

Line **BEW**



 **IMBIL**®
Pumping Satisfaction



INTRODUCTION

This catalog describes all multistage pump models of the BEW series manufactured by IMBIL and includes technical information that ranges from construction techniques to characteristic curves of each model. IMBIL and its representatives are always at your service to provide you with any further information and technical assistance.

NOTES

We reserve the right to make any modifications that we deem necessary or required to our products at any time without entailing any obligations of any nature.

The illustrations in the catalog are indicative only, should any doubts related to interpretation arise, please consult an IMBIL representative.

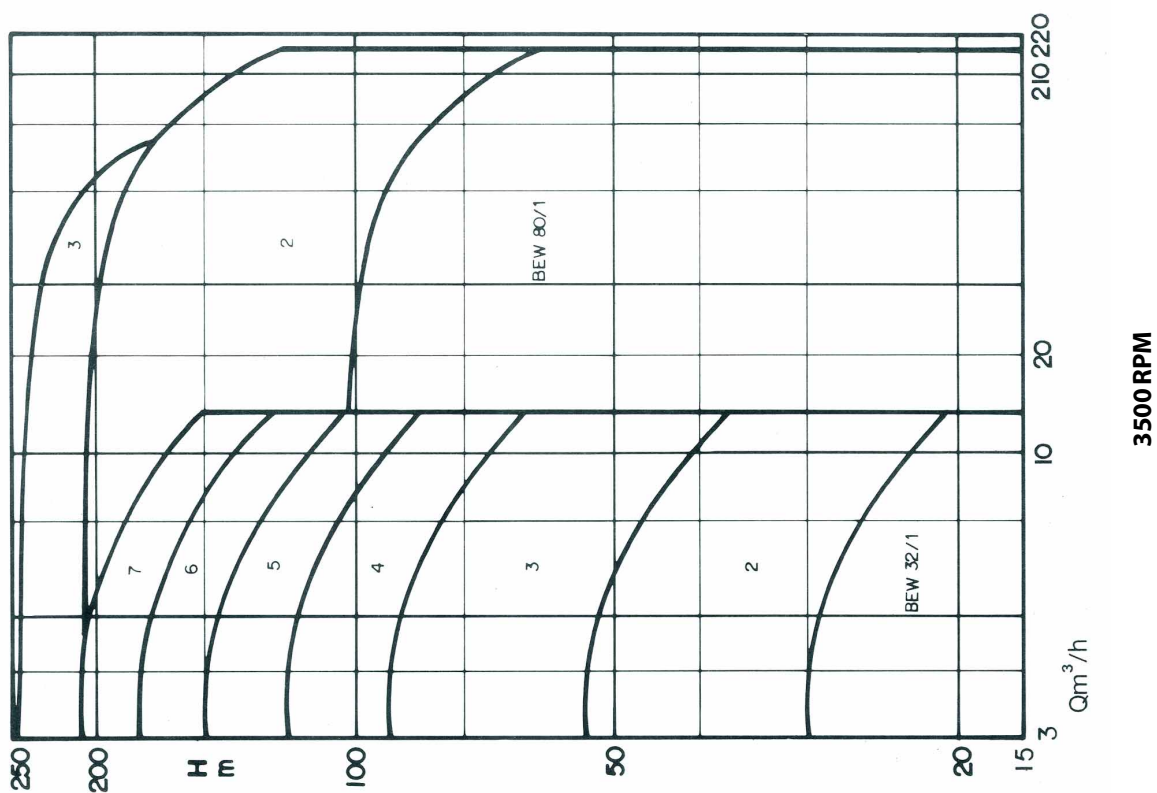
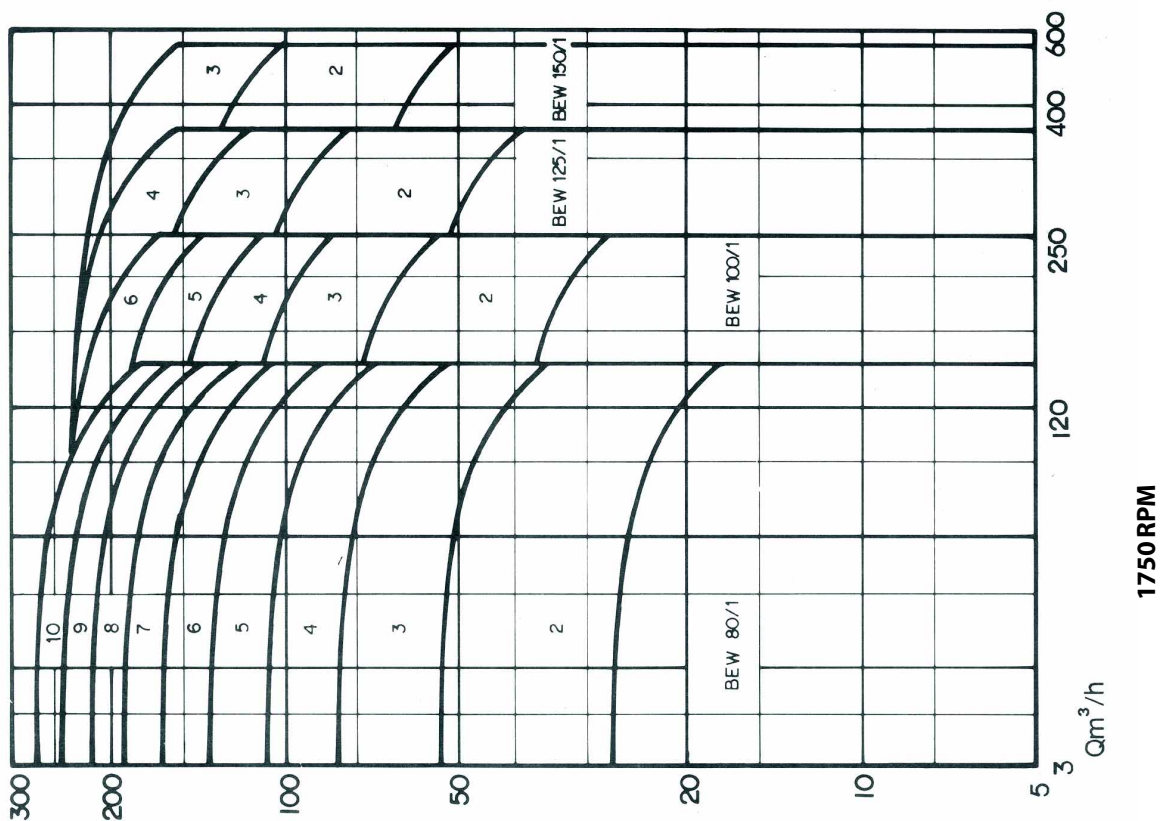


APPLICATION

BEW pump series is recommended for water supply, irrigation, low pressure boiler feed, fire fighting systems, clear liquid pumping, textile industries and industrial facilities.

CONSTRUCTION TECHNIQUES

- **Horizontal Multi-stage Pumps** with vertically sectioned stages. The stage pieces are individually sealed by means of o'rings and connected in the suction and discharge bodies through tie bars.
- **The Shaft** is sealed through gaskets in the standard execution. It has protective sleeves in the packing area and separating sleeves.
- **The impeller** is closed, radial and of a single flow. It handles its axial thrust through relief holes at the front and back.
- **The wear rings** are mounted at the front and back of the impeller and are housed on the suction and discharge bodies and stage piece and diffusers.
- **The bearings** are grease-lubricated and positioned at the two ends of the pump with cylindrical roller bearings on the driver side and double row angular contact ball bearing on the side of the discharge.





TECHNICAL DATA

- Minimum/maximum Volumetric Flow (m³/h):

0.2 x q optimum/ see characteristic curve.

- Hydrostatic Test Maximum Pressure (bar):

12.5 bar in suction piece.

35 bar in pressure piece and stage piece.

10 bar in refrigeration chamber.

- Minimum/Maximum Temperature (C°): - 10/

+ 105 °C for packing with no refrigeration.

+ 105/ +140 °C for packing with refrigeration.

For Mechanical Seal as recommended by manufacturer.

- Suction Maximum Pressure (bar): 10 bar

- Discharge Maximum Pressure (bar): 28 bar considering head = 0

- Rotation Direction:

Clockwise, from the driver side.

- For grease-based lubrication, we recommend:

Alvânia R2 ou similar.

- Flanges/ Standards:

Suction: PN 16 - DIN 2533 (except for Model 150 - PN 10 - DIN 2532)

Discharge: PN 40 - DIN 2535.

- The driver is performed by means of: elastic coupling, by electric motor, combustion engine, Steam Turbine, etc.

- Power reserve for driver in relation to power consumed by pump (HP):

Up to 20 HP approximately 15% of reserve.

Over 20 CV approximately 20% of reserve.

The following accessories are optionally available:

- IMBIL standard coupling.

- IMBIL standard coupling protector.

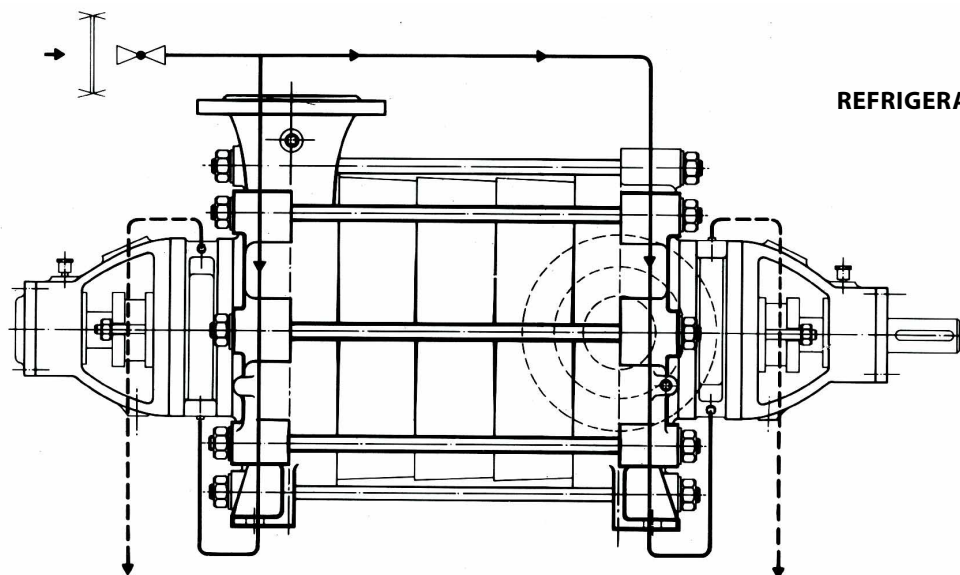
- IMBIL standard base, in plate or U-shaped beam.

- IMBIL standard counterflange.

Models		32	80	100	125	150
Bearings	Suction side	NU 206 KC3 + H 206	NU 209 KC3 + H 209	NU 210 KC3 + H 210	NU 211 KC3 + H 211	NU 213 KC3 + H 213
	Pressure side	6305 C-3	3308 C-3	3309 C-3	3310 C-3	3312 C-3
Packing dimension		1/4"	3/8"	7/16"	7/16"	5/8"
P/N - Maximum Admissible		0,012	0,08	0,1203	0,1702	0,3001
Maximum Number of Stages without Refrigeration Chamber	Up to 1500 rpm	17	10	8	6	5
	Up to 2000 rpm	17	10	8	5	4 in 1800 rpm
	Up to 2900 rpm	10	5	-	-	-
	Up to 3500 rpm	7	3	-	-	-
Maximum Number of Stages with Refrigeration Chamber	Up to 1500 rpm	15	9	7	5	4
	Up to 2000 rpm	15	9	7	5	3
	Up to 2900 rpm	11	5	-	-	-
	Up to 3600 rpm	6	3	-	-	-
Inertia Moment GD ² (kg.m ²) with water	1 stage	0,0112	0,0911	0,2052	0,4123	1,0161
	Each additional stage	0,0082	0,0703	0,1701	0,3631	0,9123



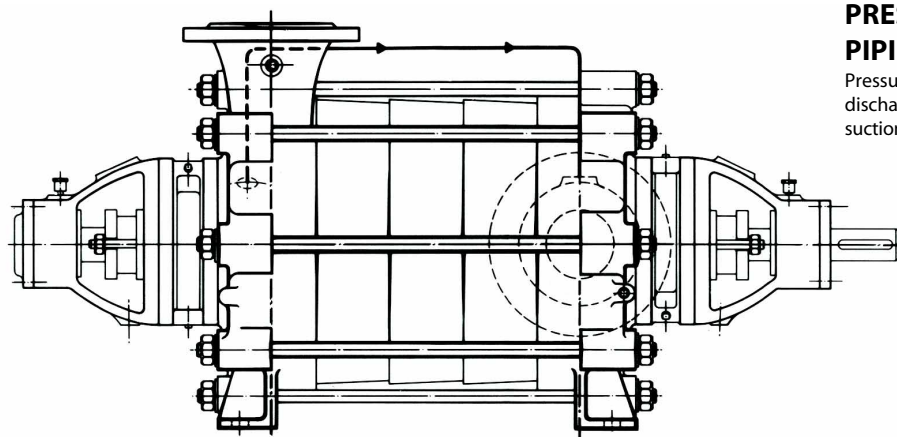
REFRIGERATION AND PRESSURE RELIEF PIPING



REFRIGERATION PIPING

- **Application:** temperatures over 105°C and under 140°C, suction pressure over 1bar.
- **Upon installation of refrigeration piping of chamber has to consider the following data:**
- **Refrigeration water:**
Maximum inflow temperature 40°C.
Maximum outflow temperature 60°C.
Refrigeration water maximum pressure 6 bar.

Model	Refrigeration flow rate
32	90 l/h
80	150 l/h
100	150 l/h
125	170 l/h
150	170 l/h

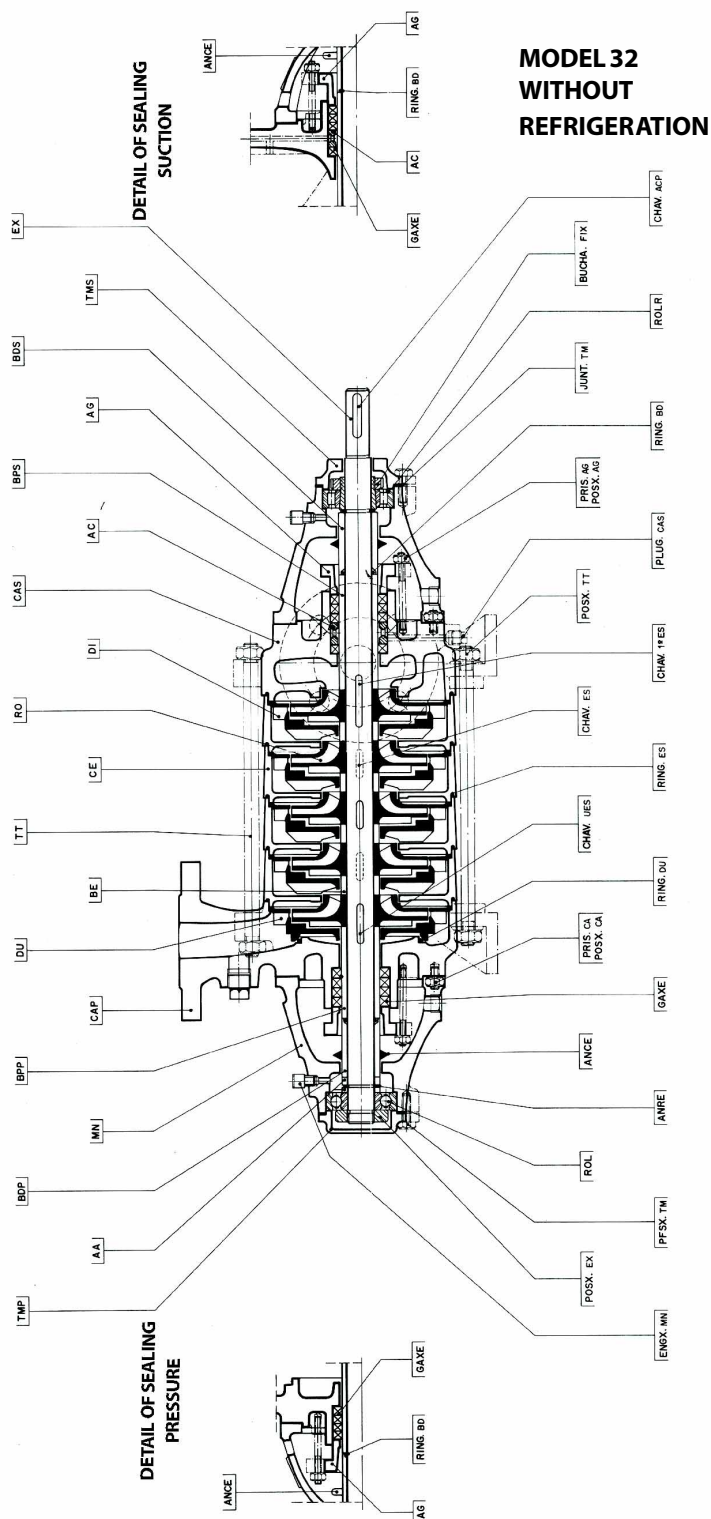


PRESSURE RELIEF PIPING

Pressure relief piping with discharge piece circulation to the suction mouth.

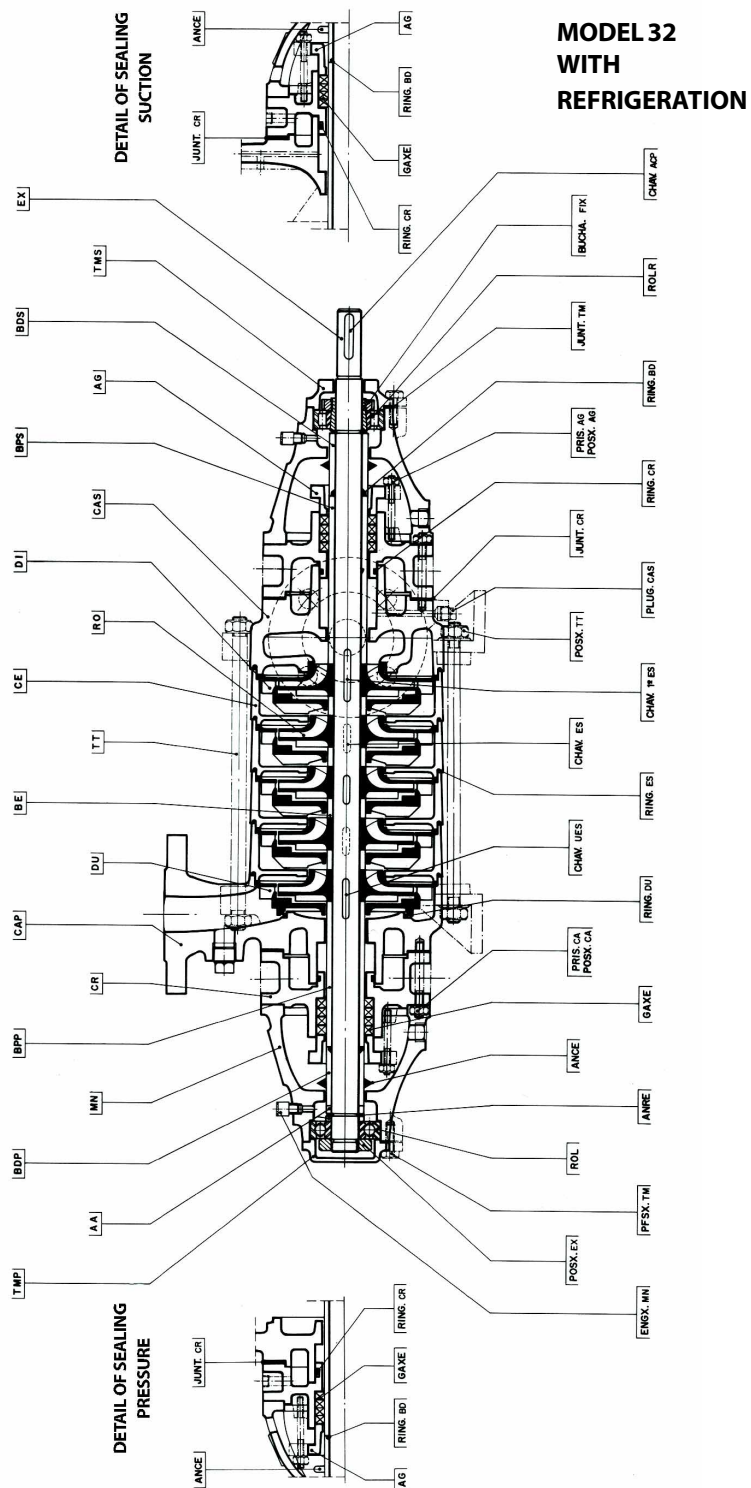


CROSS SECTION AND IDENTIFICATION OF PARTS



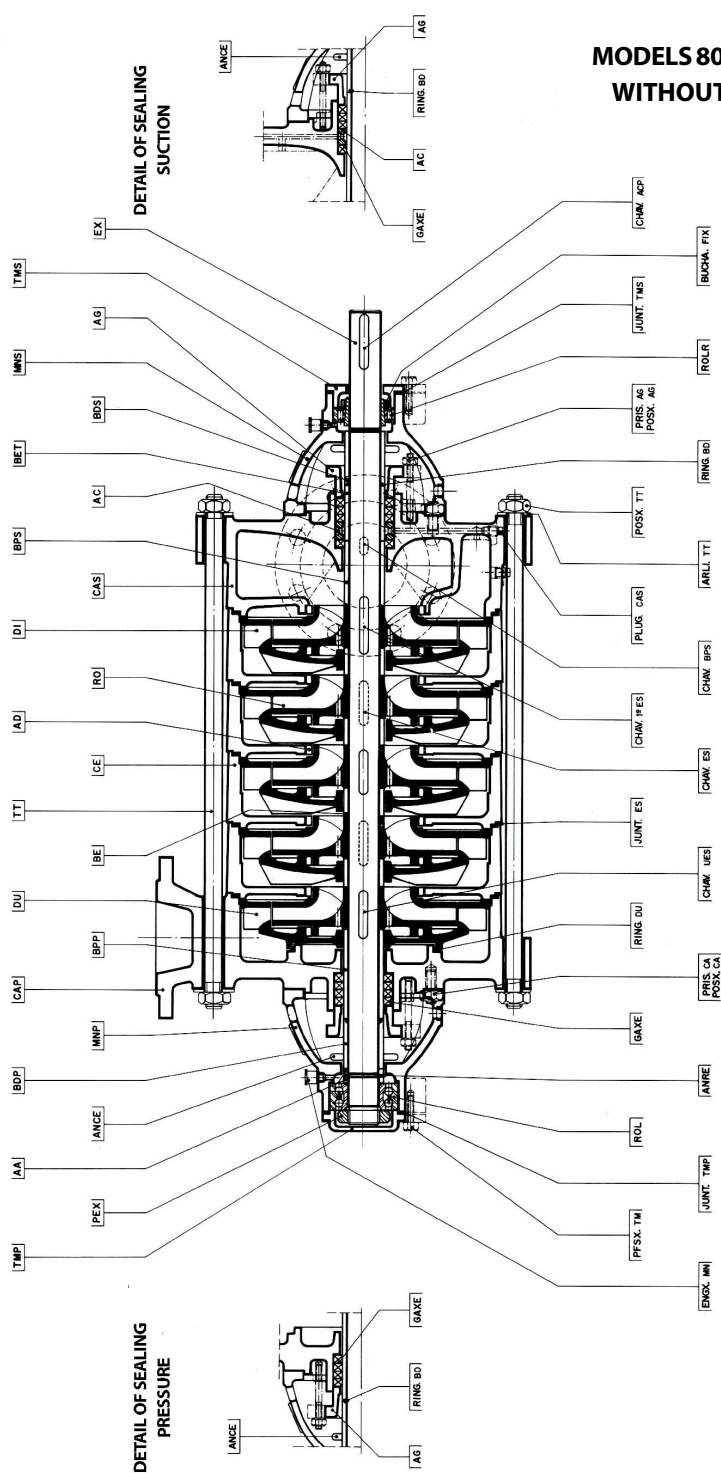


CROSS SECTION AND IDENTIFICATION OF PARTS



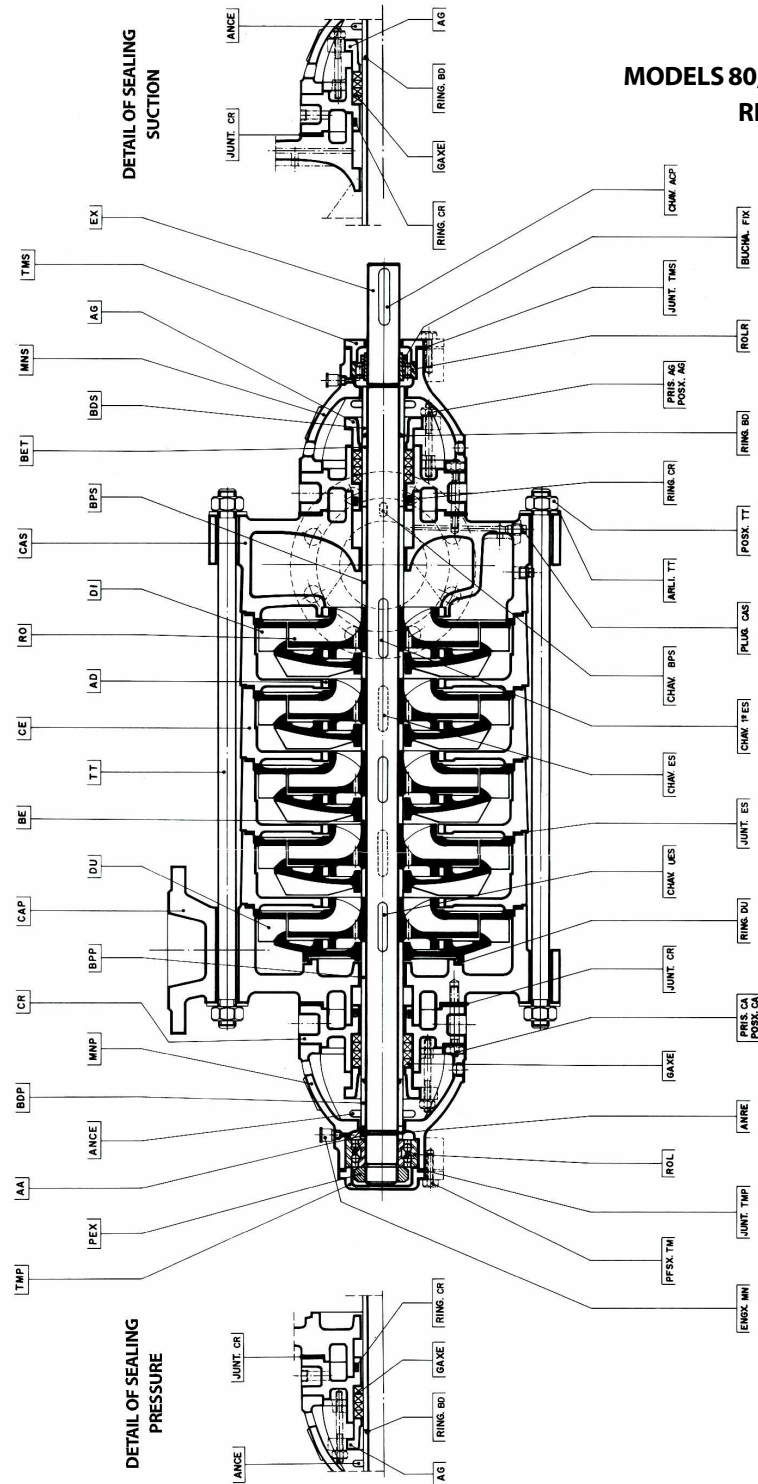


MODELS 80, 100, 125, 150 AND WITHOUT REFRIGERATION





CROSS SECTION AND IDENTIFICATION OF PARTS



MODELS 80, 100, 125, 150 AND WITH REFRIGERATION



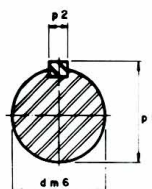
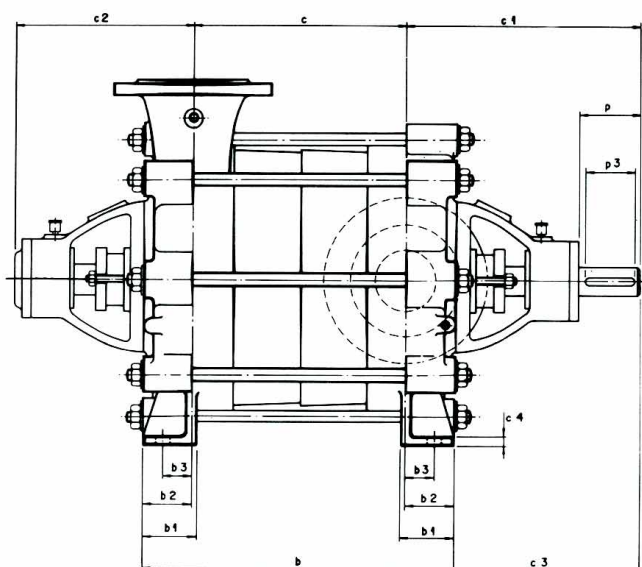
PART LIST

Part	Denomination	Material	Qty.	Quantity for each model					Notes
				32	80	100	125	150	
AA	Adjusting ring	GG - 20	2						Only for models without refrigeration.
AC	Lantern ring	GG - 20	1						
AD	Wear ring	GG - 20	(Es x 2)	0					
AG	Stuffing box packing gland	GG - 20	2						Rubber material for Model 32.
ANCE	Centrifuge ring	SAE 1020	2						
ANRE	Snap ring	Steel	2						
ARLI.TT	Smooth washer of tie bar	SAE 1020	16	0					Quantity: indicates the number of parts used in most models. Quantity for each model: indicates changes in the number of parts in some items for each specific model.
BDP	Pressure dist. sleeve	GG - 20	1						
BDS	Suction dist. sleeve	GG - 20	1						
BE	Stage sleeve	GG - 20	(Es - 1)						
BET	End sleeve	GG - 20	0					1	
BPP	Pressure shaft sleeves	CR GG - 20	1						
BPS	Suction shaft sleeves	CR GG - 20	1						
BUCHA.FIX.	Bearing adapter sleeve	Steel	1						
CAP	Pressure volute case	GG - 20	1						
CAS	Suction volute case	GG - 20	1						
CE	Stage piece	GG - 20	(Es - 1)						
CHAV.ACP	Coupling key	SAE 1045	1						
CHAV.BPS	Suction shaft sleeve key	SAE 1045	0					1	
CHAV.ES	Stage key	SAE 1045	(Es - 2)				(Es-1)	(Es-1)	
CHAV.UES	Last stage key	SAE 1045	1				0	0	
CHAV.1ºES	First stage key	SAE 1045	1						
COTOV	Relief tube elbow	Brass	2						Only for models with refrigeration.
CR	Refrigeration chamber	GG - 20	2						
DI	Intermediate diffuser	GG - 20	(Es - 1)						
DU	Last stage diffuser	GG - 20	1						(ES) indicates that the quantity depends on the number of stages. Ex. For a pump with 8 stages: (ES-1) indicates that (8-1) = 7 parts (ESx2) indicates (8x2) = 16 parts. (CR) in denomination indicates the parts whose dimensions vary for models with refrigeration.
ENGX.MN	Bearing greaser	SAE 1020	2						
EX	Shaft	CR SAE 1045	1						
GAXE	Packing	Graphitized	1						
JUNT.CR	Refrigeration chamber joint	Velumioide	2						
JUNT.ES	Stage joint	Velumioide	(ES)	0					
JUNT.TMP	Joint of pressure bearing cover	Velumioide	1						
JUNT.TMS	Joint of suction bearing cover	Velumioide	1						
MNP	Pressure bearing	GG - 20	1						
MNS	Suction bearing	GG - 20	1						
PEX	Shaft nut	SAE 1020	1						
PFSX.TM	Bearing cover screw	SAE 1020	8	6					
PLUG.CAS	Suction volute case plug	Galvanized iron	3			4			
POSX.AG	Stuffing box packing gland nut	SAE 1020	4						
POSX.CA	Volute case nut	SAE 1020	8				16	16	
POSX.TT	Tie bar nut	SAE 1020	16	8					
PRIS.AG	Tap bolt of stuffing box	CR SAE 1045	4						Only for models with refrigeration.
PRIS.CA	Tap bolt of volute case	CR SAE 1045	8			16	16		
RING.BD	Dist. sleeve o'ring	Nitrilic	2						
RING.CR	Refrigeratin chamber o'ring	Nitrilic	2						
RING.DU	Last stage diffuser o'ring	Nitrilic	1	(ES)					
RING.ES	Stage o'ring	Nitrilic	0						
RO	Impeller	GG - 20	(ES)						
ROL	Ball bearings	Steel	1						
ROLR	Roll bearings	Steel	1						
TMP	Pressure bearing cover	GG - 20	1						
TMS	Suction bearing cover	GG - 20	1						
TT	Tié bar	SAE 1020	8	4					
TUBO	Relief tube	Brass	1						

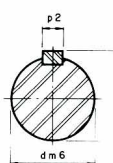
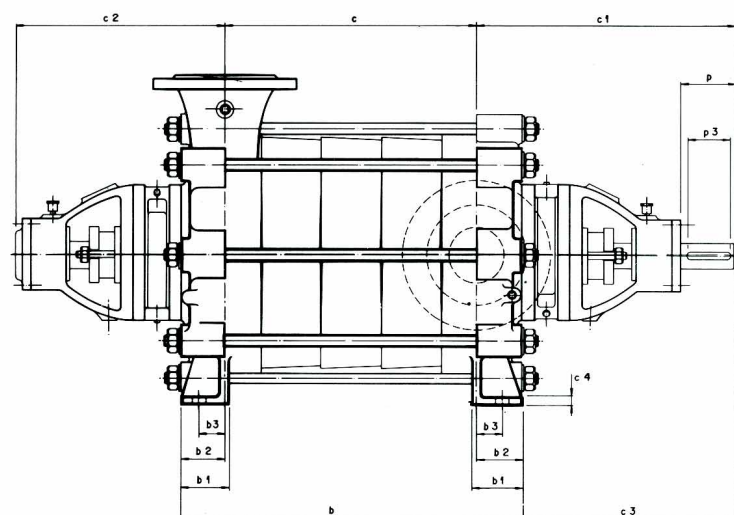
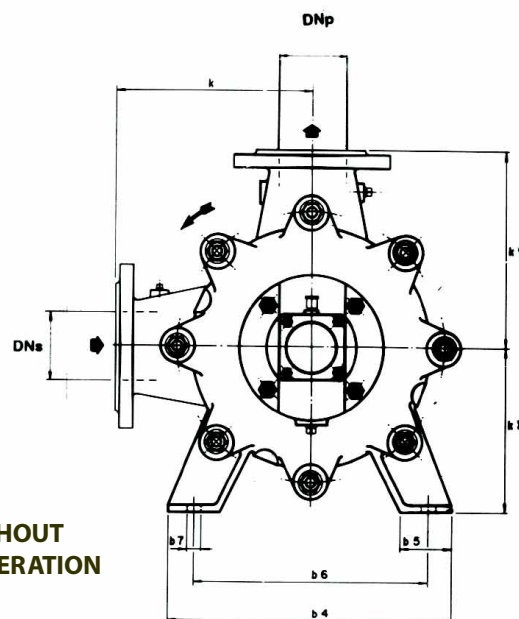
Note: The materials specified for the parts are for standard pumps. The parts can be manufactured in the following materials: nodular iron, carbon steel, stainless steel, bronze, aluminum and special alloys and or other material according to the purpose of the pump.



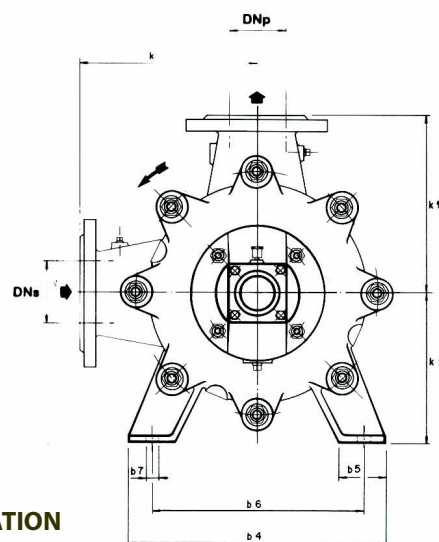
BASIC DIMENSIONS (mm)



**WITHOUT
REFRIGERATION**



**WITH
REFRIGERATION**



Models	DN DN _s DN _p		B								without refrigeration				C with refrigeration				K			P				Ø dm6
			b	b ₁	b ₂	b ₃	b ₄	b ₅	b ₆	b ₇	c ₁	c ₂	c ₃	c ₄	c ₁ *	c ₂ *	c ₃ *	c ₄ *	k	k ₁	k ₂	p	p ₁	p ₂	p ₃	
32	40	32	C+76	45	38	25	190	55	150	15	235	185	197	12	280	230	242	12	160	160	105	50	27,0	8	40	24
80	100	80	C+120	60	60	40	370	70	310	15	320	250	260	14	370	300	310	14	265	265	210	85	43,0	12	75	40
100	125	100	C+140	75	70	45	440	80	370	15	360	275	290	14	415	330	345	14	300	300	250	95	48,5	14	80	45
125	150	125	C+170	85	85	51	550	95	460	20	420	300	335	18	480	360	395	18	375	375	300	125	53,5	14	90	50
150	200	150	C+200	100	100	65	650	100	550	23	485	355	385	18	560	430	460	18	425	425	350	140	64,0	18	90	60

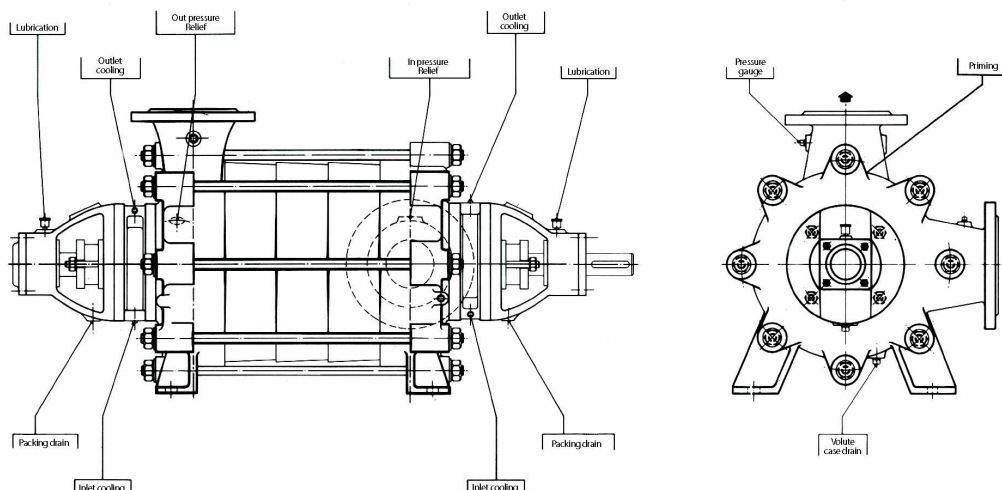
C1*, C2* and C3* are the only dimensions that change for all models with refrigeration

Measure "C" according to the number of stages

Models	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
32	67	112	157	202	247	292	337	382	427	472	517	562	607	652	697	742	787
80	110	193	276	359	442	525	608	691	774	875	-	-	-	-	-	-	-
100	135	235	335	435	535	635	735	835	-	-	-	-	-	-	-	-	-
125	135	280	395	510	625	740	-	-	-	-	-	-	-	-	-	-	-
150	165	360	505	650	795	-	-	-	-	-	-	-	-	-	-	-	-

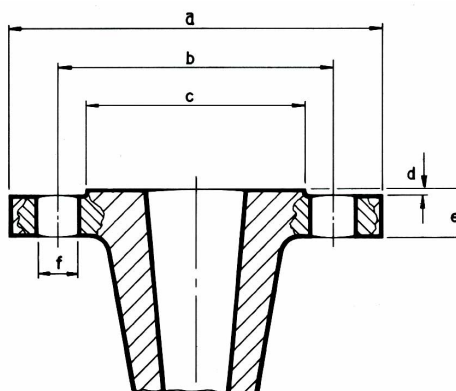


CONNECTION SIZES AND FLANGE TABLE



BSP screw threads for models					
Denomination	32	80	100	125	150
Pressure gaug	1/2"	1/2"	1/2"	1/2"	1/2"
Priming	1/2"	1/2"	1/2"	1/2"	1/2"
Volute case drain	1/4"	1/2"	1/2"	1/2"	1/2"
Lubrication	1/8"	1/4"	1/4"	1/4"	1/4"
Packing Drain	3/8"	1/2"	1/2"	1/2"	1/2"
In/Out pressure relief	1/4"	1/2"	1/2"	1/2"	1/2"
Inlet cooling*	1/4"	1/2"			
Outlet cooling*	1/4"	1/2"			

* Only for models with refrigeration



Discharge flange										Suction Flange								
Model	Standard	DNp	a	b	c	d	e	f	Number of holes	Norma	DNs	a	b	c	d	e	f	Number of holes
32	PN 40 DIN 2535	32	140	100	78	2	20	18	4	PN 16 DIN 2533	40	150	110	88	3	18	18	4
80		80	200	160	138	3	26	18	8		100	220	180	158	3	24	18	8
100		100	235	190	162	3	28	22	8		125	250	210	188	3	26	18	8
125		125	270	220	188	3	30	26	8		150	285	240	212	3	26	22	8
150		150	300	250	218	3	34	26	8	PN 10 DIN 2532	200	340	295	268	3	26	22	8

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