

Micra®

Pompa · Yangın Söndürme Sistemleri · Hidrofor

MİCRA POMPA VE MAKİNA İMALAT LTD. ŞTİ.



SGM-H HORIZONTAL MULTISTAGE CENTRIFUGAL PUMPS



Dağyaka mah. 614. cadde No:134 Kahramankazan / Ankara

+ 90 312 250 99 99

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www.micrapompa.com

GENERAL INFORMATION

Discharge Flange	DN 25 - DN 250
Capacity	up to 1000 m³/h
Head	up to 600 m
Working Temperature	From -25 °C to + 140 °C*
Casing Pressure (Pmax)	30 bar (63 bar)*
Design Type	BB4

(Pmax: Suction Pressure + Shut off Head)

(*) Depending on the type of liquid, operating temperature and pressure. The pump material changes. Please contact our company for detailed information.

Shaft Sealing

In standard production, it is used as soft packing up to 110 °C and soft packing together with refrigerated packing boxes between 110 °C and 140 °C.

Mechanical seal pumps are also available upon request.

Applications

Water Treatment and Pressurization	Power Plants
Heating Ventilating and Air Conditioning	Oil Industry
Agricultural Irrigation and Drainage	Chemical Industry
Food and Beverage Industry	Mining
Iron and Steel Industry	Marine
Building System	Fire Fighting

Transferable liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Pump Code

Pump Type **SGM-H** **65** / **5**

Discharge Nozzle (DN-mm) _____

Number of Stages _____



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DESIGN FEATURES

Horizontal ring section, multistage, centrifugal pumps with closed impeller and diffuser.

10 Models from DN 32 up to 250 discharge flange diameter.

Suction nozzle flanges conform to EN 1092 - 2 / PN 16 and discharge nozzle flanges conform to EN 1092 - 2 / PN 40 (PN 63)
(For steel or stainless steel casing pumps, flanges conform to related pressure class ratings defined in EN 1092 - 1)

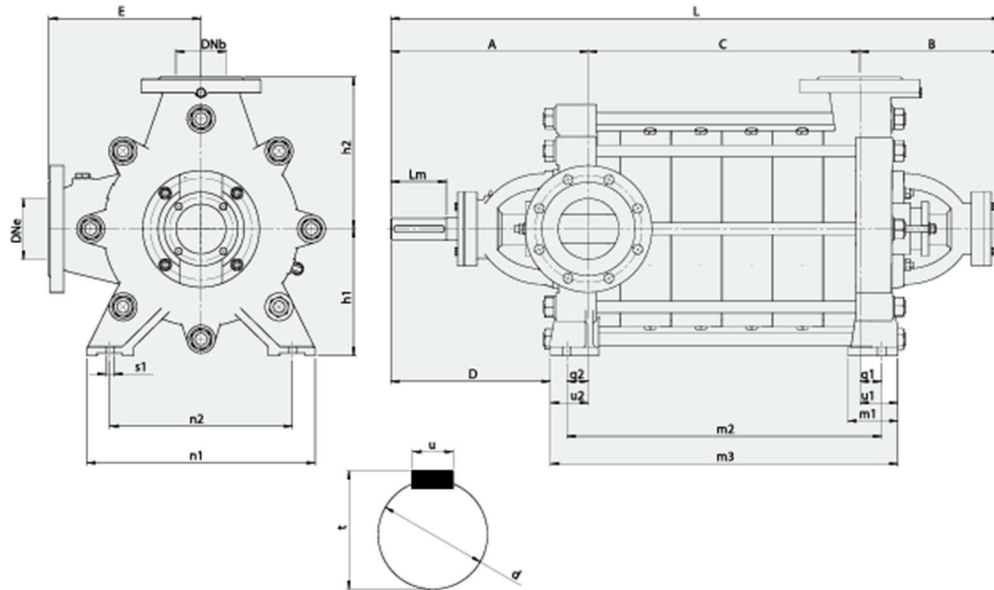
All impellers are balanced dynamically or statically in accordance with ISO 1940 class 6.3.

Axial force is balanced by impeller balancing holes system.

The direction of rotation is clockwise when viewed from the motor side.

ARS type pumps use "grease lubricated" bearings as standard.

Dimensions



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Pump Type Pompa Tipi	Dimensions / Ölçüler (mm)																			Shaft Dimensions Mil Ölçüleri				Weight Ağırlık (kg)	
	DN _e	DN _b	A	B	D	E	L	h1	h2	q1	q2	u1	u2	m1	m2	m3	n1	n2	s1	d	l _m	t	u	G	g
25	32	25	238	169	141	135	C+407	112	135	77	77	98	98	65	C+140	C+196	177	120	14	24	60	27	8	28	6
32	40	32	242	161	131	152	C+403	132	152	80	87	102	108	60	C+147	C+210	193	135	16	24	60	27	8	38	8
40	50	40	239	164	130	175	C+403	160	175	87	87	109	109	62	C+151	C+218	228	174	16	24	60	27	8	56	9
50	65	50	254	175	141	190	C+429	160	190	95	91	117	113	60	C+185	C+230	255	198	16	28	65	31	8	74	13
65	80	65	271	198	150	215	C+469	180	215	100	97	124	121	60	C+200	C+245	298	241	16	32	65	35	10	93	18
80	100	80	323	245	258	265	C+568	210	265	41	40	62	60	90	C+74	C+122	415	340	16	38	80	41	10	114	25
100	125	100	390	277	320	300	C+667	250	300	43	43	75	75	100	C+91	C+150	450	360	16	42	110	45	12	158	40
125	150	125	414	300	317	375	C+714	300	375	51	56	83	88	110	C+97	C+171	565	455	20	48	110	51,5	14	290	70
150	200	150	485	358	384	425	C+843	350	425	59	60	101	101	140	C+108	C+202	663	545	22	55	110	59	16	466	112
200	250	200	531	384	431	500	C+915	400	500	50	50	100	100	133	C+85	C+200	673	550	28	70	140	74,5	20	645	180
250	300	250	691	484	560	627	C+1175	500	627	75	75	131	131	156	C+135	C+262	775	625	33	100	210	106	28	950	300

Weight Calculation / Ağırlık Hesaplama: $G + (s \cdot g)$ (s: Number of Stage / Kademe Sayısı)

Pump Type Pompa Tipi	"C" Dimensions By Stage (mm) / Kademe Sayısına Göre "C" Ölçüsü															
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
25	107	146	185	224	263	302	341	380	419	458	497	536	575	614	653	692
32	112	155	198	241	284	327	370	413	456	499	542	585	628			
40	133	188	243	298	353	408	463	518	573	628	683	738				
50	152	214	276	338	400	462	524	586	648	710	772					
65	180	251	322	393	464	535	606									
80	198	281	364	447	530	613	696									
100	235	335	435	535	635	735										
125	279	394	509	624	739											
150	369	514														
200	438	608														
250	518	720	922													



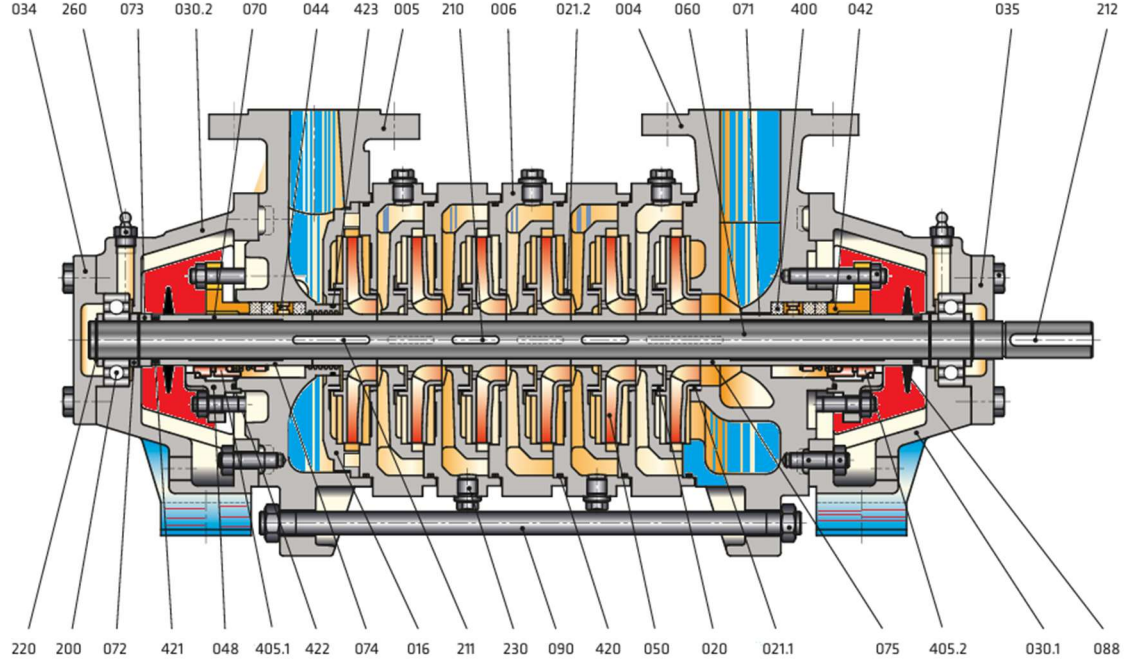
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SECTIONAL VIEW



004	Suction Casing	072	Spacer Sleeve (discharge side)
005	Discharge Casing	073	Spacer Sleeve
006	Stage Casing	074	Mechanical Seal Sleeve (discharge)
015	Diffuser	075	Mechanical Seal Sleeve (suction)
016	Final Stage Diffuser	088	Thrower
020	Wear Ring (stage casing)	090	Casing Tiebolt
021.1	Wear Ring (suction casing)	200	Ball Bearing
021.2	Wear Ring (stage casing)	202	Cylindrical Roller Bearing
030.1	Bearing Housing (suction casing)	203	Angular Contact Ball Bearing
030.2	Bearing Housing (discharge casing)	210	Impeller Key
034	Bearing End Cover	211	Stage Key
035	Bearing Cover (coupling side)	212	Coupling Key
042	Stuffing Box Gland	220	Retaining Ring
044	Lantern Ring	230	Drain Plug
048	Mechanical Seal Cover	260	Grease Nipple
050	Impeller	391	Shaft Nut
060	Shaft	392	Lock Washer
065	Shaft Nut	400	Stuffing Box Packing
067	Interstage Sleeve	405.1	Mechanical Seal (Discharge)
068	Spacer Sleeve (discharge side)	405.2	Mechanical Seal (Suction)
069	Spacer Sleeve (suction side)	420	O-Ring (stage casing)
070	Shaft Protecting Sleeve (discharge side)	421	O-Ring (shaft protecting sleeve)
071	Shaft Protecting Sleeve (suction side)	422	O-Ring (mechanical seal cover)
		423	O-Ring (discharge casing)

PART NAME



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MATERIAL OPTION

Part List	0.6025	0.7040	1.7043	1.0619	1.4308	1.4309	1.4408	1.4409	1.4500	1.4517	1.4469	1.4317	1.4008	2.1050.01	2.1050.01	2.1096.01	1.0503	1.4021	1.4021+QT	1.4301	1.4404	1.4460	1.4462
Suction Body	●	○	○		○	○	○	○	○	○	○	○	○	○									
Discharge Body	●	○	○		○	○	○	○	○	○	○	○	○	○									
Stage Body	●	○	○		○	○	○	○	○	○	○	○	○	○									
Diffuser	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○							
Impeller	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○						○	
Shaft																		●	○	○	○		○
Bearing Box	●	○	○	○	○	○	○	○															
Wear ring	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○							
Shaft Sleeve																	●	○	○	○	○		○
Seal Sleeve																	●	○	○	○	○		○
Stage Sleeve																	●	○	○	○	○		○
Mech. Seal (*)	EN 12756 / DIN 24250																						

(*) Options: Different brand and type mechanical seal can be use can according to customer request.

● Standard Manufacturing

○ Optional

MATERIAL EQUIVALENTS

Description	DIN / EN	AISI / SAE / ASTM
Cast Iron	0.6025 EN-GJL-250 (GG25)	A48 Class 40B
Nodular Cast Iron	0.7040 EN-GJS-400-15 (GGG40)	A536 60-40-18
Nodular Cast Iron	0.7043 EN-GJS-400-18-LT (GGG40.3)	A536 60-40-18
Cast Steel	1.0619 GP240GHGS-C25	A216 WCB
Chrome Nickel Cast Steel	1.4308 GX5CrNi19-10	A351 CF8
Chrome Nickel Cast Steel (low carbon)	1.4309 GX2CrNi19-11	A351 CF3
Chrome Nickel Molybdenum Cast Steel	1.4408 GX5CrNiMo19-11-2	A351 CF8M
Chrome Nickel Molybdenum Cast Steel (low carbon)	1.4409 GX2CrNiMo19-11-2	A351 CF3M
Austenitic Cast Steel	1.4500 GX7NiCrMoCuNb25-20	A351 CN7M
Austenitic - Ferritic Cast Steel (duplex)	1.4517 GX2CrNiMoCuN25-6-3-3	A890 CD4MCuN
Austenitic - Ferritic Cast Steel (super duplex)	1.4469 GX2CrNiMoN26-7-4	A890 CE3MN
Martenzitic Stainless Cast Steel	1.4317 GX4CrNi13-4	A352 CA6NM
Martenzitic Stainless Cast Steel	1.4008 GX7CrNiMo12-1	A217 CA15
Cast Bronze (tin alloy)	2.1050.01 G-CuSn10	B427 C90700
Cast Bronze (nickel alloy)	2.0975.01 G-CuAl10Ni	B148 C95500
Cast Bronze (lead)	2.1096.01 G-CuSn5ZnNb	B584 C83600
Carbon Steel	1.0503 C45	AISI 1045
Chrome Steel	1.4021 X20Cr13	A276 Type 420
Chrome Steel (heat treated)	1.4021 X20Cr13	A276 Type 420+QT
Chrome Nickel Steel	1.4301 X5CrNi18-10	A276 Type 304
Chrome Nickel Steel (low carbon)	1.4404 X2CrNiMo17-12-2	A276 Type 316L
Duplex (austenitic-ferritic) Steel	1.4460 X3CrNiMoN27-5-2	AISI 329
Duplex (austenitic-ferritic) Steel	1.4462 X2CrNiMoN22-5-3	UNS S32205



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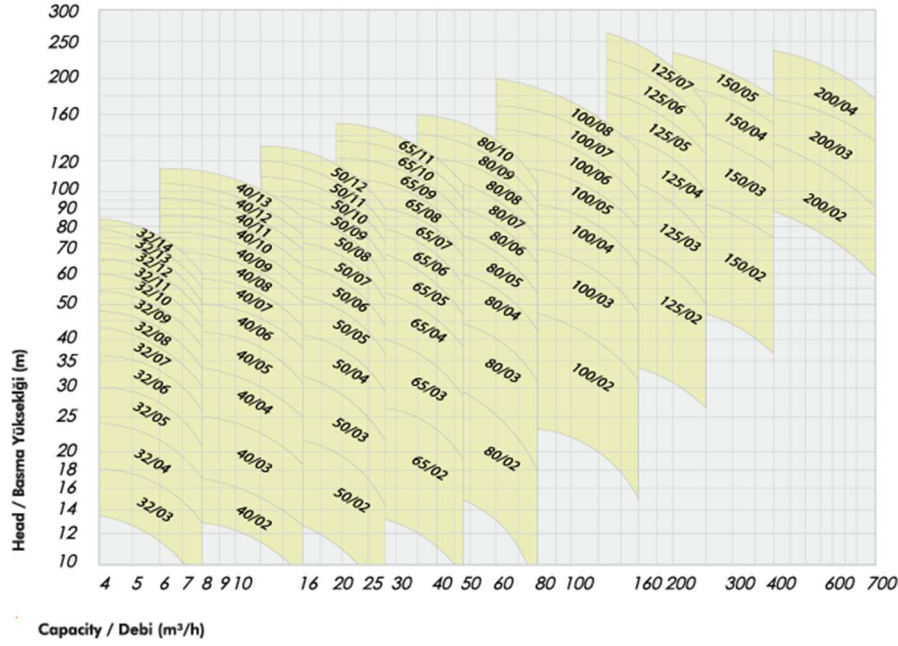
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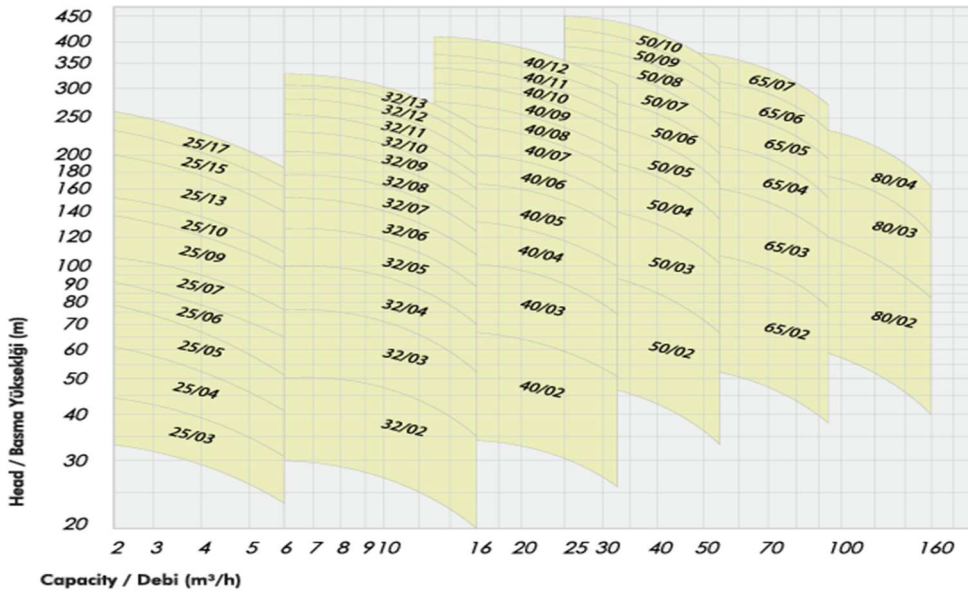
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SELECTION CHARTS

1500 RPM



3000 RPM



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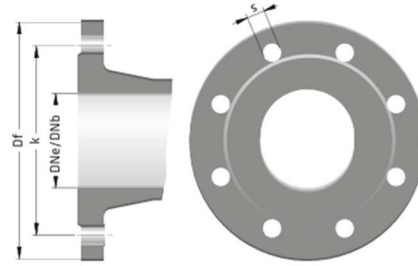
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FLANGE DIMENSIONS

DNe/DNb	Suction & Discharge (PN 16)				Suction & Discharge (PN 40)			
	Df	k	s	n	Df	k	s	n
32	140	100	19	4	140	100	19	4
40	150	110	19	4	150	110	19	4
50	165	125	19	4	165	125	19	4
65	185	145	19	4	185	145	19	8
80	200	160	19	8	200	160	19	8
100	220	180	19	8	235	190	23	8
125	250	210	19	8	270	220	28	8
150	285	240	23	8	300	250	28	8
200	340	295	23	12	375	320	31	12
250	405	355	28	12	450	385	34	12
300	460	410	28	12	515	450	34	16

"n" number of holes



Mechanical Seal

- Mechanical seals do not leak like soft seals, so if there is no leakage, the mechanical seal does not require maintenance.
- Information such as required dimensions and operating instructions for mechanical seals can be obtained from mechanical seal manufacturers.
- In the mechanical seal change, the surfaces should be cleaned well and foreign materials such as slag welding residue should not come into the seal.
- Water should be used instead of substances such as oil to aid assembly.

Pump Type	Shaft End Diameter	Mechanical Seal Diameter
25	24	35
32	24	35
40	24	35
50	28	40
65	32	45
80	38	50
100	42	60
125	48	65
150	55	75
200	70	95

Soft packing

- The packing cavity and packing thrust in the stuffing box must be thoroughly cleaned before replacing the soft packing. If there is wear on the packing bush or shaft, it should be replaced with a spare part.
- Soft packings should be cut at 90°, reverse assembly should be made, with the cut point of the first seal on the top and the second on the bottom, and if there is an irrigation ring should be placed.
- After the packing is placed, the packing must be tightened with pressure and the pump must be started. In the first start-up, no intervention should be made for 5-10 minutes and then the compression nuts should be tightened in equal proportions. This process should be done every 5-10 minutes until the leakage reaches the desired value. Minimum desired leakage amount should be 10 cm³/min and maximum desired leakage amount should be 20 cm³/min.



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