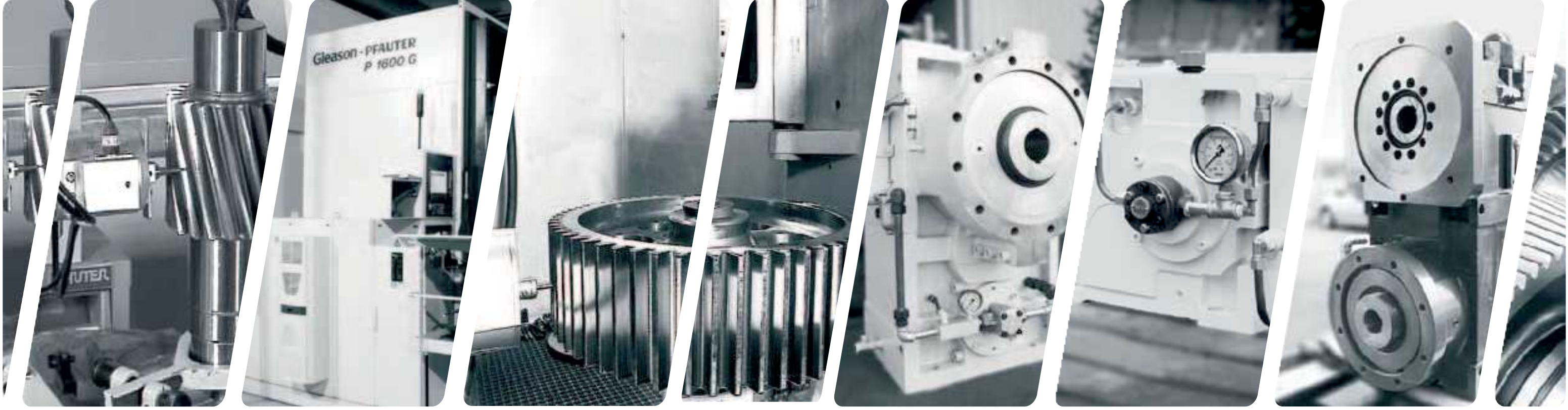


For Absolute Solutions

PGR®
DRIVE TECHNOLOGIES



Gearbox for
Single-Screw Extruder

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 Gearbox Selection Process

STEP		REFERENCE
Step1	SELECT NOMINAL RATIO I_n $I_{Req} = n1/n2$ Example : $n1 = 1750 \text{ rpm}$: $n2 = 120 \text{ rpm}$ $I_{Req} = 1750/120 = 14.58$ Choose I_n close I_{Req} , see Tables $I_n = 16$	I_n = Nominal Ratio I_{Req} = Ratio [required] $n1$ = Input speed $n2$ = Driven machine speed
Step2	CALCULATE SINGLE SHAFT OUTPUT TORQUE T_{Req} $T_{Req} = \frac{P \times 9.55 \times SF}{n2} \text{ kNm}$ Example : $P = 75 \text{ kw}$: $SF = 1.6$: $n2 = 120 \text{ rpm}$ $T_{Req} = 75 \times 9.55 \times 1.6 / 120 = 9.55 \text{ kNm}$ For general conditions, our suggestion of SF is 1.6, If you have other different requirement, please contact with our Research & Development Dept.	P = Power of Working Machine SF = Service Factor for Driven Machine $n2$ = Driven machine speed T_{Req} = Torsion of single shaft [required]
Step3	SELECT GEAR UNIT TYPE AND SIZE $T_n > T_{Req}$ Example : $T_{Req} = 9.55 \text{ kNm}$ Gear unit type PEX 200-3S with Nominal Torque $T_{Req} = 11.52 \text{ kNm}$ $T_n \geq T_{Req}$ PEX 200-3S Gear Unit is okay	T_n = Nominal torsion T_{Req} = Torsion of single shaft [required]
Step4	DETERMINE REQUIRED THERMAL CAPACITY $P > PG$, Additional cooling is required. $PG > P$, Cooling system is sufficient. Example : $P = 75 \text{ KW}$ When I adopt PEX 200-3S gear case, please according to TABLE1 PG Knowing $PG = 37 \text{ kw}$, $P > PG$, Additional cooling is required	P = Power of Working Machine PG = Thermal Capacity
Step5	CALCULATE THRUST LOAD $F_a = \pi \times \frac{ds^2 \times PS}{4 \times 10000} \text{ kN}$ Example : $ds = 100 \text{ mm}$: $PS = 200 \text{ Bar}$ $F_a = \pi \times \frac{100^2 \times 200}{4 \times 10000} = 157 \text{ kN}$	ds = Screw Diameter Ps = Pressure on screw F_a = Thrust Load 1 bar = 14.5 Psi
Step6	CALCULATE NOMINAL THRUST BEARING LIFE TIME $L_{h10} = \frac{10^6}{60 \times n2} \times \left[\frac{C_{dyn}}{F_a} \right]^{\left(\frac{10}{3} \right)} [\text{hr}]$ Example : $n2 = 120 \text{ rpm}$: $C_{dyn} = 1400 \text{ kN}$: $F_a = 157 \text{ kN}$ $L_{h10} = \frac{10^6}{60 \times 120} \times \left[\frac{1400}{157} \right]^{\left(\frac{10}{3} \right)} 204218 [\text{hr}]$ NOMINAL THRUST BEARING LIFE TIME $\geq 204218 [\text{hr}]$	L_{h10} = LIFE TIME $n2$ = Driven machine speed C_{dyn} = Dyn.Capacity Thrust Bearing F_a = Thrust Load

Single Screw Features

SINGLE SCREW EXTRUDER -TWO STAGE
Specification
- Screw dia: 0 ~ 250mm - Rated torque: 0 ~ 100,000Nm
Low noise
- dB ≤ 70
Compact Structure

- Smooth gear-reduction mechanism: Featuring gears that mesh precisely, quiet spiral-gear drive for minimal backlash and high torque output.

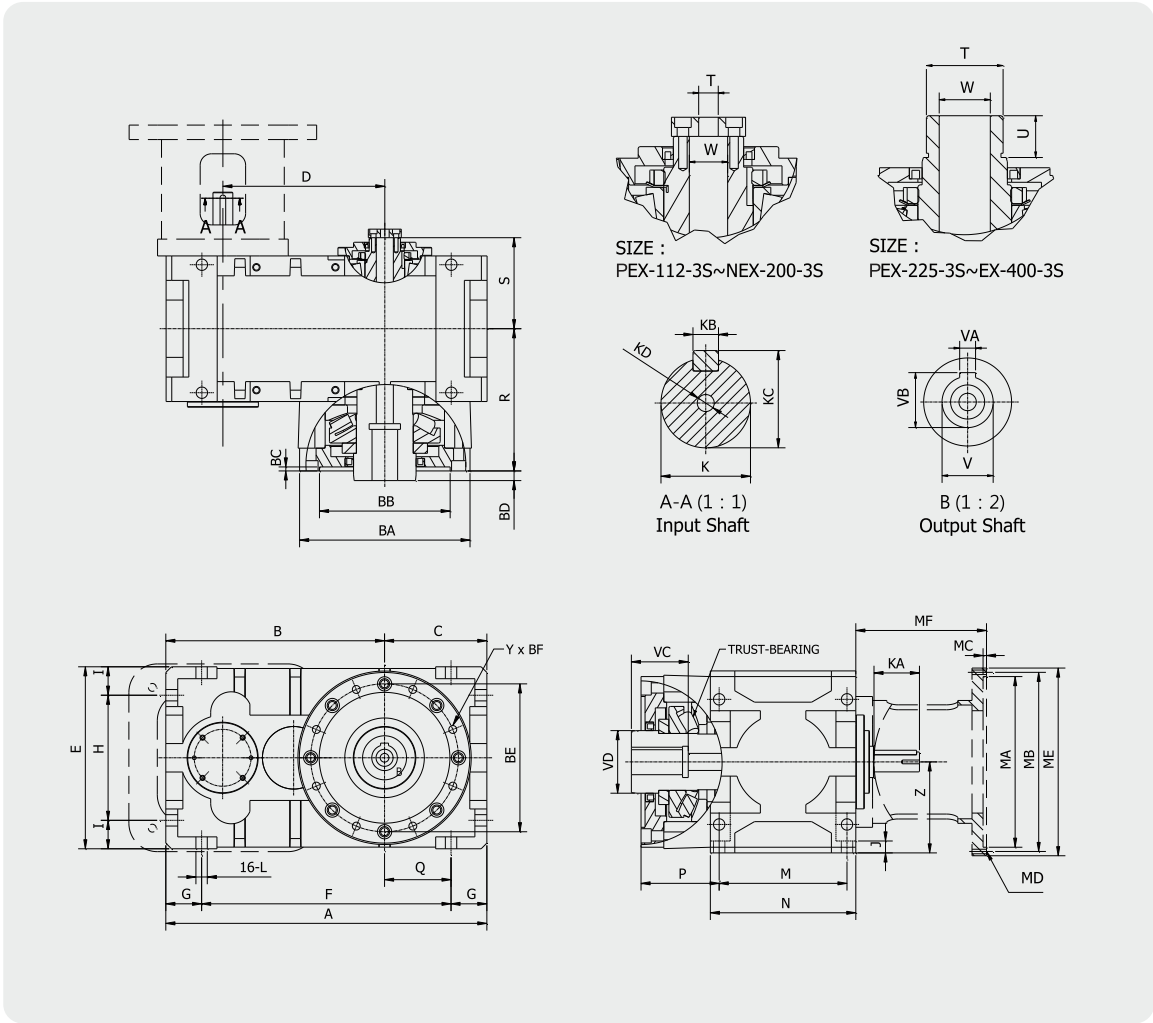


Torque Data Sheet

(Two stage reduction) Gearbox For Single-Screw Extruder (Table)							
Type	Nominal Ratio [In]						
	8	10	12	16	20	25	30
	Nominal Torsion of driven machine [kN.M]						
PEX-112-3S	2.08	2.08	2.08	1.6	1.6	1.6	1.12
PEX-125-3S	2.64	2.64	2.64	2	2	2	1.44
PEX-140-3S	4.4	4.4	4.4	3.36	3.36	3.36	2.24
PEX-160-3S	6.24	6.24	6.24	4.8	4.8	4.8	3.68
PEX-180-3S	9.76	9.76	9.76	7.44	7.44	7.44	5.2
PEX-200-3S	15.2	15.2	15.2	11.5	11.52	11.52	8
PEX-225-3S	23.2	23.2	23.2	17.6	17.6	17.6	12.32
PEX-250-3S	30.4	30.4	30.4	23.2	23.2	23.2	16
PEX-280-3S	37.6	37.6	37.6	28	28	28	20
PEX-320-3S	60.8	60.8	60.8	45.6	45.6	45.6	32
PEX-360-3S	85.6	85.6	85.6	64.8	64.8	64.8	45.6
PEX-400-3S	126.4	126.4	126.4	96	96	96	67.2

(Two stage reduction) Gearbox For Single-Screw Extruder (Table)						
Type	(PG) Thermal Capacity [KW]	Model of Trust Bearing	(Cdyn) [kN]	Advise Screw Diameter [mm]	Weight [KG]	Oil Volume [LITER]
PEX-112-3S	7.5	29413	410	Ø 25- Ø 35	85	3.5
PEX-125-3S	11	29415	525	Ø 35- Ø 45	118	5
PEX-140-3S	19	29417	640	Ø 45- Ø 55	165	7
PEX-160-3S	22	29420	870	Ø 55- Ø 75	210	10
PEX-180-3S	30	29424	1210	Ø 65- Ø 80	325	14
PEX-200-3S	37	29426	1400	Ø 80- Ø 90	490	20
PEX-225-3S	56	29430	1663	Ø 90- Ø 100	616	27
PEX-250-3S	75	29432	1820	Ø 100- Ø 120	820	36
PEX-280-3S	94	29436	1950	Ø 110- Ø 130	1205	49
PEX-320-3S	112	29440	2350	Ø 120- Ø 150	1608	64
PEX-360-3S	150	29444	2410	Ø 150- Ø 200	2145	80
PEX-400-3S	225	29452	2940	Ø 200- Ø 250	2720	108

Overall Dimensions



Specifications

Unit : mm

Type	Size	A	B	C	D	E	F	G	H	I	J
PEX-112-3S		407	282	125	202	224	307	50	144	40	16
PEX-125-3S		445	305	140	225	250	345	50	160	45	16
PEX-140-3S		502	342	160	252	280	390	56	184	48	18
PEX-160-3S		565	385	180	285	320	439	63	220	50	21
PEX-180-3S		632	432	200	320	360	492	70	240	60	25
PEX-200-3S		710	485	225	360	400	550	80	260	70	30
PEX-225-3S		795	545	250	405	450	615	90	290	80	30
PEX-250-3S		890	610	280	450	500	690	100	320	90	30
PEX-280-3S		1000	685	315	505	560	776	112	360	100	48
PEX-320-3S		1125	770	355	570	640	875	125	416	112	54
PEX-360-3S		1265	865	400	640	720	985	140	470	125	55
PEX-400-3S		1420	970	450	720	800	1100	160	520	140	60

Type	Size	L (Ø)	M	N	P	Q	R	S	T	U	W(Ø)	Z
PEX-112-3S		Ø 14	172	196	94	75	180	125	M14	0	Ø 18	112
PEX-125-3S		Ø 16	180	204	115	90	205	135	M18	0	Ø 22	125
PEX-140-3S		Ø 18	200	235	115	104	212.5	145	M18	0	Ø 25	140
PEX-160-3S		Ø 20	225	256	137.5	117	250	160	M18	0	Ø 30	160
PEX-180-3S		Ø 22	250	286	150	130	275	190	M20	0	Ø 35	180
PEX-200-3S		Ø 24	280	320	180	145	320	245	M85	50	Ø 45	200
PEX-225-3S		Ø 26	315	360	197.5	160	355	270	M85	50	Ø 55	225
PEX-250-3S		Ø 30	355	407	227.5	180	405	300	M85	50	Ø 55	250
PEX-280-3S		Ø 33	400	460	245	203	445	320	M90	50	Ø 60	280
PEX-320-3S		Ø 36	450	520	265	230	490	350	M90	50	Ø 60	320
PEX-360-3S		Ø 39	500	580	310	260	560	390	M120	50	Ø 80	360
PEX-400-3S		Ø 42	560	650	360	290	640	425	M120	50	Ø 80	400

Type \ Size	Barrels [customize]							Screw [customize]						Input shaft					Motor Flange					
	BA (Ø)	BB(Ø)	BC	BD	BE(Ø)	Y	BF	V (Ø)	VA	VB	VC	VD(Ø)		K (Ø)	KA (Ø)	KB	KC	KD	MA	MB(Ø)	MC	MD	MF	Flange
PEX-112-3S	200	150	6	0	170	8	M12	22	6	25.3	60	70		24	60	8	27	M8	230	265	5	4-M12	186	10HP-4P
PEX-125-3S	230	180	6	8	205	8	M12	28	10	31.3	80	80		28	65	8	31	M8	230	265	5	4-M12	186	7.5HP-6P
PEX-140-3S	260	200	6	8	230	8	M12	35	12	38.3	80	90		32	80	10	35	M8	250	300	6	4-M16	230	15/20HP-4P
PEX-160-3S	300	230	6	17	260	8	M16	45	14	48.8	100	110		35	90	10	38	M10	250	300	6	4-M16	230	10/15HP-6P
PEX-180-3S	350	260	6	17	300	8	M20	50	14	53.8	110	130		40	95	12	43	M10	300	350	6	4-M16	250	30/40HP-4P
PEX-200-3S	380	290	6	18	330	8	M20	60	160	64.3	120	140		45	110	14	48.5	M10	300	350	6	4-M16	250	20/30HP-6P
PEX-225-3S	400	310	6	18	350	12	M20	70	20	74.9	140	160		50	120	14	53.5	M12	350	400	6	8-M16	285	50/60HP-4P
PEX-250-3S	450	365	8	20	400	12	M24	80	22	85.3	140	170		55	130	16	59	M12	350	400	6	8-M16	285	40/50HP-6P
PEX-280-3S	500	400	8	20	450	12	M24	90	25	95.4	140	180		60	150	18	64	M16	450	500	6	8-M16	305	75/100HP-4P
PEX-320-3S	600	450	8	20	500	12	M24	100	28	106	140	190		70	170	20	75	M16	450	500	6	8-M16	305	60/75HP-6P
PEX-360-3S	680	520	10	24	600	12	M30	110	28	116	180	200		80	190	22	85	M20	-	-	-	-	-	-
PEX-400-3S	750	600	10	24	680	12	M33	130	32	137	180	220		90	210	25	95	M20	-	-	-	-	-	-

Single Screw Features

SINGLE SCREW EXTRUDER - THREE STAGE	
Advance 4 Shaft Design	
- 4 shafts design requires less motor output, power consumption is lower than those of pulley	
Compact Structure	
- Allows more work space on your machine table - Barrel and motor could be on the same direction - Motor shaft can connect to our gearbox directly	
Cost Down	
- No Coupling and adapter needed - No drive pulley and belt needed - Electricity saving, also save your electrical bill	
Easy Maintenance. Easy Install	
- Easy motor mounting. Motor axle can be connectedto gearboxes with some bolts - Easy maintenance. No special tools required to disassemble. No irritating maintaining processes, just change lubricating oil regularly	

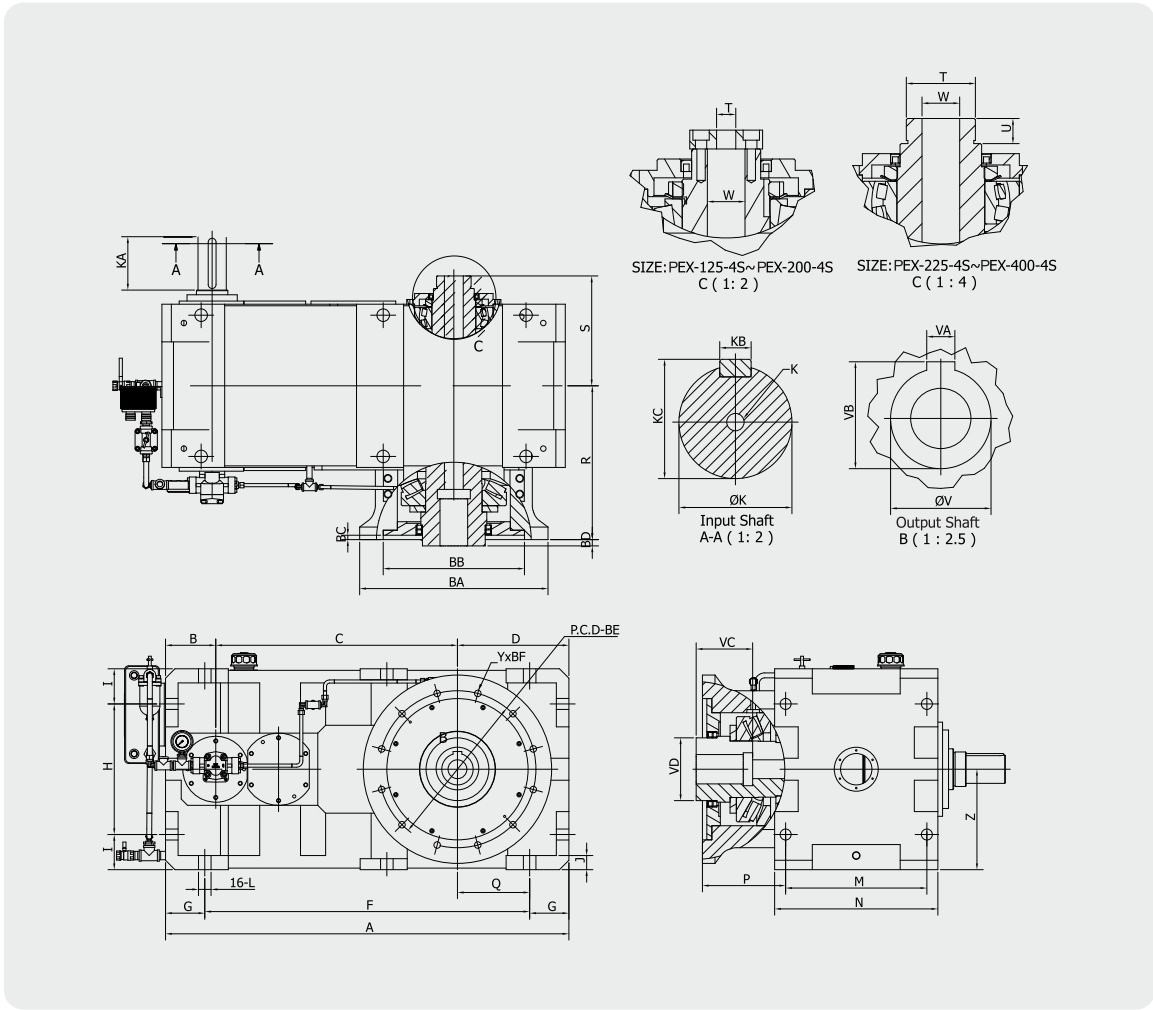


Torque Data Sheet

(Three stage reduction) Gearbox For Single-Screw Extruder (Table)							
Type	Nominal Ratio [In]						
	10	16	20	25	30	40	50
	Nominal Torsion of driven machine [kN.M]						
PEX-125-4S	4.27	4.07	3.88	3.70	3.52	3.36	3.20
PEX-140-4S	6.40	6.08	5.92	5.76	5.60	4.96	4.64
PEX-160-4S	8.64	8.48	8.16	8.00	7.68	7.52	7.04
PEX-180-4S	13.28	12.96	12.64	12.48	12.32	11.84	10.72
PEX-200-4S	20.80	19.68	19.20	18.72	18.40	17.28	16.00
PEX-225-4S	30.72	29.60	28.32	27.20	25.92	23.52	22.40
PEX-250-4S	40.10	38.40	35.68	34.72	33.60	29.60	26.88
PEX-280-4S	56.00	52.00	50.40	48.32	47.20	43.20	40.20
PEX-320-4S	92.00	85.60	82.40	79.20	76.05	72.12	65.60
PEX-360-4S	110.40	103.20	100.00	96.00	94.40	85.60	81.60
PEX-400-4S	160.80	146.40	144.00	140.00	136.10	122.40	111.20

(Three stage reduction) Gearbox For Single-Screw Extruder (Table)						
Type	(PG) Thermal Capacity [KW]	Model of Trust Bearing	(Cdyn) [kN]	Advise Screw Diameter [mm]	Weight [KG]	Oil Volume [LITER]
PEX-125-4S	19	29416	580	Ø 35- Ø 45	122	5.4
PEX-140-4S	22	29418	710	Ø 45- Ø 55	161	7
PEX-160-4S	30	29422	1060	Ø 55- Ø 75	253	9.5
PEX-180-4S	37	29424	1210	Ø 65- Ø 80	334	15
PEX-200-4S	56	29428	1410	Ø 80- Ø 90	485	30
PEX-225-4S	75	29430	1663	Ø 90- Ø 100	655	26
PEX-250-4S	94	29432	1820	Ø 100- Ø 120	910	48
PEX-280-4S	1125	29436	1950	Ø 110- Ø 130	1350	60
PEX-320-4S	150	29440	2350	Ø 120- Ø 150	1900	90
PEX-360-4S	225	29444	2410	Ø 150- Ø 200	2800	135
PEX-400-4S	300	29452	2940	Ø 200- Ø 250	3900	150

Specifications



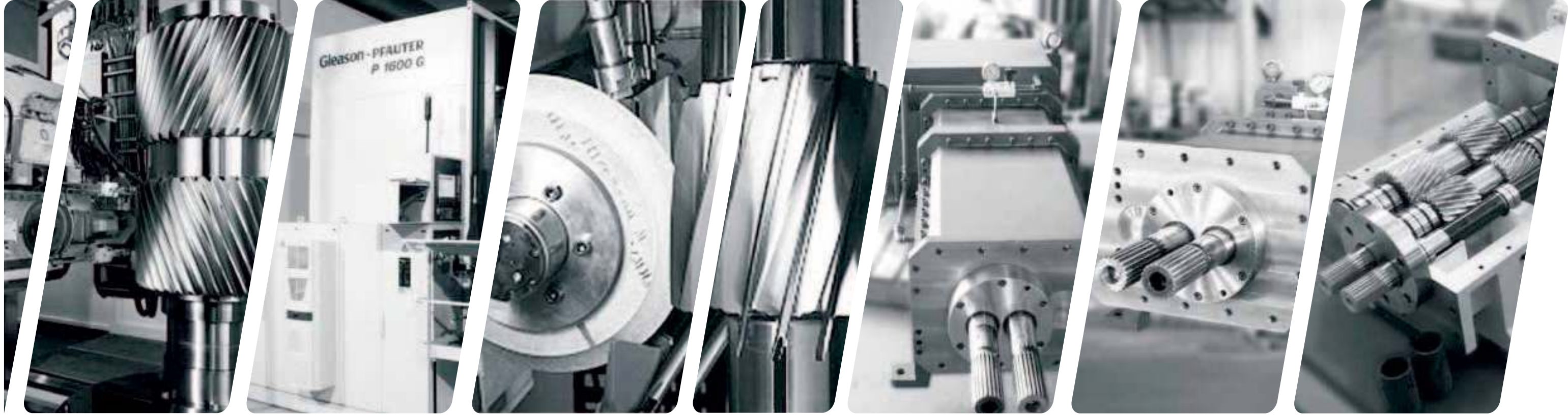
Type	Size	Barrels (customize)							Screw (customize)					Input shaft				
		BA (Ø)	BB (Ø)	BC	BD	BE (Ø)	Y	BF	V (Ø)	VA	VB	VC	VD (Ø)	K (Ø)	KA (Ø)	KB	KC	X
PEX-125-4S		230	180	5	8	205	8	M12	32	10	31.3	80	80	22	56	8	31	M8
PEX-140-4S		260	200	5	8	230	8	M12	38	10	38.3	80	90	24	63	10	35	M8
PEX-160-4S		300	230	6	17	260	8	M16	42	12	48.8	100	110	28	70	10	38	M10
PEX-180-4S		350	260	6	17	300	8	M20	48	14	53.8	110	130	32	80	12	43	M10
PEX-200-4S		380	290	6	18	330	8	M20	60	18	64.3	120	140	40	90	14	48.5	M10
PEX-225-4S		400	310	6	18	350	12	M20	70	20	74.9	140	160	45	100	14	53.5	M12
PEX-250-4S		450	365	8	20	400	12	M24	80	22	85.3	140	170	50	112	16	59	M12
PEX-280-4S		500	400	8	20	450	12	M24	90	25	95.4	140	180	55	125	18	64	M16
PEX-320-4S		600	450	8	20	500	12	M24	100	28	106	140	190	60	140	20	75	M16
PEX-360-4S		680	520	10	24	600	12	M30	110	28	116	160	200	70	160	22	85	M20
PEX-400-4S		750	600	10	24	680	12	M33	125	32	137	180	220	80	180	25	95	M20

Overall Dimensions

Unit : mm										
Type\Size	A	B	C	D	E	F	G	H	I	J
PEX-125-4S	525	80	305	140	250	408	50	160	45	17
PEX-140-4S	592	90	342	160	280	459	56.5	184	48	18
PEX-160-4S	665	100	385	180	320	539	63	220	50	21
PEX-180-4S	744	112	432	200	360	604	70	240	60	26
PEX-200-4S	835	125	485	225	400	675	80	260	70	31
PEX-225-4S	935	140	545	250	450	755	90	290	80	36
PEX-250-4S	1050	160	610	280	500	850	100	320	90	42
PEX-280-4S	1180	180	685	315	560	956	112	360	100	48
PEX-320-4S	1285	160	770	355	640	1035	125	416	112	45
PEX-360-4S	1490	225	865	400	710	1210	140	460	125	55
PEX-400-4S	1670	250	970	450	800	1350	160	520	140	60

Type\Size	L [Ø]	M	N	P	Q	R	S	T	U	W[Ø]	Z
PEX-125-4S	Ø 16	180	204	115	90	205	135	M18	50	Ø 22	125
PEX-140-4S	Ø 18	200	226	130	103.5	230	145	M18	56	Ø 25	140
PEX-160-4S	Ø 20	225	256	137.5	117	250	160	M18	63	Ø 30	160
PEX-180-4S	Ø 22	250	286	150	130	275	190	M20	70	Ø 35	180
PEX-200-4S	Ø 24	280	320	180	145	320	245	M85	80	Ø 45	200
PEX-225-4S	Ø 27	315	360	197.5	160	355	270	M85	90	Ø 55	225
PEX-250-4S	Ø 30	355	407	227.5	180	405	300	M85	100	Ø 55	250
PEX-280-4S	Ø 33	400	460	245	203	445	320	M90	112	Ø 60	280
PEX-320-4S	Ø 36	450	520	265	230	490	350	M90	125	Ø 60	315
PEX-360-4S	Ø 39	500	580	310	260	560	390	M120	140	Ø 80	355
PEX-400-4S	Ø 42	560	650	360	290	640	425	M120	160	Ø 80	400

For Absolute Solutions



Gearbox for
Twin-screw Extruder

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Gearbox Selection Process

STEP	Gearbox for Co- Rotating Twin-screw Extruder	Gearbox for Counter-Rotating Twin-screw Extruder	REFERENCE
Step1	SELECT NOMINAL RATIO In I Req = $n1/n2$ Example : $n1 = 1750 \text{ rpm}$: $n2 = 600 \text{ rpm}$ I Req = $1750/600 = 2.91$ Choose In close I Req , see Tables 1, In = 3	SELECT NOMINAL RATIO In I Req = $n1/n2$ Example : $n1 = 1000 \text{ rpm}$: $n2 = 50 \text{ rpm}$ I Req = $1000/50 = 20$ Choose In close I Req , see Tables 2, In = 20	In = Nominal Ratio I Req = Ratio (required) n1 = Input speed n2 = Driven machine speed
Step2	CALCULATE SINGLE SHAFT OUTPUT TORQUE T Req $T \text{ Req} = \frac{P \times 9550 \times SF}{2 \times n2} \text{ Nm}$ Example : P = 150 kw : SF = 1.6 : n2 = 600rpm T Req = $150 \times 9550 \times 1.6 / 2$ $\times 600 = 1910 \text{ Nm}$ For general conditions, our suggestion of SF is 1.6, If you have other different requirement, please contact with our Research & Development Dept.	CALCULATE SINGLE SHAFT OUTPUT TORQUE T Req $T \text{ Req} = \frac{P \times 9550 \times SF}{2 \times n2} \text{ Nm}$ Example : P = 22.5 kw : SF = 1.6 : n2 = 50 rpm T Req = $22.5 \times 9550 \times 1.6 / 2$ $\times 50 = 3438 \text{ Nm}$ For general conditions, our suggestion of SF is 1.6, If you have other different requirement, please contact with our Research & Development Dept.	P = Power of Working Machine SF = Service Factor for Driven Machine n2 = Driven machine speed T Req = Torsion of single shaft (required)
Step3	SELECT GEAR UNIT TYPE AND SIZE $Tn > T \text{ Req}$ Example : T Req = 1910 Nm Gear unit type POR 60/72 with Nominal Torque Tn=3048 Nm $Tn \geq T \text{ Req}$ POR 60/72 Gear Unit is okay	SELECT GEAR UNIT TYPE AND SIZE $Tn > T \text{ Req}$ Example : T Req = 3438 Nm Gear unit type PTR-H 55/65 with Nominal Torque Tn=4104 Nm $Tn \geq T \text{ Req}$ PTR-H 55/65 Gear Unit is okay	Tn = Nominal torsion T Req = Torsion of single shaft (required)
Step4	CALCULATE THRUST LOAD $Fa = \pi \times \frac{ds^2 \times PS}{4 \times 10000} \text{ kN}$ Example : ds = 72 mm : PS =150 Bar $Fa = \pi \times \frac{72^2 \times 150}{4 \times 10000}$ =61.07 kN	CALCULATE THRUST LOAD $Fa = \pi \times \frac{ds^2 \times PS}{4 \times 10000} \text{ kN}$ Example : ds = 65 mm : PS =200 Bar $Fa = \pi \times \frac{65^2 \times 200}{4 \times 10000}$ =66.36 kN	ds = Screw Diameter Ps = Pressure on screw Fa = Thrust Load 1 bar = 14.5 Psi
Step5	CALCULATE NOMINAL THRUST BEARING LIFE TIME $Lh10 = \frac{10^6}{60 \times n2} \times \left(\frac{Cdyn}{Fa} \right)^{\left(\frac{10}{3} \right)} [\text{hr}]$ Example : n2 = 600 rpm : Cdyn = 471 kN : Fa = 61.07 kN $Lh10 = \frac{10^6}{60 \times 600} \times \left(\frac{471}{61.07} \right)^{\left(\frac{10}{3} \right)}$ = 25177[hr] NOMINAL THRUST BEARING LIFE TIME $\geq 25177[\text{hr}]$	CALCULATE NOMINAL THRUST BEARING LIFE TIME $Lh10 = \frac{10^6}{60 \times n2} \times \left(\frac{Cdyn}{Fa} \right)^{\left(\frac{10}{3} \right)} [\text{hr}]$ Example : n2 = 50 rpm : Cdyn = 471 kN : Fa = 66.36 kN $Lh10 = \frac{10^6}{60 \times 50} \times \left(\frac{471}{66.36} \right)^{\left(\frac{10}{3} \right)}$ = 22904[hr] NOMINAL THRUST BEARING LIFE TIME $\geq 22904[\text{hr}]$	Lh10 = LIFE TIME n2 = Driven machine speed Cdyn = Dyn.Capacity Thrust Bearing Fa = Thrust Load

Twin-Screw Extruder Features

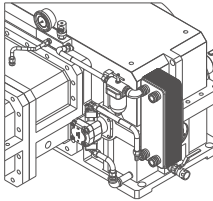
Twin-screw Extruder - Co-rotating

Double Helical Gear for Torsion.

- It is manufactured as a single piece:
- No Axial Thrust Force
 - achieves substantially more torque than other alternatives
 - 100% Torque Output

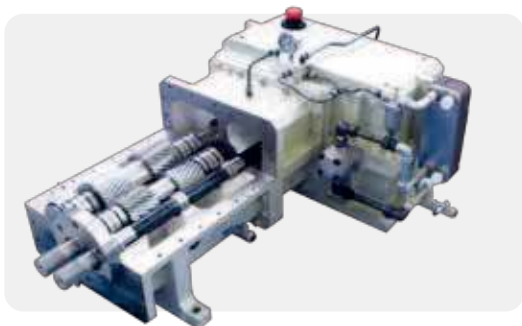
Lower The Temperature Effectively

- We Set up Cooling Pipe Inside to Lubricate Bearings, Gears and Other Parts It Will Ensure Your Gearbox operating under optimal temperature. The Oil Cooling System Include complete set
- Oil pump system for forced lubrication
 - Oil Pump (Heavy Oil Pump)
 - Plate Heat Exchanger
 - Oil Filter
 - Pressure Gauge
 - Oil Distributors
 - Pressure switch
 - Check Valve
 - Lubrication Tube



The Spline with Cylinder Grinding

- gives you exceptional precision on positioning
- Minimal hindering on screw operation



Torque Data Sheet

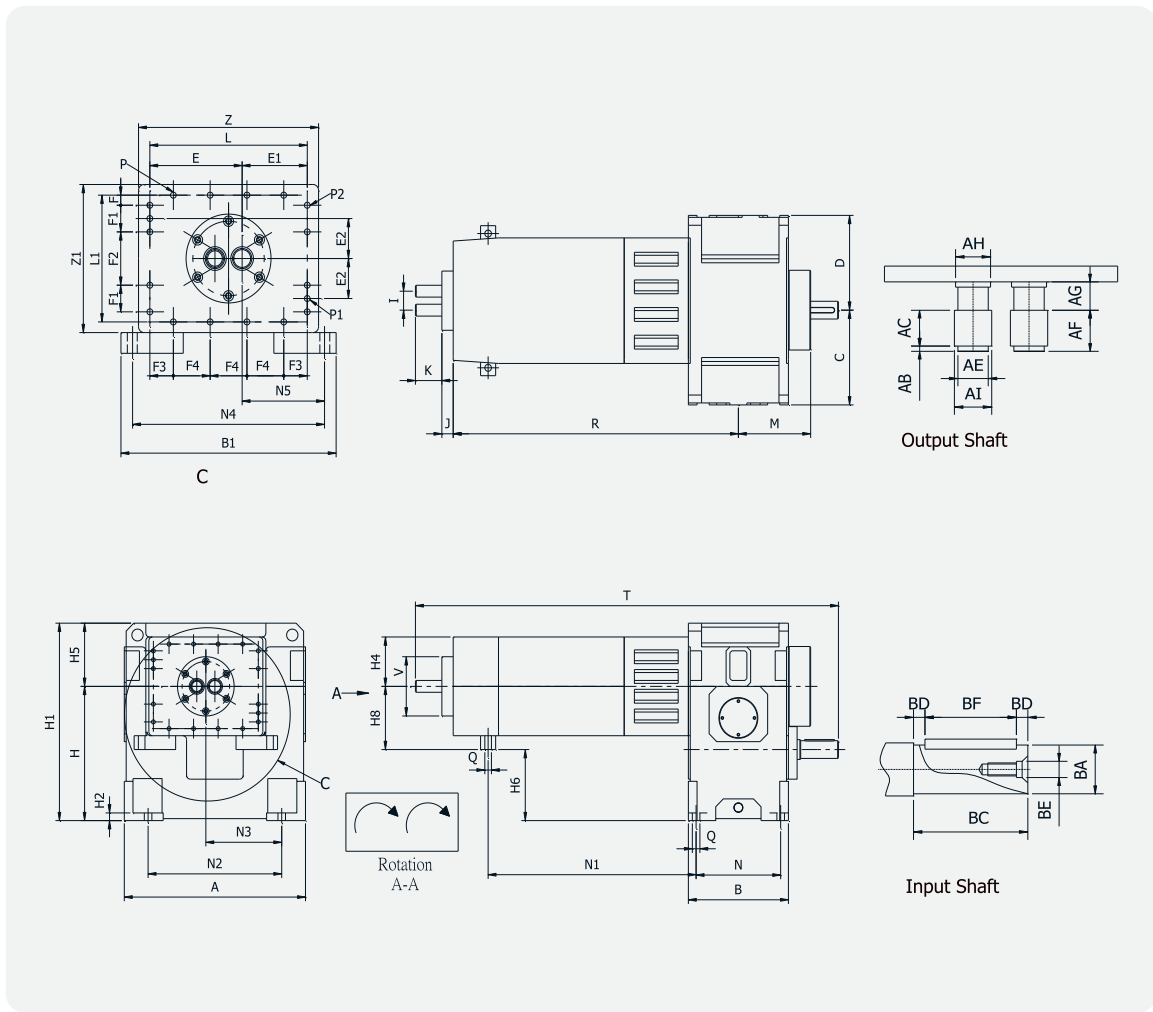
★Screw diameter as reference

Unit : mm

Gearbox For Co-rotating Twin-screw Extruder [Table 1]						
Type	Nominal Ratio [In]					
	2	3	5	2	3	5
	[Tn] Each shaft			[N2] Driven machine speed [rpm]		
POR 26/32 ★	275	277	286	900	600	300
POR 35/42 ★	475	477	477	900	600	300
POR 48/58 ★	1534	1547	1585	900	600	300
POR 50/60 ★	1534	1547	1585	900	600	300
POR 58.5/70 ★	3049	3048	3151	900	600	300
POR 60/72 ★	3049	3048	3151	900	600	300
POR 64/77 ★	3767	3810	3915	800	600	300
POR 76/92 ★	5816	5892	6054	800	600	300
POR 78/95 ★	5816	5892	6054	800	600	300
POR 90/112 ★	-	9683	9970	-	600	300
POR 100/120 ★	-	14468	14916	-	600	300
POR 110/130 ★	-	22283	22385	-	600	300

Gearbox For Co-rotating Twin-screw Extruder (Table 1)						
Type	Nominal Ratio [In]			[Cdyn]	Weight [KG]	Oil Volume [LITER]
	2	3	5			
	[P] Power of Working Machine [kw]			[kN]		
POR 26/32 ★	52	35	18	73	95	6
POR 35/42 ★	90	60	30	170	240	13
POR 48/58 ★	289	194	100	349	415	22
POR 50/60 ★	289	194	100	349	415	22
POR 58.5/70 ★	575	388	198	471	760	24
POR 60/72 ★	575	388	198	471	760	24
POR 64/77 ★	631	479	246	577	1005	67
POR 76/92 ★	974	740	380	755	1380	92
POR 78/95 ★	974	740	380	755	1380	92
POR 90/112 ★	-	1217	626	1008	1825	82
POR 100/120 ★	-	1818	938	1263	2235	112
POR 110/130 ★	-	2800	1406	1580	4360	210

Overall Dimensions



Specifications

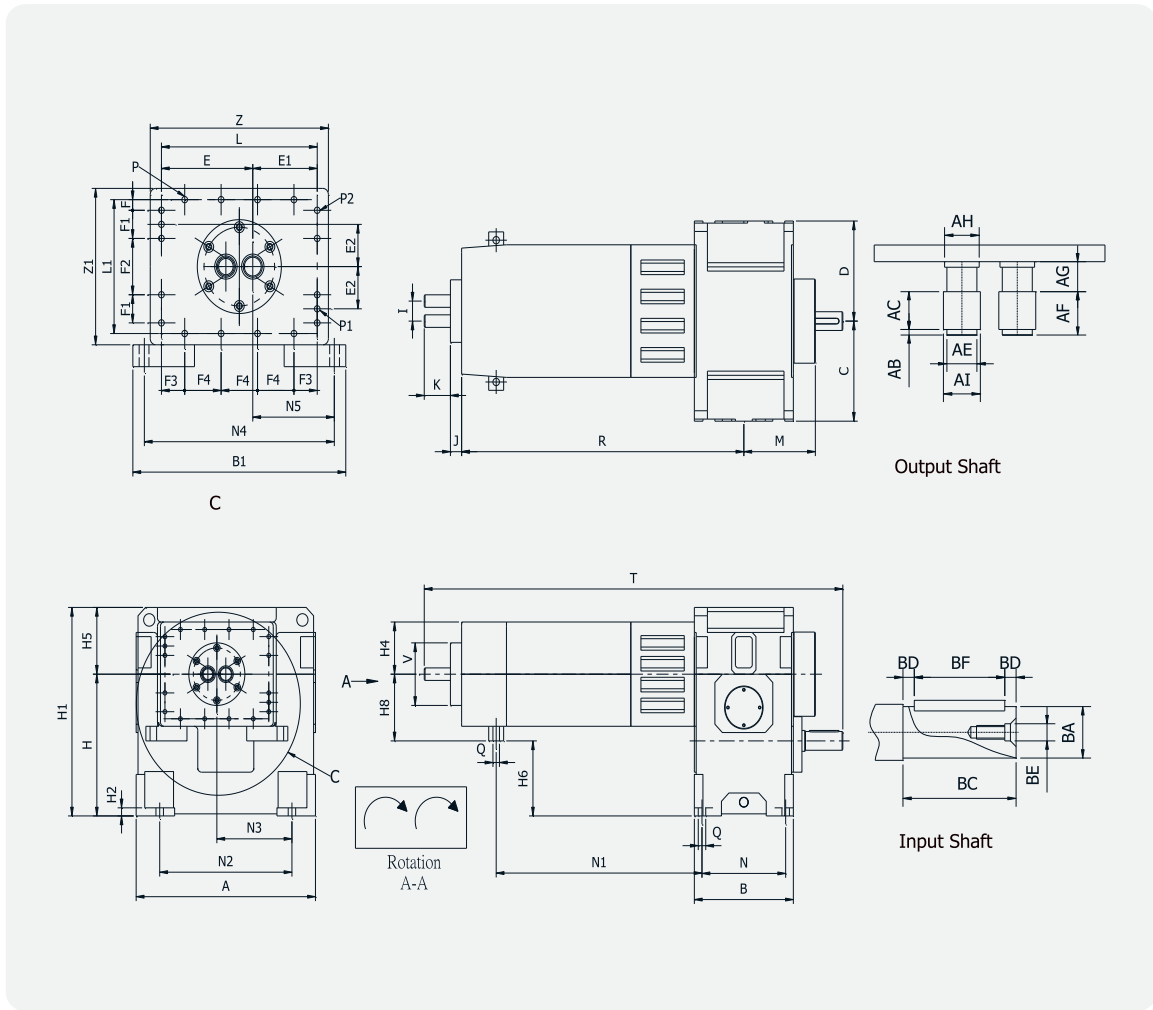
★Screw diameter as reference Unit : mm

Type \ Size	A	B	C	D	H	H1	H2	H3	H4	I	J	K
POR-H 26/32 ★	330	168	100	82.5	112	224	15	15	70	26.2	16	45
POR-H 35/42 ★	405	240	125	100	140	280	18	18	90	35	24	61
POR-H 48/58 ★	522	265	160	125	160	320	27	20	110	48	28	67
POR-H 58.5/70 ★	655	350	200	160	200	400	30	25	130	58.5	30	85
POR-H 64/77 ★	730	375	225	180	225	450	32	25	160	64	37	98
POR-H 76/92 ★	800	415	250	200	250	500	35	29	160	76	28	127
POR-H 90/112 ★	925	520	280	225	280	560	30	35	170	90	30	140
POR-H 110/133 ★	1149	450	360	225	360	720	40	48	260	110	48	282

Type \ Size	M	M1	N	N1	N2	N3	Q	R	J	V	Weight (kg)	Oil (kg)
POR-H 26/32 ★	98	100	143	345	305	170	14	445	669	95	80	10
POR-H 35/42 ★	132.5	134	205	493	370	208	18	628.5	927.5	120	220	15
POR-H 48/58 ★	164	165	225	643	482	265	20	795.5	1155.5	150	380	20
POR-H 58.5/70 ★	208	210	300	762	605	335	24	952	1402	180	680	40
POR-H 64/77 ★	229	230	325	802	680	380	26	1010	1499.5	200	910	60
POR-H 76/92 ★	260.5	262	365	977	750	425	26	1210	1756.5	220	1215	70
POR-H 90/112 ★	295	296	466	984	870	478	28	1287	1933	260	1870	105
POR-H 110/133 ★	271	285	360	1609	1089	555	30	2054	2869	330	4360	210

Type \ Size	Barrels Flange (customize)																	Output shaft							Input shaft						
	B1	E	E1	E2	F	F1	F2	L	F3	F4	L1	N4	N5		P n° 8	P1 H7	P2 n° 8	Z	Z1	AI (DIN5482)	AB	AC	AE	AH	AF	AG	BA	BC	BD	BE	BF
POR-H 26/32 ★	260	95.1	68.9	42	15	30	54	164	22	40	144	235	104.4		M8	8	M8	180	160	17 x 14	4	21	12	14	25	-	28m6	63	6.5	M8	50
POR-H 35/42 ★	280	119	84	54	17	36	72	203	26.5	50	178	250	107.5		M12	10	M12	225	200	22 x 19	5	35	19	20	30	18	35m6	80	10	M8	60
POR-H 48/58 ★	380	163	115	67.5	24	45	90	278	41.5	65	228	340	146		M13	10	M12	300	250	32 x 28	5	34	26	30	39	22	45m6	100	10	M10	80
POR-H 58.5/70 ★	480	199.25	140.75	82.5	30	55	110	340	35	90	280	425	183.25		M15	12	M14	370	320	40 x 36	6	42	35	38	48	27	55m6	125	13	M12	100
POR-H 64/77 ★	520	222	158	90	40	60	120	380	40	100	320	470	203		M17	16	M16	410	350	48 x 44	6	50	42	44	56	30	55m6	125	13	M12	100
POR-H 76/9 ★	584	248	172	97.5	40	65	130	420	45	110	340	534	229		M22	16	M20	460	380	60 x 55	8	50	53	54	58	52	60m6	130	10	M12	110
POR-H 90/112 ★	618	272	182	97.5	47	65	130	454	62	110	354	560	235		M22	16	M20	500	400	62 x 57	8	62	55	57	70	50	80m6	180	10	M16	160
POR-H 110/133 ★	845	370	260	157.5	55	105	210	630	52.5	175	530	760	325		M26	20	M24	680	580	80 x 74	10	90	70	75	100	60	90m6	200	10	M16	180

Overall Dimensions



Specifications

★Screw diameter as reference Unit : mm

Type \ Size	A	B	C	D	H	H1	H2	H4	H5	H6	H8	I	J
POR-V 26/32 ★	300	168	150	150	212	324	16	70	112	100	112	26	16
POR-V 35/42 ★	380	225	190	190	265	405	20	90	140	125	140	35	24
POR-V 48/58 ★	480	265	240	240	340	500	23	110	160	180	160	48	28
POR-V 50/60 ★	480	265	240	240	340	500	23	110	160	180	160	50	28
POR-V 58.5/70 ★	590	350	295	295	425	650	31	130	225	225	200	59	30
POR-V 60/72 ★	590	350	295	295	425	650	31	130	225	225	200	60	30
POR-V 64/77 ★	650	375	325	325	475	725	35	160	250	250	225	64	37
POR-V 76/92 ★	700	415	350	350	530	810	40	160	280	280	250	76	28
POR-V 78/95 ★	700	415	350	350	530	810	40	160	280	280	250	78	28
POR-V 90/112 ★	665	485	325	340	555	835	45	170	280	275	280	90	30
POR-V 100/120 ★	710	485	355	355	596	876	45	195	280	371	225	100	30
POR-V 110/133 ★	-	-	-	-	-	-	-	260	-	-	360	110	48

Type \ Size	K	M	N	N1	N2	N3	Q	R	T	V	Weight (kg)	Oil (kg)
POR-V 26/32 ★	45	100	138	288.5	210	105	14	445	669	95	95	6
POR-V 35/42 ★	61	134	190	413.5	268	134	18	628.5	927.5	120	240	13
POR-V 48/58 ★	67	165	224	551	354	177	20	795.5	1115.5	150	415	22
POR-V 50/60 ★	67	165	224	551	354	177	20	795.5	1115.5	150	415	22
POR-V 58.5/70 ★	85	210	310	644	450	225	24	952	1402	180	760	24
POR-V 60/72 ★	85	210	310	644	450	225	24	952	1402	180	760	24
POR-V 64/77 ★	98	230	325	672	490	245	26	1009.5	1499.5	200	1005	67
POR-V 76/92 ★	127	262	355	840	500	250	26	1209.5	1756.5	220	1380	92
POR-V 78/95 ★	127	262	355	840	500	250	26	1209.5	1756.5	220	1380	92
POR-V 90/112 ★	140	289	431	879	475	192	28	1319.5	2028	260	1825	82
POR-V 100/120 ★	180	303	430	1172.5	520	210	29	1652.5	2345	280	2235	112
POR-V 110/133 ★	282	-	-	-	-	-	30	2054	2869	330	-	-

Type \ Size	Barrels Flange (customize)																		Output shaft							Input shaft					
	B1	E	E1	E2	F	F1	F2	L	F3	F4	L1	N4	N5	P n° 8	P1 H7		P2 n° 8	Z	Z1	AI (DIN5482)	AB	AC	AE	AH	AF	AG	BA	BC	BD	BE	BF
POR-V 26/32 ★	260	95	69	42	15	30	54	164	22	40	144	235	104	M8	8		M8	180	160	17 x 14	4	21	12	-	25	-	28m6	63	6.5	M8	50
POR-V 35/42 ★	280	119	84	54	17	36	72	203	27	50	178	250	108	M12	10		M12	225	200	22 x 19	5	35	19	20	30	18	35m6	80	10	M8	60
POR-V 48/58 ★	380	163	115	67.5	24	45	90	278	42	65	228	340	146	M13	10		M12	300	250	32 x 28	5	34	26	30	39	22	45m6	100	10	M10	80
POR-V 50/60 ★	380	163	115	67.5	24	45	90	278	42	65	228	340	146	M13	10		M12	300	250	32 x 28	5	34	26	30	39	22	45m6	100	10	M10	80
POR-V 58.5/70 ★	480	199	141	82.5	30	55	110	340	35	90	280	425	183	M15	12		M14	370	320	40 x 36	6	42	35	38	48	27	55m6	125	13	M12	100
POR-V 60/72 ★	480	199	141	82.5	30	55	110	340	35	90	280	425	183	M15	12		M14	370	320	40 x 36	6	42	35	38	48	27	55m6	125	13	M12	100
POR-V 64/77 ★	520	222	158	90	40	60	120	380	40	100	320	470	203	M17	16		M16	410	350	48 x 44	6	50	42	44	56	30	55m6	125	13	M12	100
POR-V 76/92 ★	584	248	172	97.5	40	65	130	420	45	110	340	534	229	M22	16		M20	460	380	60 x 55	8	50	53	54	58	52	60m6	130	10	M12	110
POR-V 78/95 ★	584	248	172	97.5	40	65	130	420	45	110	340	534	229	M22	16		M20	460	380	60 x 55	8	50	53	54	58	52	60m6	130	10	M12	110
POR-V 90/112 ★	618	272	182	97.5	47	65	130	454	62	110	354	560	235	M22	16		M20	500	400	62 x 57	8	62	55	57	70	50	80m6	180	10	M16	160
POR-V 100/120 ★	-	310	210	112.5	50	75	150	520	65	130	400	325	85	M24	20		M24	570	450	72 x 66	10	90	60	65	100	57	80m6	180	10	M16	160
POR-V 110/133 ★	845	370	260	157.5	55	105	210	630	53	175	530	760	325	M26	20		M24	-	-	80 x 74	10	90	70	75	100	60	90m6	200	10	M16	180

Twin-Screw Extruder Features

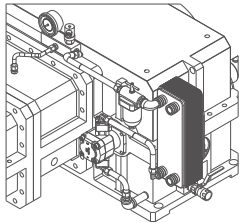
TWIN-SCREW EXTRUDER - COUNTER-ROTATING

Double Helical Gear for Torsion.

- It is manufactured as a single piece:
- No Axial Thrust Force
 - achieves substantially more torque than other alternatives
 - 100% Torque Output

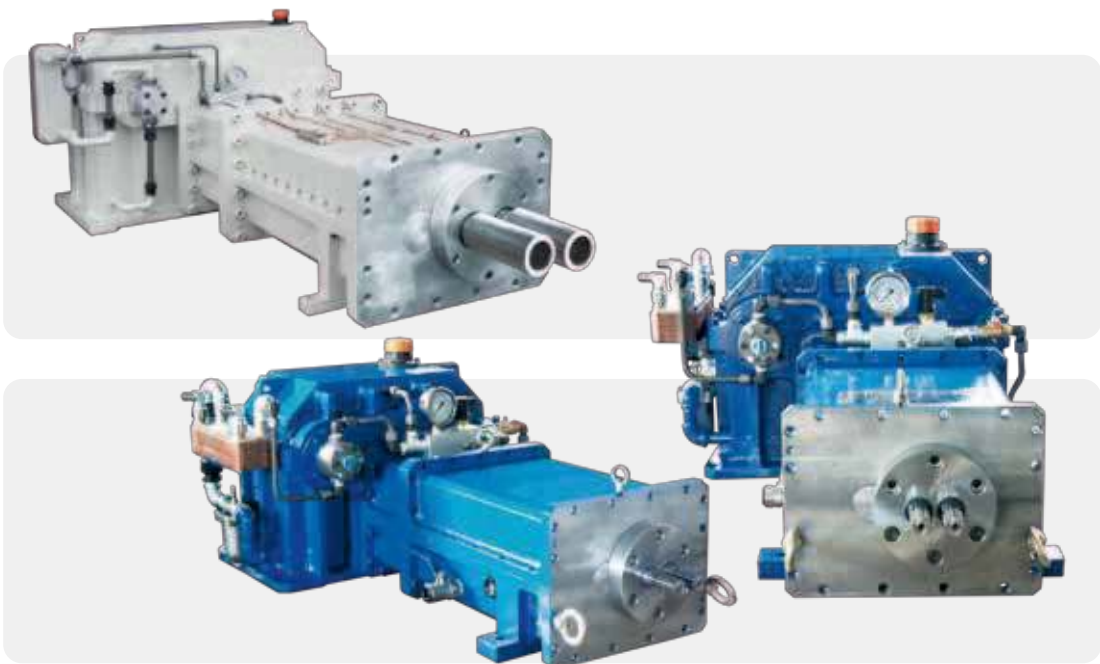
Lower The Temperature Effectively

- We Set up Cooling Pipe Inside to Lubricate Bearings, Gears and Other Parts It Will Ensure Your Gearbox operating under optimal temperature. The Oil Cooling System Include complete set:
- Oil pump system for forced lubrication
 - Oil Pump (Heavy Oil Pump)
 - Plate Heat Exchanger
 - Oil Filter
 - Pressure Gauge
 - Oil Distributors
 - Pressure switch
 - Check Valve
 - Lubrication Tube



The Spline with Cylinder Grinding

- gives you exceptional precision on positioning
- Minimal hindering on screw operation



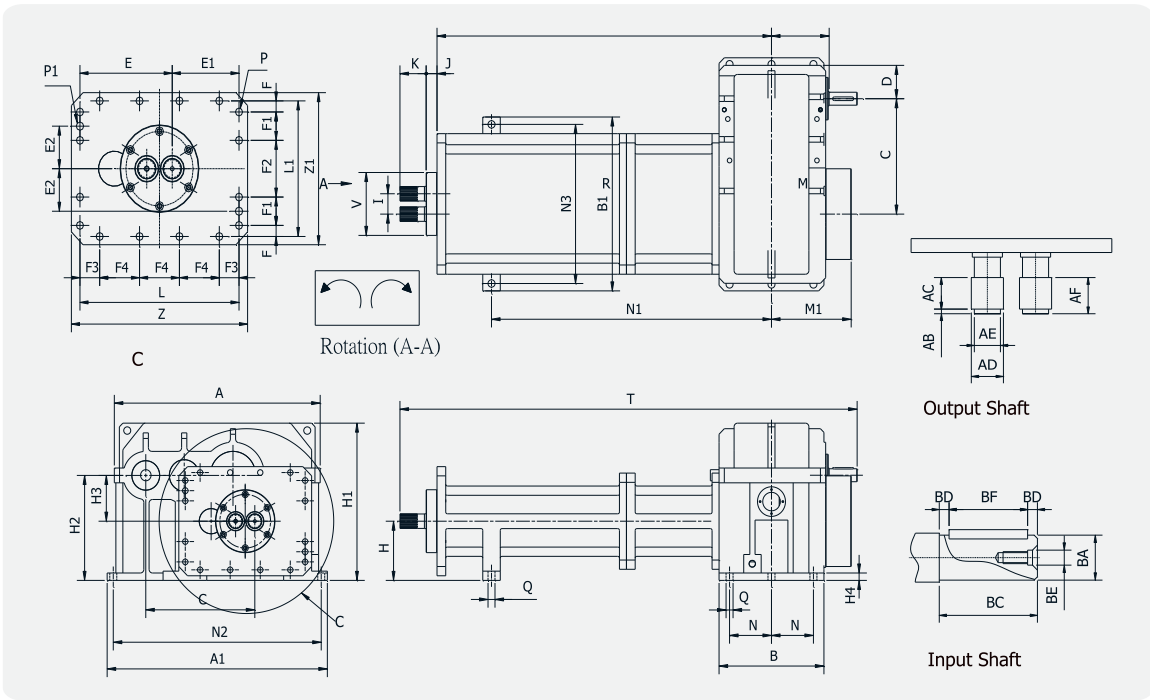
Torque Data Sheet

★Screw diameter as reference Unit : mm

Gearbox for Counter-Rotating Twin-screw Extruder (Table 2)			
Type	Nominal Ratio [In]	[Tn] Each shaft	[N2] Driven machine speed [rpm]
PTR 44/55 ★	20	1527	50
PTR 55/65 ★	20	4104	50
PTR 64/75 ★	20	6211	50
PTR 75/90 ★	20	10080	45
PTR 90/107 ★	20	17308	45
PTR 110/130 ★	20	31680	40
PTR 130/160 ★	20	47367	40

Gearbox for Counter-Rotating Twin-screw Extruder (Table 2)				
Type	[P] Power of Working Machine [kw]	[Cdyn] [kN]	Weight [KG]	Oil Volume [LITER]
PTR 44/55 ★	13	349	290	18
PTR 55/65 ★	36	471	656	32
PTR 64/75 ★	54	577	805	47
PTR 75/90 ★	79	755	1065	67
PTR 90/107 ★	122	1008	2185	97
PTR 110/130 ★	181	1580	3250	135
PTR 130/160 ★	331	1992	5655	182

Specifications



Overall Dimensions

★Screw diameter as reference Unit : mm

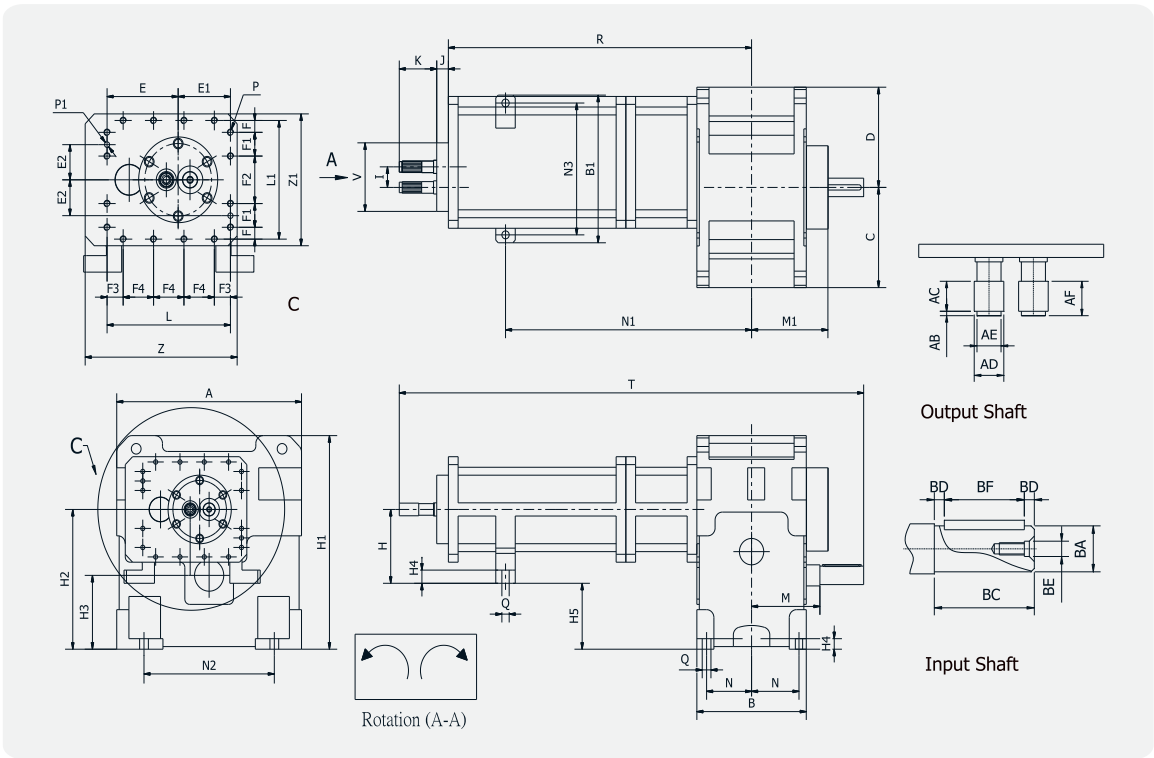
Type \ Size	A	A1	B	B1	C	D	H	H1	H2
PTR-H 44/55★	495	525	245	390	265	80	125	362	237
PTR-H 55/65★	589	630	300	470	312	90	160	425	283.7
PTR-H 64/75★	640	710	340	500	355.5	100	160	465	305
PTR-H 75/90★	735	800	380	560	401	125.5	180	521	341
PTR-H 90/107★	910	940	450	618	503.5	157.5	220	614.5	416.5
PTR-H 110/130★	1100	1155	550	750	637.5	180	280	815	535
PTR-H 130/160★	1220	1380	730	900	715	200	320	930	610

Type \ Size	H3	H4	I	J	K	N1	N2	N3	Q
PTR-H 44/55★	112	20	44	20	60	553	496	350	16
PTR-H 55/65★	123.7	20	55	31	75	801	595	430	20
PTR-H 64/75★	145	26	64	44	86	832	672	465	20
PTR-H 75/90★	161	28	75	30	110	993	760	520	22
PTR-H 90/107★	196.5	35	90	57	93	1120	890	568	26
PTR-H 110/130★	255	45	110	33	160	1290	1090	685	30
PTR-H 130/160★	290	50	130	68	202	1885	1320	840	32

Type \ Size	R	T	V	M	M1	N	Input shaft				Output shaft						
							BA	BC		BD	BE	BF	AD (DIN 5480)	AB	AC	AE	AF
PTR-H 44/55★	683	970.5	150	137.5	200	92.5	32m6	70		5	M8	60	W28 x 1.5 x 30 x 17	6.5	28.5	24	35
PTR-H 55/65★	957	1308	170	165	226	120	35m6	80		10	M10	60	W40 x 1.5 x 30 x 25	6	44	30	50
PTR-H 64/75★	992	1402	195	190	260	135	40m6	90		10	M10	70	W45 x 2 x 30 x 21	6	44	40	50
PTR-H 75/90★	1168	1623	220	215	305	150	45m6	100		10	M10	80	W55 x 3 x 30 x 17	8	53	48.5	60
PTR-H 90/107★	1320	1850	260	240	352	180	60m6	140		10	M12	120	W65 x 2.5 x 30 x 24	8	62	50	70
PTR-H 110/130★	1520	2198	300	325	410	225	75m6	160		10	M16	140	W75 x 2 x 30 x 36	6.5	73.5	70	76.5
PTR-H 130/160★	2160	3075	380	465	515	265	80m6	180		10	M16	160	W85 x 3 x 30 x 27	8	105	78	113

Type \ Size	Barrels [customize]							Barrels [customize]							
	E	E1	E2	F	F4	L		L1	P	P1	Z	F1	F2	F3	Z1
PTR-H 44/55★	165	121	67.5	15	75	286		210	M12	12	310	45	90	30.5	240
PTR-H 55/65★	199	144	82.5	21.5	86	343		263	M18	16	380	55	110	42.5	295
PTR-H 64/75★	224	160	84	25	95	384		274	M16	16	420	56	112	49.5	305
PTR-H 75/90★	256.5	181.5	90	34	110	438		308	M20	16	475	60	120	54	345
PTR-H 90/107★	272	182	97.5	47	110	454		354	M22	16	500	65	130	62	400
PTR-H 110/130★	330	220	135	50	130	550		460	M24	16	600	90	180	80	510
PTR-H 130/160★	405	275	165	60	160	680		560	M30	20	740	110	220	100	620

Specifications



Overall Dimensions

★Screw diameter as reference Unit : mm

Type \ Size	A	B	B1	C	D	H	H1	H2	H3
PTR-V 55/65 ★	400	290	470	157.5	242.5	160	610	477.5	125
PTR-V 64/75 ★	465	325	500	178	287	160	695	542.5	140
PTR-V 75/90 ★	520	360	560	200	320	180	770	597.5	160
PTR-V 90/107 ★	660	515	618	264.5	395.5	175	948	723	180
PTR-V 110/130 ★	710	564	750	232.5	477.5	230	1005	765	200

Type \ Size	H4	I	J	K	N1	N2	N3	Q
PTR-V 55/65 ★	25	55	31	75	848	300	430	20
PTR-V 64/75 ★	21	64	44	86	884.5	355	465	20
PTR-V 75/90 ★	26	75	30	110	1048	400	520	22
PTR-V 90/107 ★	33	90	50	130	1305	500	620	31
PTR-V 110/130 ★	35	110	55	195	1591	652	587	32

Type \ Size	R	T	V	M	M1	N	Input shaft						Output shaft				
							BA	BC		BD	BE	BF	AD (DIN 5480)	AB	AC	AE	AF
PTR-V 55/65 ★	957	1330	170	145	220	127	28	80		5	M8	60	W40 x 1.5 x 25	6	44	30	50
PTR-V 64/75 ★	1044.5	1427	195	176.5	252.5	142.5	32m6	70		5	M8	60	W45 x 2 x 21	6	44	40	50
PTR-V 75/90 ★	1223	1655.5	220	190	292.5	157.5	35m6	80		10	M10	60	W55 x 3 x 17	8	53	48.5	60
PTR-V 90/107 ★	1535	2132.5	270	275	417.5	227.5	45m6	100		10	M12	80	W65 x 2 x 31	8	62	50	70
PTR-V 110/130 ★	1821	2518	300	297	447	189	50m6	112		10	M12	120	W78 x 2 x 38	6.5	73.5	70	76.5

Type \ Size	Barrels [customize]							Barrels [customize]							
	E	E1	E2	F	F4	L		L1	P	P1	Z	F1	F2	F3	Z1
PTR-V 55/65 ★	199	144	82.5	21.5	86	343		263	M18	16	380	55	110	42.5	295
PTR-V 64/75 ★	224	160	84	25	95	384		274	M16	16	420	56	112	49.5	305
PTR-V 75/90 ★	256.5	181.5	90	34	110	438		308	M20	16	475	60	120	54	345
PTR-V 90/107 ★	272	182	97.5	47	110	454		354	M22	16	500	65	130	62	400
PTR-V 110/130 ★	330	220	135	50	130	550		460	M24	16	600	90	180	80	510