



Power Transmission

Alpha Data Sheet

Data for drive design

using optibelt ALPHA timing belts

Company: _____

Street address: _____

Town/post code: _____

Person to be contacted: _____

Department: _____ Date: _____

Phone: _____ Fax: _____

for test new drive
 for pilot production existing drive
 for series production requirement: _____ per annum

The parameters printed below in bold face are the minimum necessary for a drive design, where the other parameters cannot be determined by means of further data. Special conditions or factors should also be noted.

Quantity	Optibelt Type	Designation	Construction
	timing belt		
	driver pulley		
	driven pulley		

LOAD DRIVER UNIT

Prime mover (e. g. 3-cyl. diesel): _____

Daily operating time: _____ hours

Steady running Shock or pulsating running

Number of starts/stops _____ per hour

and/or reverses under load: _____ per day

Full load starting torque $M_A =$ _____ M_N oder $M_A =$ _____ Nm

Correction factor for starts/stops/reverses under load $c_8 =$ _____

Max. driver power $P_{An} =$ _____ **kW at $n_1 =$ _____ min^{-1}**
 or max. driver torque $M_{An} =$ _____ Nm at $n =$ _____ min^{-1}

DRIVEN UNIT

Driven machine (e. g. milling machine): _____

Light duty drive, shock-free and steady running

Medium duty drive, intermittent operation with low to medium shock load

Heavy duty drive, intermittent operation with medium to high shock load

Very heavy duty drive, continuous operation with high shock load

Basic drive service factor $c_0 =$ _____

Max. input drive power $P_{Ab} =$ _____ kW at $n_2 =$ _____ min^{-1}

or max. output drive torque $M_{Ab} =$ _____ Nm at $n =$ _____ min^{-1}

max./min. driven speed $n_{2max} =$ _____ min^{-1} / $n_{2min} =$ _____ min^{-1}

GEOMETRY

Pitch diameter d_{w1} or number of teeth z_1 of driver pulley $d_{w1} =$ _____ mm or $z_1 =$ _____

Max. o/a width $B =$ _____ mm max. clearance dia. $=$ _____ mm

pilot bored finish bored taper bushed

with keyway

Bore diameter $d =$ _____ mm Tolerance range: _____

Max. static shaft loading $S_a =$ _____ N

Pitch diameter d_{w2} or number of teeth z_2 of driven pulley $d_{w2} =$ _____ mm or $z_2 =$ _____

Max. o/a width $B =$ _____ mm max. clearance dia. $=$ _____ mm

pilot bored finish bored taper bushed

with keyway

Bore diameter $d =$ _____ mm Tolerance range: _____

Max. static shaft loading $S_a =$ _____ N

Drive ratio $i =$ _____ $i_{min} =$ _____ $i_{max} =$ _____
Centre distance $a =$ _____ mm $a_{min} =$ _____ mm $a_{max} =$ _____ mm

Centres adjustable or centres not adjustable then

Tension or guide pulley: inside Arrangement: slack side

outside tight side

Pulley $d_w =$ _____ mm idler and pulley correction factor $c_6 =$ _____

or flat pulley $d_a =$ _____ mm

OPERATING CONDITIONS

Arrangement of shafts: horizontal or vertical

Ambient temperature $T =$ _____ $^{\circ}\text{C}$ $T_{min} =$ _____ $^{\circ}\text{C}$ $T_{max} =$ _____ $^{\circ}\text{C}$

Normal air humidity Relative humidity: _____ %

Contaminant (if any): solid material (e. g. dust, swarf): _____

liquid material (e. g. water, oil): _____

gas material (e. g. sulphur vapour): _____

For the design of multiple drive systems, please let us have a sketch with the coordinates of the shafts and the load information for each pulley and idler.



Power Transmission

Alpha Data Sheet

Data for drive design

with **optibelt ALPHA linear** open-ended and **optibelt ALPHA V** joined endless timing belts

Company: _____

Street address: _____

Town/post code: _____

Person to be contacted: _____

Department: _____ Date: _____

Phone: _____ Fax: _____

for test new drive
 for pilot production existing drive
 for series production requirement: _____ per annum

The parameters printed below in bold face are the minimum necessary for a drive design, where the other parameters cannot be determined by means of further data. Special conditions or factors should also be noted.

Quantity	Optibelt Type	Designation	Construction
	timing belt		
	driver pulley		
	guide/idler pulleys		

LOADS DRIVER UNIT

Prime mover (e. g. 3-cyl. diesel): _____

Daily operating time: _____ hours

Steady running shock or pulsating running

Number of starts/stops _____ per hour

and/or reverses under load: _____ per day

Full load starting torque $M_A =$ _____ M_N or $M_A =$ _____ Nm

Correction factor for starts/stops/reverses und load $c_8 =$ _____

Conveyor system
 or linear drive system

Direction of motion

horizontal (0°) vertical (90°) inclined: _____ °

Circumferential force $S_{n3} =$ _____ N or

Output drive torque $M_{Ab} =$ _____ Nm at $d_w =$ _____ mm

Mass moved $m_{tot} =$ _____ kg

Material conveyed (e. g. workpiece on wood pallet): _____

DRIVEN UNIT

Driven machine (e. g. milling machine): _____

Light duty drive, shock free and steady running

Medium duty drive, intermittent operation with low to medium shock load

Heavy duty drive, intermittent operation with medium to high shock load

Very heavy duty drive, continuous operation with high shock load

Basic drive service factor $c_0 =$ _____

Belt type: Optibelt Alpha V joined endless timing belt

Optibelt Alpha linear open-ended timing belting

Acceleration/ $a_1 = +$ _____ m/s^2 Accel. travel $s_1 =$ _____ mm

Deceleration $a_2 = -$ _____ m/s^2 decel. travel $s_2 =$ _____ mm

Acceleration time $t_1 =$ _____ s decel. time $t_2 =$ _____ s

Conveyor speed $v =$ _____ m/s speed $n_1 =$ _____ min^{-1}

with accumulating conveyor: coeff. of friction, material/belt $\mu_1 =$ _____

with conveyor system: coeff. of friction, support or guide rail/belt $\mu_2 =$ _____

with linear drive: coeff. of friction, guides $\mu_2 =$ _____

GEOMETRY

Pitch diameter d_{w1} or number of teeth z_1 of driver

pulley $d_{w1} =$ _____ mm or $z_1 =$ _____

Max. o/a width $B =$ _____ mm max. clearance dia. = _____ mm

pilot bored finish bored taper bushed

with keyway

Bore diameter $d =$ _____ mm Tolerance range: _____

Max. static shaft loading $S_a =$ _____ N

Pitch diameter d_{w2} or number of teeth z_2 of driven

pulley $d_{w2} =$ _____ mm or $z_2 =$ _____

Max. o/a width $B =$ _____ mm max. clearance dia. = _____ mm

pilot bored finish bored taper bushed

with keyway

Bore diameter $d =$ _____ mm Tolerance range: _____

Max. static shaft loading $S_a =$ _____ N

Drive ratio $i =$ _____ $i_{min} =$ _____ $i_{max} =$ _____
Centre distance $a =$ _____ mm $a_{min} =$ _____ mm $a_{max} =$ _____ mm

Centres adjustable or centres not adjustable then

Tension or guide pulley: inside Arrangement: slack side

outside tight side

Pulley $d_w =$ _____ mm idler and pulley correction factor $c_6 =$ _____

or flat pulley $d_a =$ _____ mm

OPERATING CONDITIONS

Arrangement of shafts: horizontal or vertical

Ambient temperature $T =$ _____ °C $T_{min} =$ _____ °C $T_{max} =$ _____ °C

Normal air humidity Relative humidity: _____ %

Contaminant (if any): solid material (e. g. dust, swarf): _____

liquid material (e. g. water, oil): _____

gas material (e. g. sulphur vapour): _____

For the design of multiple-pulley drive systems, please let us have a sketch with the coordinates of the shafts and the load information for each pulley and idler.