1. contact details

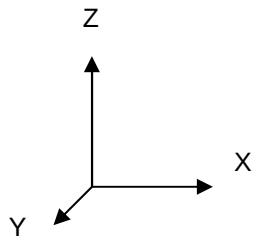
company:		address:	
contact person:		phone:	
email:		date:	
Schunk customer no.:		Schunk contact person:	

2. Definition of the project

Please describe the project exactly.

3. Arrangement of the application

Please sketch the requested operation under specification of dimensions and mass of the separate parts.

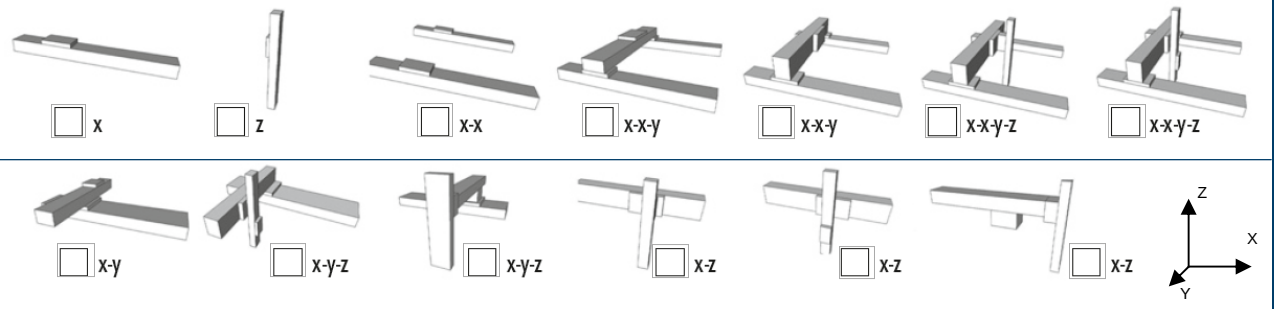


4. Requirement information (please check)

☐ Single application	☐ Technical improvement
☐ Series, quantity per year:	☐ Reduction of expenses
☐ New construction	☐

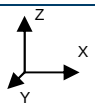
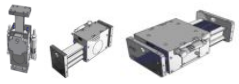
Please send form to: Automationsolution@de.schunk.com

5. Information about the axis - system configuration (please check)



work piece:	weight (load) [kg]					
balance point:	distance (coordinate and zero point see torque info catalog): in X [mm] :		in Y [mm]:		in Z [mm]:	
basic information	X-axis horiz.	Y-axis horiz.	Z-axis			
	top(1) side(2) bottom(3) slide position: Please note applicable no.(1...3)			X-axis horiz.	Y-axis horiz.	Z-axis vertical
	mounting: slide movable (standard) axis movable (cantilever)			☐ standard ☐ cantilever	☐ standard ☐ cantilever	☐ standard ☐ cantilever
	stroke (incl. over travel)		[mm]			
	..thereof useful stroke		[mm]			
load	additional force (e.g. process force)		[N]			
	force direction of the add. force (axis & direction e.g. Z+)					
dynamics	velocity V_{max}		[m/s]			
	acceleration a_{max}		[m/s²]			
operating data	total cycle time (incl. dwell time)		[s]			
	moving time (part of total cyc. time)		[s]			
	operating hours per year		[h] per [days]	hour per days		
accuracy	repeatability		[mm]			
environmental conditions	temperature		[°C]			
	humidity		[%]			
	dirt, interference fields, site					
	interfering contour					

6. LDx axis options

If axis not defined, please check	☐ Selection of axis type will be done by SCHUNK. Please continue at LDx					
	  ☐ LDx			 ☐ ELB		
	X	**Y**	**Z**	**X**	**Y**	**Z**
LDx type: (H,K,N,M,T,L) / ELB …e.g.: LDK						
active slides (including linear motor) piece						
passive slides (without linear motor) piece						
slide center distance between two slides [mm]						

encoder system:	absolute	☐ Hiperface ☐ SSI					
	incremental encoder (1Vss)	☐					
	optical encoder (highest resolution)	☐					
reference switch	inductive reference switch	☐			☐		
limit switch	inductive limit switch	☐					
	mechanical limit switch	☐					
Energy chain	standard	☐			☐		
	wide	☐					
Holding device	H=hold.brake G=gravity compens.	(X)	(Y)	(Z)	(X)	(Y)	(Z)
valve for brake		☐	☐	☐			
wiper		☐	☐	☐			
shock absorber		☐	☐	☐			
Center sleeves		☐	☐	☐			
Drive controller							
BoschRexroth	Indradrive ☐ Cs ☐ BAS. ☐ ADVN.	☐					
Siemens	Sinamics ☐	☐					
other	type:	☐					
Interface		☐ Profibus ☐ Profinet ☐ EtherCat ☐ Sercos III ☐ Parallel ☐					
safety function		☐ STO ☐					
Cable length Siemens only in 1-3m cable length (up to SME) BoschRexroth in 5-20m cable length		X axis: ☐ 1m ☐ 2m ☐ 3m ☐ 5m ☐ 10m ☐ 15m ☐ Y axis: ☐ 1m ☐ 2m ☐ 3m ☐ 5m ☐ 10m ☐ 15m ☐ Z axis: ☐ 1m ☐ 2m ☐ 3m ☐ 5m ☐ 10m ☐ 15m ☐					
emergency brake, clamping …(please describe)							

7. additional

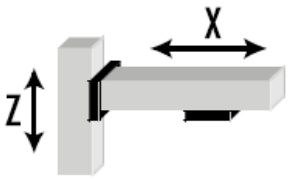
regulations	(Resources regulations,..):
documentation	☐ Schunk standard design Language: German / Scale: Installation instruction, Drawing(s), bill of material / Shipping mode: CD-Rom with PDFs
	☐ Special design (chargeable) Definition:
additional:	

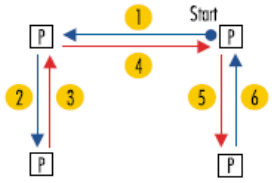
8. Cycle data

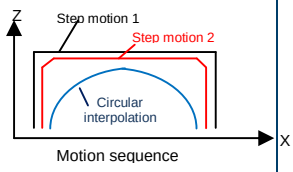
In order to calculate the best possible linear motor drive for your application, it is important to define the intended application as accurately as possible in advance.

Example:

pick & place - application



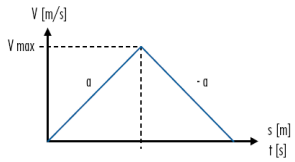




9. Cycle table (each system axis is examined individually)

cycle step	axis	stroke [mm]	permitted travel time [s]	dwell time after positioning [s]	payload [kg]
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

10. Basic calculation data

definitions						Definitions
velocity	v	[m/s]	weight-slide with motor	m_{eig}	[kg]	
acceleration	a	[m/s²]	add. weight-user weight	m_{zus}	[kg]	
strike	s	[m]	counterforce	F_{geg}	[N or. kgm/s²]	
time	t	[s]	theoretical required force	F_{teo}	[N or. kgm/s²]	
total moved mass	m_{ges}	[kg]				

11. Formulas

velocity	$v = a \cdot t = \sqrt{2a \cdot s}$	acceleration	$a = 2s / t^2 = v / t$
stroke	$s = a \cdot t^2 / 2 = v \cdot t / 2$	time	$t = V / a = 2s / v$
moved mass	$m_{ges} = m_{eig} + m_{zus}$	force	$F_{teo} = m_{ges} \cdot a + F_{geg}$
motor force	$F = (F_{teo}$ + control reserve) · dynamic correction factor – duty cycle factor		