



A.K. INDUSTRIES®
An ISO 9001-2008 Certified Company

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Mfg By :

- Chemicals Process Pumps
- Valve
- Reduction Gear Box
- Spur Gear
- Beval Gear

Mfg By :

- Industrial Blade
- Spring
- Rubber Components
- Nozzle & all type of Eng. Item



S 3177



Specialize : Starch & Sugar Plant Machinery Parts

An ISO 9001 - 2008 Certified Company



A.K. INDUSTRIES®

SPECIFICATION CHEMICAL PROCESS PUMP

► CASHING
Top centerline discharge, Self-venting casing, arrange for back pull-out. Fully confined gasket. Foot support under casing for maximum resistance to misalignment & distortion from pipe loads. PN20 (Class 150) flanges standard, PN50 (Class 50) optional for working pressures to 2550 kPa with 3mm corrosion allowance. For maximum corrosion supplied without topped opening. But gauge & brain plug opening are provided when specified.

► IMPELLER
Impeller matched to casing for high efficiency & low NPSH. Fully open, has partial shrouds for maximum vane support without high trust inherent in closs impellers. Stuffing box pressure reduced & entrance of solid prevented by back pump outvanes. Large smoothly contoured flow passages combine best slurry & solids loading ability. Impeller is screwed on shaft with rotation to tighten, & threads nut & exposed treads from impeller eye. Stat of the art casting methods provide smoothest possible surface for highest efficiency. All impellers are statically & dynamically balanced.

► STUFFING BOX COVER
Enclosed back of casing & contains stuffing box chamber. Cover is fastened to frame or adapter so that a spare back pull-out assembled. Cover can be supplied with jacket for cooling stuffing box chamber in high temperature services. Jacket can also be used for heating viscous or high freezing point liquids.
Packed box has five rings packing & a lantern ring. Quench glad with water taps & an auxiliary ring of packing is standard. Gland is split for easy removal. Topped openings to lantern ring permit "in & out sealing, external flushing or lubricant as required.
Stuffing box is completely machined for mechanical seal installation, either originally or as a field conversion. Inside Outside, unbalanced, balanced, single, double or tandem sales, with any required gland, throttle bushing and flushing lines furnished to meet individual sealing problems. Gland completely confiners stationary mating ring gasket.

► BEARING FRAME
Stury cast iron construction provides rigid bearing alignment & shaft support. Contains large oil reservoir, with water jacket. Oil level maintained by constant level oiler with visible oil supply. Oil seals on each and oil breather fully protect oil from contamination while allowing for expansion or contraction of air caused by ambient temperatuer change. To handle liquids above 1700 Cast integral cooling chamber is designed for 600 kPa working pressure or 900 kPa test pressure.

► SHAFT
A singal piece shaft is designed for 0.05 mm maximum deflection at stuffing box face. all critical surfaces ground to less than 0.8 micron. threads where shaft screws into impeller are sealed by TEEO - Ring.

► SHAFT SLEEVE
Renewable shaft sleeve is possible driven, hooktype, with onbe and free to expand with temperature variations. TFE O-ring prevents leakage under sleeve permits application of inside balanced mechanical seals where required.

► BEARINGS
Inford bearing is pressed on shaft & is free to float exially in frame carries redial load only. Outboards bearing is shouldered and locked on shaft with locknut & washer & in bearing housing to carry redial & any unbalanced trust load. all bearing fits are precision bored. inboard bearing in single row, deep groove. outboard bearing are sized for two year minimum life.

► BASE PLATE
Cast iron drip rim type with large beaded holes. Only three sizes of base plates accommodated all pump size s and all applicable is or IEC frame size motors.
A standard spacer type coupling is furnished to take full advantage of the back pull out feature. Facroty selected coupling from leading manufactures are supplied unless otherwise specified.

► COUPLING
A standard spacer type coupling is furnished to take full advantage of the back pull out feature. Facroty selected coupling from leading manufactures are supplied unless otherwise specified.

► SPECIFICATION
Based On ANSI N73.1.

► AK SERIES
Back- Pull out horizontal centrifugal pump as per international standards.

► APPLICATIONS
Ak Pumps are used in all process industries like Chemical, Petro chemical, Pharmaceutical, refinery, Fertilizer, Sugar, Textile, Paper, Rubber cement, Powder Plants etc.

► METALLURGY
These pumps are supplied in the following standard materials of construction. All Iron, Bronze, cast Steel, CF 8 M, Ni-Resist, Monel, Hastelloy etc., & also various combinations of above.

INTRODUCTION

A.K. INDUSTRIES
Where We Never Compromise On Quality, We Have Adopted Most Professional & Experienced Precise Machinery & Technology.

THAT IS THE REASON
Pump & Helical Gear is Widely Acknowledge By Plastic Machinery Manufacturers & Users

HALICAL TOP IN QUALITY
It has standard modular design, gear body is machined on imported boring machine , it is hardened and tempered on imported gear grinding machine the function is noise free. no need for regular attention only periodical checking.

VISION
Pump & Helical gear unit is made with regular innovation & up gradation thus gives regular something new. Day by day it becomes popular overseas , the time is not far that they will say we trust Pump & Helical And We Use Only Made In India Gujarat Pump & Helical Gear Unit.

MISSION
We at A.K. Industries are always Thinking to upgrade the product with regular R&D. Put India in Global Map as the best in world for Pump & Helical gear unit.

Our Company Recent Achievement

We Have Completed New Projects Of Furfal Which Is Given By Kenya Company Consultant Company For Eepl Pune
Email : engeniousengineering@yahoo.com




Worthington Simpson Process Pump / Metering / Doshing / Friston Pump & Helical Gear Box Manufacturing & Servicing.

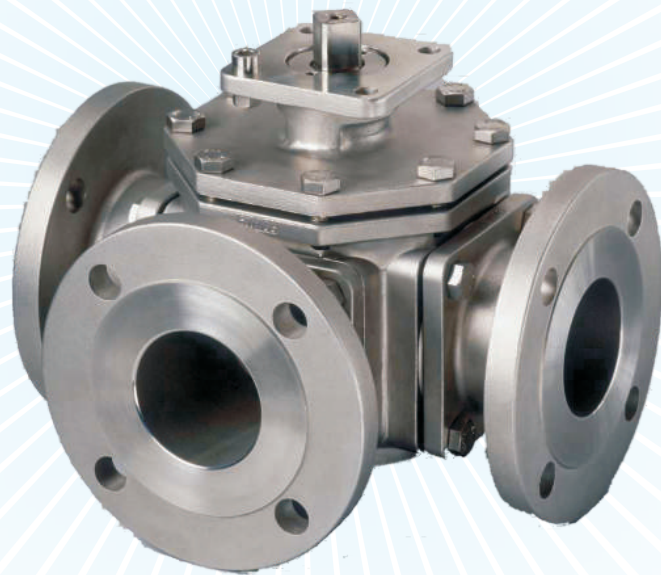



Assemble & Packing Department




Dispatch Area

3-WAY "L" PORT BALL VALVE



FEATURES

- BS 5351
- Face to Face ANSI B 16.10
- Flanges ANSI B 16.5 ASA-150 Pressure Testing
- Body (hydrostatics) : 30 kg/cm2
- Seat (hydrostatics) : 22 kg/cm2
- Seat (Air) : 6 kg/cm2

FEATURES

- 3 PC Bolting Design
- Bubble Tight Sailing
- Leak Tight Steam Sealing
- Suitable for Actuator Mounting
- Flexible Seat Design
- Low Operating torque
- "L" port/fire safe design on request

OUR NEW MANUFACTURING

Sluice Valve

- Size Range : 2" to 12"

- Pressure Rating : 150#, 300#, 600#

Mfg. Standards : is 14846, BS 5103, BS 5150

Forged Valve

- Size Range : ½" to 2"

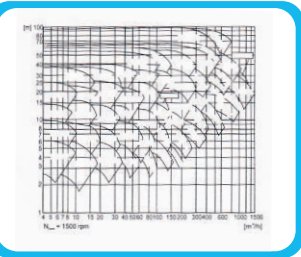
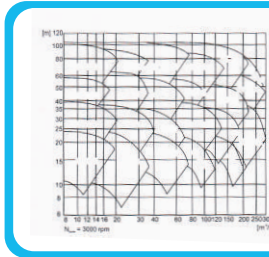
- Pressure Rating : 800#, 1500#, 2500#

Mfg. Standards : ASME B 16.34

OUR OTHER PRODUCTS

Globe / Gate / STR / Angle / Flush Bottom / Feed Check/ PRV / Safety gas Regulator / Blowdown / Tailor madve valve.

SPECIFICATION CHEMICAL PROCESS PUMP



PUMP SIZE - MECHANICALS SEAL TYPE

PUMP MODEL NO.	MOTER HP	RPM	CAPACITY M3/hr	HEAD mt
40 cp 200	15	2900	25.6	47
40 cp 200	10	2900	17	52.4
50 cp 200	1.5	2900	23	50
50 wp 160	3	2900	3	21
50 cp 160	10	2900	16	28
32 cp 125	5	2900	1.9	19
32 cp 125	5	2900	9.2	18
32 cp 160	5	2900	14	25
65 cp 160	7.5	2900	18	22
40 wp 250	20	2900	12	60
40 cp 250	20	2900	4.5	10
80 wp 250	20	2900	26	10
Fristan Pump C/F S.S.316	2	1440	2.2kg	10

PUMP SIZE - GLAND TYPE

PUMP SIZE (M.M)	SUCTION	DELIVERY	PRESSURE PER KG	AMPIER	MOTER (H.P)	R.P.M
50/315	80	50	3.8	LOW	12	1440
65/315	102	65	3.8	LOW	12	1440
50/200	80	50	4.0	HIGH	10	2800
50/160	80	50	3.5	HIGH	10	2800
32/160	65	32	3.5	HIGH	7.5	2800
90/90	90	90	5.8	HIGH	25	2800
65/65	65	65	4.5	HIGH	12	2800
80/400	80	80	5.0	HIGH	30	2800
115/315	150	125	3.3	LOW	30	1440
90/250	100	80	3.0	HIGH	12	1440
80/80	80	80	7.0	HIGH	25	2800
25/160	40	25	4.5	HIGH	5	2800
90/90	90	90	1.8	LOW	3	1440
50/265	75	50	7.0	HIGH	40	2900
65/315		65	3.5	HIGH	25	1440
32/200		32	4.0	HIGH	7.5	2900
80/250		80	2.5	HIGH	15	1440
100/315		100	3.7	HIGH	25	1440
25/150	37	25	3.0	HIGH	7.5	2900
75/275	100	75	7.0	HIGH	30	2900
80/400	100	75	3.5	HIGH	20	1440
100/40		100	4.5	HIGH	40	1440
50/150	75	50	4.5	HIGH	7.5	1440

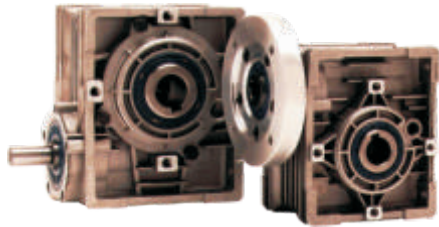
REDUCTION GEAR BOX

Gear Box		Gear Box Housing Dimension																Input Shaft				Output Shaft				Mounting Flange					
Model	Ratio	C	C1	A1	A2	B	B1	P	P1	O	E	H	T	F	G	ØK	J	Ø11	L1	V1	V1	Ø22	L2	V2	Y2	ØM	ØN	R	S	LN	BRG
SG-125S	6.3:1	125	175	290	-	155	134	120	23	340	210	160	190	420	416	Ø14	30	Ø30	80	8	33	Ø22	125	10	33	Ø225		175	M16	8	2941.4E
SG-1100	12.5:1	190	140	170	150	150	147	90	23	365	180	135	150	430	395	Ø15	20	Ø30	60	8	28	Ø22	125	10	28	Ø220	Ø140	180	M16	8	2961.4E
SG-1250	12.5:1	215	158	170	185	170	140	95	23	400	204	140	165	478	425	Ø16	23	Ø30	80	8	33	Ø20	130	12	33	Ø220	Ø140	180	M16	8	2991.4E
SG-1400	12.5:1	240	180	255	145	185	145	125	30	460	235	160	190	542	458	Ø17	25	Ø35	80	10	38	Ø50	135	14	38	Ø275	Ø180	220	M16	9	2941.4E
SG-1600	12.5:1	270	200	250	190	225	158	130	30	500	280	180	210	598	514	Ø20	30	Ø40	100	12	43	Ø60	150	18	43	Ø300	Ø210	255	M20	9	2942.4E
SG-1800	12.5:1	305	220	270	235	230	170	135	35	575	280	200	235	665	555	Ø20	35	Ø50	110	14	52.5	Ø70	170	20	52.5	Ø320	Ø220	260	M20	9	2942.4E
SG-2000	12.5:1	340	245	305	265	290	177	155	35	630	350	225	250	757	614	Ø22	40	Ø55	110	16	59	Ø80	180	25	59	Ø380	Ø270	325	M20	11	2942.4E

ALL DIMENSION ARE IN MM
NOTE : DIMENSIONS-D2, N,R,S, STANDARD OR AS PER DISIRE BY CUSTOMERS.

POWER RATINGS :

NOMINAL RATIO IN	INPUT SPEED RPM n1	OUT PUT SPEED RPM n2	GEAR SIZE													
			SG-125S		SG-1100		SG-1250		SG-1400		SG-1600		SG-1800		SG-2000	
			NOMINAL POWER : PN (KW)													
	1500	240	36		32		46		70		105		205		145	
	1000	160	24		21		31		46		70		135		95	
	1500	150			22		32		48		72		150		100	
	1000	100			15		21		32		46		95		65	
	1500	120			19		26		38		52		110		80	
	1000	80			12		17		25		35		75		52	
	1500	94			14		20		28		40		90		60	
	1000	63			9		13		18		26		60		40	
	1500	75							23		33		73		48	
	1000	50							15		21		49		32	



NOTE : Recommended Service (Application) factor for extruder duty between 1.75& 2.0.

GLOBE VALVE



MATERIAL OF CONSTRUCTION

SR NO.	PARTS	QTY.	MATERIAL
1	BODY	1	ASTM 16 Gr. WCB
2	SEAT RING	2	CARBON STEEL WITH 13% CR, S.S. FACING
3	MAIN VALVE	1	CARBON STEEL WITH 13% CR, S.S. FACING
4	CHECK NUT	1	S.S. AISI 410
5	SPINDLE	1	S.S. AISI 410
6	GASKET	1	COMPRESSED ASBESTORS FIBRE / S.S. 304 SPIRAL WOUND WITH CAF
7	BONNET		ASTM A216 GR. WCB
8	BONNET BUSH		S.S. AISI 410 / BRONZE
9	BONNET STUD NUT		ASTMA 194 GR. 2H
10	BONNET STUD		ASTMA 194 GR. B7
11	BONNET BOLT & NUT		CARBON STEEL
12	GLAND PACKING		MATALIC WIRE REINF ORCED GRAPHITED ASBESTOS
13	GLAND		ASBESTTOS
14	GLAND FLANG		S.S. AISI 410
15	EYE BOLT & NUT		CARBON STEEL
16	YOKE BUSH		CARBON STEEL
17	HANDWEEL		NI-RESIS / S.G. IRON
18	WASHER		MALLEABLE IRON/CAST IRON
19	HANDWEEL NUT		MALLEABLE IRON/CAST IRON

DESIGN FEATURES

- MANUFACTURING STANDARD : BS :1873 / ANSI B 16.34
- FACE TO FACE AS PER ANSI B 16.10
- ENDS FLANGED & DRILLED AS PER ANSI B 16.5 R.F.
- TESTED AS PER BS : 5146
- AVAILABLE WITH EXTENSION STEM

CLASS	TEST PRESSURE			
	HYDROSTATIC	PNEUMATIC	TEST	MAX
	800V	800V	800V	800V
100	25 kg/cm ²	25 kg/cm ²	25 kg/cm ²	454C
300	75 kg/cm ²	75 kg/cm ²	75 kg/cm ²	454C
600	150 kg/cm ²	150 kg/cm ²	150 kg/cm ²	454C
NB40	40 kg/cm ²	40 kg/cm ²	40 kg/cm ²	454C

SIZE "NB"	CLASS150					CLASS300					CLASS600					NB40				
	"A"	"B"	"F"	"H"	"L"	"A"	"B"	"F"	"H"	"L"	"A"	"B"	"F"	"H"	"L"	SEGEN	A	B	C	D
1/2	127	108	111	152	250	203	124	117.5	152	235	216	124	124	152	255	177.125	125	220	280	310
1/2	152	127	143	152	300	229	156	241	203	310	241.5	156	26.5	203	310	177.125	180	240	300	310
2	203	152	16	203	330	267	165	222	203	325	292	165	32	203	385	177.125	200	250	330	350
2 1/2	216	178	17.5	203	334	292	180.5	25.4	254	330	330	180.5	35	254	381	177.125	220	280	350	380
3	241.5	190.5	19	254	395	337.5	210	28.6	254	450	395	210	38	254	455	177.125	240	300	380	410
4	292	229	24	305	470	356	254	32	305	515	432	173	44.5	305	623	177.125	280	340	420	450
5	356	254	24	305	510	400	279.5	35	356	530	208	330.5	51	356	560	177.125	320	400	480	510
6	406.5	279.5	25.4	356	570	444.5	317.2	38.5	356	600	550	356	54	356	577.8	177.125	360	450	570	600
8	495.5	343	2.6	406	642	559	381	41.5	356	730	660.5	419	62	406	828	177.125	420	510	660	700
10	524.5	408.5	30.5	406	768	622.5	444.5	48	406	840	787.5	528	70	508	942	177.125	480	600	750	800
12	598.5	483	32	508	770	711.5	521	51	508	1005						177.125				
14	757.5	533.5	35	508	920											177.125				
16	914.5	597	36.5	508	1010											177.125				
18	978	635	40	559	1062											177.125				
20	978	635	43	559	1220											177.125				

GATE VALVE



DESIGN FEATURES

- MANUFACTURING STANDARD : BS : 1414/API-600/ANSI
- FACE TO FACE AS PER ANSI B 16.10
- ENDS FLANGED & DRILLED AS PER ANSI B 16.5 R.F.
- TESTED AS PER BS : 2156/API 598
- AVAILABLE WITH ACTUATOR OPERATOR
- AVAILABLE WITH EXTENSION STEM

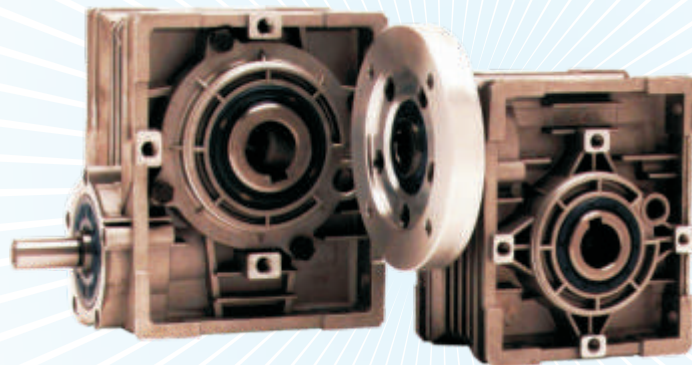
CLASS	TEST PRESSURE		
	BODY	SEAT & BALL JOINT	PNEUMATIC TEST
150	30 kg/cm ²	22 kg/cm ²	6 kg/cm ²
300	76 kg/cm ²	55 kg/cm ²	6 kg/cm ²
600	150 kg/cm ²	110 kg/cm ²	6 kg/cm ²

MATERIAL OF CONSTRUCTION

SR NO	PARTS	QTY.	Material
1	BODY	1	ASTM A216 Gr. WCB / C.I.
2	SEAT RING	2	CARBON STEEL WCB 13% CR. S.S. FACING
3	WEDGE	1	ASTM A216 Gr. WCB WITH 13% CR. S.S. FACING
4	SPINDLE	1	S.S. AISI 410
5	GASKET	1	COMPRESSED ASBESTOS FIBRE / S.S. 304 SPIRAL WOUND WITH CAF
6	BONNET	1	ASTM A216 GR. WCB / C.I.
7	BONNET STUD NUT	AS REQD	ASTMA 194 GR. 2H
8	BONNET STUD	AS REQD	ASTMA 194 GR. B7
9	BONNET BUSH	1	S.S. AISI 410 / BRONZE
10	GLAND PACKING	7	MATALIC WIRE REINF ORCED GRAPHITED ASBESTOS
11	GLAND	1	S.S. AISI 410
12	GLAND FLANG	1	CARBON STEEL
13	CROSS BOLT & NUT	2	CARBON STEEL
14	EYE BOLT & NUT	2	CARBON STEEL
15	YOKE BUSH	1	NI-RESIS / S.G. IRON
16	YOKE BUSH	1	CARBON STEEL
17	HANDWHEEL	1	MALLEABLE IRON/CAST IRON
18	KEY	1	CARBON STEEL
19	HANDWHEEL NUT	1	CARBON STEEL

SIZE "NB"	CLASS150				CLASS300				CLASS600			
	"A"	"D"	"T"	"H"	"L"	"A"	"D"	"T"	"H"	"L"	"A"	"D"
1/2"40	165	127	14.3	152	330	190.5	156	21	152	390	241.5	156
2"750	178	152.5	16	203	360	216	165	22	203	370	292	165
2 1/2"865	190.5	178	17.05	209.6	415	241.5	180.5	25.4	203	440	330	180.5
3"780	203	190.5	19	254	425	282.5	210	29	254	445	356	210
4"7100	229	229	24	254	510	305	254	32	254	520	432	273
5"7125	254	254	24	254	470	381	287.5	35	305	570	508	330.5
6"7150	287	279.5	25.4	305	665	403.5	317.5	36.5	356	740	559	356
8"7200	292	343	28.6	305	770	419	381	41.5	406	910	660.5	419
10"7250	330	406.5	30.5	408	940	457.5	444.5	48	458	1100	787.5	508
12"7300	356	483	32	457	1030	521	513	50.8	508	1200	838.5	559
14"7350	381	533.5	35	457	1270	584.5	54	559	1415	889	603.5	76.5
16"7400	406.5	597	36.5	508	1450	638.5	648	57.5	610	1540	991	688
18"7450	432	635	40	508	1600	614.5	711.5	60.5	613	1670	1093	743
20"7500	457	675	43	610	1770	691	775	63.5	665	1900	1194	813
24"7600	508	813	43	610	2170	1143	914.5	70	508	2200	1394	813

REDUCTION GEAR BOX



Reduction gear units are manufactured in different sizes in adopter type as well as solid foot mounting type to transmit minimum 0.05 H.P. & maximum 60 H.P. with selected of correct sizes. Normally available in ratios of 5:1, 10:1, 15:1, 20:1, 30:1, 40:1, 50:1, & 60:1 of reductions. Also higher ratiom form 100:1 to.

WORM :

The worm is solid with shaft is made of high grade steel so as to give hard wear resisting surface.

WORM WHEEL :

It is made of cost phosphor Bronze rim shrunk & keyed on cast iron center block for bigger units & solid casting for smaller units. the teethare hobbled on gear hobbing machine.

GEAR HOUSING :

It is made of close grain cast iron. large cooling fins on both sides &adequate cooling area improves efficiency.

BEARING :

The ball & roller bearing are used in worm & wheel with ample capacity so that it can take journal & thrust loads.

OIL SEALS :

Best quality of oil seals are used.

SPECIFICATION :

Wherever they can be applied in materials & Construction, they are made almost to I.S.S.S. 3734 - 1966 for worm gearing.

GUARANTEE :

Every A. K. worm reduction gear unit is a guaranteed for one year against manufacturing defect. If any gear becoming defective within guarantee period the same will be repaired or replaced free harge provided it is sent to our work on site carriage paid. any defect caused by accident transit.

REDUCTION GEAR BOX

GEAR RATIO	OUTPUT SPEED R.P.M.	CAPACITY	SIZE IN UNIT					
			1 1/2"	1 3/4"	2"	2 1/4"	3"	3 5/8"
5	300	INPUT POWER KW	1.172	1.360	2.100	2.40	4.00	8.05
		OUTPUT TORQUE Nm	32.765	38.500	60.000	66.30	121	176.6
		INPUT POWER KW	0.840	1.100	1.720	1.870	2.800	5.5
7.5	200	OUTPUT TORQUE Nm	35.000	44.340	72.000	80.300	126	238.4
		INPUT POWER KW	0.730	0.730	0.740	1.500	1.570	2.60
		OUTPUT TORQUE Nm	37.300	38.500	62.300	86.30	145	255.1
10	150	INPUT POWER KW	0.887	0.570	0.970	1.030	2.30	3.5
		OUTPUT TORQUE Nm	49.442	44.440	75.240	85.350	186	265.00
		INPUT POWER KW	0.350	0.510	0.821	0.940	2.33	2.700
15	100	OUTPUT TORQUE Nm	50.030	51.210	82.000	95.650	233	295
		INPUT POWER KW	0.470	0.510	0.690	0.730	1.83	2.7
		OUTPUT TORQUE Nm	49.840	61.140	81.410	82.220	231	360
20	75	INPUT POWER KW	0.450	0.450	0.560	0.600	1.46	2.4
		OUTPUT TORQUE Nm	58.200	62.000	78.500	87.800	214	323.7
		INPUT POWER KW	0.310	0.260	0.450	0.470	1.06	1.72
25	60	OUTPUT TORQUE Nm	41.400	43.660	79.560	87.510	197	333.54
		INPUT POWER KW	0.261	0.250	0.350	0.356	0.80	1.48
		OUTPUT TORQUE Nm	41.800	53.400	78.500	81.43	180	334
30	50	INPUT POWER KW	0.250	0.230	0.330	0.356	0.60	1.22
		OUTPUT TORQUE Nm	42.700	57.140	80.450	84.860	321	328.6
		INPUT POWER KW	0.224	0.210	0.288	0.300	0.50	1.06
40	37.5	OUTPUT TORQUE Nm	44.150	59.070	79.000	86.820	118	313

GEAR RATIO	OUTPUT SPEED R.P.M.	CAPACITY	SIZE IN UNIT					
			4"	5"	6"	7"	8"	10"
5	300	INPUT POWER KW	13800	23.140	36.500	50.000	67.200	82.4
		OUTPUT TORQUE Nm	412.0	701.41	1128.2	1500.00	2050.3	2491.2
		INPUT POWER KW	9.700	12.000	26.100	40.300	55.200	83.43
7.5	200	OUTPUT TORQUE Nm	431.70	819.10	1177.2	1844.3	2531.0	2933.2
		INPUT POWER KW	6.300	15.700	23.130	3.000	45.500	74.5
		OUTPUT TORQUE Nm	490.5	932.00	1383.0	1953.3	2825.6	4558
10	150	INPUT POWER KW	5.600	11.000	17.200	21.800	31.340	56
		OUTPUT TORQUE Nm	490.5	932.00	1383.0	1953.3	2825.6	4558
		INPUT POWER KW	5.100	9.000	14.200	18.650	24.330	46
15	100	OUTPUT TORQUE Nm	578.90	10.30	16.28.5	2178.0	2864.5	5473.3
		INPUT POWER KW	4.000	7.400	12.100	17.200	22.500	42
		OUTPUT TORQUE Nm	540.36	1040.5	1707.0	2403.5	3338.0	6661.5
20	75	INPUT POWER KW	3.000	5.000	8.300	12.000	15.000	32
		OUTPUT TORQUE Nm	583.70	1040	1700.00	2462.3	3502.2	6876
		INPUT POWER KW	2.463	4.254	6.650	11.000	13.500	27
25	60	OUTPUT TORQUE Nm	623.00	1049.6	1746.2	2531.0	3384.5	7253
		INPUT POWER KW	2.240	3.810	6.200	9.200	12.200	22
		OUTPUT TORQUE Nm	647.46	1118.3	1795.2	2668.3	3502.2	6967
30	50	INPUT POWER KW	1.800	1.800	3.000	5.000	7.500	9.85
		OUTPUT TORQUE Nm	608.22	608.22	1628.5	2405.0	3384.5	6888

RATINGS AT INPUT SPEED 1000 R.P.M.

GEAR RATIO	OUTPUT SPEED R.P.M.	CAPACITY	SIZE IN UNIT					
			1 1/2"	1 3/4"	2"	2 1/4"	3"	3 5/8"
5	200	INPUT POWER KW	0.890	1.030	1.760	1.865	3.21	4.55
		OUTPUT TORQUE Nm	37.100	43.250	73.880	81.000	141	198.2
		INPUT POWER KW	0.708	0.730	1.360	1.406	2.30	3.95
7.5	133.30	OUTPUT TORQUE Nm	41.400	45.500	82.000	96.140	147	255.1
		INPUT POWER KW	0.54	0.582	1.194	1.230	2.04	3.47
		OUTPUT TORQUE Nm	41.500	45.600	83.200	101.00	169	294.33
10	100	INPUT POWER KW	0.520	0.485	0.746	0.835	1.74	2.54
		OUTPUT TORQUE Nm	52.100	55.700	82.400	98.100	223	314
		INPUT POWER KW	0.400	0.380	0.715	0.582	1.74	2.100
15	66.66	OUTPUT TORQUE Nm	52.000	56.700	103.20	110.000	266	334.4
		INPUT POWER KW	0.373	0.365	0.544	0.580	1.45	1.94
		OUTPUT TORQUE Nm	60.333	64.100	98.100	105.50	263	372.8
20	50	INPUT POWER KW	0.302	0.321	0.477	0.507	1.15	1.68
		OUTPUT TORQUE Nm	52.100	55.700	103.20	110.000	266	334.4
		INPUT POWER KW	0.288	0.250	0.395	0.430	0.94	1.34
30	33.33	OUTPUT TORQUE Nm	54.500	57.300	101.10	104.00	223	392.4
		INPUT POWER KW	0.201	0.200	0.355	0.350	0.65	1.194
		OUTPUT TORQUE Nm	52.000	52.500	89.100	98.100	254	362.4
40	25	INPUT POWER KW	0.200	0.180	0.298	0.261	0.450	1.01
		OUTPUT TORQUE Nm	57.000	59.000	99.100	94.200	130	402.20
		INPUT POWER KW	0.180	0.180	0.224	0.244	0.400	0.933
50	20	OUTPUT TORQUE Nm	58.540	62.540	88.300	94.400	126	392.4

GEAR RATIO	OUTPUT SPEED R.P.M.	CAPACITY	SIZE IN UNIT							
			4"	5"	6"	7"	8"	9"	10"	12"
5	300	INPUT POWER KW	11.000	18.700	26.900	37.300	49.250	64.4	84	108
		OUTPUT TORQUE Nm	490.5	853.5	1215.5	1677.5	2256.0	2912	3900	4449.8
		INPUT POWER KW	7.540	14.100	20.900	29.900	39.600	54.1	56	80
7.5	200	OUTPUT TORQUE Nm	510.2	951.6	1402.8	2011.1	2707.6	3682.1	4867.5	6382.1
		INPUT POWER KW	6.500	12.200	18.650	25.70	32.100	45.5	50	70
		INPUT POWER KW	5.78	10.793	16.680	22.370	29.3	44.00	4360	6279.3
10	150	OUTPUT TORQUE Nm	538.1	1011.7	1486.6	2127.0	2852.0	3811.0	5000.0	6552.0
		INPUT POWER KW	5.78	10.793	16.680	22.370	29.3	44.00	4360	6279.3
		OUTPUT TORQUE Nm	578	1000.60	1742.2	2668.3	3306.0	4966	5100	7583.2
15	100	INPUT POWER KW	3.880	6.600	10.000	14.000	20.200	30.8	33.5	49
		OUTPUT TORQUE Nm	1831.0	3152.0	4782.0	6782.0	9512.0	15100	17000	25000
		INPUT POWER KW	3.00	6.000	8.300	11.000	17.200	27	27	40
20	75	OUTPUT TORQUE Nm	618.00	1197.0	1770.0	2676.3	3639.5	5673	5580	8529.8
		INPUT POWER KW	2.400	4.100	6.300	8.900	13.500	20.0	20.0	30.0
		OUTPUT TORQUE Nm	686.70	1277.7	1775.6	2684.7	3894.6	5722	5710	8665.2
40	37.5	INPUT POWER KW	2.400	4.100	6.300	9.100	12.00	20	18	30.5
		OUTPUT TORQUE Nm	3.256	3.33	5.00	7.00	9.00	15.00	15.00	22.00
		INPUT POWER KW	2.015	3.500	5.300	7.600	10.500	15.4	15.8	24
60	25	OUTPUT TORQUE Nm	735.80	1395.0	1952.2	2796.0	3790.0	5956.3	5950	8986
		INPUT POWER KW	1.626	2.800	4.200	6.000	8.200	12.00	12.00	18.00
		OUTPUT TORQUE Nm	794.60	1226.0	1833.5	2647.4	3835.9	5993	5980	9731.1
70	21.4	INPUT POWER KW	1.420	2.630	3.900	5.750	7.400	10.1	12.5	19
		OUTPUT TORQUE Nm	1011.7	1831.0	2707.6	3811.0	5000.0	6552.0	8529.8	11000
		OUTPUT TORQUE Nm	1011.7	1831.0	2707.6	3811.0	5000.0	6552.0	8529.8	11000

CHECK VALVE

► MATERIAL (LIFEUP CHECK VELVE)

5	Stud with nut	MS	6
4	valve	SS410	1
3	cover	ASTM A216 WCB	1
2	seat ring	SS 410	1
1	main body	ASTM A216 WCB	1
No. Parts	Materials	Qty.	



► DESIGN FEATURES

- MANUFACTURING STANDARD : BS : 1868/ ANSI B 16.34/API 6D
- FACE TO FACE DIMS. AS PER ANSI B 16.10
- ENDS FLANGED & DRILLED AS PER ANSI B 16.5 R.F. (150#, 300#)
- TESTED AS PER BS : 5146
- SIZE AVAILABLE FROM 25 MM TO 300 MM

TEST PRESSURE			
CLASS	80V	150/180/250	PNEUMATIC TEST
150	30 kg/cm ²	22 kg/cm ²	6 kg/cm ²
300	76 kg/cm ²	55 kg/cm ²	6 kg/cm ²
600	150 kg/cm ²	110 kg/cm ²	6 kg/cm ²

► MATERIAL ('Y' TYPE STAINER)

5	Stud with nut	MS	6
4	valve	SS410	1
3	cover	ASTM A216 WCB	1
2	seat ring	SS 410	1
1	main body	ASTM A216 WCB	1
No. Parts	Materials	Qty.	

Max. Working Pressure : 40 kg/cm²
Max. Working Temrature : 425 C

► MATERIAL (SWING CHECK VALVE)

SR No	Parts	Qty	Materials
1	BODY	1	ASTM A216 Gr. WCB
2	SEAT RING	1	CARBON STEEL WCB WITH 13% Cr. S.S. FACING
3	DISC	1	ASTM A216 Gr. WCB WITH 13% Cr. S.S. FACING
4	HINGE	1	ASTM 216 Gr. WCB
5	WASHER	1	S.S. AISI 410
6	DISC NUT	1	ASTM 194 Gr. 2H
7	SPLIT PIN	1	S.S. AISI 410
8	HINGE PIN	1	S.S. AISI 410
9	BRACKET	1	ASTM 216 Gr. WCB
10	BRACKET BOLT	1	ASTM A 193 Gr. B7
11	GASKET	1	COMPRESSED ASBESTOS FIBRE
12	COVER	1	ASTM 216 Gr. WCB/C.S.
13	COVER STUD NUT	AS REQD	ASTM 216 Gr. 2H
14	COVER STUD	AS REQD	ASTM A 193 Gr. B7

LOAD CHARACTERISTICS

U = UNIFORM LOAD	M = MEDIUM SHOCK LOAD	H = HEAVY SHOCK LOAD
Agitators & Mixers	Bucket- heavy load	M
Liquidize, semi Liquids	Bucket-cont, load	U
Liquidize, variable density	Centrifugal discharge	U
Blowers	Gravity discharge	U
centrifugal, Vane	Fens	
Lobe	Centrifugal	
Brewing & Distilling	Induced draft	U
Bottle Machinery	Induced draft	M
Brew kettl	Large (mine, Industrial, etc)	M
Cookers, Scale hopper	Light (small diameter)	
(frequent starts)	Apron	M
cane Knives	Belt	
Clarifies	Disc.	U
Clay-working machinery	Reciprocating	H
Brik press, briquete machines	Food Industry	M
Pug mill, clay working machinery	Beet slicer	
Compressor	Cereal cooker	U
Centrifugal	Laundry machines	
Lobe	Washers, tumblers	M
Reciprocating-multi-cylinder	Line shaft	U
Reciprocating-single-cylinder	Mills	
Conveyors	hammers	H
Uniformly loaded	Balls kilns, pebbles	M
Rough or non-uniform drive	Road tumbling barrels	H
Reciprocating & shaker	Sugar Industry	
Crance Hoists	Cane Knives	M
crushers	Crusher	M
Elevators	mills	M
Bucket-uniform load		

► SERVICE FACTORS

PRIME MOVER	DURATION OF SERVICE	UNIFORM U	MODERATE SHOCK M	HEAVY SHOCK H
Electric Motor	2 hour/day	0.75	0.90	1.25
	8 hour/day	0.90	1.1	1.45
	12 hour/day	1.00	1.25	1.55
	24 hour/day	1.25	1.50	1.75

HELICAL GEAR BOX

► RTICAL DOWN/UP WARD UNITS ◀

SIZE	A	B	C	D	OE	F	OG	H	I
40V	232	225	65	156	32	30	45	230	274
50V	262	255	72	188	38	35	50	275	325
65V	300	265	85	212	45	40	58	320	380
80V	353	335	88	261	45	40	70	425	490
100V	432	370	120	300	58	63	80	530	600

SIZE	OJ	K	L	M	N	O	P	Q	R
40V	18	75	170	115	88	209	245	145	100
50V	21	100	190	140	101	255	290	192	125
65V	22	102	203	138	125	283	305	195	160
80V	27	108	243	170	140	321	351	245	200
100V	28	125	285	180	145	345	410	295	250

SIZE	S	T	U	V	W	X	Y
40V	100	230	274	9.52	476	12.7	6.35
50V	113	275	325	9.52	4.76	12.7	6.35
65V	130	335	390	12.7	6.35	15.87	7.93
80V	145	425	495	12.7	6.35	19.05	9.52
100V	150	530	600	15.87	7.93	19.05	9.52

► UNIVERSAL ADOPTER TYPE ◀

SIZE	A	B	C	D1	D2	E1	E2	F	G
16A	40	63	122	16	19	45	45	165	48
20A	50	61	150	18	25	52	55	207	74
25A	63	81	163	19	30	60	65	230	71
31A	80	83	191	22	32	65	70	274	90
35A	90	120	208	25	38	70	95	292	92

SIZE	H	I	J	K	L	M	N	O	P
16A	120	128	103	26	40	46	20	122	101
20A	158	150	125	30	56	70	20	180	122
25A	190	180	143	35	70	63	18	195	142
31A	232	225	161	38	87	66	20	232	171
35A	252	250	198	46	98	57	22	255	198

SIZE	Q1	Q2	R1	R2	S	U	V	W
16V	4.7	6.35	2.4	3.2	60	70	52	11
20V	4.76	6.35	2.4	3.2	97	90	65	11
25V	6.35	7.93	3.2	4	89	100	70	15
31V	6.35	7.93	3.2	4	109	120	80	15
35V	6.35	9.52	3.2	4.7	115	182	97	15



BUTTERFLY VALVE

► MATERIAL (SWING CHECK VALVE)

PART	DESCRIPTION	STD MODE OF CONSTRUCTION	OPTION
1	BODY	Cast Iron, GG-25/ IS - 210 FG - 250/ BS - 1425 Gr. 250V	SG Iron GGG 40 Cast Steel (WCB) Stainless Steel CR13Cr28M
2	DISC	SG Iron GGG 40/ Cast SG - 1865 SG 400/12/ BS - 2789 Gr. 420/12	Cast Steel (WCB) Stainless Steel CR13Cr28M Aluminum Bronze IS 305 Gr2
3	SEAT	Blake Nitrile	EPDM, Neoprene, Viton, Silicon, Hypalon or as per Customer's Requirements
4	SHAFT	AISI 410	AISI 304 / AISI 316
5	BEARING	Self Lubricating phosphorus Bronze	PTFE
6	'O' RINGS	Nitrile	EPDM, neoprene
7	BUSH	Polycacetal	PTFE
8	TAPER PIN	AISI 410	AISI 304 / AISI 316
9	PLUG	Carbon Steel	
10	Hand Lever	SG Iron / C.I.	cast Steel, S.S.

► DIMENSION CHART

NB	A	D	H	L	WT/(KG)
40	33	66	106	250	3.1
50	43	70	113	250	3.7
65	46	76	121	250	4.5
80	46	59	129	250	4.8
100	52	96	147	250	6.0
125	56	133	176	315	11.0
150	56	133	176	315	11.0
200	60	158	200	315	15.5
250	68	194	245	500	27.0
300	78	219	270		36.0
350	78	260	321		
400	100	290	348		
150	108	320	373		
500	127	360	410		
600	149	420	470		

► OPERATING DATA

- SIZE OF VALVE
- M.O.C. FOR BODY DISC & SEAT
- IF ANY SPECIFIC CHANGES TO STANDARD MATERIAL OF OTHER PARTS
- OPERATION MANUAL / GEARBOX / ACTUATOR (GIVE DETAILS OF ACTUATOR)
- DETAILS OF FLOW MEDIUM I.E. NAME TEMPERATURE, PRESSURES

► TECHNICAL DATA

PRESSURE RATING	PN10 & PN16
PRESSURE TESTING	A) BODY : 1.5 X PN B) SEAT: 1.1 X PN
TEMPERATURE	(-) 40. C TO 200. C
FACE TO FACE DIMENSION	ISO-5752 / (S-13095/ BS - 5155
TO SIFT FLANGES	IS, ANSI, BS, DN Standard
OPERATION	Bi-directional
PAINTING	Epoxy coated

