

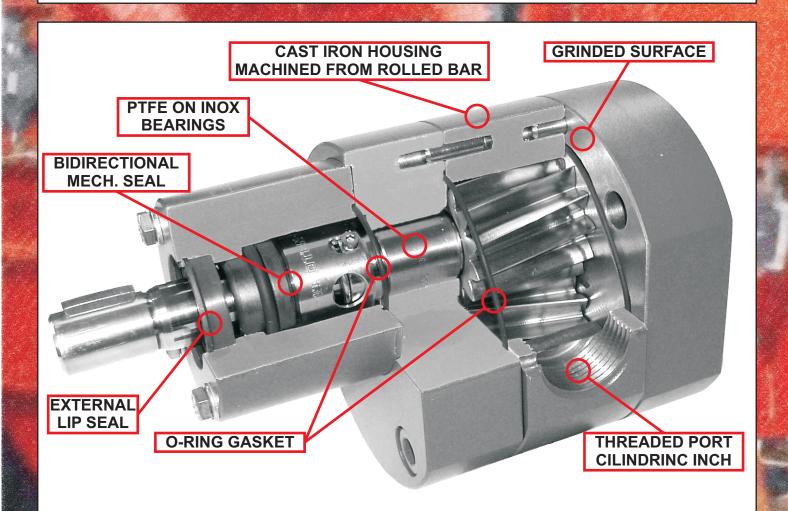
Metering & Thrust Gear Pumps

Cast Iron (G25)

Priorie - 4-30 Charles 15 2. Tak. 4-39 Charles 16 Charl

GENERAL FEATURES

- **+Application:** The G-series is designed for metering, booster, vacuum extraction, lubrication and transfer of a great variety of fluids in any industrial application. More than forty years of experience and development are invested in this series.
- **+Bidirectional:** The G-Series offers the best combination of quality versus price. This series of pumps can provide flow in either direction. However keep in mind that an internal or external relief valve can only be designed for a single flow direction.
- **+Ports:** The S-series inlet and outlet ports are threaded, are of the same diameter and are in-line (share the same axis). The flanges can be welded or screwed.
- **+Hardened Materials:** The G-series housings, cover plates and gear shafts are machined from rolled bar forgings as apposed to casting, which ensures maximum hardness.
- + Complete Unit: The G-series can be supplied in different coupling configurations. Complete units consisting of a base-plate (not necessary for flange mounted motors), flexible coupling with guard and electric motor are available. 8-pole, 6-pole and 4-pole electric motors are available. Explosion proof motors, gear reducers, and variable speed drives are also available on request.
- **+Seals and Options:** The G-series uses a simple and versatile mechanical seal design or magnetic coupling system. Heating options include electric or fluid (oil or steam) heating.



Main Material

erial +Viscosity
n +Pressure

G25

+Size

+Temperature

From 1CST to 1'000'000CST

From OBAR to 30BAR

From 1.5cc to 300cc

From -10°C to +240°C

TECHNICAL FEATURES

Housing (1,2,3,4)

Cast iron G25

The housing is machined from rolled bar that is cut turned, machined and ground into its' final shape, thus ensuring maximum hardness as apposed to using cast parts.

Rotors (5,6,7)

Steel 39NiCrMo3

Rotors are machined from rolled bar that is cut, turned and ground into its' final shape as opposed to using cast parts, thus ensuring maximum hardness.

Bearings (8)

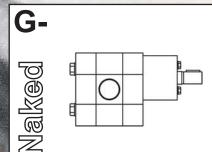
PTFE on Stainless Steel

The bearings are aided by a metal backing to increase resistance especially for corrosive environments. A lining of PTFE is coated in the ID of the bearings forming and a solid lubricant film.

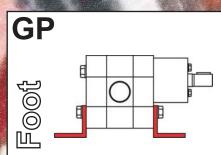
Sealing Elements (10,11,12,13) FPM, PTFE or MVQ

O-Rings are used on all mating surfaces to reduce leakage even when pumping fluid of low viscosity. The shaft is sealed with both an external lip seal and a bidirectional mechanical seal according to API610 and PLAN13. Dimensions are in accordance with DIN24960 and DIN3760.

Other optional materials and sealing systems are available on request.



This configuration is provided with threaded holes on the front cover allowing direct coupling to a non-standard drive unit.

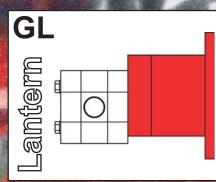


The pump is provided with feet for mounting on a baseplate.

Projected to be coupled to drive units form B3.

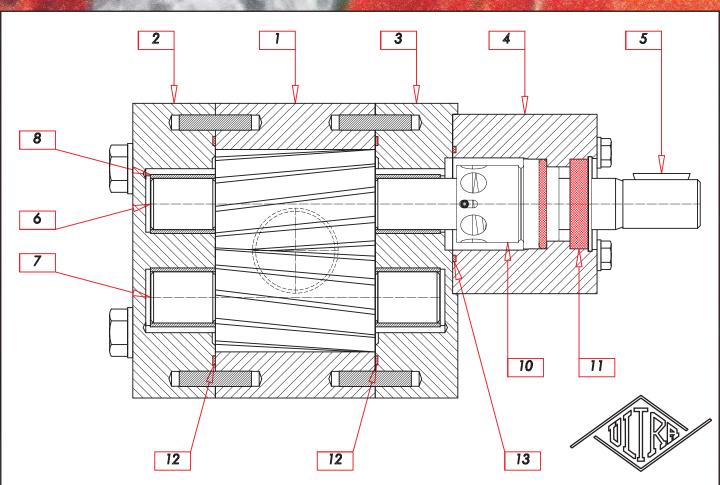
+Foot

Alluminum



The pump is provided with an extension flange that couples with any B3/B5 or B3/B14 UNEL MEC flange. Available in different lengths.

+Mask +Lantern Cast Iron
Alluminum



SIAFI SEAL

MECHANICAL SEAL (Standard)

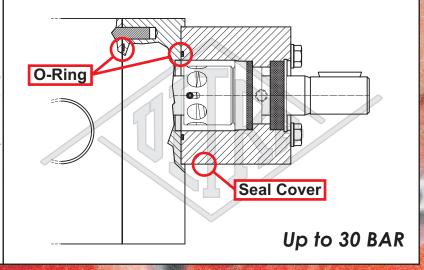
Sealing elements made of FPA

Sealing elements made of PTFE

Sealing elements made of MVQ

Features: According to API610 and PLAN13, external lip seal and bidirectional mechanical seal, unaffected by the direction of shaft rotation. Dimension according to DIN24960 and DIN3760. STAINLESS STEEL and CARBON GRAPHITE mechanical seals are first choice for all such applications where pumped fluid doesn't have any oxidative property and work temperature is under 150°C.

Maximum prussure: 30 BAR Temperature: -10/+240°C Work Sense: Bidirectional



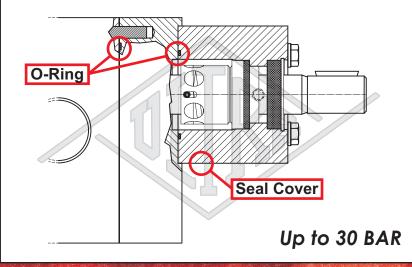
MECHANICAL SEAL "K" (Optional)

KV Sealing elements made of FPM
KT Sealing elements made of PTFE

KS Sealing elements made of **MVQ**

Features: According to API610 and PLAN13, **external lip seal** and **bidirectional mechanical seal**, unaffected by the direction of shaft rotation. Dimensions according to DIN24960 and DIN3760. **BRAZED TUNGSTEN CARBIDES** on **STAINLESS STEEL** mechanical seals are used when pumped fluids require the use of anticorrosion materials or work temperature is up to 240°C.

Maximum prussure: 30 BAR Temperature: -10/+240°C Work Sense: Bidirectional



MAGNETIC COUPLING (Optional)

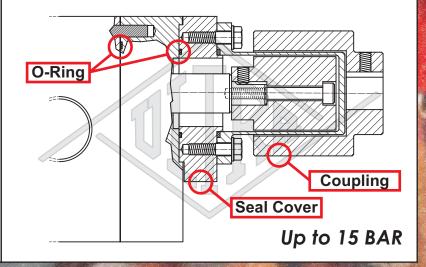
MV Sealing elements made of FPM
MT Sealing elements made of PTFE

MS Sealing elements made of MVQ

Features: The standard mechanical seal can be replaced by a **magnetic coupling** system that definitively eliminates seal leakage and wear in particularly harsh conditions.

Magnetic coupling are synchronous coupling that transmits torque through magnetic forces between the internal and external rotor, but ensures a hermetic separation of the drive and the driven side via **STAINLESS STEEL** bell.

Maximum prussure: 15 BAR Temperature: -30/+240°C Work Sense: Bidirectional



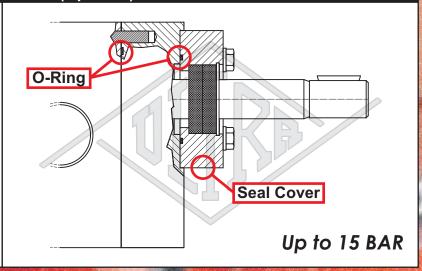
SIAFI SEAL

LIP SEAL (Optional)

AV Sealing elements made of FPM
AT Sealing elements made of PTFE
AS Sealing elements made of MVQ

Features: The **double lip seal** is designed according to DIN3760. The seal is coated with either FPM, PTFE or MVQ and has a supplementary dust lip useful in particularly dusty environments. Also available in different materials.

Maximum prussure: 15 BAR Temperature: -10/+240°C Work Sense: Bidirectional

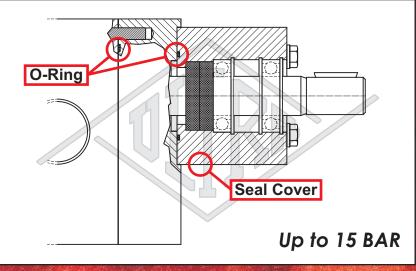


LIP SEAL for CHAIN/BELT COUPLING (Optional)

CV Sealing elements made of FPM
CT Sealing elements made of PTFE
CS Sealing elements made of MVQ

Features: The use of the **double lip seal** allows for non axial coupling between the motor and pump if the drive shaft is adequately **supported against radial movement**. This is an ideal solution when saving space is a priority. Typical applications include belt, gear or chain couplings.

Maximum prussure: 15 BAR Temperature: -10/+240°C Work Sense: Bidirectional

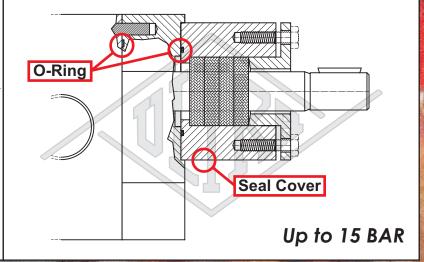


PACKED GLAND SEAL (Optional)

DV Sealing elements made of PTFEDS Sealing elements made of MVQ

Features: The **packed gland** is composed of 4 **packing gland rings** seated on the seal cover. This type of seal requires a high level of maintenance and is therefore discouraged in pump applications. Ultra strongly recommends the use of mechanical seals instead.

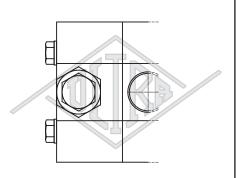
Maximum prussure: 15 BAR Temperature: -10/+240°C Work Sense: Bidirectional



The pump is supplied with an internal recirculation relief valve (by-pass) that is designed to protect the pump from damage that can be caused by overpressure.



Bypass valve

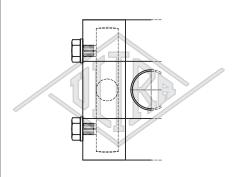


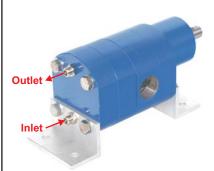


The pump is supplied with an integrated heating system to provide the heating of the entire pump with hot oil or steam. Heating fluid is pumped by an external pump in the internal channels of the gear pump.



Oil Heating system



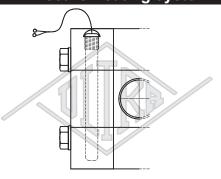


The pump is supplied with an integrated electric cartridge heating system to provide the heating of the entire pump.

PT100 Probes are probes which show a change in resistance with a change of temperature.



Electric Heating system

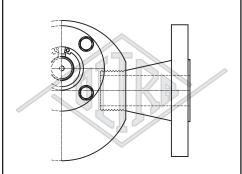




Threaded Neck flange (ANSI or UNI)

The pump is supplied with a threaded neck flange screwed into the body of the pump. Also available, is a flexible coupling to mount between the pump flange and pipe line.



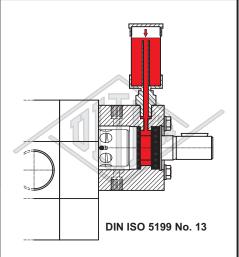




The pump is supplied with a transparent and ventilated reservoir positioned directly above the seal casing. Used when pumped fluid reacts with atmospheric oxygen, the quench medium stops the leakage making contact with the atmosphere. Quench applies a pressure less external fluid to mechanical seal's faces on the atmosphere side.



Quench dead end system

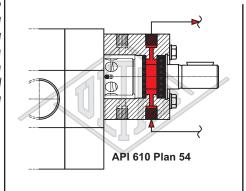




The pump is supplied with two threaded holes on a seal casing that allows the circulation of a quenching medium from an external system. The system absorbs the mechanical seal leakage by the quenching



Plan 54 circulation system

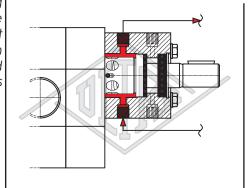




The pump is supplied with flushing holes. The seal washing can be ensured by a "CIP cycle," that through internal channels and with an appropriate solvent pumped from an external system, removes pumped fluid residue.



Flushing system

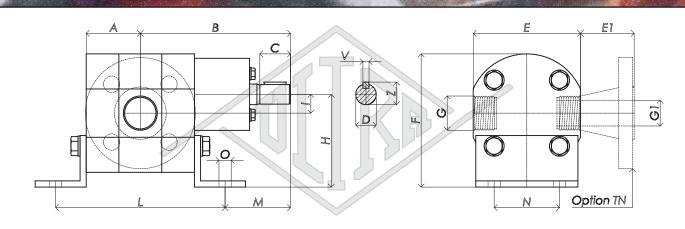


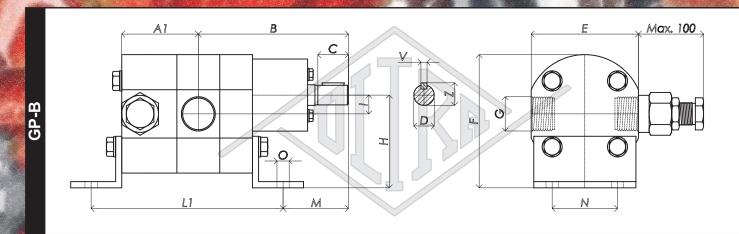


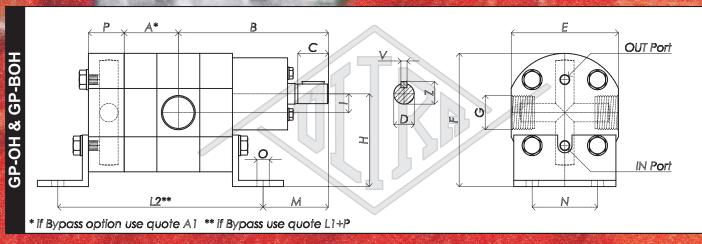
Many combinations of options are available limited by the pump material and pump series. Note that some options change the envelope dimensions of the pump. Options can be combined, such as a bypass system and oil heating system.

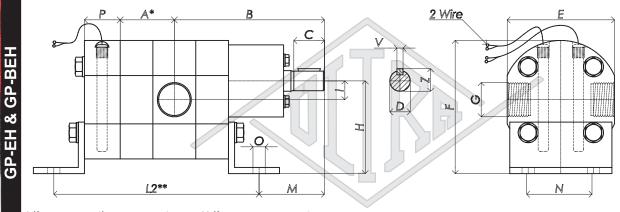
OUTLINE DRAWINGS



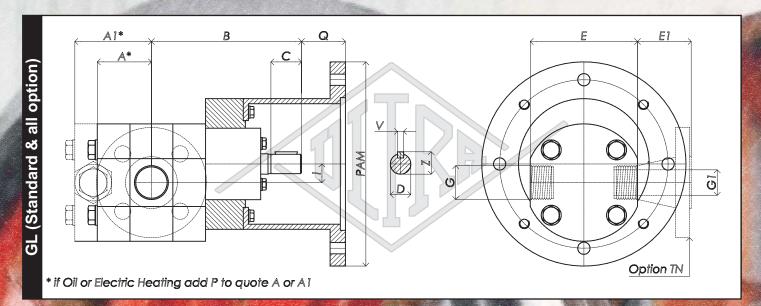








* if Bypass option use quote A1 ** if Bypass use quote L1+P



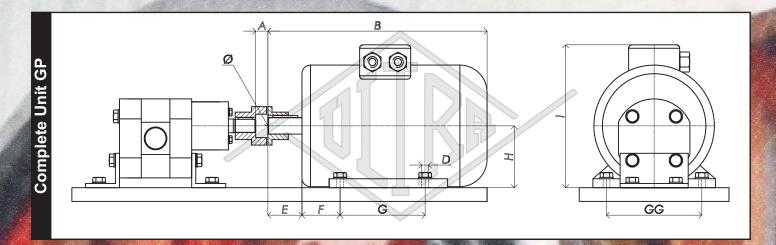
The second second										7.000000000000000000000000000000000000					THE REAL PROPERTY.			
Size	Α	A1	В	С	D	Е	E1	F	G	G1	Н	I	L	L1	L2	M	N	0
1.5	43	71	94	25	11	65	40	85	1/4''	Dn15	56	11	94	122	119	63	44	7
3	53	81	94										104	132	129			
4.5	37	65	120						1/2''				114	142	139			
7	44.5	72.5	127.5										129	157	154			
10	40	67	131	30	14	90	40	110	1/2''	Dn15	76	16	130	157	165	66	56	10
14	45	72	136				45		3/4''	Dn20			140	167	175			
21	54	81	145										158	185	193			
28	53	75	147	30	19	105	52.5	132	1"	Dn25	90	18	166	188	201	64	64	12
35	58	80	152										176	198	211			
42	63	85	157										186	208	221			
52	72	109	171	35	24	135	52.5	168	1"	Dn25	112	25	204	241	244	69	86	14
72	81	118	180				57.5		1.1/2''	Dn40			222	259	264			
93	89	126	188										230	267	270			
114	97.5	134.5	196.5										255	292	295			
144	90	136	207	50	28	160	57.5	200	1.1/2"	Dn40	132	30	240	286	280	87	122	14
200	100	146	217				60		2"	Dn50			260	306	300			
300	118	164	235						2.1/2"	Dn65			296	342	336			

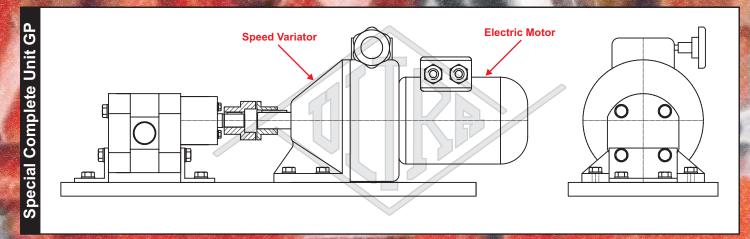
SIZE	P				Q	All and the second			V	Z
1.5	25	56	56	69	NA	NA	NA	NA	NA	NA
3										
4.5										
7										
10	35	NA	69	69	89	NA	NA	NA	5	16
14										
21										
28	35	NA	NA	68	81	81	105	NA	6	21.5
35										
42										
52	40	NA	NA	NA	83	83	100	151	8	27
72										
93										
114										
144	40	NA	NA	NA	NA	83	100	136	8	31
200										
300										
		71	80	90	100	112	132	160		

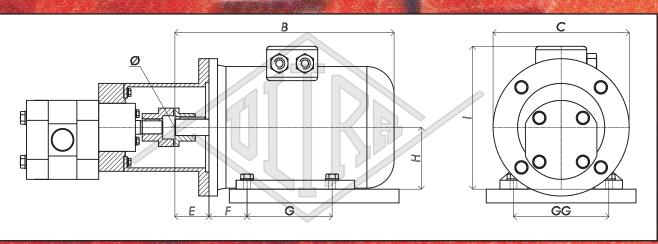
LANTERN (B5 or B14) PAM (Type)

IMPORTANT NOTE

- +Chosen dimensions: During the design phase we have tried to use dimensions that can easily match with standard components such as IEC motor dimensions.
- +Overall Dimensions change: While in the Flange configuration, the addition of optional parts, such as valve systems or heating systems, doesn't effect coupling dimensions. In the foot configuration, the overall dimensions may change and positions of anchor bolts may change significantly due to modifications. Please contact our office for detailed drawings in these cases.
- + **Disclaimer:** Please not that all dimensions contained in this catalog are not binding. Please contact our office for detailed drawings.







Pump SIZE

4.5

1.5

SIZE	Gr 71	Gr 80	Gr 90	Gr 100	Gr 112	Gr 132	Gr 160
Α	16	16	16	NA	NA	NA	NA
	NA	16	16	18	NA	NA	NA
	NA	NA	18	18	18	20	NA
	NA	NA	20	20	20	20	26
	NA	NA	NA	20	20	20	26
В	234	264	302	367	384	483	653
С	160	200	200	250	250	300	350
D	7	10	10	12	12	12	15
Ε	30	40	50	60	60	80	110
Ø	14	19	24	28	28	38	42
F	45	50	56	63	70	89	108
G	90	100	125	140	140	178	254
GG	112	125	140	160	190	216	254
Н	71	80	90	100	112	132	160
I	175	192	208	245	277	312	380

Complete Unit GL

Why should I use a lantern instead of a foot mounting configuration?

The use of a lantern configuration is used to reduce cost, because it eliminates the baseplate and guard. Additionally it is lighter and reduces shipping costs.

TORSIONALLY FLEXIBLE COUPLINGS

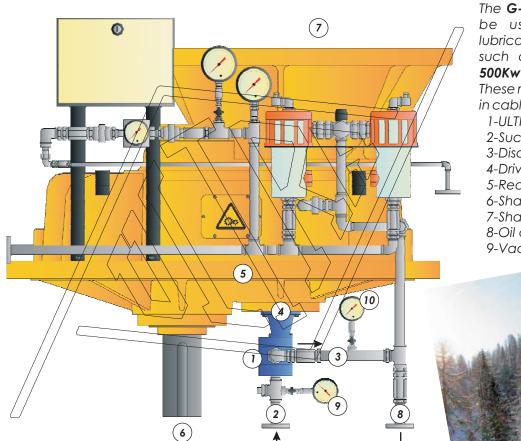
When pump is connected to the electric motor via a coupling, the dimension "A" is based on the size of the coupling model.

This is determined by each coupling manufacturer. See manufacturer brochure for details.



APPLICATIONS

Installation on Reducer (GL14AV)



The **G-series** Ultra gear pump can be used to provide internal; lubrication for heavy machinery such as for a **gear reducer for 500Kw electric motors**.

These reducers are commonly used in cable cars and ski lifts.

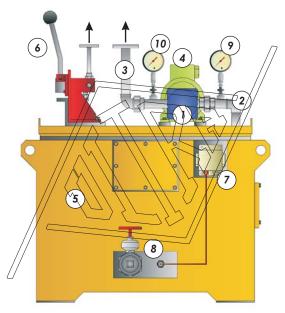
- 1-ULTRA gear pump
- 2-Suction line
- 3-Discharge line
- 4-Drive shaft
- 5-Reducer (for 500Kw)
- 6-Shaft to machine
- 7-Shaft to motor
- 8-Oil drain valve
- 9-Vacuum gauge



Installation on Lubrication Unit (GP114V)



- 1-ULTRA gear pump
- 2-Suction line
- 3-Discharge line
- 4-Motor
- 5-Oil tank unit
- 6-Hand pump
- 7-Temperature switch
- 8-Oil drain valve
- 9-Vacuum gauge
- 10-Pressure gauge



The **G-series** Ultra pump can be used to **deliver lubricant** from a tank to machinery.

Lubricants are an essential part of modern machinery and everything from computer hard disk drives to the Airbus requires lubrication of its moving parts.

What Lubricant is?: A Lubricant is a substance (usually a liquid) introduced between two moving surfaces to reduce the friction and wear between them. Typically lubricants contain 90% base oil and less than 10% additives. Additives deliver reduced friction and wear, increased viscosity, improved viscosity index, resistance to corrosion and oxidation, aging or contamination and so on...

APPICATIONS

Installation on Oil Heating Unit (GL28KVB)

The **G-series** units can be installed on **heating units**, complete with double electric heaters and double control valves.

These heating units are used in a large number of applications.

1-ULTRA gear pump

2-Suction line

3-Discharge line

4-Motor

5-Flow control valve

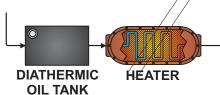
6-Servo motor

7-Electric heater

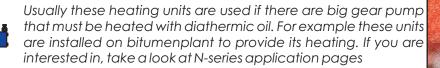
8-Fluid meter

9-Filter

10-Fuel oil feeding



G-series GEAR PUMP



Installation as Transfer Pump (GL300KV)



The **G-series** pumps can be used to transfer fluid from

one tank to another such as from a tanker to drums. As example, the pump

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can move a fluid from a

tanker to barrels or drums. Also, the pump can be used in the same configuration to pump fluid from barrels or drums to a tanker just reversing the rotation sense of the motor.

1-ULTRA gear pump

CLOCK WISE ROTATION

2-Discharge line

3-Suction line

COUNTER CLOCK WISE ROTATION

2-Suction line

3-Discharge line

4-Motor

5-Tanker

6-Barrels

