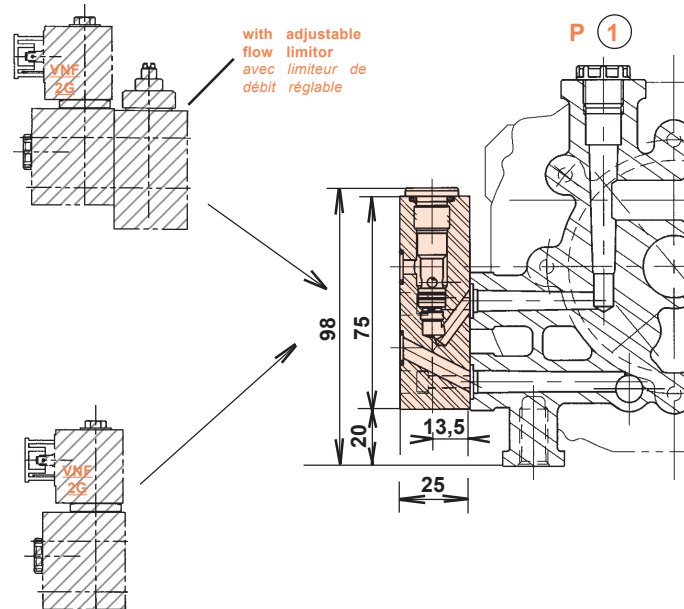


with or without flow limiter  
 avec ou sans limiteur de débit

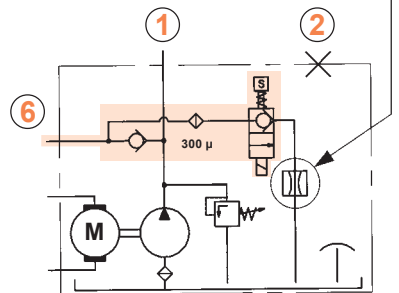


Check valve assembly  
 (for use with 2G only)

Clapet anti-retour



with or without flow limiter  
 avec ou sans limiteur de débit







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**VALVE MOUNTING ACCESSORIES**  
**ACCESSOIRES POUR MONTAGE**

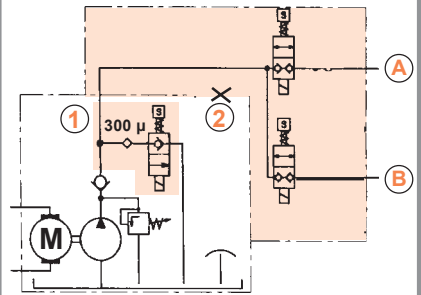
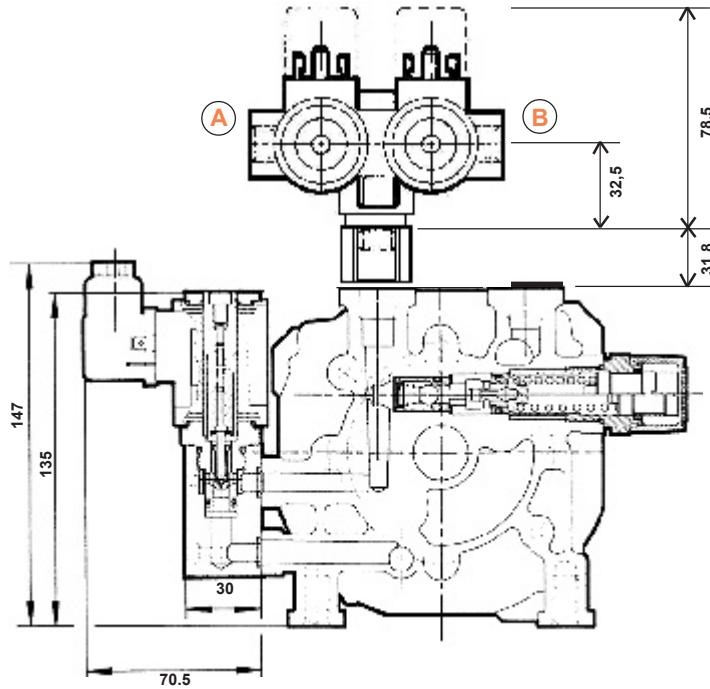
<p>Mounting block for Proportional valve ( 10 or 27 l/min )</p> <p>MONTAGE avec valve proportionnelle ( 10 ou 27 l/min )</p>	<p>OPTION : with flow restrictor on Port 4          OPTION : avec freineur sur Orifice 4</p>	<p>OPTION : with flow restrictor on Port 4          OPTION : avec freineur sur Orifice 4</p> <p>Shown with optional emergency decent valve.</p> <p>Avec Commande de secours</p>
<p>Manual decompression valve assembly.</p> <p>Commande manuelle de décompression</p> <p>Reference: K5091749</p>		



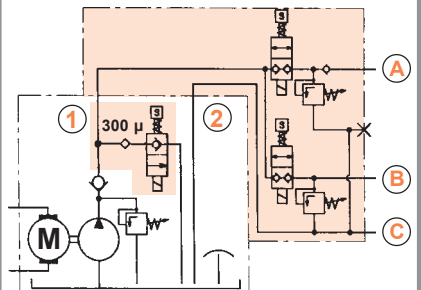
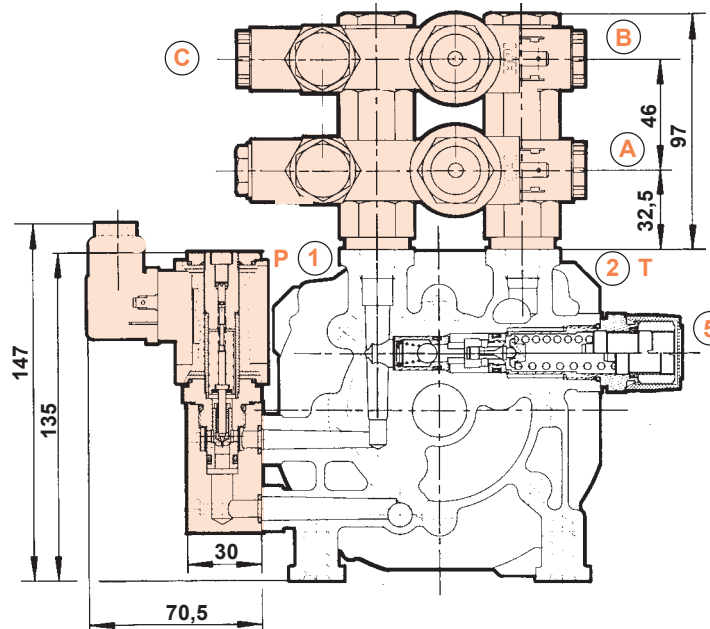
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**VALVE MOUNTING ACCESSORIES**  
**ACCESSOIRES POUR MONTAGE**

Mounting Block for  
 2 X single acting setup.



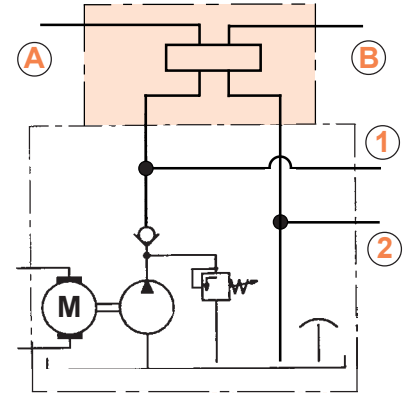
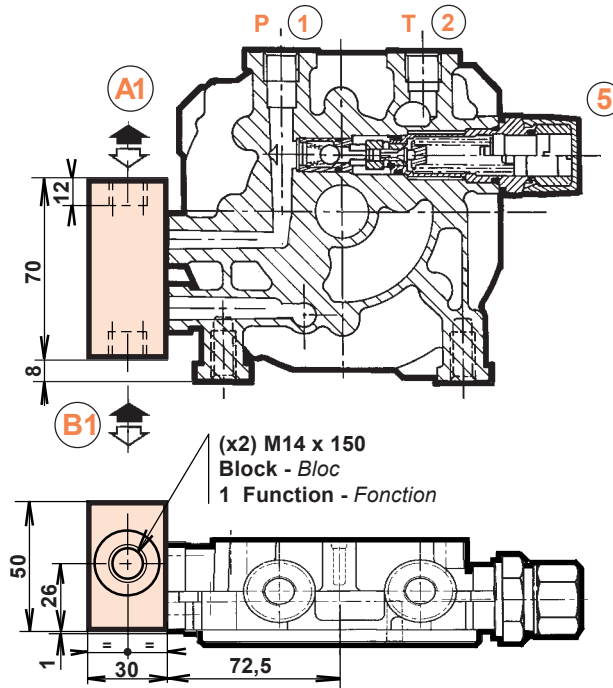
Mounting block for  
 2 x single acting setup  
 with build in circuit relief.





Mounting block for  
**CETOP 3** valve.  
 ( 1 Station )  
 (Alternate Method)

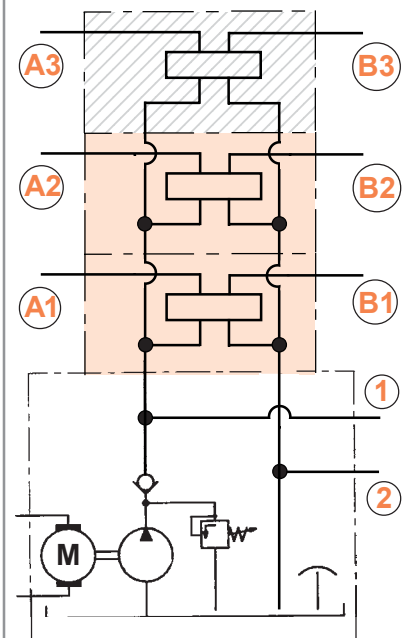
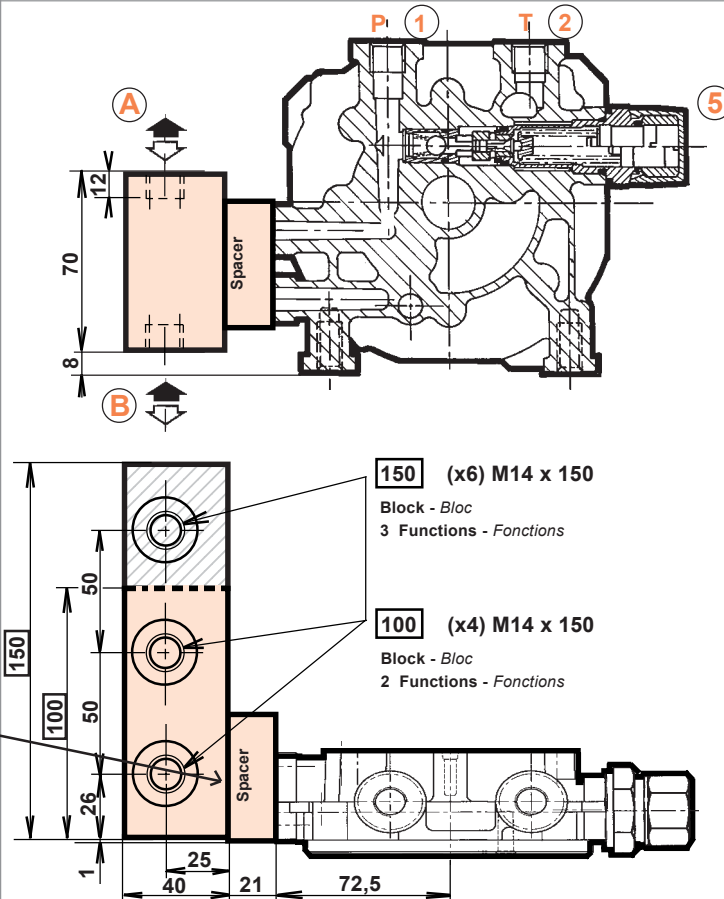
Montage avec  
 bloc **CETOP 3**  
 ( 1 fonction )



Mounting block for  
**CETOP 3** valves.  
 ( 2 and 3 Station )  
 (Alternate Method)

Montage avec  
 bloc **CETOP 3**  
 2 et 3 fonctions

Note! This spacer is not  
 used with Direct Current  
 Motors.





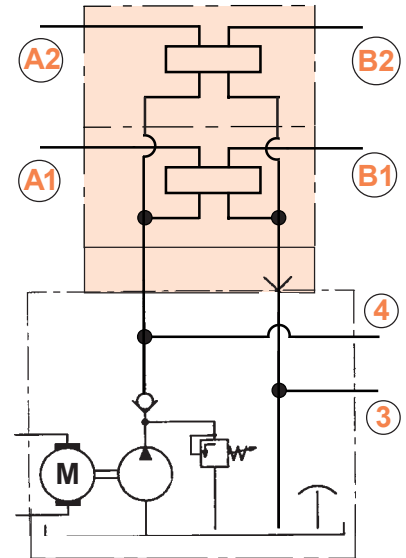
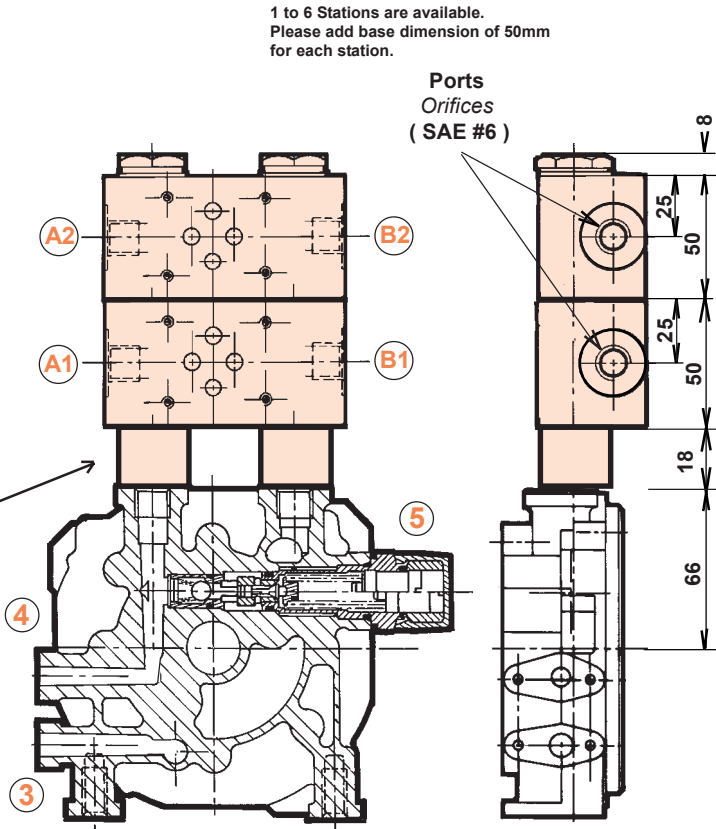
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**VALVE MOUNTING ACCESSORIES**  
**ACCESSOIRES POUR MONTAGE**

Mounting block for  
**CETOP 3** valves  
 ( 1 or more Stations )  
 (Preferred Method)

Montage avec  
 bloc **CETOP 3**  
 2 fonctions

Note! This spacer is not  
 used with Direct Current  
 Motors.

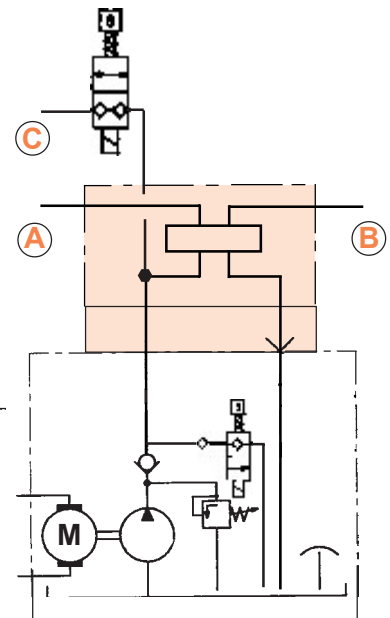
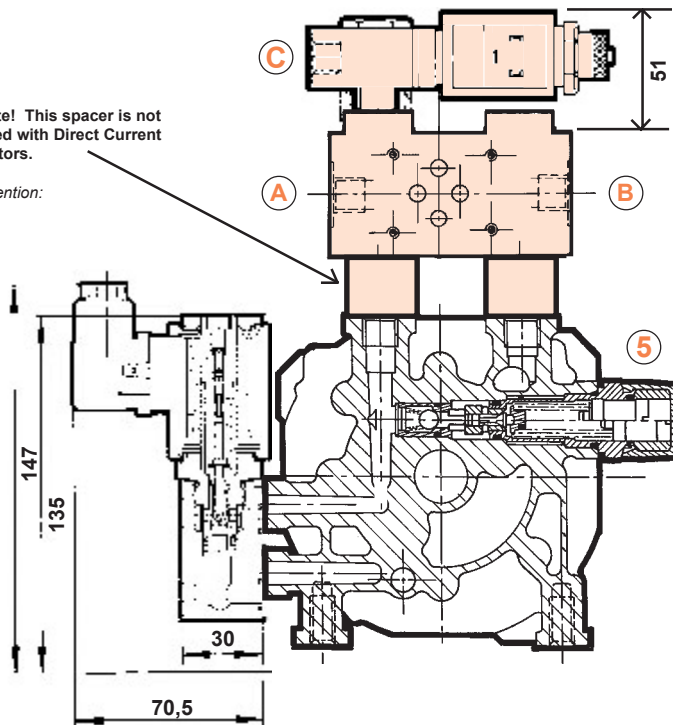


Mounting with  
**CETOP 3** block  
 and single acting  
 function.

Montage avec  
 bloc **CETOP 3**  
 1 fonctions

Note! This spacer is not  
 used with Direct Current  
 Motors.

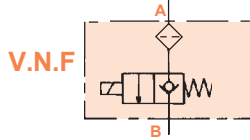
Attention:



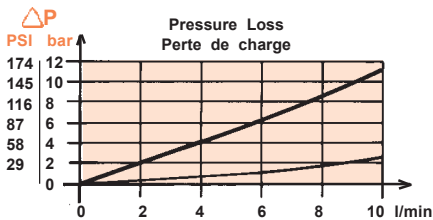
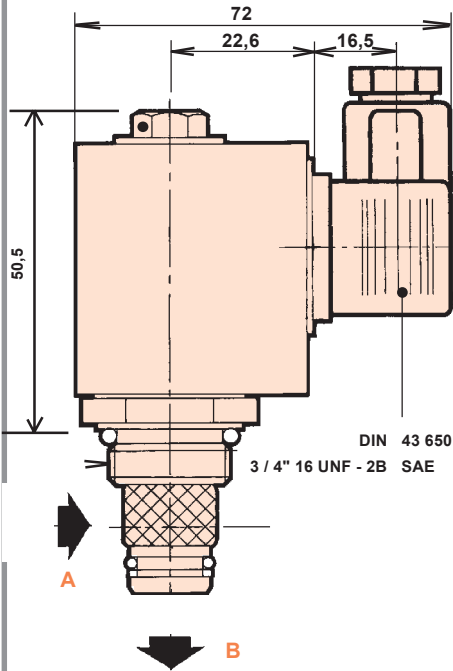


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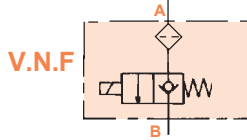
**VALVES AND SPECIFICATIONS**  
**VALVES ET SPECIFICATIONS**



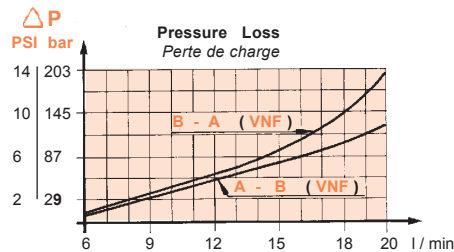
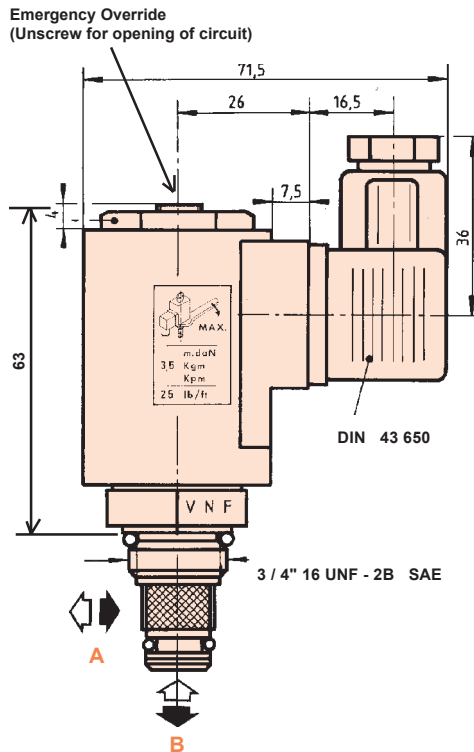
**Normally Closed Valve**  
**Valve Normalement Fermée**  
**2G - 10L/MIN**



Specifications / Specifications		
Voltage / Tension	Power	P3 (Bar) / P3 (Bar)
12 VDC	1,5 A	300
24 VDC	0,7 A	300
24 VRAC	0,7 A	300
110 VRAC	0,2 A	300
220 VRAC	0,1 A	300



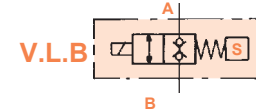
**Normally Closed Valve**  
**Valve Normalement Fermée**  
**1G - 20L/MIN**



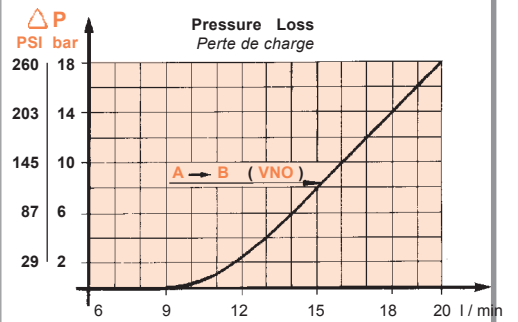
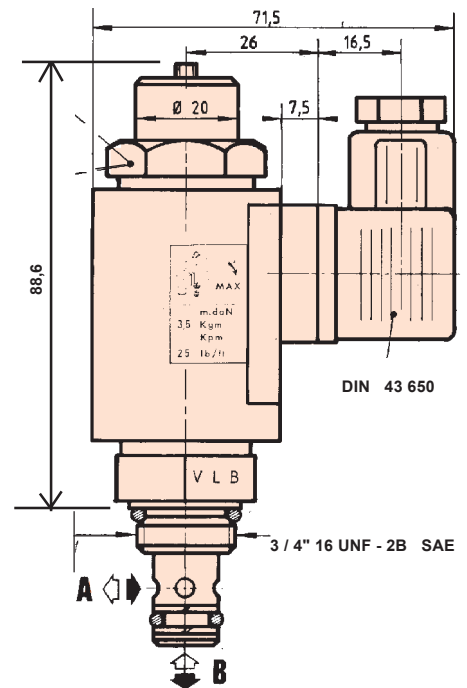
Specifications / Specifications		
Voltage / Tension	Power	P3 (Bar) / P3 (Bar)
12 VDC	1,3 A	300
24 VDC	0,7 A	300
24 VRAC	1,0 A	300
110 VRAC	0,2 A	300
220 VRAC	0,1 A	300



**Normally open valve**  
**Valve Normalement Ouverte**  
**1G - 20L/MIN**



**Double Lock Valve**  
**Valve Logique Bi-directionnelle**  
**1G - 20L/MIN**



Specifications / Specifications		
Voltage / Tension	Power	P3 (Bar) / P3 (Bar)
12 VDC	1,3 A	300
24 VDC	0,7 A	300
24 VRAC	1,0 A	300
110 VRAC	0,2 A	300
220 VRAC	0,1 A	300





**PROPORTIONAL VALVE**  
**VALVE PROPORTIONNELLE**

**HYDRAULIC CHARACTERISTICS**

(SHELL Tellus Oil T46 at 40°C - 46 Cst)

Oil temperature : from -15°C to +80°C  
 Optimal viscosity range : from 12 Cst to 100 Cst  
 Max. Leakage : 10 cc in 5 min  
 Repeatability : 50 to 100 % of Max. flow +/- 1%  
 Response time : approximately 100ms

Nominal voltage : 24 V  
 Mini - Max. battery voltage : 16,8 V - 28,8 V  
 S2 Duty : 5 min  
 S3 Duty : 20% of 10 minute  
 Current consumption: 300 mA Max  
 Protection index : IP65 according to DIN 40050  
 Emergency control : Closed position in case of power cut off  
 Control voltage : 0,7 V to 10 V



**CARACTERISTIQUES HYDRAULIQUES**

(Huile SHELL Tellus T46 à 40°C - 46 Cst)

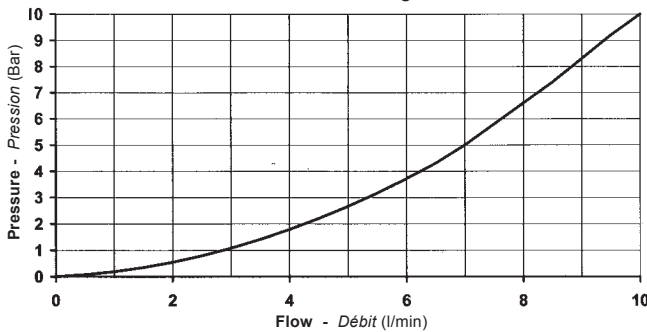
Température de l'huile: de -15°C à +80°C  
 Plage de viscosité optimale: de 12 Cst à 100 Cst  
 Fuite Maxi: 10 cc en 5 min  
 Répétabilité: 50 to 100 % du débit Maxi +/- 1%  
 Temps de réponse: environ 100ms

Tension Nominale: 24 V  
 Tension Mini-Maxi batterie: 16,8 V - 28,8 V  
 Service S2: 5 min  
 Service S3: 20% de 10 min  
 Courant de consommation: 300mA Maxi  
 Indice de protection: IP65 suivant DIN 40050  
 Commande de secours: Fermée en cas de coupure du courant  
 Tension de commande: 0,7 V à 10 V

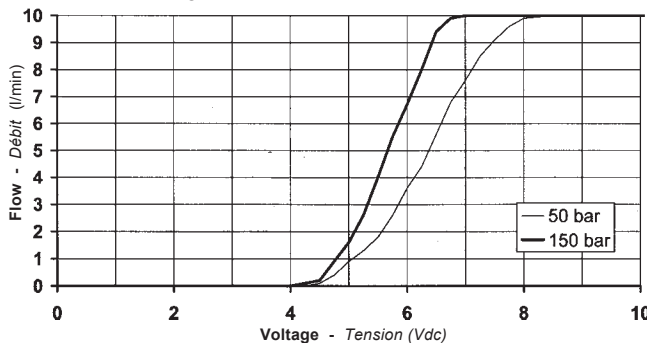
**Reference: C5089984**  
**10 l / min**

Max. flow : 10 l / min  
 Max. Pressure : 250 bar  
 Outlet Max. pressure : 8 bar

**Pressure Loss**  
*Perte de charge*



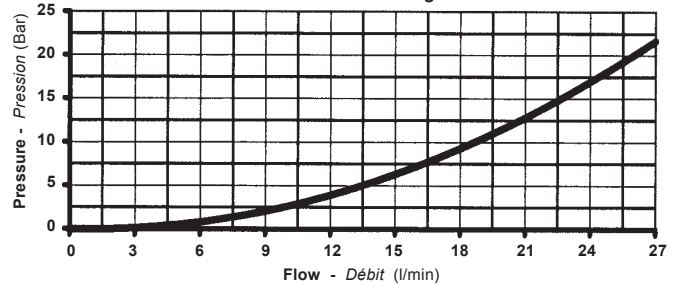
**Progressivity according to Voltage**  
*Progressivité en fonction de la Tension*



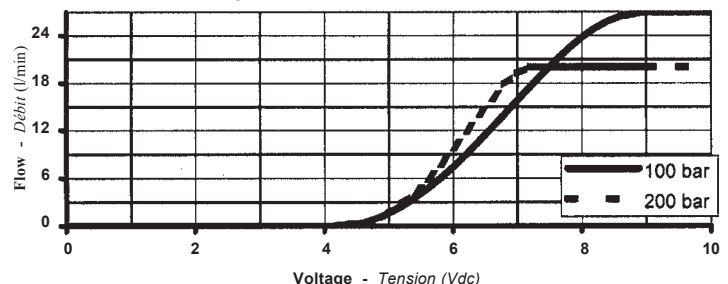
**Reference: C5089985**  
**27 l / min**

Max. flow : 27 l / min  
 Max. Pressure : 200 bar up to 18l/min  
 Outlet Max. pressure : 4 bar

**Pressure Loss**  
*Perte de charge*



**Progressivity according to Voltage**  
*Progressivité en fonction de la Tension*





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**North America**  
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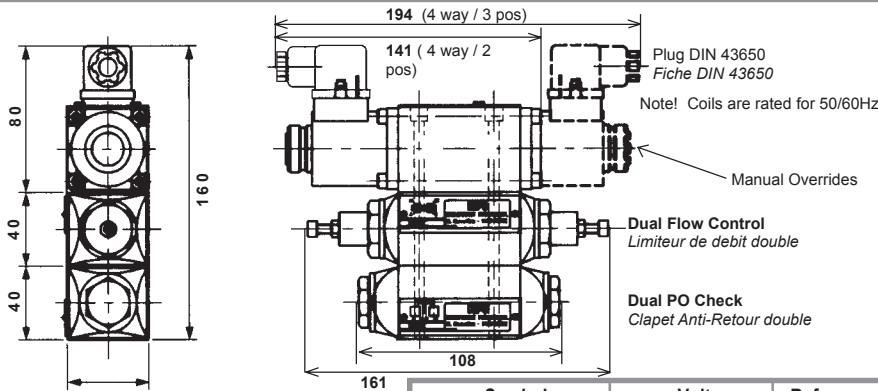
## VALVES AND SPECIFICATIONS VALVES ET SPECIFICATIONS

### Directional Control Valves

#### Distributeurs

#### CETOP 3

Symbols Symboles	Voltage Tension	References Références
	12 VDC 24 VDC 110 VAC 220 VAC 24 VAC	K5091673 K5091674 K5091675 K5091676 K5091677
	12 VDC 24 VDC 110 VAC 220 VAC 24 VAC	K5091668 K5091669 K5091670 K5091671 K5091672
	12 VDC 24 VDC 110 VAC 220 VAC 24 VAC	K5091663 K5091664 K5091665 K5091666 K5091667
	12 VDC 24 VDC 110 VAC 220 VAC 24 VAC	K5091678 K5091679 K5091680 K5091681 K5091682



Symbols Symboles	Voltage Tension	References Références
	12 VDC 24 VDC 110 VAC 220 VAC 24 VAC	K5091658 K5091659 K5091660 K5091661 K5091662
	Dual PO Checks Clapet Anti-Retour double	K5093053
	Dual Flow Limitor Limiteur de debit double	K5093054

### REMOTE CONTROL



#### HPI Solution

- With more than 10 m of range, it allows any movement in the work area.
- Accidental operations are prohibited by the security push button.
- 2 and 4 way models available. All kinds of applications are conceivable.

### SPECIFICATIONS

**Operating Frequency:** 433.92Mhz, less than 10mW

**Operating Modes:**

**MonoStable:** The contact is maintained as long as the pushbutton is pressed

**BiStable (default):** Each order requires a counter order. Contact maintained for dwell time.

**Dwell time:** In BiStable mode a timer controls the period of contact if a counter order is not received.

Motor: 30 seconds

Valve: 120 seconds

**Power Supply:** 10 to 30 Vdc

**Power Consumption:** Receiver when inoperative: 15 mA

Receiver when working: 70 mA

**Relay Output:** At 12Vdc: 15 amps

At 24Vdc: 10 amps

**Enclosure rating:** Receiver: IP65 Wiring: PE IP68

Environment: -20°C to +50°C



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## REPLACEMENT PARTS: LISTING

### REPLACEMENT PARTS - MINI 2G POWERPACKS

<b>MOTORS</b>			<b>RESERVOIRS</b>			<b>CARTRIDGE VALVES, 2 WAY</b>		
AC	0.25 - 5.0 HP	See Pg. 14	T	1,1 L	K5080246	VNF2G: 12 VDC	(normally closed)	C5084513
DS1	1,# kW 12VDC	114133	E	1,5 L	K5061100	VNF2G: 24 VDC	"	C5084514
DS2	1,5 kW 24VDC	114134	A	2,0 L	K5061110	VNF2G: 24VRAC	"	C5094325
BK1	2,1 kW 12VDC	114806	H	2,5 L	K5061120	VNF2G: 115 VRAC	"	C5086855
BK2	2,2 kW 24VDC	113349	B	3,0 L	K5061130	VNF2G: 230 VRAC	"	C5086854
BS2	2,2 kW 24VDC	113305	S	4,0 L	K5087273	VNF: 12 VDC	(normally closed)	C5035300
CI2	3,0 kW 24VDC	111895	Z	6,0 L	K5080008	VNF: 24 VDC	"	C5035310
			C	5,0 L	K5077650	VNF: 24 VRAC	"	C5072507
<b>RELAYS</b>			U	6,0 L	K5074035	VNF: 115 VRAC	"	C5048410
RELAY: 80 AMP - 12VDC		E5080303	R	5,0 L	K5061380	VNF: 230 VRAC	"	C5048420
RELAY: 80 AMP - 24VDC		E5074322	K	7,5 L	K5061390	VNO: 12 VDC	(normally open)	C5068370
RELAY: 150 AMP - 12VDC		E5085534	D	10,0 L	K5061400	VNO: 24 VDC	"	C5068380
RELAY: 150 AMP - 24VDC		E5085533	Y	14,0 L HORIZONTAL		VNO: 24 VRAC	"	C5072505
BRAID CONNECTOR		101809	Y	14,0 L VERTICAL	K5093793	VNO: 115 VRAC	"	C5071251
<b>BELLHOUSING</b>			G	6,3 L	K5083378	VNO: 230 VRAC	"	C5071252
BELLHOUSING: 56C		HPI-9471	Qa	6,5 L	NG6,5	VLB: 12 VDC	(double check)	C5067470
<b>COUPLINGS</b>			Da	12,0 L	NG12	VLB: 24 VDC	"	C5067480
COUPLING: AC 5/8" shaft	L075-5/8-3/16		La	18,0 L	NG20	VLB: 24 VRAC	"	C5072509
COUPLING: AC Insert	L075 - SOX		Ma	30,0 L	NG30	VLB: 115 VRAC	"	C5071260
COUPLING: AC Pump half	L075 - 10mm		Na	44,0 L	NG44	VLB: 230 VRAC	"	C5071261
COUPLING: DS, BK, BS	111182		Oa	70,0 L	NG70	<b>CARTRIDGE VALVES, PROPORTIONAL</b>		
COUPLING: CI	104971		Ds	12,0 L	Ds Tank	VNF: 10 l/m		C5089984
			Ms	34,0 L	Ms Tank	VNF: 27 l/m		C5089985
			Ya	12,0 L	Ya Tank	<b>COILS &amp; CONNENCTORS:</b>		
<b>PUMP SUPPORTS &amp; INTERNAL PARTS</b>			<b>VALVE BLOCKS AND ACCESSORIES</b>			VNF2G COIL: 12 VDC		112344
1CC (L20 SHAFT)	E5091579		<b>PORTS 3 &amp; 4</b>			VNF2G COIL: 24 VDC		112345
2CC (For AC Motors)	E5091580		10L POPPET VALVE BLOCK			VNF2G COIL: 24 VRAC		
3CC "	E5091581		WITH PORT #6			VNF2G COIL: 115 VRAC		112809
4CC "	E5091582		20 L POPPET VALVE BLOCK			VNF2G COIL: 230 VRAC		112808
5CC "	E5091583		WITH PORT #6			VNF/VNO/VLB COIL: 12 VDC		E5072140
6CC "	E5091584		DIRECTIONAL VALVE BLOCK			VNF/VNO/VLB COIL: 24 VDC		E5072141
1CC (L40 SHAFT)	E5091573		4 way, 2 position			VNF/VNO/VLB COIL: 24 VRAC		E5072513
2CC (For DC Motors)	E5091574		4 way, 3 position			VNF/VNO/VLB COIL: 115 VRAC		E5072145
3CC "	E5091575		CETOP 3 BASEPLATE			VNF/VNO/VLB COIL: 230 VRAC		E5072146
4CC "	E5091576		-SPACER			DIN CONNECTOR - DC COILS		102291
5CC "	E5091577		-O-RING			DIN CONNECTOR - AC COILS		104097
6CC "	E5091578		-BANJO BOLT, MAIN BLOCK			<i>(connector is included with AC Coils)</i>		
CHECK VALVE	K5089116		-BANJO BOLT, SPACER			<b>PRESSURE COMP. FLOW CONTROLS</b>		
RELIEF VALVE 10 - 300 BAR	K5093458		-CAP			1,1 l/m (PORT 31 STYLE)		E5073714
<b>RESERVOIR PARTS</b>			2 X SINGLE ACTING BLOCK			1,4 l/m		E5073433
CLAMP: T, E, A, H, B, S, Z	K5073875		-SPACER			2,2 l/m		E5073752
COLLERETTE: C, U	K5091604		-O-RING			3,1 l/m		E5073434
COLLERETTE: R, K, D	K5091605		-ADAPTOR M14x1.5 TO BSPP			4,1 l/m		E5073749
COLLERETTE: G, Y	K5093422		-BANJO BOLT WITH CAP			5,4 l/m		E5073435
COLLAR: Ya	MTM/2761		INLINE BLOCK (LOAD HOLDING)			6,6 l/m		E5073437
ELBOW	110232+A		-ADAPTOR M14 TO BSPP			8,0 l/m		E5073644
<b>FILTRATION</b>			-BANJO BOLT			9,5 l/m		E5073439
STRAINER 90 MICRON	STR-050		-O-RING			11,2 l/m		E5073441
STRAINER 300 MICRON	K5072445		<b>PORT ADAPTORS / MISC ITEMS</b>			13,2 l/m		E5073729
INLET TUBING	109810		PLUG: PORTS 1 & 2			15,3 l/m		E5073442
INLET CLAMP	OET 16701005		BONDED SEAL, M14			17,6 l/m		E5073443
RETURN DIFFUSER 300 MIC	E5072445		PORT 1&2 ADAPTOR: #6 JIC MALE			20,0 l/m		E5073444
RETURN FILTER 10 MIC	RTR-050		PORT 1&2 ADAPTOR: 1/4" FNPT			22,3 l/m		E5073590
RETURN HOSE	AU05-008-BK		PORT 1&2 ADAPTOR: #6 SAE					
RETURN CLAMP	OET 10500012							

**PLEASE NOTE! PARTS LISTED ON THIS PAGE MAY DIFFER FOR UNITS ASSEMBLED IN FRANCE. PLEASE CONTACT HPI CANADA FOR FURTHER INFORMATION.**



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