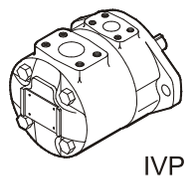
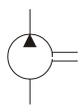
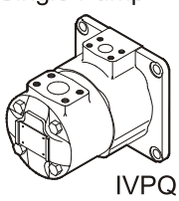
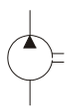
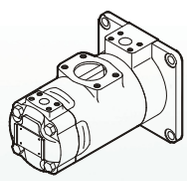
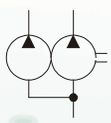
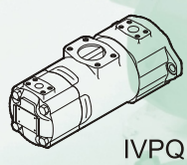
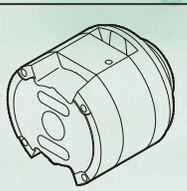
B

Model Code		Graphic Symbol	Q max. cm^3/ r.p.m	P max. bar	Max. r.p.m	Ref. Page
Single Pump  IVP	IVP1		7.5 ~ 236	138 ~ 207	1800	94
	IVP2					
	IVP3					
	IVP4					
Single Pump  IVPQ	IVPQ1		7.5 ~ 236	138 ~ 207	1800	94
	IVPQ2					
	IVPQ3					
	IVPQ4					

Model Code		Graphic Symbol	Shaft end pump Q max. cm^3/ r.p.m	Cover end pump Q max. cm^3/ r.p.m	P max. bar	Max. r.p.m	Ref. Page
Double Pump  IVP	IVP21		32.5 ~ 236	7.5 ~ 134	69 ~ 172	1800 F3=1200 F11=1500	104
	IVP31						
	IVP32						
	IVP41						
	IVP42						
	IVP43						
Double Pump  IVPQ	IVPQ21		32.5 ~ 236	7.5 ~ 134	69 ~ 172	1800 F3=1200 F11=1500	104
	IVPQ31						
	IVPQ32						
	IVPQ41						
	IVPQ42						
	IVPQ43						

Cartridge Kit	Geometric Displacement Code			Ref. Page
	Single Pump	Double Pump		
		Shaft end pump	Cover end pump	
	2 ~ 75	10 ~ 75	2 ~ 42	111

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B

Performance

These cost-effective pumps provide volumetric efficiencies of more than 90% and sound levels as low as 62 dB(A) with operating pressure to 210 bar.On site repair via the replaceable pump cartridge reduces downtime to increase productivity.

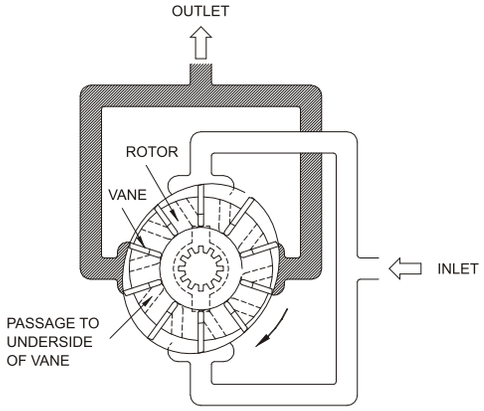
General Description

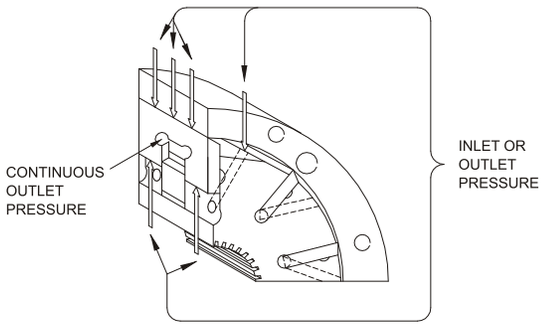
Intravane pumps provide longer life.Increased productivity and application versatility. Extremely low sound levels are compatible with the most demanding industrial applications.Compact size and of service allow maximum equipment design flexibility.Pumps are available in single and double configurations.

Features and Benefits

- High operating pressure capabilities in compact packages provide high power to weight ratios and lower installed coats.
- Low noise characteristics inherent in intravane design enhance operator comfort.
- Twelve vane system provides low amplitude flow pulsations resulting in low system noise characteristics.
- Hydraulic balancing,designed to prevent internally-induced radial shaft and bearing loads,provides long life.
- Double pumps arrangements save installation space and cost by eliminating double shaft extension electric motors or by reducing the number of motors and drive couplings.
- Thirty-one flow displacements and high operating pressure capability provide optimum selection and single-source capability for your complete range of flow and pressure requirements.
- Factory tested cartridge kits provide new pump performance upon installation.
- The cartridge kit design offers fast and efficient field serviceability.The cartridge is independent of the drive shaft,allowing for easy change of flow capacity and servicing without removing the pump from its mounting.
- Inlet and outlet ports can be oriented in four different positions relative to each other, providing greater installation flexibility and ease of machine design.

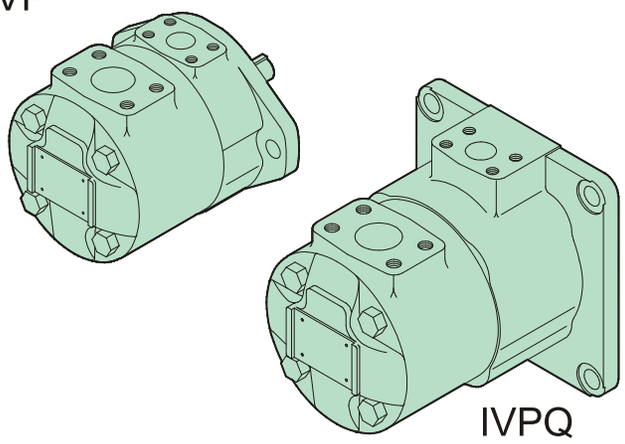
Intravane Pump's Operation Figure



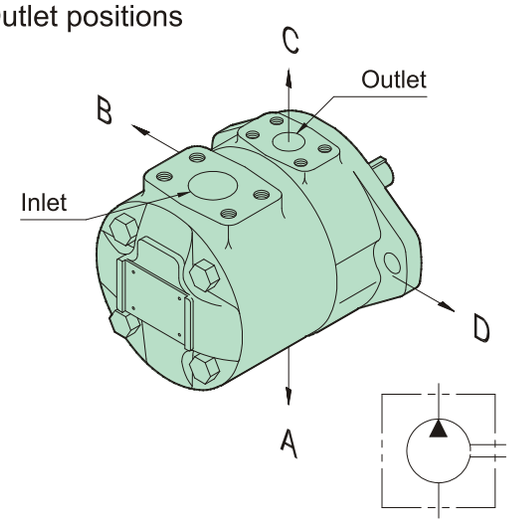


B

IVP



Outlet positions



IVP(Q) Ordering Code - Single Pumps

(F3-)	IVP(Q)2	-17	-F	-R	-C	-10
Prefix,fluid compatibility	Frame size	Geometric displacement ● Code	Mounting form	Rotation	Outlet positions	Design
Omit- Using antiwear oil or phosphate ester fluid.	IVP(Q)1	2 , 3 , 4 , 5 , 6 , 7 , 8 ,10 ,11 , 12 ,14	F- Flange mounting. L- Foot mounting.	Viewed from shaft end of pump. R- Right hand for clock-wise. L- Left hand for counter-clockwise.	Viewed from cover end of pump. A- opposite inlet port. B- 90°CCW from inlet. C- inline with inlet. D- 90°CW from inlet.	10
F11- Using water glycol fluid.	IVP(Q)2	10 ,12 , 14, 15 ,17 ,19 , 21 ,25				10
F3- Using water-in-oil emulsions.	IVP(Q)3	17 ,21 , 25, 30 ,32 ,35 , 38 ,42				10
	IVP(Q)4	30 ,35 ,38 , 42 ,50 ,60 , 67 ,75				10

● Rated capacity in USgpm at 1200rpm and 6.9bar.

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IVP SINGLE PUMPS MAX. CONTINUOUS PRESSURES

Frame size	●Code	Geometric displace-ment cm^3/r	IVP(Q) ▲ Using antiwer oil or phosphte ester fluid		F11-IVP(Q) Using water glycol fluid		F3-IVP(Q) Using water-in-oil emulsions		Min. speed rpm
			Max.Pressure bar	Max.Speed rpm	Max.Pressure bar	Max.Speed rpm	Max.Pressure bar	Max.Speed rpm	
IVP(Q)1	2	7.5	138	1800	138	1500	138	1200	600
	3	10.2							
	4	12.8	207		157				
	5	16.7							
	6	19.2							
	7	22.9							
	8	26.2							
	10	31.0							
	11	35.0							
	12	37.9	157		138				
	14	44.2	138						
IVP(Q)2	10	32.5	172	1800	157	1500	138	1200	600
	12	38.3							
	14	43.3							
	15	46.7							
	17	52.5							
	19	59.2							
	21	65.0							
	25	78.6	138		138				
IVP(Q)3	17	53.3	172	1800	157	1500	138	1200	600
	21	66.7							
	25	79.2							
	30	95.0							
	32	100							
	35	109							
	38	118							
	42	134	138		138				
IVP(Q)4	30	96.0	172	1800	157	1500	138	1200	600
	35	109							
	38	128							
	42	134							
	50	156							
	60	189							
	67	210	157		138				
	75	236	138						

● Rated capacity in USgpm at 1200rpm and 6.9bar.

▲ A transient (peak) pressure 10% over the max. continuous pressure rating for 0.5 seconds or less duration is allowed.

B

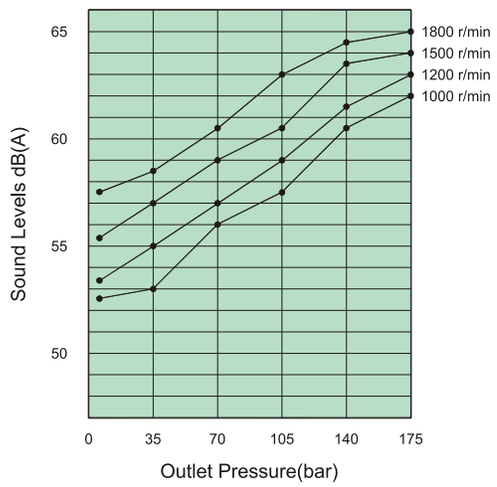
IVP Single Pumps Weight

kg(lb)

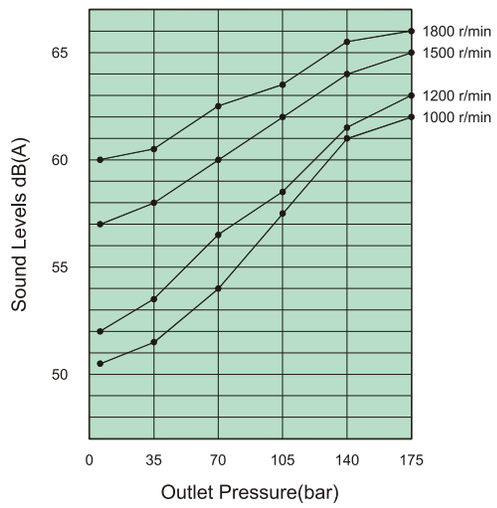
Frame size	IVP		IVP(Q)	
	Flange mounting	Foot mounting	Flange mounting	Foot mounting
IVP(Q)1	16(35.24)	19(41.85)	18.5(40.75)	21.5(47.36)
IVP(Q)2	25(55.07)	34.5(75.99)	29.5(64.98)	39(85.9)
IVP(Q)3	35(77.09)	44.5(98.02)	43(94.71)	52.5(115.64)
IVP(Q)4	59.5(131.06)	84.5(186.12)	71(156.39)	96(211.45)

IVP Single Pumps Sound Data

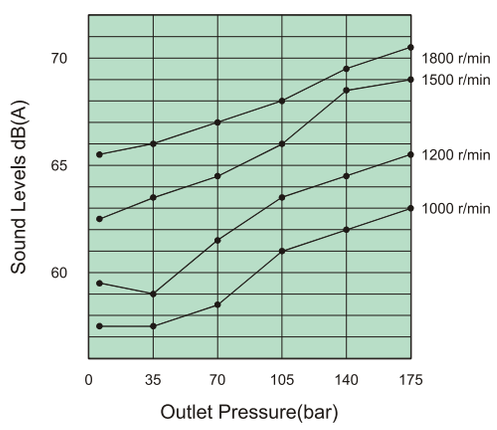
IVP1-11



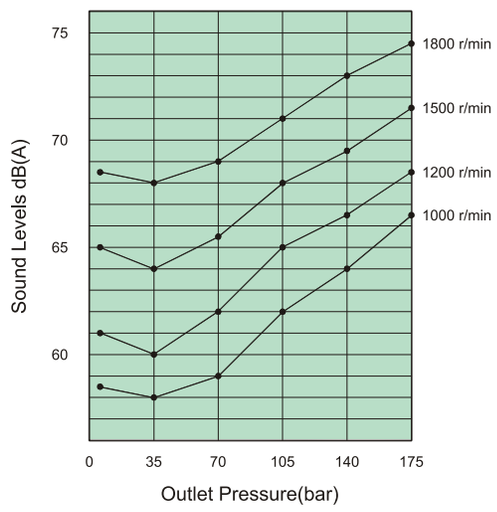
IVP2-21



IVP3-38



IVP4-60



Conditions:ISO VG32,(50 °C),0 bar inlet,distance:1m

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IVP SINGLE PUMPS - PERFORMANCE CHARACTERISTICS

MODEL	Speed rpm	Output flow (lpm)				Input power (kw)			
		6.9bar	69bar	138bar	172bar	6.9bar	69bar	138bar	172bar
IVP(Q)1-2	1000	7.5	6.0	4.5		0.2	1.2	2.1	
	1200	9.5	8.5	6.5		0.3	1.5	2.5	
	1500	11.2	9.3	7.5		0.3	1.8	3.2	
	1800	13.5	11.2	9.0		0.4	2.2	3.8	
IVP(Q)1-3	1000	10.2	8.8	7.4		0.3	1.5	3.1	
	1200	12.5	11.0	9.5		0.4	1.8	3.7	
	1500	15.3	13.7	12.1		0.5	2.3	4.7	
	1800	18.4	16.9	15.3		0.5	2.7	5.6	
IVP(Q)1-4	1000	12.8	12.3	10.8	10.0	0.4	1.8	3.7	4.6
	1200	16.0	15.0	13.5	13.0	0.5	2.2	4.4	5.5
	1500	19.2	17.7	16.2	15.7	0.6	2.7	5.6	6.9
	1800	23.1	21.3	19.5	19.0	0.7	3.2	6.7	8.3
IVP(Q)1-5	1000	16.7	15.7	14.7	14.2	0.4	2.8	4.8	6.0
	1200	20.0	19.0	18.0	17.5	0.5	3.2	5.8	7.2
	1500	25.0	24.0	23.0	22.5	0.6	3.9	7.3	9.0
	1800	30.0	29.0	28.0	27.5	0.6	4.2	8.6	10.7
IVP(Q)1-6	1000	19.2	18.2	17.0	16.2	0.4	3.0	5.5	6.6
	1200	23.0	22.0	20.5	20.0	0.5	3.5	6.5	7.9
	1500	28.5	27.5	26.0	25.0	0.6	4.3	8.1	9.8
	1800	34.5	33.5	32.0	31.0	0.7	5.2	9.7	11.8
IVP(Q)1-7	1000	22.9	21.4	19.9	18.9	0.5	3.4	6.2	7.6
	1200	27.5	26.0	24.5	23.5	0.6	4.0	7.4	9.1
	1500	34.4	32.9	31.4	30.4	0.7	5.0	9.2	11.3
	1800	41.3	39.8	38.3	37.3	0.8	5.9	11.0	13.6
IVP(Q)1-8	1000	26.2	24.2	22.7	21.2	0.5	3.9	6.7	8.3
	1200	31.5	29.5	28.0	26.5	0.6	4.5	8.0	10.0
	1500	39.4	37.4	35.9	34.4	0.8	5.5	10.0	12.5
	1800	47.2	45.2	43.7	42.2	0.8	6.6	11.8	14.8
IVP(Q)1-10	1000	31	29.2	26.5	24.8	0.6	4.6	8.4	10.4
	1200	37.2	34.7	32.4	30.9	0.7	5.4	10.0	12.5
	1500	46.5	43.1	41.3	39.4	0.9	6.5	12.5	15.6
	1800	55.8	53.2	50.6	48.5	0.9	7.8	14.7	18.5
IVP(Q)1-11	1000	35.0	33.0	30.5	29.5	0.7	4.9	9.2	11.4
	1200	42.0	40.0	37.5	36.5	0.8	5.7	11.0	13.7
	1500	52.5	50.5	48.0	47.0	1.0	6.9	13.8	17.1
	1800	63.2	61.0	58.5	57.5	1.0	8.3	16.2	20.3
IVP(Q)1-12	1000	37.9	36.4	34.4		0.7	5.6	10.4	
	1200	44.5	44.0	42.0		0.9	6.5	12.5	
	1500	56.9	55.4	53.4		1.1	7.9	15.6	
	1800	68.2	66.7	64.7		1.1	9.4	18.4	
IVP(Q)1-14	1000	44.2	42.7	40.7		1.0	6.6	12.2	
	1200	53.0	51.5	49.5		1.1	7.8	14.6	
	1500	66.0	64.0	62.0		1.3	9.6	18.2	
	1800	79.5	77.5	75.5		1.4	11.5	21.7	
IVP(Q)2-10	1000	32.5	29.5	26.0	24.5	0.9	4.9	9.3	11.3
	1200	39.0	36.0	32.5	31.0	1.0	5.8	11.1	13.5
	1500	48.8	45.8	42.3	40.8	1.2	7.2	13.8	16.8
	1800	58.5	55.5	52.0	50.5	1.3	8.5	16.5	20.1
IVP(Q)2-12	1000	38.3	35.9	33.3	31.8	1.0	5.7	10.9	13.4
	1200	46.0	43.6	41.0	39.5	1.1	6.5	13.0	16.0
	1500	57.5	55.1	52.5	51.0	1.3	8.3	16.1	19.9
	1800	69.0	66.6	64.0	62.5	1.4	9.8	19.3	23.8
IVP(Q)2-14	1000	43.3	40.2	36.8	35.8	1.2	6.4	12.2	15.1
	1200	52.0	48.5	45.5	44.5	1.3	7.5	14.5	18.0
	1500	65.0	61.9	58.5	57.5	1.5	9.4	18.0	22.4
	1800	78.0	74.9	71.5	70.5	1.7	11.1	21.5	26.7
IVP(Q)2-15	1000	46.7	43.7	40.7	39.2	1.2	6.8	13.0	15.9
	1200	56.0	53.0	50.0	48.5	1.3	8.0	15.5	19.0
	1500	70.0	67.0	64.0	62.5	1.5	9.9	19.3	23.6
	1800	84.0	81.0	78.0	76.5	1.7	11.8	23.0	28.3
IVP(Q)2-17	1000	52.5	49.7	46.5	44.5	1.4	7.4	14.3	17.6
	1200	63.0	60.6	57.0	55.0	1.5	9.0	17.0	21.0
	1500	78.8	76.0	72.8	70.8	1.7	10.8	21.1	26.1
	1800	94.5	91.7	88.5	86.5	1.9	12.9	25.1	31.2
IVP(Q)2-19	1000	59.2	56.2	53.2	50.2	1.5	8.5	16.0	20.1
	1200	71.0	68.0	65.0	62.0	1.7	10.0	19.0	24.0
	1500	88.7	85.7	82.7	79.7	1.9	12.3	24.1	29.8
	1800	106.5	103.7	100.7	97.7	2.2	14.7	28.2	35.7
IVP(Q)2-21	1000	65.0	62.2	59.0	57.0	1.6	9.2	17.6	21.8
	1200	78.0	75.0	72.0	70.0	1.8	11.0	21.0	26.0
	1500	97.5	94.7	91.5	89.5	2.1	13.4	26.1	32.3
	1800	117	114	111	109	2.3	16.0	31.1	38.6

B

IVP SINGLE PUMPS - PERFORMANCE CHARACTERISTICS

MODEL	Speed rpm	Output flow (lpm)				Input power (kw)			
		6.9bar	69bar	138bar	172bar	6.9bar	69bar	138bar	172bar
IVP(Q)2-25	1000	78.8	74.8	71.5		2.0	11.2	21.4	
	1200	94.6	90.3	87.8		2.2	13.4	25.6	
	1500	118.2	113.0	110.0		2.6	16.3	31.8	
	1800	141.0	137.0	134.0		2.8	19.5	32.4	
IVP(Q)3-17	1000	53.3	47.3	41.3	38.3	1.4	6.8	12.6	15.5
	1200	64.0	58.0	52.0	49.0	1.5	8.0	15.0	18.5
	1500	80.0	74.0	68.0	65.0	1.7	9.8	18.6	22.9
	1800	96.0	90.0	84.0	81.0	1.9	11.6	22.1	27.4
IVP(Q)3-21	1000	66.7	60.7	54.7	51.7	1.6	8.9	16.8	20.6
	1200	80.0	74.0	68.0	65.0	1.8	10.5	20.0	24.5
	1500	100	94.0	88.0	85.0	2.0	12.9	24.8	30.4
	1800	120	114	108.0	105.0	2.3	15.4	30.5	36.4
IVP(Q)3-25	1000	79.2	73.5	67.2	64.2	1.8	10.7	20.5	25.1
	1200	95.0	89.0	83.0	80.0	2.0	12.5	24.5	30.0
	1500	119	113	107.0	104.0	2.3	15.7	30.4	37.3
	1800	142	136	130.0	127.0	2.6	18.7	36.4	44.6
IVP(Q)3-30	1000	95.0	88.4	81.0	78.0	1.8	12.6	24.7	30.5
	1200	114	107	100	97.0	2.0	15.0	29.5	36.5
	1500	142	136	128	125	2.4	18.6	36.7	45.5
	1800	171	164	157	154	2.7	22.2	44.0	54.5
IVP(Q)3-32	1000	100	92.0	85.0	82.0	2.1	13.5	26.0	32.2
	1200	120	112	105	102	2.3	16.0	31.0	38.5
	1500	150	142	135	132	2.7	19.8	38.6	47.9
	1800	180	172	165	162	3.1	23.6	46.1	57.4
IVP(Q)3-35	1000	109	103	95.2	92.2	2.2	14.2	27.6	34.3
	1200	131	124	117	114	2.5	17.0	33.0	41.0
	1500	164	157	150	147	2.9	20.9	41.0	51.0
	1800	196	189	182	179	3.3	24.9	50.4	61.1
IVP(Q)3-38	1000	118	111	102	99.3	2.7	15.5	29.8	36.9
	1200	142	134	126	123	3.0	18.5	35.5	44.0
	1500	177	170	161	158	3.4	22.7	44.0	54.7
	1800	213	205	197	194	3.9	27.0	52.6	65.4
IVP(Q)3-42	1800	134	125	118		4.5	27.1	52.1	65.4
	1800	160	152	144		5.0	32.2	62.2	65.4
	1800	201	193	185		5.8	39.8	77.4	65.4
	1800	241	233	225		6.6	47.5	92.5	65.4
IVP(Q)4-30	1000	96.0	87.0	77.0	72.0	1.6	13.4	25.1	30.9
	1200	115	106	96.0	91.0	2.0	15.0	30.0	37.0
	1500	144	135	125	120	2.4	18.6	37.4	46.1
	1800	172.5	163.5	153.5	148.5	2.8	22.3	44.7	55.2
IVP(Q)4-35	1000	109	100	90.0	85.0	1.7	14.2	28.4	35.1
	1200	131	122	112	107	2.0	17.0	34.0	42.0
	1500	164	157	145	140	2.4	21.2	42.4	52.4
	1800	196.5	187.5	177.5	172.5	2.9	25.4	50.9	62.9
IVP(Q)4-38	1000	128	119	109	104	2.7	16.8	33.5	41.0
	1200	154	145	135	130	3.0	20.0	40.0	49.0
	1500	192.5	183.5	173.5	168.5	3.5	24.8	49.8	61.0
	1800	231	222	212	207	4.0	29.5	59.5	73.0
IVP(Q)4-42	1000	134	125	115	110	2.7	17.7	35.2	43.5
	1200	161	152	142	137	3.0	21.0	42.0	52.0
	1500	201	192	182	177	3.5	26.0	52.3	64.7
	1800	241	232	222	217	4.0	31.0	62.5	77.5
IVP(Q)4-50	1000	156	147	137	132	3.1	20.2	39.4	49.3
	1200	187	178	168	163	3.5	24.0	47.0	59.0
	1500	234	225	215	210	4.0	29.7	58.5	73.4
	1800	280	271	261	256	4.7	35.4	69.9	87.9
IVP(Q)4-60	1000	189	178	166	160	4.0	24.4	46.9	58.6
	1200	227	216	204	198	4.5	29.0	56.0	70.0
	1500	284	273	261	255	5.2	35.8	69.6	87.1
	1800	340	329	317	311	5.9	42.7	83.2	104
IVP(Q)4-67	1000	210	199	187		4.5	27.1	52.1	
	1200	252	241	229		5.0	32.2	62.2	
	1500	315	304	292		5.8	39.8	77.4	
	1800	378	366	354		6.6	47.5	92.5	
IVP(Q)4-75	1000	236	225	213		5.0	30.5	58.7	
	1200	289	280	269		5.6	36.3	70	
	1500	354	343	331		6.5	44.8	87	
	1800	424	414	401		7.4	53.4	104.0	

Typical flows at 50°C,10W oil at 26 sSt, 0 bar inlet at specified speeds.

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