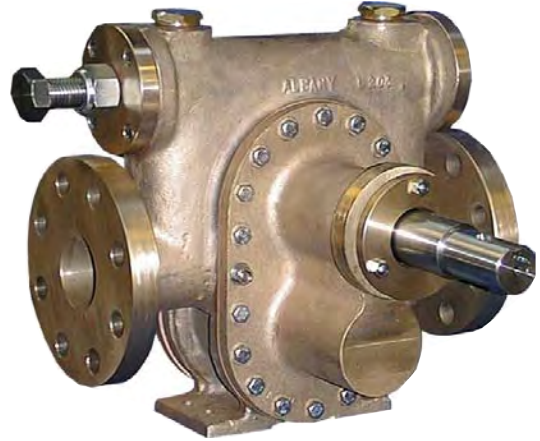


FOAM PUMPS FOR THE FIRE INDUSTRY

Features

- Positive Displacement Rotary Gear type
- Handles thixotropic foam liquids
- Gunmetal pump casing with phosphor bronze rotor and 316SS stainless steel shaft
- PTFE self-lubricating bearings
- Greased lubricated Lip Seals. Option: mechanical seals or packed glands
- Pump can run in either direction (except for water driven pelton wheel pumps)
- Internal pressure relief system is available as an option
- Drivers - electric motor, diesel engine or water driven pelton wheel



Progard can supply a wide range of types and sizes of gear pumps with many drive and mounting options to suit fire trucks and fixed installations for pressure up to 21 bars. These gear pumps comply with NFPA 20 latest edition (1999). Our engineering expertise includes a high level of customisation, ensuring that the pumps can be supplied to meet exacting needs. The gear pumps may be run at normal speeds when handling thixotropic foam concentrates, as the shear rate within the pump is sufficient to reduce viscosities. Suction lines should be as short as possible and of generous diameter since these liquids have a high resistance to flow.

Construction

Pump Casing	:	Standard Gunmetal. Optional Stainless Steel #316. Flanges to BSPT. Optional ASA standard or NPT screwed branches available on request.
Rotors	:	Standard Phosphor Bronze. Optional A304 stainless steel on certain models
Shaft	:	Stainless steel #316 with options of hard coatings and pressure balance
Relief Valve	:	Usually mounted in the pump body for internal circulation. Valve with external relief can be supplied
Gland & Seals	:	Standard PTFE Lip Seal. Optional John Crane mechanical seals or Packed Glands. An internal pressure relief system reduces pressure in the gland and seal area
Reversible	:	Gear pumps can run in either direction (water pelton wheel pump sets are built for one direction of rotation only)

Applications

Offshore, Jetties, oil & gas industry, fixed installation in tank farms and refineries and shipboard fire protection.

Technical Specification:

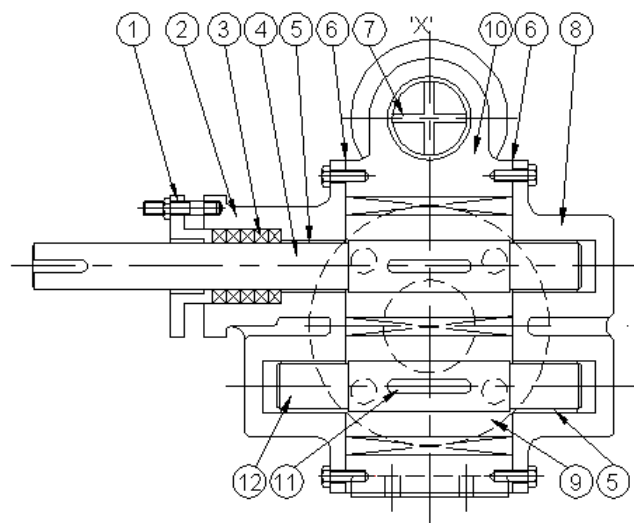
Pump Model	Flow		kW	Hp	Bar	RPM	Maximum RPM	Branch
	Litre/min	US gpm						
01-AAP6	62	16.5	3	4	16	1,420	3,000	3/4" BSP F
01-AAP7	86	23	5	6.6	16	1,420	3,000	1" BSP F
01-AAP8	154	40.8	7.1	9.6	16	1,420	3,000	1-1/4" BSP F
01-AAP9	190	50	11.2	15	16	1,420	3,000	1-1/2" BSP F
01-AAP10 DH	255	67.2	13.4	18	16	1,420	2,200	2" Flanged
01-AAP11 DH	300	79	17.9	24	16	1,420	2,200	2" Flanged
01-AAP11.5 DH	390	103	23.3	31.2	16	1,420	2,200	2 1/2" Flanged
01-AAP11.5 DH	460	121	30	40.2	17	1,764	2,200	2 1/2" Flanged
01-AAP12 DH	320	84.4	21.5	28.8	16	960	1,800	2 1/2" Flanged
01-AAP13 DH	520	137	32.2	43.2	16	960	1,800	3" Flanged
01-AHD8 DH	820	217	44	59	16	960	1,800	4" Flanged
01-AHD10 DH	940	248	53.7	72	16	960	1,800	4" Flanged

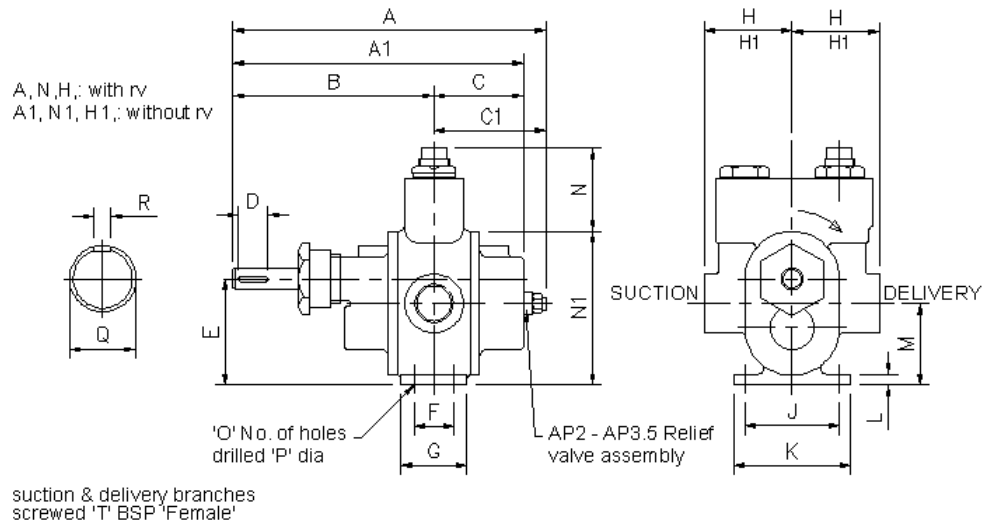
Above flows based on foams of 12-14 cst & S.G: 1.2, Viscosity range 3.0 cps to 2,000 cps can be accommodated. Other versions are available for maximum 40 bar pressure, depending on viscosity. Larger flows are available to 9,000 litre/min.

PART LIST

When ordering spares, please quote pump sizes and pump serial number stamped in position 'X'.
Items marked with an asterik are recommended spares.

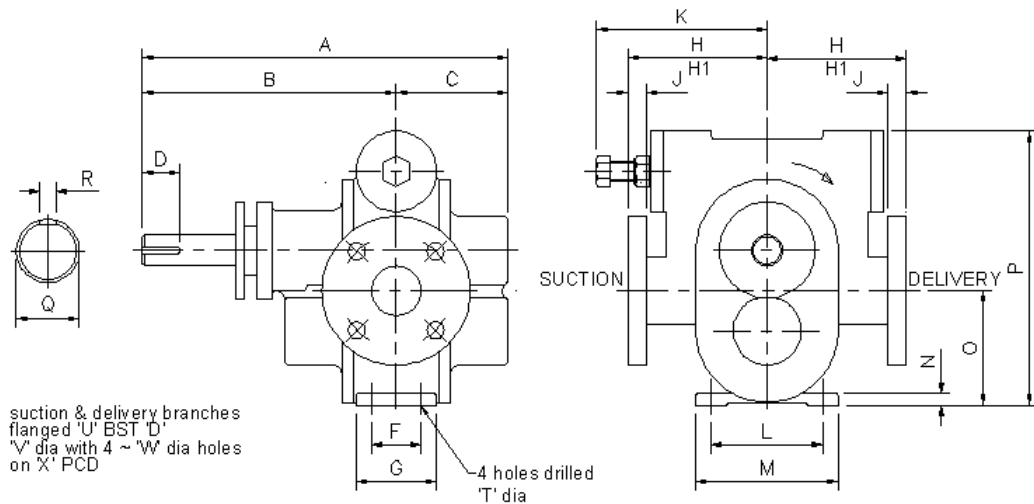
1. Gland
2. Front Cover
3. Gland Packing*
4. Drive Shaft*
5. Bushes*
6. Gaskets*
7. Relief Valve comprises:
 - Valve
 - Adjusting Screw
 - Lock nut
 - Spring
 - AP11 & over - Spring Header
8. Back Cover
9. Rotors*
10. Body
11. Key*





DIMENSIONS in millimetres

AP SIZE	SIZES AP2 - AP10																			SHAFTS				Kgs
	A ₁	A	B	C	C ₁	D	E	F	G	H	H ₁	J	K	L	M	N	N ₁	O	P	Q	R	T"		
AP2	157	184	114	43	70	19	48	-	22	44	44	60	76	8	37	73	73	2	7	9.5	3.1	1/4	1	
AP3	169	194	121	48	73	19	48	-	25	28	28	60	76	8	37	73	73	2	7	9.5	3.1	1/4	2	
AP3.5	181	206	127	54	79	19	51	-	38	43	43	60	76	6	40	76	76	2	7	9.5	3.1	1/2	2.5	
AP4	160	-	114	46	-	19	76	-	28	57	57	70	89	8	60	181	140	2	7	13	3.1	1/2	3	
AP5	177	-	121	56	-	19	76	28	48	57	57	70	89	8	60	181	140	4	7	13	3.1	3/4	4	
AP6	231	-	164	67	-	25	92	19	35	76	57	83	102	10	71	184	133	4	7	19	4.7	3/4	8	
AP7	253	-	175	78	-	25	92	35	57	76	63	83	102	10	71	211	133	4	9	19	4.7	1	11	
AP8	266	-	187	79	-	25	114	32	54	111	73	102	127	10	86	267	171	4	9	25	6.3	1/4	15	
AP9	292	-	200	92	-	25	114	38	76	121	76	102	127	10	86	267	171	4	9	25	6.3	1/4	21	
AP9w	324	497	216	108	137	-	114	76	108	82	82	124	152	10	86	271	-	4	10	25	6.3	2.1/2	25	
AP10DH HD3	350	-	248	102	-	38	159	25	57	117	105	121	146	13	117	327	232	4	10	31.7	7.9	1.1/2	30	



AP SIZE	SIZES AP11 - AP13																SHAFTS								Kgs
	A	B	C	D	E	F	G	H	H ₁	J	K	L	M	N	O	P	P ₁	Q	R	T	U	V	W	X	
AP11 DH (HD4)	375	260	114	38	159	35	83	143	124	19	238	114	146	11	117	283	232	31.7	7.9	10	2	152	17	114	40
AP11.5 DH (HD5)	400	273	127	38	159	51	108	171	124	19	305	114	146	14	117	314	232	31.7	7.9	10	2.5	165	17	127	50
AP12 DH	414	279	135	38	197	35	95	184	137	19	318	152	190	13	146	349	286	38.1	9.5	10	2.5	165	17	127	65
AP13 DH (HD8)	490	330	160	38	197	83	146	197	137	19	330	140	178	13	146	381	286	38.1	9.5	13	3	184	17	140	