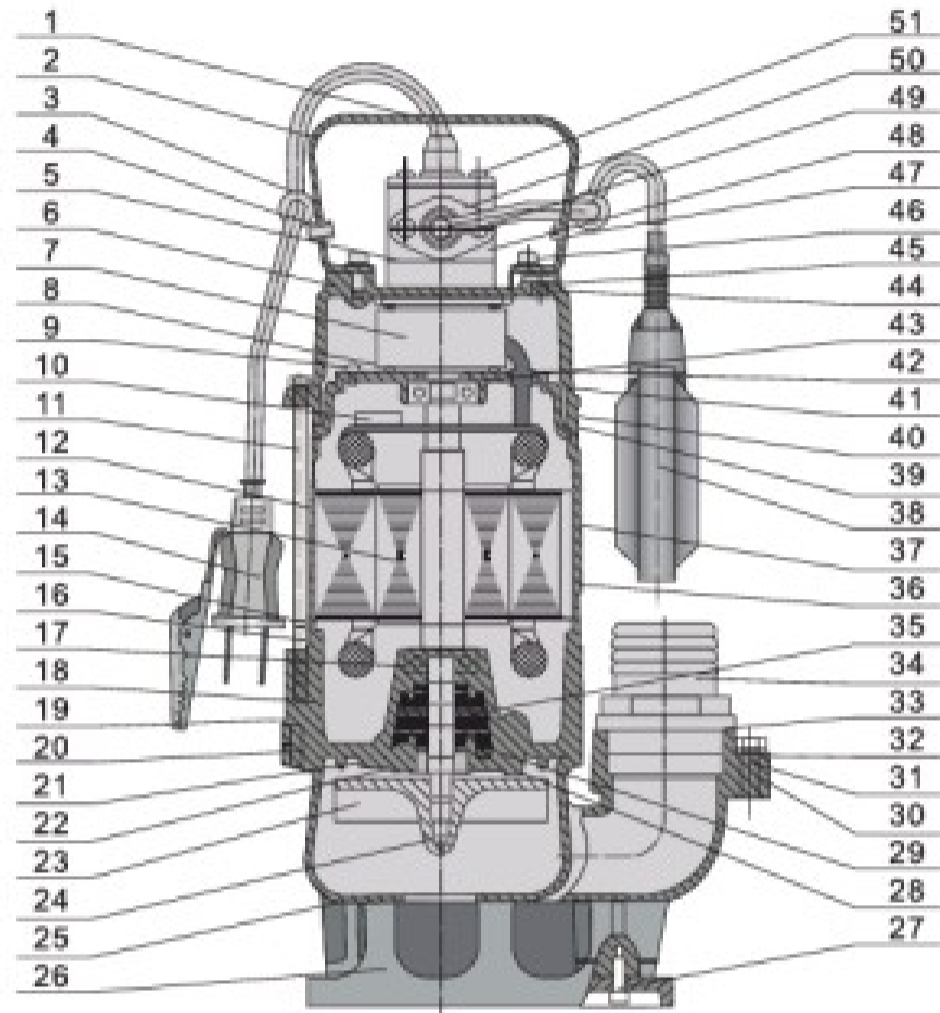


# SUBMERSIBLE PUMPS





N.	Description	N.	Description	N.	Description	N.	Description
1	Warning label	14	Source line	27	Screw	40	"O" ring
2	Handle	15	Fan-slice	28	Screw	41	Cover
3	line protector	16	"O" ring	29	"O" ring	42	line protector
4	Hexagon nut	17	Bearing	30	Washer	43	Spring
5	Tees washer	18	Jointing support	31	Screw	44	Screw
6	Capacitor cover	19	Screw	32	Connecting screw	45	"O" ring
7	capactor	20	Screw	33	"O" ring	46	Screw
8	"O" ring	21	Oil cylinder cover	34	Outlet jointing	47	Screw
9	Grounding screw	22	Oil seal	35	Mechanical seal	48	Tees
10	Thermal protector	23	Impeller	36	Stator	49	Self-taping screw
11	Screw	24	Nut	37	Label	50	Rubber
12	Machine frame	25	Pump body	38	Floating switch	51	Screw
13	Rotor	26	Chassis	39	Square section washer		

# QSA Series Submersible Drainage Pumps (For Clear Water)

IEC MOTOR

GOST MOTOR

NEMA MOTOR

PUMP

GENERATOR

D.C. MOTOR

## **P**erformance Range

Flow rate up to 200 l/min (12 m<sup>3</sup>/h)  
Dynamic head up to 11 m

### Operating Limits

Maximum operating depth 2m below water level  
Maximum fluid temperature +40°C  
Maximum passage for suspended solids 10mm  
Maximum emptying level 9mm from the bottom



### Working Principle

The **QSA** is a single open impeller centrifugal submersible drainage pump designed to function either partly or totally submerged. The impeller, mounted on the end of the drive shaft, consists of a back disk and blades. The fluid enters the rotating blade channel through the suction, where it moves radially from the center outwards, acquiring energy both in the form of pressure and increased speed. When it leaves the impeller the fluid is conveyed towards the volute. Here part of the kinetic energy is transformed into pressure energy, and the fluid leaves the pump via the side delivery opening in the pump body. Correct motor cooling is ensured by the fluid being pumped.

### Pump Installation And Applications

**QSA** is designed to pump clear or slightly dirty water not containing abrasive substances.

**IT IS RECOMMENDED FOR SMALL EMPTYING JOBS SUCH AS FLOODED BASEMENTS AND GARAGES, HOLIDAY HOMES, TUBS AND USED DOMESTIC WATER DISPOSAL.**

A purposely built pit with minimum dimensions 350X350X350h mm is recommended for fixed installation, to provide total drainage and allow correct operation of the float switch. This system automatically starts the pump when the fluid reaches a preset level, stopping it once the fluid has been emptied. Installing a suitable non return valve on the delivery pipe prevents reverse flow when the pump stops.

### Performance

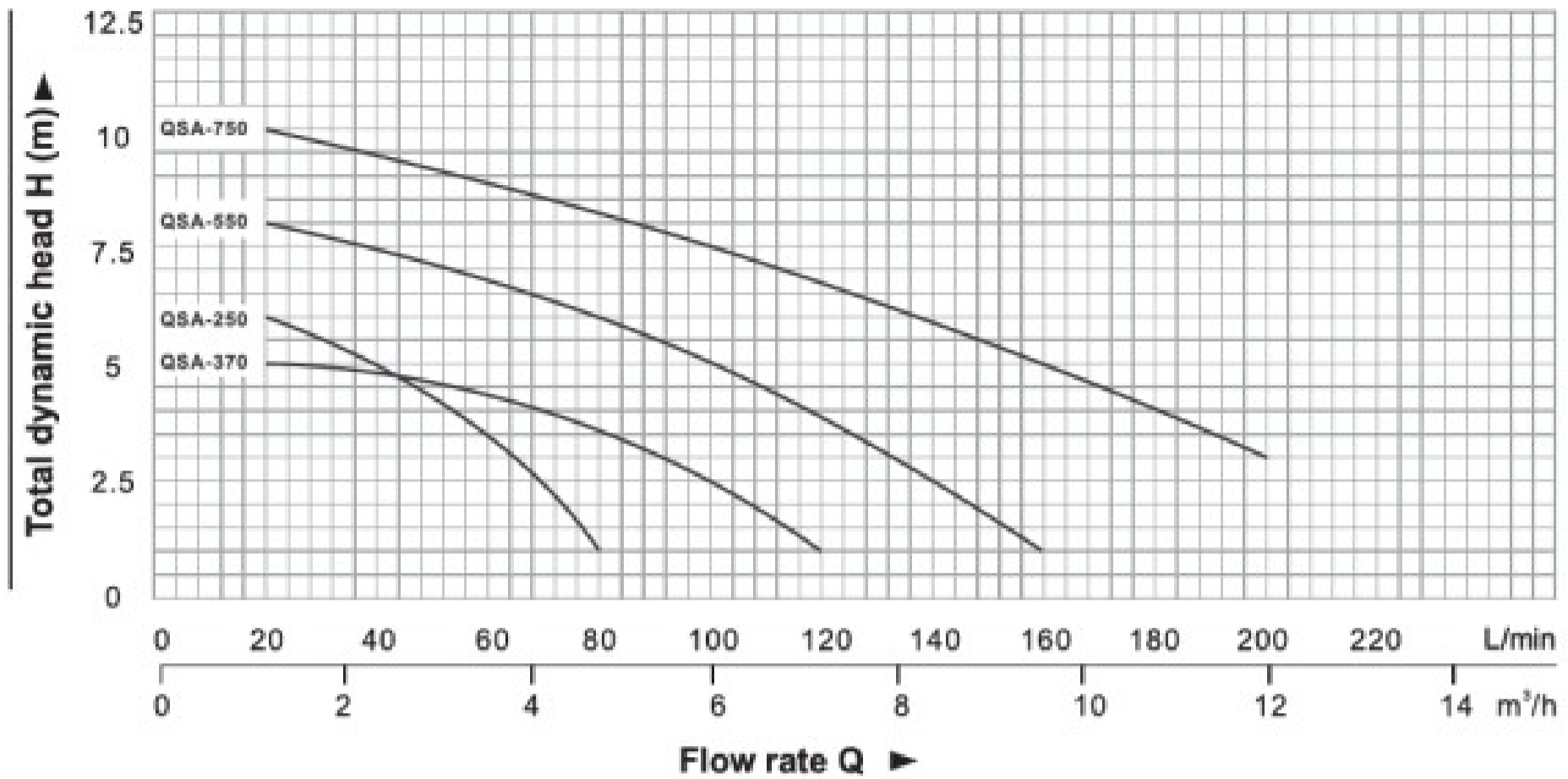
When designing performance level for the **QSA** pump, special attention was given to typical requirements for domestic usage.

-Performance curve specially designed for high delivery rates at the low installed power rating.

### Structural Characteristics

- stainless steel **DELIVERY BODY**
- stainless steel **BASE**
- Technopolymer open impeller
- EXTERNAL FLOAT SWITCH** for automatic pump operation
- stainless steel **MOTOR SHAFT**
- Carbon/alumina **MECHANICAL SEAL**.
- Sealed induction **MOTOR** designed for continuous duty.
- The thermal cutout relay(motor protector) is incorporated.
- INSULATION** class B
- neoprene submerged **SUPPLY CABLE**. Supplied standard with 5 metres of cable and plug (10 meters on request).
- CONSTRUCTION AND SAFETY STANDARDS** in compliance with IEC.

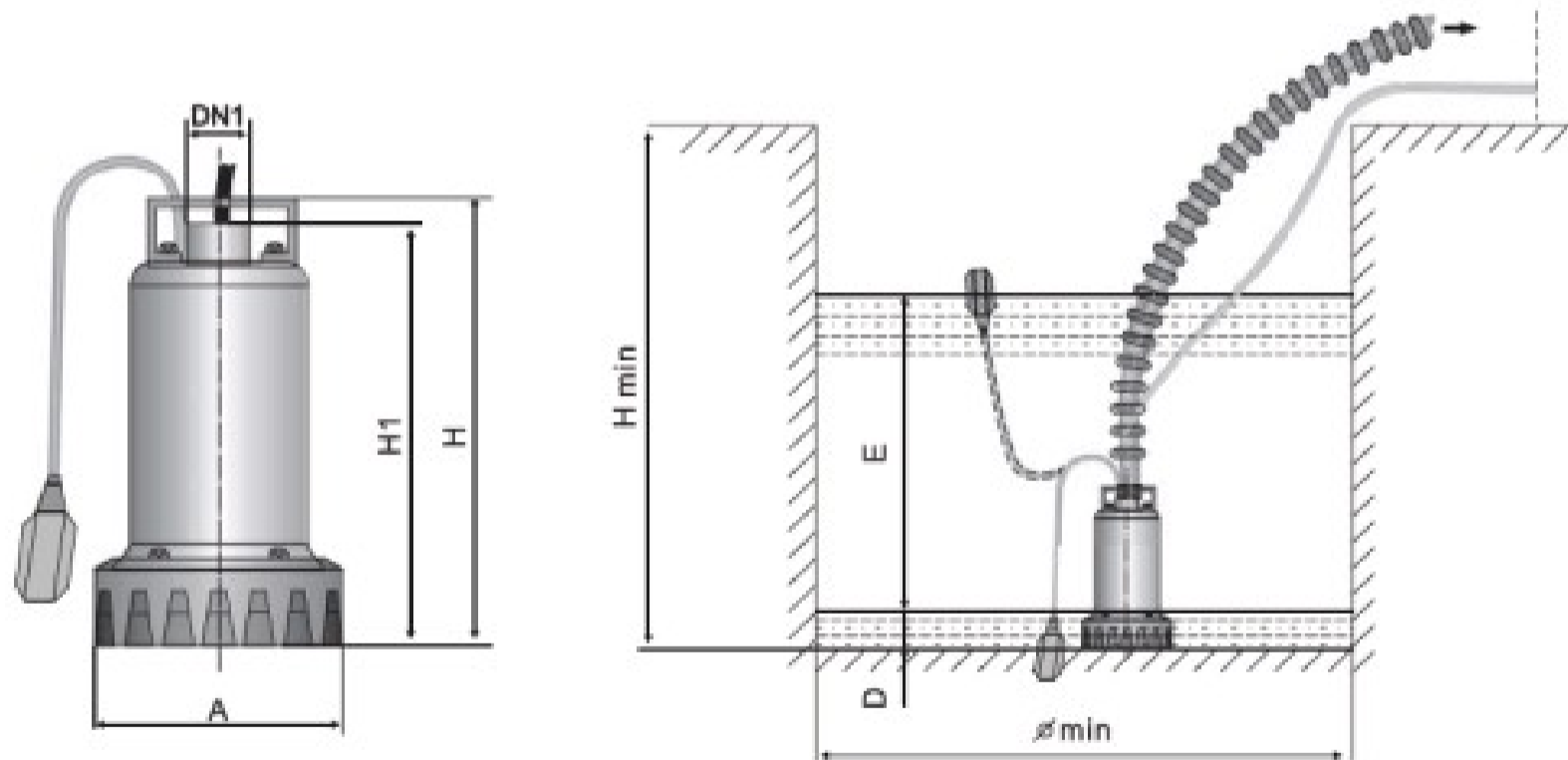
**WARRANTY: 1 YEAR** (according to our general sales conditions)



## Performance Data At N=2900 L/min

Pump Model		Power		Q(m³/h)	0	1.2	1.8	2.4	3.0	3.6	4.2	4.8	6.0	7.2	9.6	12
Single phase	Three phase	KW	HP	Q(L/min)	0	20	30	40	50	60	70	80	100	120	160	200
QSA-250	QSA-250	0.25	0.33	H(m)	6.5	6	5.5	5	3.8	3.5	2.3	1				
QSA-370	QSA-370	0.37	0.5		5.5	5	4.8	4.7	4.6	4.3	4	3.6	2.5	1		
QSA-550	QSA-550	0.55	0.75		10	8	7.8	7.5	7.2	6.7	6.3	6	5	3.8	1	
QSA-750	QSA-750	0.75	1		11	10	9.8	9.5	9.2	8.7	8.5	8.2	7.5	6.7	5	3

H=TOTAL DYNAMIC HEAD IN METERS. Q=FLOW RATE



Pump Model		DN1	Dimensions (mm)						
Single phase	Three phase		A	H	H1	Dmin	E	Hmin	Ømin
QSA-250	QSA-250	1 1/4"	150	245	205	40	Adjustable	500	350
QSA-370	QSA-370	1 1/4"	150	245	205	40	Adjustable	500	350
QSA-550	QSA-550	1 1/4"	150	276	235	40	Adjustable	500	350
QSA-750	QSA-750	1 1/4"	150	276	235	40	Adjustable	500	350

# QSB

## Submersible Drainage Pumps (For Clear Water)

### Performance Range

Flow rate up to 200 l/min (12 m<sup>3</sup>/h)  
Dynamic head up to 11 m

### Operating Limits

Maximum operating depth 3m below water level  
Maximum fluid temperature +40°C  
Maximum passage for suspended solids 10mm  
Maximum emptying level 14mm from the bottom

**Design, technology and innovative materials are the main features behind the new QSB pump, designed to be easy to use and extremely reliable. The vortex system permits to drain dirty water without fear of impeller clogging.**



### Working Principle

**QSB centrifugal pumps** is a SUBMERSIBLE PUMP, for dirty water, designed mainly for domestic use. Their operation principle is that of a centrifugal pump. A large sized ring chamber with a threaded delivery opening is machined in the pump body and closed at the front by a cover, housing the suction opening, which is shaped to prevent suspended solid over a certain sized from entering the pump. Since the impeller is retracted with respect to the cover, water entering the front chamber lying between these two components assumes a vortex motion and is centrifuged into the ring chamber, leaving the pump via the delivery opening. This principle does not require the pumped liquid to pass directly through the impeller, enabling the pump to handle suspended solids without risk of clogging.

### Pump Installation And Applications

**QSB pumps** are suitable for lifting clear water not containing abrasive substances. These pumps have been designed for easy use and it is extremely reliable even when subjected to continuous use, since the motor is fully cooled. It is particularly suited for domestic use, to drain dirty water in all cases where suspended solids up to 20 mm have to be dealt with.

**RECOMMENDED APPLICATIONS THEREFORE INCLUDE EMPTYING OF POOLS AND TANKS, DISPOSAL OF DOMESTIC SEWAGE, EMPTYING OF SUMP PITS.**

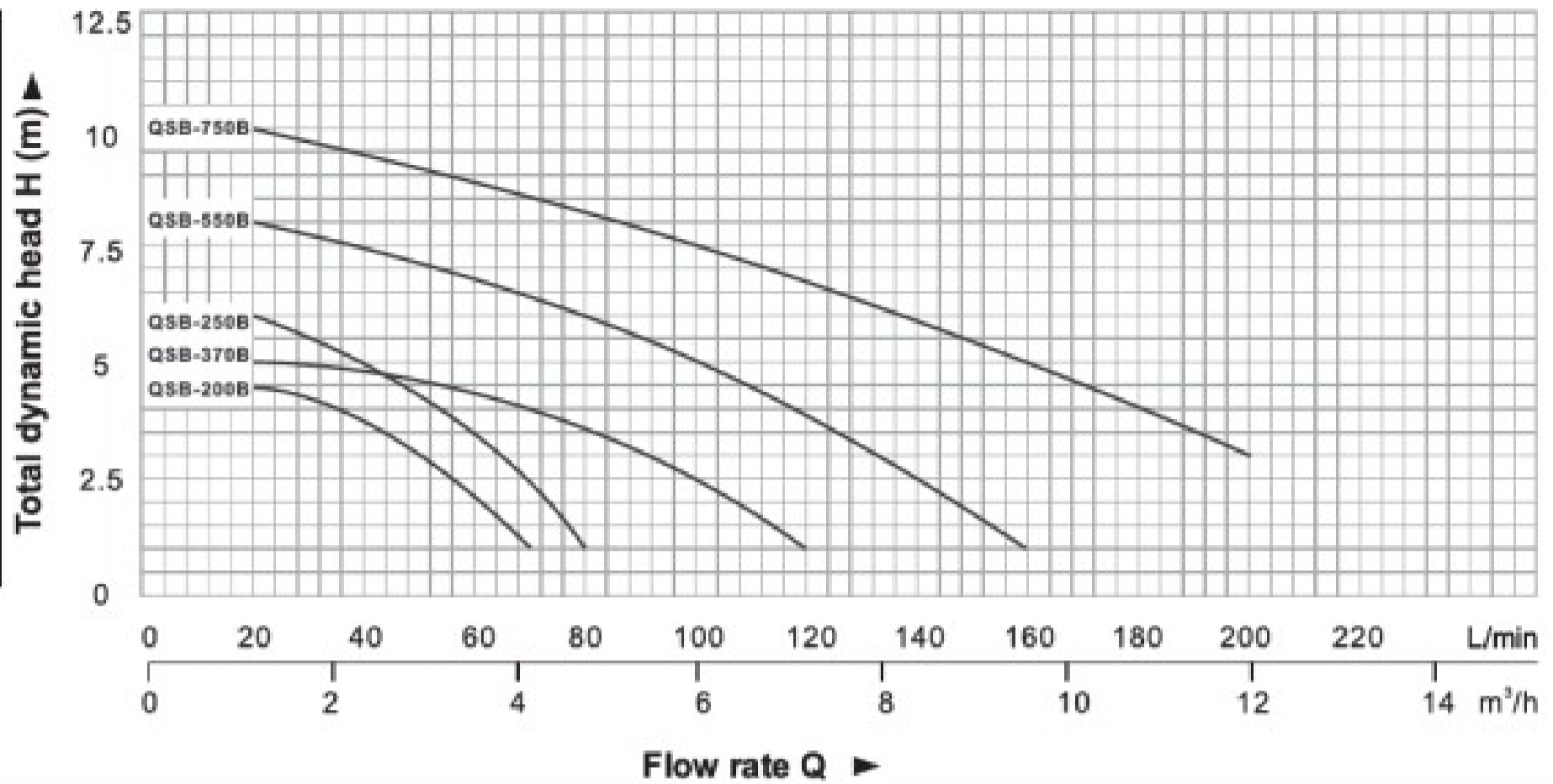
### Performance

When designing performance levels for **QSB pumps**, special attention was given to typical requirements for domestic usage.  
-Performance curves specially designed for high delivery rates at the low installed power rating.

### Structural Characteristics

- DELIVERY BODY** made from fiberglass reinforced technopolymer, particularly resistant to mechanical stress, knocks and corrosion, fitted with gas threaded vertical delivery opening.
- SUCTION STRAINER** made from fiberglass reinforced technopolymer, providing the support base for the pump.
- Technopolymer **HOSE JOINT** with screw fitting.
- Technopolymer open **IMPELLER**
- EXTERNAL FLOAT SWITCH** for automatic pump operation.
- DOUBLE MECHANICAL SEAL** carbon/alumina on the pump side and sealing ring on the motor side (with barrier oil chamber to lubricate and cool the sealing surfaces in the absence of water).
- Seal induction **MOTOR**, suitable for continuous duty with built-in thermal cutout relay (motor protector). **INSULATION Class F** (provides the motor with a considerable overload tolerance and substantially increases the service life of the motor itself). Cooling of motor assured by the liquid in which the pump is immersed.
- PROTECTION IP 68**
- Neoprene submersible **SUPPLY CABLE**. Supplied standard with 5 meters of cable and plug (10 meters on request)
- CONSTRUCTION AND SAFETY STANDARDS** is compliance with the IEC.

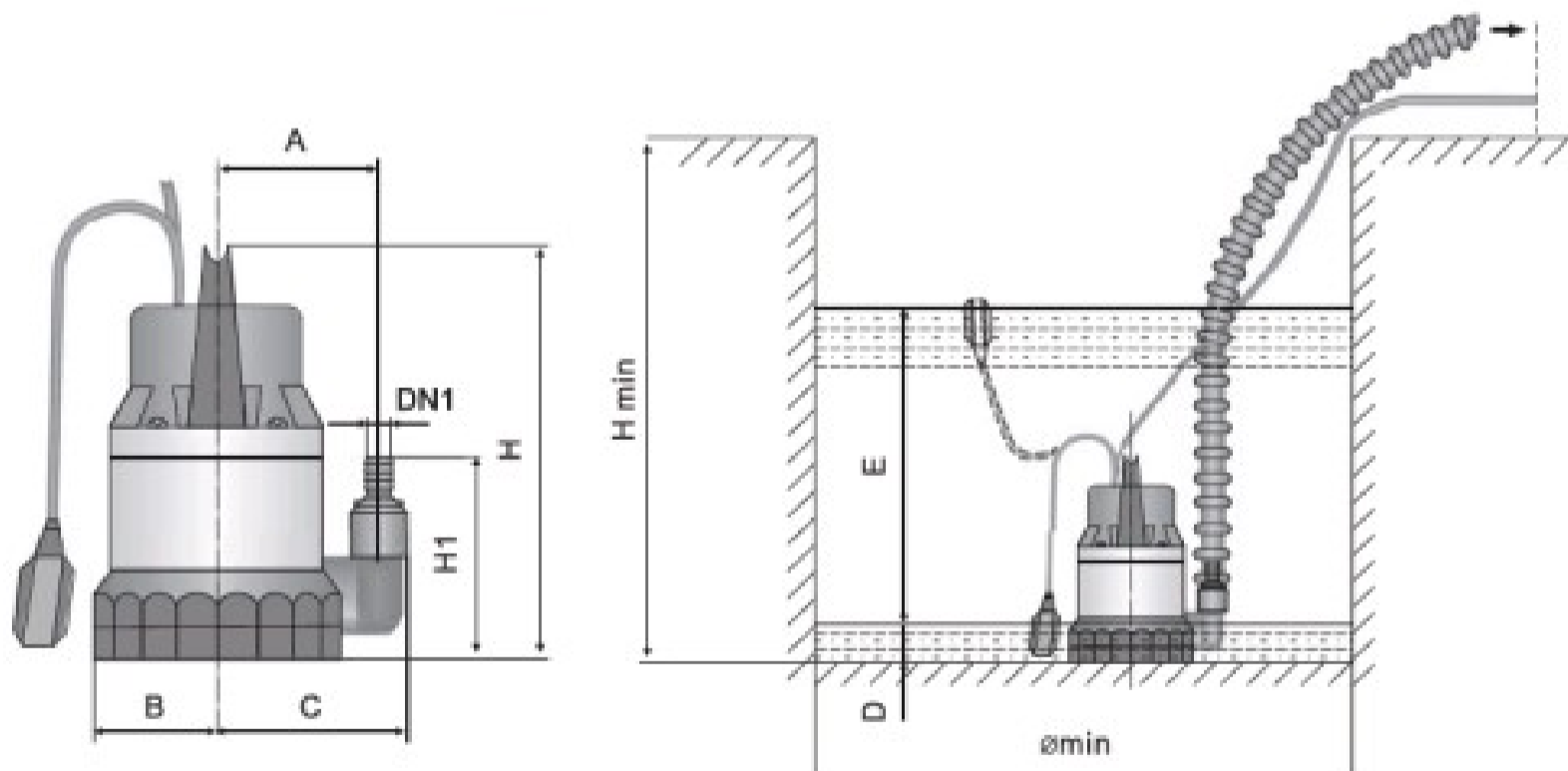
**WARRANTY: 1 YEAR** (according to our sales conditions)



## Performance Data At N=2900 L/min

Pump Model		Power		Q(m³/h)	0	1.2	1.8	2.4	3.0	3.6	4.2	4.8	6.0	7.2	9.6	12	
Single phase	Three phase	KW	HP	Q(L/min)	0	20	30	40	60	60	70	80	100	120	160	200	
QSBm-100	QSB-100	0.20	0.25	H(m)	5	4.5	4	3.5	2.8	2	1						
QSBm-200	QSB-200	0.25	0.33		6.5	6	5.5	5	3.8	3.5	2.3	1					
QSBm-400	QSB-400	0.37	0.5		5.5	5	4.8	4.7	4.6	4.3	4	3.6	2.5	1			
QSBm-550	QSB-550	0.55	0.75		9	8	7.8	7.5	7.2	6.7	6.3	6	5	3.8	1		
QSBm-750	QSB-750	0.75	1		11	10	9.8	9.5	9.2	8.7	8.5	8.2	7.5	6.7	5	3	

H=TOTAL DYNAMIC HEAD IN METERS. Q=FLOW RATE



Pump Model		DN1	Dimensions (mm)								
Single phase	Three phase		A	B	C	H	H1	Dmin	E	Hmin	ømin
QSBm-100	QSB-100	1"	110	78	150	300	180	80	Adjustable	400	400
QSBm-200	QSB-200	1"	110	78	150	300	180	80	Adjustable	400	400
QSBm-400	QSB-400	1"	110	78	150	300	180	80	Adjustable	400	400
QSBm-550	QSB-550	1"	120	78	156	345	215	100	Adjustable	450	400
QSBm-750	QSB-750	1"	120	78	156	345	215	100	Adjustable	450	400