

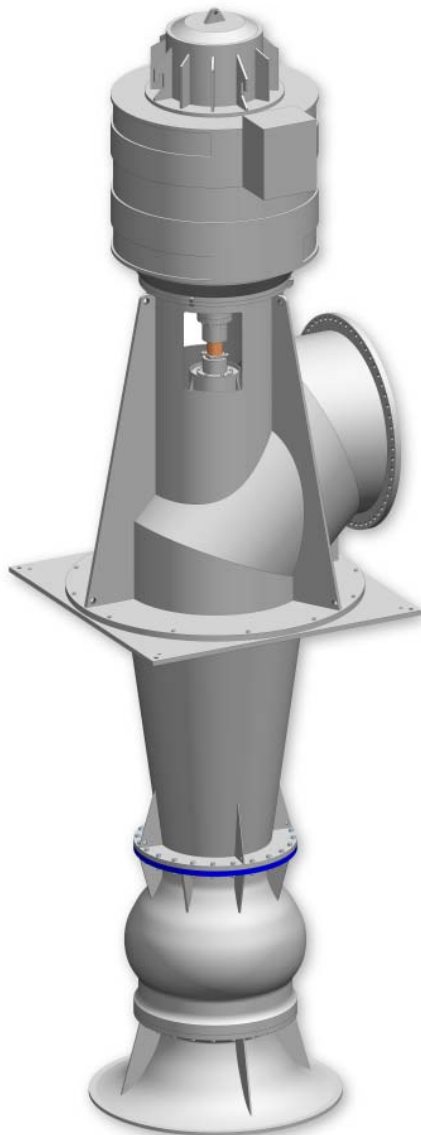
motralec

4 rue Lavoisier . ZA Lavoisier . 95223 HERBLAY CEDEX
Tel. : 01.39.97.65.10 / Fax. : 01.39.97.68.48
Demande de prix / e-mail : service-commercial@motralec.com
www.motralec.com

SULZER

Sulzer Pumps

SJT Vertical Turbine Pumps



The Heart of Your Process

Sulzer Pumps

Sulzer Pumps is a world leader in reliable products and innovative pumping solutions. Our advanced research and development, detailed process and application knowledge together with a comprehensive understanding of market demands keeps us consistently at the leading edge of technical development. Our global network of modern manufacturing and packaging facilities together with sales representatives located close to major markets provide fast responses to customer needs.



Sulzer Pumps Houston manufacturing site

Sulzer Pumps has a long history of providing innovative pumping solutions to business partners in the following industries:

- q .HK @MC & @R
- q 'XCQNB@QANM /QNBDRRHMF
- q /TKO @MC /@ODQ
- q /NVDQ &DMDQ@SHNM
- q &DMDQ@K (MCTRSQX
- q "GDLHB@K /QNBDRR (MCTRSQX
- q 6@SDQ @MC 6@RSDV@SDQ

\$SSOLF DWLRQ .QRZOHGJH IRU %HWWHU

Vertical Turbine Pumps

Vertical turbine pumps are typically used whenever a liquid needs to be pumped upward from ground water tables (deep well pumps), manmade underground storage (caverns) or open bodies of liquid such as oceans, rivers, lakes, cooling ponds, tanks and sumps. Vertical turbine pumps are also used in inline applications such as O HODKHMDR ANNRSDQ systems.

Advantages of SJT

q , HMHLTL TRD NE kNNQh conditions.
 q 3GD -/2' @U@HK@AKDq BDRRADD@QSGD SN KNV N
 KNVDRS KDUDK SN R@SPEX SGD -/2'
 requirements of the pump. q2TKYDQ GXCQ@TKHBR CDK
 q -N OQHLHMF QDPHQD@TSGD@JBLHDMBHDR
 bowl assembly is submerged in q2S@MC@QC LNSNQR NE @K
 SGD kTHC ADHMF OTL@Sly matched.
 q3GD UDQSHB@K STQAHMD HR GHFGKX UDQ
 satile and adaptable in terms of
 both location and pump length.
 q3GMDUHQSH@K STQAHMD OTLO HR
 adaptable to various design
 codes.

Extensive Product Range

3 GD 2 TKYDQ 2)3 HR @ Mg f d m f and D d f a d n g can be
 SN NQCDQ f UDQSHB @ K c s p r a t a d h m b s t o a t d h e
 and has a capacity range of up to 55,000 m³/h (240,000 USgpm) with
 a total maximum single stage head of up to 115 m (360 ft) in sizes up
 to 3,000 mm (120 inches) in bowl diameter.

Replaceable hardened wear rings help to ensure long life and facilitate maintenance. A variety of design options such as weed cutting U @ MDR QHkD @ MC BQ N R R B O N W R K H C D Q @ S @ E R (for external lubrication at bear

pump to the application to maximize equipment longevity.
 Above and below base discharge connections are available to suit existing pipe design variants.
 Performance and hydro testing is HM @ BBNQC @ MBD VHSG SGD 'XCQ @ TKHB (M RSHSTSD 2S @ MC @ QCR 3GD 2)3 OTLO is engineered to balance high DEjBHDMBX KNV RTALDQFDMBD @ MC

(QJLQH HUH G IRU \$SSOLF DWLRQ)OH[LEL

Applications

2)3 OTLOR @ QD GHFG medium to high head units widely used for raw water supply to pro-BD RR OK @ MSR NQ QD j circulating service in nuclear or BN MUDMSHNM @ K ONVD ished water booster pumps as well as for irrigation projects.

"NLLNM SXODR NE kTH include water, service water and wastewater.

Materials

3GD 2)3 B @ M AD L @ MT a variety of metallurgies to extend OTLO KHED @ MC ODQENQL @ MBD 3GD choice of materials and construction possibilities to meet special requirements (such as corrosion resistance) is virtually unlimited.



Materials	
" @ RS O @ QSR B @ RS HQNM B @ QANM RSDDK	22 CT bronze
Shafts	12% chrome, 316SS, duplex, super duplex, monel
% @ AQHB @ SHN @ QANM RSDDK	+ CTOKDW RTODQ
Bearings	bronze, duplex, super duplex backed rubber

6-7 'HVLJQ)HDWXUHV DQG %HQHðWV

Headshaft

Precision machined and sized for the application power input. Drive couplings connect headshaft with a vertical solid shaft motor.

Pumpshaft

3GD RG@ES HR S@HKNQ L@CD SN SGD service needs and sized individually for each installation; sized for maximum torque. A stepped shaft with sleeves can be supplied.

Bowl Bearings

!NVKR B@M AD jSSDC with rubber, metal or dual (rubber and metal) bearings of many different materials to meet required applications and RODBHjB@SHNMR

Impeller

(LODKKDQ HR BKNRDC CDRHFM B@RS from various materials of choice for versatility, balanced to assure vibration-free operation and polished to optimize performance. 3GD HLODKKDQ HR RDBTQDC SN SGD shaft by a key and split thrust ring and is available with replaceable wear rings.

Suction Bell

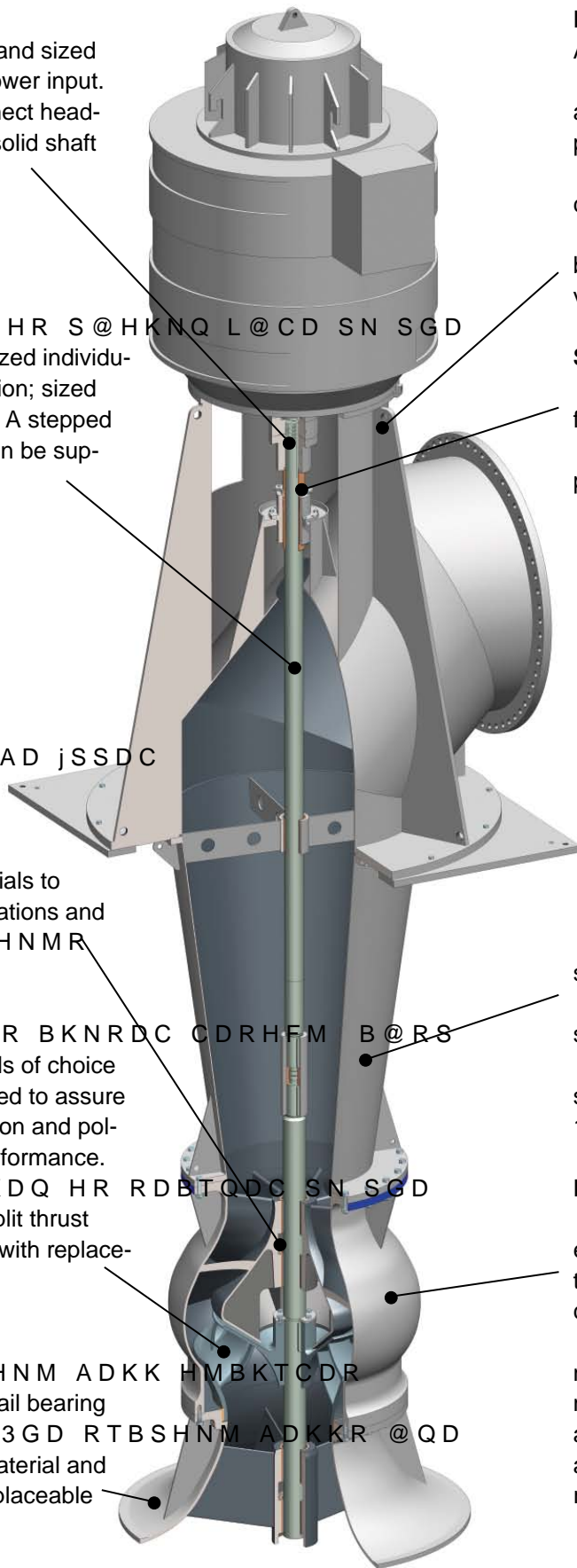
\$@BG RTBSHNM ADKK HMBKTCDR anti-vortex ribs and tail bearing ATRGHMFR 3GD RTBSHNM ADKKR @QD standard cast iron material and are available with replaceable wear rings.

Discharge Head

An above ground discharge head is RS@MC@QC 3GD HMSDFQ @ allows easy access to removable packing/seal box and coupling. \$@BG RS@MC@QCHYDC CHR comes with a segmented bend / LNSNQ RSNNK @MC TSHKHY box designed to accommodate various mechanical seals.

Shaft Seal

O@BJDC RSTEmF ANW HR for reliable sealing and easy main-SDM@MBD ,DBG@MHB@K R provided.



&ROXPQ \$VVHPEO\ "NKTLM OHODR @QD k@MFD shafts are connected by split ring, JDX @MC RKDDUD BNTOKHM shaft bearings are replaceable. "NKTLM @RRDLAKHDR G@UD spiders for column diameter above 14".

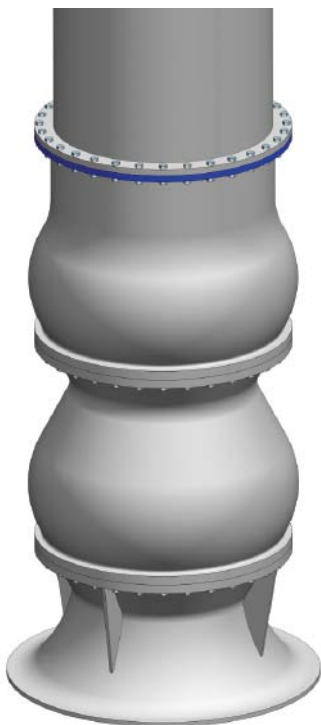
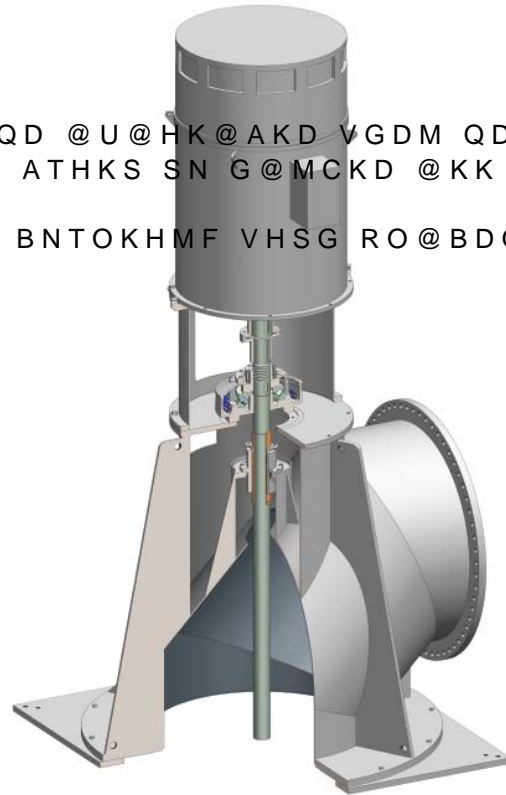
Bowl

3GD 2)3 ANVK CDRHFM BNLA energy conversion and diffusion of the intermediate bowl and discharge case in one single casing. 3GHR QDCTBDR SGD QDPTH nents and allows for a direct connection to the column pipe. Bowls are standard cast iron material and are available with replaceable wear rings.

7KUXVW %HDULQJ \$VVHPEO\
 3GQTRS AD@QHMF @RRDLAKHDR @QD @U@HK@AKD VGDM QDPTHQDC
 AX SGD @OOKHB@SHNM 3GDX @QD ATHKS SN G@MCKD @KK SGD CNVM

thrust produced by the pump and any momentary up
 SGQTRS L@X NBBTQ 3GD kDWHAKD BNTOKHMF VHSG RO@BDQ
 allows servicing the thrust bearing and mechanical seal
 as needed. A one-piece fabricated motor stand hous-
 ing is bolted down over the discharge head to protect
 the bearing and support the motor.

Optional features include sandstorm protection, special
 means for cooling and a constant level oil lubricator.

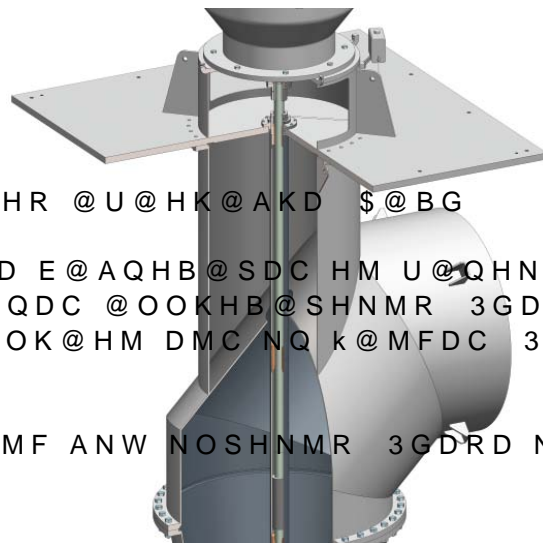


Multistage Construction

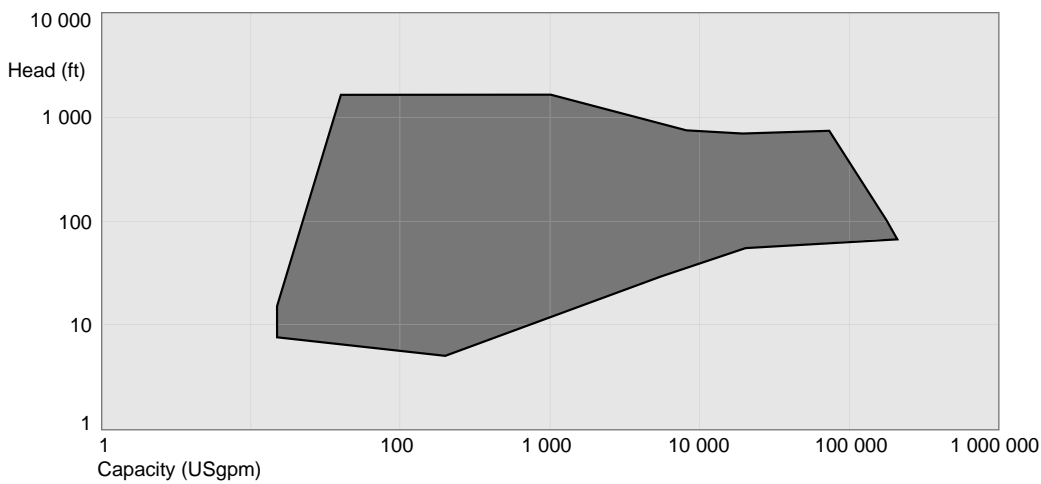
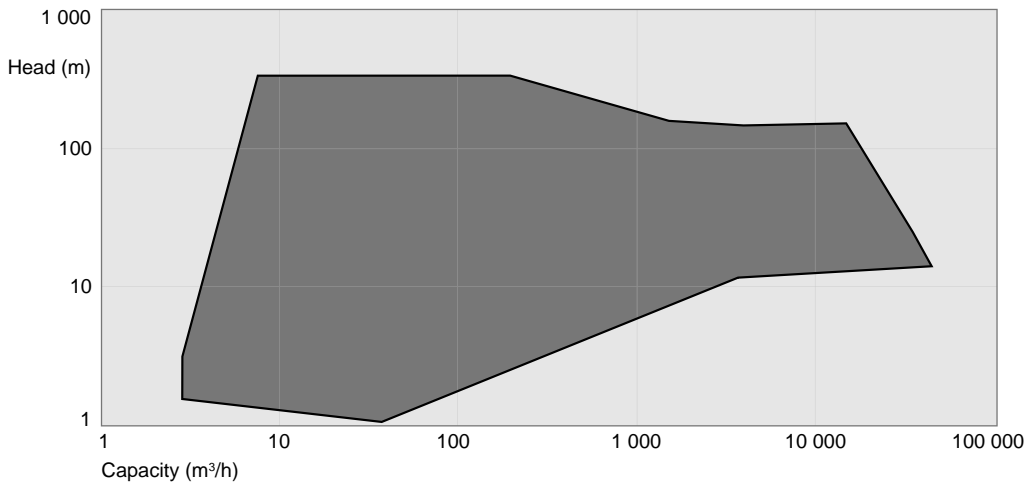
LTKSHRS@FD CDRHFM NE SGD 2)3 HR @U@HK@AKD
 for increased head requirements up to 40
 bar (600 psi).

Discharge Head

!DKNV FQNTMC CHRBG@QFD GD@C HR @U@HK@AKD \$@BG
 comes with a segmented elbow designed to optimize
 OTLO DEjBHDMBX 3GD DKANVR @QD E@AQHB@SDC HM U@QHNT
 L@SDQH@KR SN LDDS L@MX QDPTHQDC @OOKHB@SHNMR 3GD CHR-
 BG@QFD MNYYKD B@M AD DHSGDQ OK@HM DMC NQ k@MFDC 3GD
 motor stand is mounted above ground and is designed
 to support the motor weight and provide maximum
 BKD@Q@MBD ENQ LTKSHOKD RSTEmF ANW NOSHNR 3GDRD NO-
 tions include gland packing, shaft tube and mechanical
 seal.



SJT Performance Ranges



Operating Data

	SJT 50 Hz	SJT 60 Hz
Pump sizes	150 to 3,000 mm	6 to 120 inches
" @ O @ B H S H D R	S N ³ /h L	40 to 240,000 USgpm
' D @ C R	T O S N L O D Q R S @ F D	T O S N E D D S O D Q R S @ F D
Pressures	up to 40 bar	up to 600 psi
3 D L O D Q @ S T Q D R	T O S N ! "	T O S N ! %

Maintaining and Improving Pump Performance

Sulzer Pumps –

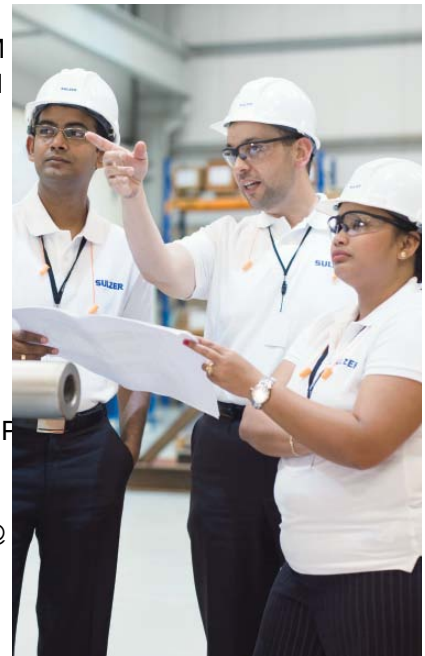
Customer Support Services

operating performance of pumps is the key target for our customer support service organization.

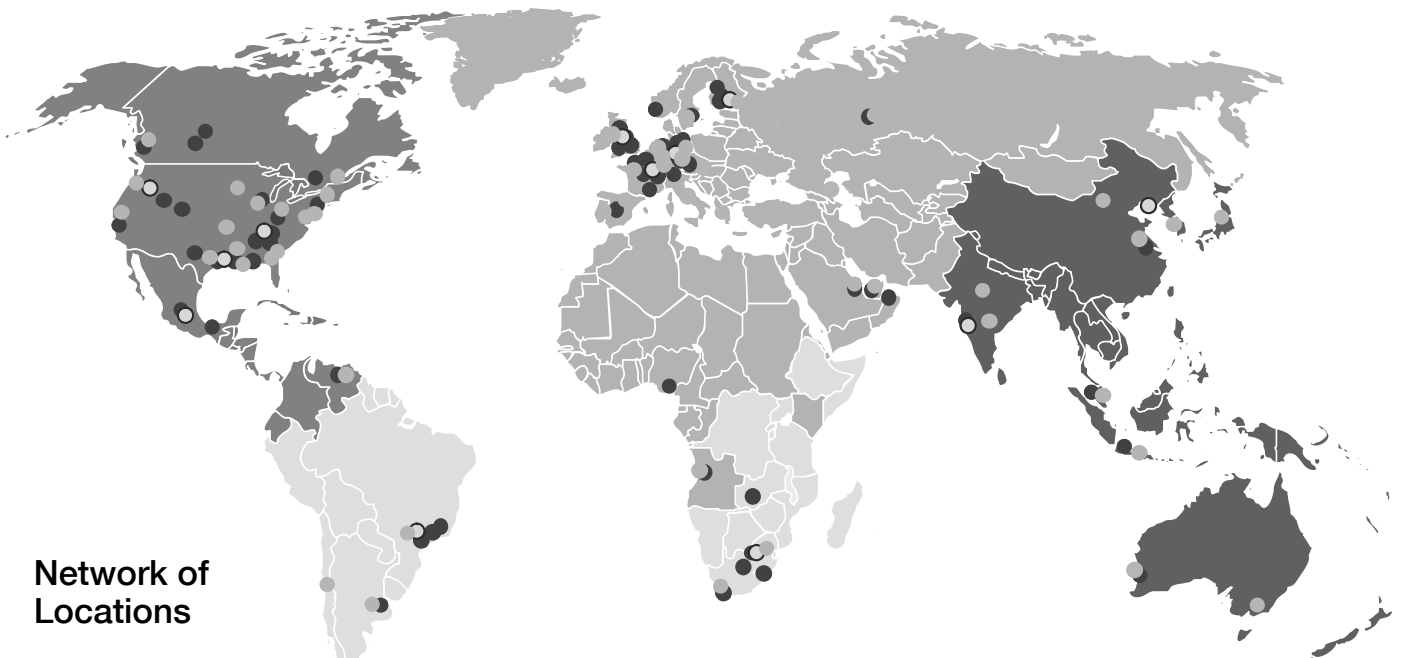
personnel and application knowledge, we provide a full range of innovative service solutions to our customers to keep their pumps running including:

- q 2O@QD /@QSR
- q %HDKC 2DQUHBDR
- q 1DO@HQ 2DQUHBDR
- q 1DSQNJSR
- q ,@HMSDM@MBD FQ
- q .ODQ@SHNM FQDDLDMSR

When we are contracted to maintain and improve the pump under contract, we are uniquely placed to make your process run smoother. A dedicated team of Driven Specialists based at either our manufacturing facilities or one of over 60 service centers located around the world is dedicated to maintaining the performance of our customers' pumps. Our service is not just limited to Sulzer products, all the pumps our customers use are Sulzer Pumps.



L



Network of Locations

- #HUHRHNM@K 'D@CPT@QSDQR
- ,@MTE@BSTQHMF %@BHKHSX
- "TRSNLDQ 2TOONQS 2DQUHBD "DMSDQ "22
- 2@KDR .EjBD

motralec

4 rue Lavoisier . ZA Lavoisier . 95223 HERBLAY CEDEX
Tel. : 01.39.97.65.10 / Fax. : 01.39.97.68.48
Demande de prix / e-mail : service-commercial@motralec.com
www.motralec.com