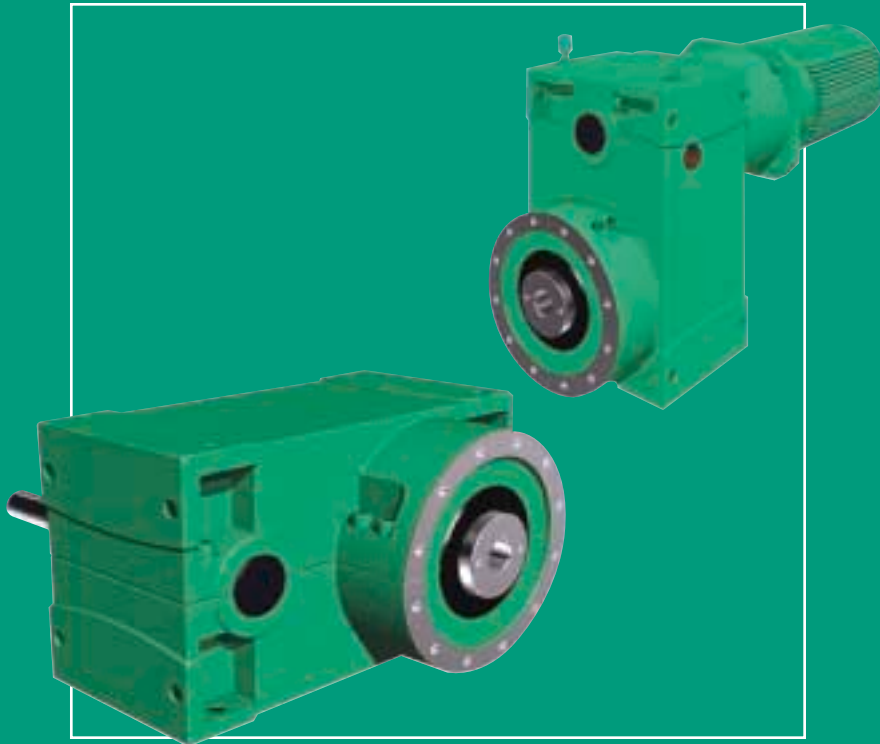


PARAMAX[®]

Extruder Drives

New!



SEC SERIES



SUMITOMO
MACHINERY CORPORATION OF AMERICA

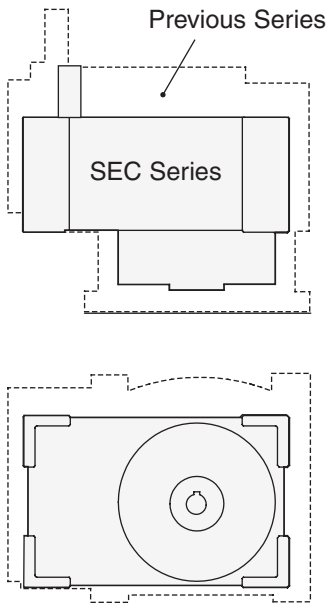
Catalog

07.090.51.001

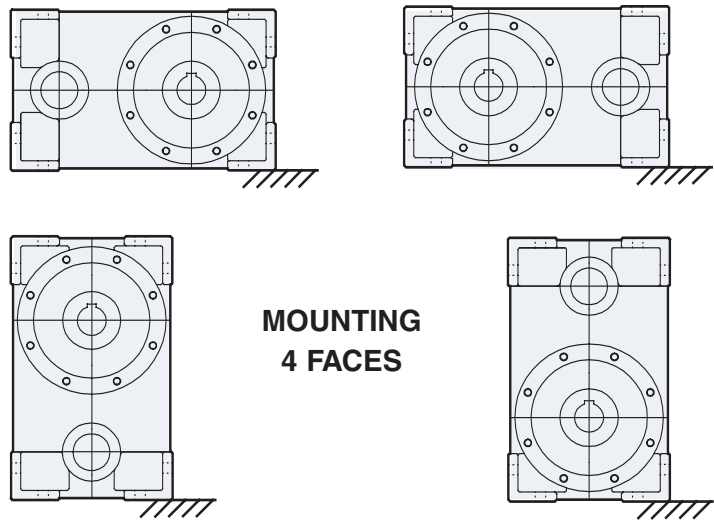
SEC SERIES EXTRUDER DRIVES

Features

COMPACT

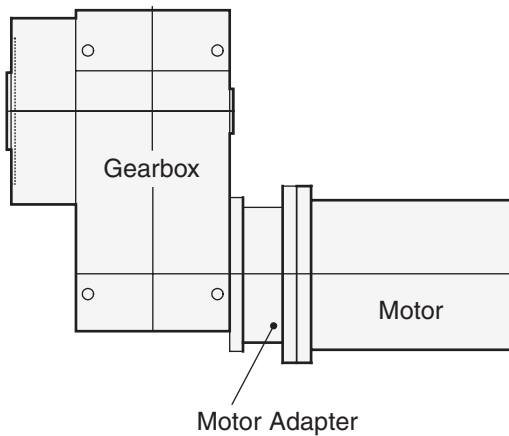


UNIVERSAL MOUNTING

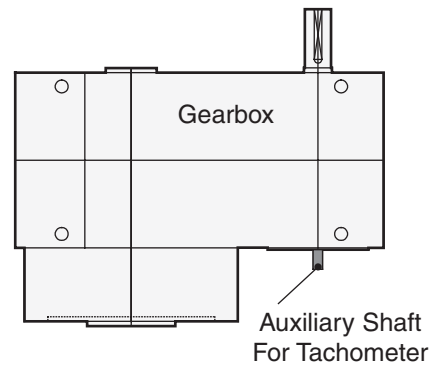


Options

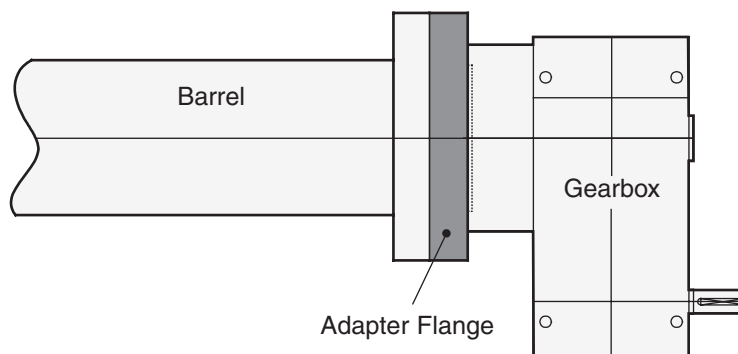
MOTOR ADAPTER

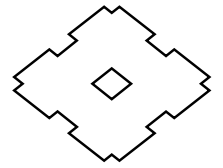


AUXILIARY SHAFT FOR TACHOMETER



ADAPTER FLANGE





Quick Selection

Motor Size	Shaft Diameter											Thrust Bearing Number				
	kW	HP	25	30	40	45	50	55	65	75	90	Gearbox Size				
												005	010	020	030	
	3.7	5										Bearing No.	29412	29415	29417	29420
	5.5	7.5		005	005	005	005					Thrust bearing selection based on 7250 psi continuous screw pressure.				
	7.5	10		005	005	005	005									
	11	15		005	010	010	010	010								
	15	20		005	010	010	010	010								
	18.5	25				020	020	020	020	030						
	22	30				020	020	020	020	030						
	30	40					030	030	030	030						
	37	50					030	030	030	030						
	45	60					030	030	030	030						
	55	75					030	030	030	030						

Nomenclature

Series	Size	Approx. Torque kNm	Number of Stages	Thrust Bearing	Shaft Arrangement	Mounting	Nominal Ratio
SEC	005	(1.9)	P2 Parallel Double Reduction	T Normal Thrust		(Blank)	6.3
	010	(2.6)				*W	* 7.1
	020	(3.8)				*WR	* 8
	030	(6.1)					* 9

Note: Ratios marked with * are optional

Exact Reduction Ratio

Nominal Ratio	Size			
	005	010	020	030
6.3	6.213	6.483	6.260	6.410
7.1	7.192	7.239	7.032	6.978
8	7.820	8.160	7.750	7.889
9	9.053	9.112	8.706	8.588
10	10.040	10.476	9.993	9.861
11.2	11.622	11.698	11.226	10.735
12.5	12.565	13.111	12.179	12.710
14	14.545	14.641	13.681	13.837
16	15.717	16.400	15.728	16.304
18	18.194	18.313	17.668	17.749
20	19.392	20.235	19.579	19.969
22.4	22.449	22.596	21.994	21.739
25	24.406	24.567	25.093	23.761
28	27.675	27.655	27.046	27.844
31.5	30.088	30.067	30.858	30.433

Table 1 Temperature correction factor

Ambient Temperature		Temperature Correction Factor Ta
°C	°F	
20	68	1.00
30	86	0.85
40	104	0.70
50	122	0.55

SEC SERIES EXTRUDER DRIVES

Rating Table

HP

Mechanical Power Rating (HP): Pn

AGMA Service Factor = 1.0

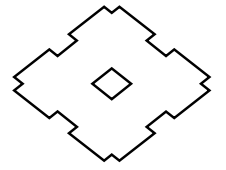
Thermal Power Rating (HP): Pt

Ambient Temperature: 68°F

Nominal Ratio	Input Speed r/min	Output Speed r/min	Size							
			005		010		020		030	
			Pn	Pt	Pn	Pt	Pn	Pt	Pn	Pt
6.3	1800	286	87	34	106	43	153	46	228	63
	1500	238	72	38	91	46	133	51	197	71
	1200	190	58	39	76	48	110	55	162	76
	1000	159	48	39	66	48	94	56	135	78
	900	143	44	39	60	47	84	56	122	78
	750	119	37	39	50	46	71	55	102	76
* 7.1	1800	286	72	34	106	42	142	48	212	62
	1500	238	60	36	91	44	118	54	177	68
	1200	190	48	38	74	46	95	58	142	74
	1000	159	40	38	62	46	79	58	119	75
	900	143	37	38	55	44	71	58	107	75
	750	119	31	38	46	43	60	56	90	74
8	1800	286	68	35	91	44	130	46	194	66
	1500	238	58	36	79	46	111	50	165	71
	1200	190	46	38	64	46	91	52	133	75
	1000	159	39	38	54	46	76	52	111	75
	900	143	35	38	48	44	68	52	99	74
	750	119	29	36	40	43	56	51	83	72
* 9	1800	286	58	34	87	42	115	48	173	64
	1500	238	48	36	72	43	97	52	145	68
	1200	190	48	36	58	43	78	54	117	71
	1000	159	39	36	48	43	64	55	97	71
	900	143	32	36	44	42	58	54	87	71
	750	119	25	35	37	40	48	52	74	68
10	1800	286	54	34	75	43	106	47	158	66
	1500	238	46	35	63	43	88	50	133	70
	1200	190	37	35	51	43	71	51	106	71
	1000	159	31	35	42	42	59	50	88	70
	900	143	28	34	38	42	54	48	80	68
	750	119	23	32	32	39	44	47	67	67
* 11.2	1800	286	44	34	68	40	90	50	139	63
	1500	238	38	34	56	42	75	51	117	67
	1200	190	30	34	46	40	60	52	94	67
	1000	159	25	34	38	39	50	51	78	67
	900	143	23	32	35	39	46	51	70	66
	750	119	19	31	29	36	38	48	59	63
12.5	1800	286	43	32	60	40	87	47	123	66
	1500	238	37	32	51	40	72	48	103	68
	1200	190	29	32	40	39	58	48	83	68
	1000	159	25	31	34	38	48	48	70	67
	900	143	22	31	31	38	43	47	62	66
	750	119	18	29	26	35	37	44	52	63
* 14	1800	286	36	31	55	38	74	50	109	63
	1500	238	30	32	46	38	62	51	91	66
	1200	190	24	31	37	38	50	51	72	66
	1000	159	20	29	31	36	42	50	60	63
	900	143	18	29	28	35	38	48	55	63
	750	119	15	28	23	32	31	47	46	60
16	1800	286	35	32	43	40	67	44	95	60
	1500	238	29	32	37	40	56	46	79	62
	1200	190	23	32	30	39	46	44	64	60
	1000	159	20	31	25	38	38	43	54	59
	900	143	18	29	22	36	34	42	48	58
	750	119	15	28	19	34	29	40	40	54
* 18	1800	286	29	31	43	38	58	47	84	58
	1500	238	24	31	37	38	48	47	71	59
	1200	190	20	31	30	36	39	46	56	58
	1000	159	16	29	25	35	32	44	47	56
	900	143	15	28	22	34	29	43	43	55
	750	119	12	27	19	31	24	42	36	52

- When input speed is not shown in the table, find it by the interpolation method.
- When input speed (N) is lower than 750 r/min, find the mechanical power rating (Pn) according to the following formula. $P_n = P_n(750) \times N/750$
- Please consult us when input speed is over 1800 r/min.
- The values Pt are applicable to continuous operation at ambient temperatures of 20°C (68°F) or less.
- Recommended Service Factor for Extruder is 1.25 or over and applies for electric motor as prime mover.

- Thermal power rating should be checked by the following method.
ex.) Specifications Motor: 20 HP, Input speed:1500r/min, Size of Gearbox: SEC005, Nominal reduction ratio:12.5
Ambient temperature:40°C (104°F), Temperature correction factor Ta = 0.70
(See the following table1)
Thermal power rating Pt = Pt x Ta = 32 x 0.70 = 22.4 > 20HP.
- Ratios with * are optional.



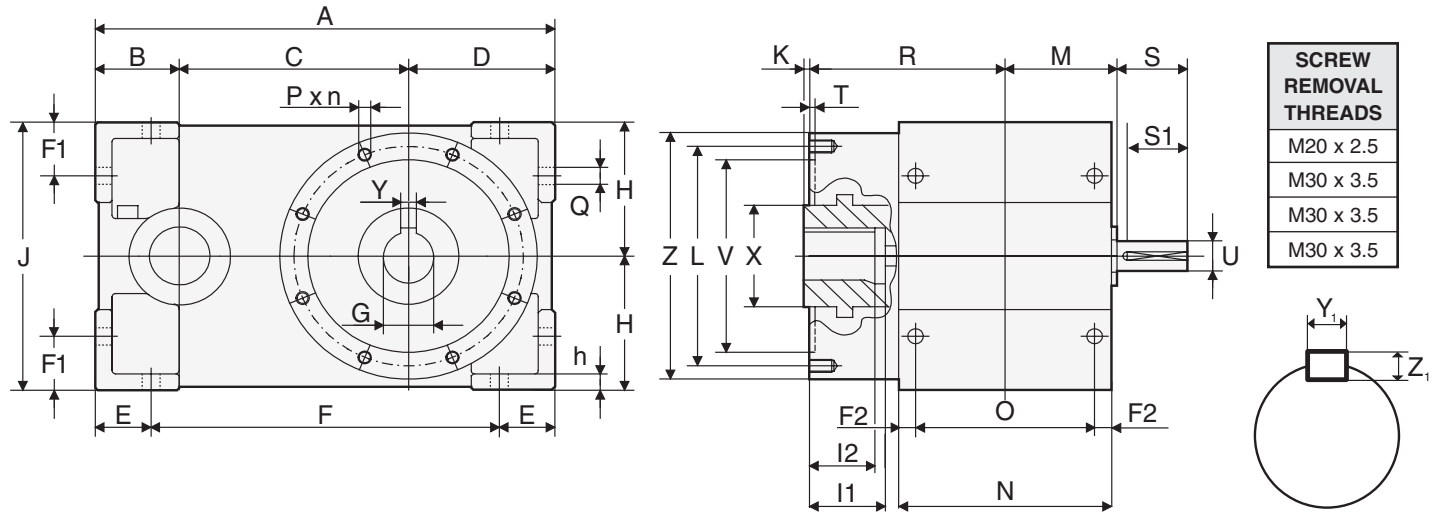
Rating Table (continued)

HP

Nominal Ratio	Input Speed r/min	Output Speed r/min	Size								
			005		010		020		030		
			Pn	Pt	Pn	Pt	Pn	Pt	Pn	Pt	
*	20	1800	286	29	29	34	38	47	44	70	59
		1500	238	24	29	29	36	40	44	59	59
		1200	190	19	28	23	35	32	43	47	58
		1000	159	16	27	19	32	27	40	40	56
		900	143	14	27	17	32	24	40	36	54
*	22.4	1800	286	24	29	34	35	46	46	70	56
		1500	238	20	28	29	34	39	46	58	56
		1200	190	16	27	23	32	31	44	47	55
		1000	159	13	25	19	31	26	42	39	54
		900	143	12	25	17	29	23	42	35	52
*	25	1800	286	22	27	30	34	40	43	62	54
		1500	238	18	27	25	32	34	42	51	54
		1200	190	15	25	20	31	27	40	42	52
		1000	159	12	24	17	29	23	39	35	50
		900	143	11	24	15	28	21	38	32	48
*	28	1800	286	17	29	25	36	34	44	50	58
		1500	238	14	28	21	35	28	44	42	58
		1200	190	11	27	16	34	23	43	33	55
		1000	159	10	25	14	31	19	42	28	54
		900	143	9	25	12	31	17	40	25	52
*	31.5	1800	286	16	28	23	34	30	42	46	54
		1500	238	13	27	19	34	25	42	38	54
		1200	190	10	25	15	31	20	40	31	52
		1000	159	9	24	13	29	17	39	25	50
		900	143	8	24	11	28	15	38	23	48
		750	119	7	21	10	27	13	35	19	46

Dimensions

Inch



Inch

Size	A	B	C	D	E	F	F1	F2	G	H	h	I1	I2	J	K	L	M
005	15.0	2.8	7.6	4.6	1.5	12.0	1.7	0.6	1.125	4.4	0.6	5.3	4.7	8.8	0.3	6.7	3.6
010	16.1	3.0	8.1	5.1	1.6	13.0	1.8	0.6	1.500	4.9	0.6	5.9	5.3	9.8	0.3	8.1	4.0
020	18.1	3.3	9.1	5.7	1.8	14.5	1.9	0.7	1.750	5.5	0.6	6.3	5.7	11.0	0.3	9.1	4.4
030	20.3	3.7	10.2	6.3	2.0	16.3	2.0	0.7	2.000	6.3	0.6	6.9	6.3	12.6	0.7	10.2	5.0

Inch

Size	N	n	O	P	Q	R	S	S1	T	U	V	X	Y	Y1	Z	Z1	Weight (lbs)
005	6.7	0.3	5.6	M12	0.6	6.3	2.0	1.57	0.2	0.9	5.9	2.8	0.3125	0.250	7.9	0.250	152
010	7.5	0.5	6.3	M12	0.6	6.9	2.4	1.97	0.2	1.1	7.1	3.1	0.375	0.250	9.1	0.250	209
020	8.3	0.3	7.0	M16	0.7	7.6	3.1	2.83	0.2	1.4	7.9	3.7	0.500	0.3125	10.6	0.3125	290
030	9.3	0.5	8.7	M16	0.7	8.8	4.3	4.02	0.2	1.6	9.1	4.3	0.625	0.375	11.8	0.375	407

SEC SERIES EXTRUDER DRIVES

Rating Table

kW

Mechanical Power Rating (kW): Pn

AGMA Service Factor = 1.0

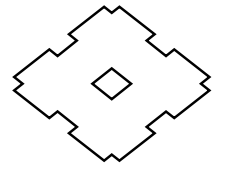
Thermal Power Rating (kW): Pt

Ambient Temperature: 20°C

Nominal Ratio	Input Speed r/min	Output Speed r/min	Size							
			005		010		020		030	
			Pn	Pt	Pn	Pt	Pn	Pt	Pn	Pt
6.3	1800	286	65	25	79	32	114	34	170	47
	1500	238	54	28	68	34	99	38	147	53
	1200	190	43	29	57	36	82	41	121	57
	1000	159	36	29	49	36	70	42	101	58
	900	143	33	29	45	35	63	42	91	58
	750	119	27.6	29	37	34	53	41	76	57
* 7.1	1800	254	54	25	79	31	106	36	158	46
	1500	211	45	27	68	33	88	40	132	51
	1200	169	36	28	55	34	71	43	106	55
	1000	141	30	28	46	34	59	43	89	56
	900	127	27.4	28	41	33	53	43	80	56
	750	106	22.9	28	34	32	45	42	67	55
8	1800	225	51	26	68	33	97	34	145	49
	1500	188	43	27	59	34	83	37	123	53
	1200	150	34	28	48	34	68	39	99	56
	1000	125	29.2	28	40	34	57	39	83	56
	900	113	26.3	28	36	33	51	39	74	55
	750	94	22.0	27	30	32	42	38	62	54
* 9	1800	200	43	25	65	31	86	36	129	48
	1500	167	36	27	54	32	72	39	108	51
	1200	133	36	27	43	32	58	40	87	53
	1000	111	29.0	27	36	32	48	41	72	53
	900	100	24.2	27	33	31	43	40	65	53
	750	83	18.3	26	27.6	30	36	39	55	51
10	1800	180	40	25	56	32	79	35	118	49
	1500	150	34	26	47	32	66	37	99	52
	1200	120	27.3	26	38	32	53	38	79	53
	1000	100	22.8	26	31	31	44	37	66	52
	900	90	20.6	25	28.7	31	40	36	60	51
	750	75	17.2	24	24.0	29	33	35	50	50
* 11.2	1800	161	33	25	51	30	67	37	104	47
	1500	134	28.3	25	42	31	56	38	87	50
	1200	107	22.7	25	34	30	45	39	70	50
	1000	89	18.9	25	28.7	29	37	38	58	50
	900	80	17.2	24	25.8	29	34	38	52	49
	750	67	14.3	23	21.6	27	28.4	36	44	47
12.5	1800	144	32	24	45	30	65	35	92	49
	1500	120	27.3	24	38	30	54	36	77	51
	1200	96	21.9	24	30	29	43	36	62	51
	1000	80	18.3	23	25.6	28	36	36	52	50
	900	72	16.5	23	23.0	28	32	35	46	49
	750	60	13.8	22	19.2	26	27.5	33	39	47
* 14	1800	129	27.1	23	41	28	55	37	81	47
	1500	107	22.7	24	34	28	46	38	68	49
	1200	86	18.2	23	27.5	28	37	38	54	49
	1000	71	15.2	22	23.0	27	31	37	45	47
	900	64	13.7	22	20.7	26	28.0	36	41	47
	750	54	11.4	21	17.3	24	23.4	35	34	45
16	1800	113	26.2	24	32	30	50	33	71	45
	1500	94	21.9	24	27.5	30	42	34	59	46
	1200	75	17.5	24	22.1	29	34	33	48	45
	1000	63	14.6	23	18.5	28	28.4	32	40	44
	900	56	13.2	22	16.6	27	25.6	31	36	43
	750	47	11.0	21	13.9	25	21.4	30	30	40
* 18	1800	100	21.7	23	32	28	43	35	63	43
	1500	83	18.2	23	27.5	28	36	35	53	44
	1200	67	14.6	23	22.1	27	28.9	34	42	43
	1000	56	12.2	22	18.4	26	24.1	33	35	42
	900	50	11.0	21	16.6	25	21.8	32	32	41
	750	42	9.1	20	13.9	23	18.2	31	26.9	39

- When input speed is not shown in the table, find it by the interpolation method.
- When input speed (N) is lower than 750 r/min, find the mechanical power rating (Pn) according to the following formula. $P_n = P_n(750) \times N/750$
- Please consult us when input speed is over 1800 r/min.
- The values Pt are applicable to continuous operation at ambient temperatures of 20°C (68°F) or less.
- Recommended Service Factor for Extruder is 1.25 or over and applies for electric motor as prime mover.

- Thermal power rating should be checked by the following method.
ex.) Specifications Motor: 15kW, Input speed:1500r/min, Size of Gearbox: SEC005, Nominal reduction ratio:12.5
Ambient temperature: 40°C (104°F). Temperature correction factor Ta = 0.70 (See the following table1)
Thermal power rating Pt = Pt x Ta = 24 x 0.70 = 16.8kW > 15kW.
- Ratio with * are optional.



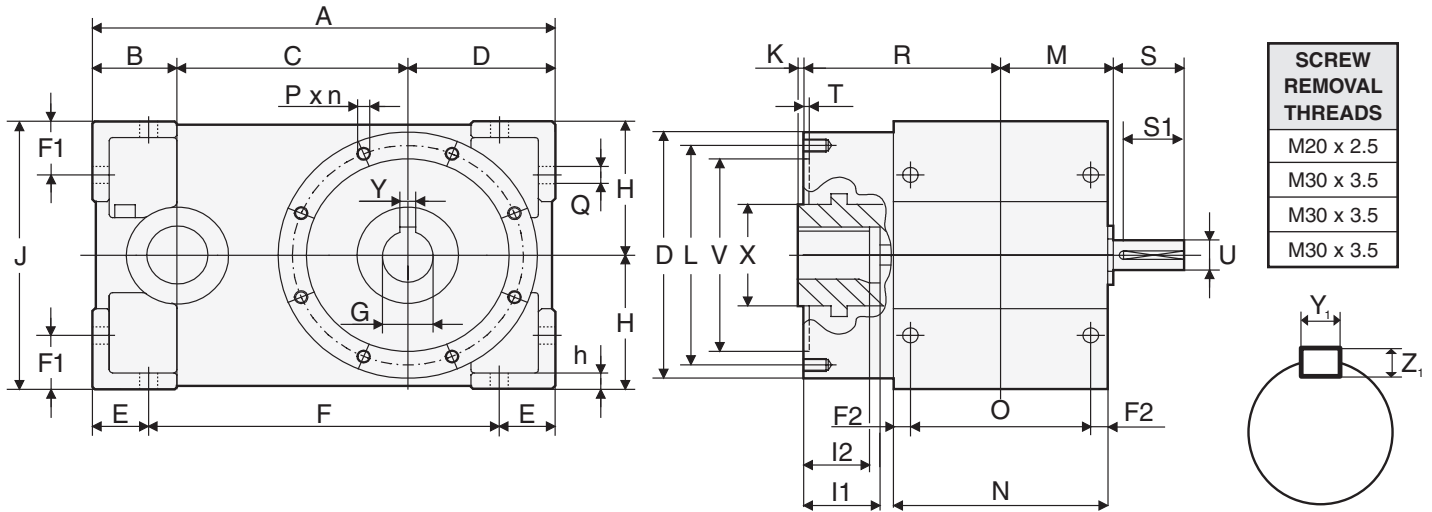
Rating Table (continued)

kW

Nominal Ratio	Input Speed r/min	Output Speed r/min	Size								
			005		010		020		030		
			Pn	Pt	Pn	Pt	Pn	Pt	Pn	Pt	
*	20	1800	90	21.3	22	25.5	28	35	33	52	44
		1500	75	17.8	22	21.4	27	29.8	33	44	44
		1200	60	14.3	21	17.2	26	24.0	32	35	43
		1000	50	11.9	20	14.3	24	20.1	30	29.7	42
		900	45	10.7	20	12.9	24	18.1	30	26.8	40
*	22.4	1800	80	17.7	22	25.5	26	34	34	52	42
		1500	67	14.8	21	21.4	25	29.0	34	43	42
		1200	54	11.8	20	17.2	24	23.3	33	35	41
		1000	45	9.9	19	14.3	23	19.4	31	29.2	40
		900	40	8.9	19	12.9	22	17.5	31	26.3	39
*	25	1800	72	16.3	20	22.6	25	30	32	46	40
		1500	60	13.6	20	18.9	24	25.5	31	38	40
		1200	48	10.9	19	15.2	23	20.4	30	31	39
		1000	40	9.1	18	12.7	22	17.1	29	26.0	37
		900	36	8.2	18	11.4	21	15.4	28	23.5	36
*	28	1800	64	12.7	22	18.3	27	25.4	33	37	43
		1500	54	10.6	21	15.3	26	21.2	33	31	43
		1200	43	8.5	20	12.3	25	17.0	32	24.9	41
		1000	36	7.1	19	10.2	23	14.2	31	20.8	40
		900	32	6.4	19	9.2	23	12.8	30	18.7	39
*	31.5	1800	57	11.7	21	16.9	25	22.3	31	34	40
		1500	48	9.7	20	14.1	25	18.6	31	28.4	40
		1200	38	7.8	19	11.3	23	14.9	30	22.8	39
		1000	32	6.5	18	9.4	22	12.5	29	19.0	37
		900	29	5.9	18	8.5	21	11.2	28	17.2	36
		750	24	4.9	16	7.1	20	9.4	26	14.3	34

Dimensions

Metric



SCREW REMOVAL THREADS
M20 x 2.5
M30 x 3.5
M30 x 3.5
M30 x 3.5

Millimeters

Size	A	B	C	D	E	F	F1	F2	G	H	h	I1	I2	J	K	L	M
005	380	70	193	117	38	304	42	14	30	112	15	135	120	224	8	170	91
010	410	75	205	130	40	330	45	15	40	125	15	150	135	250	8	205	101
020	460	85	230	145	46	368	48	17	46	140	15	160	145	280	8	230	113
030	515	95	260	160	51	413	50	18	55	160	15	175	160	320	17	260	128

Millimeters

Size	N	n	O	P	Q	R	S	S1	T	U	V	X	Y	Y1	Z	Z1	Weight (kg)
005	170	8	142	M12	14	160	50	40	5	24	150	70	8	8	200	7	69
010	190	12	160	M12	14	175	60	50	5	28	180	80	12	8	230	7	95
020	212	8	179	M16	18	193	80	70	5	35	200	95	14	10	270	8	132
030	236	12	220	M16	18	224	110	100	5	40	230	110	16	12	300	8	185