

Test item particulars
Classification of installation and use.....: Intend use in internal residential doors
<p>Test case verdicts</p> <p>- test case does not apply to the test object..... : N/A</p> <p>- test object does meet the requirement..... : P (Pass)</p> <p>- test object does not meet the requirement..... : F (Fail)</p>
<p>Testing</p> <p>Date of receipt of test item.....: December 11, 2011 and August 22, 2012</p> <p>Date (s) of performance of tests: December 11, 2011 to August 31, 2012</p>
<p>General remarks</p> <p>This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.</p> <p>"(See remark #)" refers to a remark appended to the report.</p> <p>"(See Appendix #)" refers to an appendix appended to the report.</p> <p>Throughout this report a comma (point) is used as the decimal separator.</p> <p>When determining the test result, measurement uncertainty has been considered.</p>
<p>General product information:</p> <p>Garniture handles, model 2035/1082/94, Range of door thicknesses: 50 mm to 80 mm, and the angle of rotation permitted by the design: 0° to 360° .</p> <p>Schedule of Components:</p> <p>See Appendix A –Product Photos and Drawings for component list and raw material information.</p> <p>Detail "Ratings" information listed as following:</p> <p>First digit (Category of use): Grade 1 – medium frequency of use by people with a high incentive to exercise care and with a small chance of misuse;</p> <p>Second digit (Durability): Grade 7 – high frequency of use:200, 000 test cycles; (* Applicant's customized 200 000 cycles for Category of use as Grade 1)</p> <p>Third digit (Door mass): No classification;</p> <p>Fourth digit (Fire resistance): Grade 0 – Not approved for use on fire/smoke door assemblies;</p> <p>Fifth digit (Safety): Grade 1 – Safety applications;</p> <p>Sixth digit (Corrosion resistance): Grade 3 – High resistance;</p> <p>Seventh digit (Security): Grade 1 – mild burglary resistance;</p> <p>Eighth digit (Type of operation): type A – spring-assisted furniture.</p>

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Clause	Requirement – Test	Result - Remark	Verdict											
4	CLASSIFICATION													
4.1	Coding system		—											
4.1.2	Category of use:	1	—											
4.1.3	Durability	7	—											
4.1.4	Door mass	—	—											
4.1.5	Fire resistance	0	—											
4.1.6	Safety	1	—											
4.1.7	Corrosion resistance	3	—											
4.1.8	Security	1	—											
4.1.9	Type of operation	A	—											
5	REQUIREMENTS													
5.1	General Sets of furniture shall be classified in grades 1 to 4 in regard to performance requirements specified in 5.2 to 5.13.	Refer to Clause 5.2 to 5.13	—											
	Materials in products shall not release any dangerous substances in excess of the maximum levels specified in the European material standards.	Informative	—											
5.2	Check of spindle and fastening elements The spindle and fastening elements shall be supplied or specified by the manufacturer with every set of lock or latch furniture. The manufacturer shall state clearly the door thickness or range of the door thicknesses for which the furniture is suitable and in the case of spring assisted and spring loaded furniture, the angle of rotation permitted by the design.	Spindle and fastening elements were supplied by manufacturer. Range of door thicknesses: 50 mm to 80 mm. And the angle of rotation permitted by the design: 0° to 360°	P											
5.3	Rotational torque strength Lock or latch furniture shall show no failure of any component and the lever handles or knobs shall still operate after the test. Lever handles or knobs shall not deform permanently more than 5 mm as measured at 50 mm ± 2mm from the axis of rotation by the dial gauge. Category of use acceptance criteria: <table border="1" data-bbox="290 1803 890 1870"> <tr> <td>Grade</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Torque (Nm)</td> <td>20</td> <td>30</td> <td>40</td> <td>50</td> </tr> </table>	Grade	1	2	3	4	Torque (Nm)	20	30	40	50	Rotational torque 20 Nm. Permanent deformation: 0,8 mm Grade 1.	P	
Grade	1	2	3	4										
Torque (Nm)	20	30	40	50										

EN 1906														
Clause	Requirement – Test	Result - Remark	Verdict											
5.4	<p>Axial strength of lock furniture or latch furniture and fixing</p> <p>There shall be no fail of any component and lever handles or knobs shall still operate after the test. After test the permanent deformation for lever handles or knobs measured at the reference point 75 mm ± 2mm from the axis of rotation shall not increase by more than 2 mm.</p> <p>Category of use acceptance criteria:</p> <table border="1"> <thead> <tr> <th>Grade</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Load (N)</td> <td>300</td> <td>500</td> <td>800</td> <td>1000</td> </tr> </tbody> </table>	Grade	1	2	3	4	Load (N)	300	500	800	1000	<p>Axial load: 300 N.</p> <p>Permanent deformation: 0,3 mm</p>	P	
Grade	1	2	3	4										
Load (N)	300	500	800	1000										
5.5	Free play and safety		—											
5.5.1	<p>Requirement of free play</p> <p>The maximum total movement measured shall not exceed the limit as below,</p> <p>Category of use acceptance criteria:</p> <table border="1"> <thead> <tr> <th>Grade</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Total movement (mm)</td> <td>≤10</td> <td>≤10</td> <td>≤6</td> <td>≤6</td> </tr> </tbody> </table> <p>This requirement only applies to lever handles and knobs that will not be driven during the endurance test.</p>	Grade	1	2	3	4	Total movement (mm)	≤10	≤10	≤6	≤6	<p>Maximum movement: 0,7 mm</p> <p>On 60° position: 0,3 mm</p>	P	
Grade	1	2	3	4										
Total movement (mm)	≤10	≤10	≤6	≤6										
5.5.2	<p>Safety requirement</p> <p>When the lock or latch furniture is fitted to the test block there shall be no sharp edges that can cause injury.</p>	<p>Edges that are broken by a chamfer of 0,5 mm maximum × 45°.</p> <p>The edges can not cause injury.</p>	P											
5.6	<p>Free angular movement or misalignment</p> <p>The free angular movement or misalignment shall not exceed the limit as below,</p> <p>Category of use acceptance criteria:</p> <table border="1"> <thead> <tr> <th>Grade</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Total movement (mm)</td> <td>≤10</td> <td>≤10</td> <td>≤5</td> <td>≤5</td> </tr> </tbody> </table> <p>This requirement applies to all furniture with either a fixed or floating spindle.</p>	Grade	1	2	3	4	Total movement (mm)	≤10	≤10	≤5	≤5	Maximum movement: 0,8mm	P	
Grade	1	2	3	4										
Total movement (mm)	≤10	≤10	≤5	≤5										
5.7	Torque of return mechanism		—											
5.7.1	General	See item 5.7.2 and 5.7.4	—											

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Clause	Requirement – Test	Result - Remark	Verdict																																				
5.7.2	<p>Unsprung and spring-assisted lever handles</p> <p>Category of use acceptance criteria:</p> <p>For unsprung lever handles, maximum moment,</p> <table border="1"> <thead> <tr> <th>Grade</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Operate moment (Nm)</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>Return moment (Nm)</td> <td colspan="2">≤0,6</td> <td colspan="2">≤1,5</td> </tr> </tbody> </table> <p>For spring assisted lever handles,</p> <table border="1"> <thead> <tr> <th>Grade</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Operate moment (Nm)</td> <td colspan="2">≤1,5</td> <td colspan="2">≤2,4</td> </tr> <tr> <td>Return moment (Nm)</td> <td colspan="2">≤0,6</td> <td colspan="2">≤1,5</td> </tr> <tr> <td>Angle of rotation</td> <td colspan="4">≥40°</td> </tr> </tbody> </table>	Grade	1	2	3	4	Operate moment (Nm)	—	—	—	—	Return moment (Nm)	≤0,6		≤1,5		Grade	1	2	3	4	Operate moment (Nm)	≤1,5		≤2,4		Return moment (Nm)	≤0,6		≤1,5		Angle of rotation	≥40°				<p>Maximum operating moment: 1,3 Nm.</p> <p>Return moment: 0 Nm</p>	P	
Grade	1	2	3	4																																			
Operate moment (Nm)	—	—	—	—																																			
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5.7.3	<p>Unsprung knobs</p> <p>Category of use acceptance criteria:</p> <table border="1"> <thead> <tr> <th>Grade</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Operate moment (Nm)</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>Return moment (Nm)</td> <td colspan="4">≤0,6</td> </tr> </tbody> </table>	Grade	1	2	3	4	Operate moment (Nm)	—	—	—	—	Return moment (Nm)	≤0,6				Spring-assisted lever handles	N/A																					
Grade	1	2	3	4																																			
Operate moment (Nm)	—	—	—	—																																			
Return moment (Nm)	≤0,6																																						
5.7.4	<p>Spring-loaded lever handles or knobs</p> <p>The torque required to rotate the lever handles or knobs through a maximum of 60° 0/+5° or through the angle of rotation possible by the design shall meet the specified requirement as below,</p> <p>Category of use acceptance criteria:</p> <table border="1"> <thead> <tr> <th>Grade</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Operate moment (Nm)</td> <td colspan="2">≤1,5</td> <td colspan="2">≤2,4</td> </tr> <tr> <td>Return moment (Nm)</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>Limited deviations "at rest"</td> <td>±4°</td> <td>±2°</td> <td>±1°</td> <td>±1°</td> </tr> </tbody> </table>	Grade	1	2	3	4	Operate moment (Nm)	≤1,5		≤2,4		Return moment (Nm)	—	—	—	—	Limited deviations "at rest"	±4°	±2°	±1°	±1°	Spring-assisted lever handles	N/A																
Grade	1	2	3	4																																			
Operate moment (Nm)	≤1,5		≤2,4																																				
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Clause	Requirement – Test				Result - Remark	Verdict
5.8	Durability of mechanism There shall be no failure of any component and the lever handle or knob shall still operate after test. After the test, the "at-rest" position of spring-loaded door furniture when against its stops shall conform to the "at-rest" position recorded before commencing, the detailed requirement specified as below,				200 000 cycles, function correctly after test; Force L: 60N Force P: 60N Grade 1.	P
	Grade	1	2	3	4	
	Number of cycles	100k		200k		
	force L (N)	60		100		
	force P (N)	60		100		
	Limited deviations "at rest" (except for spring assisted levers)	±4°	±2°	±1°	±1°	
5.9	Repeat test of axial strength of lock or latch furniture and methods of fixing The lock or latch furniture shall meet the requirement of 5.4.				Axial load: 300 N. Permanent deformation: 0,4 mm	P
5.10	Repeat test of free play measurement The lock or latch furniture shall meet the requirement of 5.5.1				Maximum movement: 1,4 mm	P
5.11	Repeat test of measurement of free angular movement or misalignment The lock or latch furniture shall meet the requirement of 5.6.				Maximum movement: 3,2 mm	P
5.12	Repeat test or torque of return mechanism The lock or latch furniture shall meet the requirement of 5.7.				Operate lever handle: 1,3 Nm Return movement: 0 Nm	P
5.13	Axial strength for safety furniture (optional) Category of use acceptance criteria:				Axial load: 1500N No failure of any component and the furniture remain fixed to the test block. Grade 1	P
	Grade	1	2	3	4	
	Axial load (N)	1500		2500		
	After test, there shall be no failure of any component and the furniture shall remain fixed to the test block. The lever handle or knob need not operate after completion of the test.					

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Clause	Requirement – Test	Result - Remark			Verdict																			
5.14	Corrosion resistance Corrosion resistance shall comply with requirements of EN 1670:1998.	After 96 hours exposure, no visible corrosion was found on the surface which are visible when fitted in service Grade 3.			P																			
8	MARKING			—																				
Annex A	Requirements for security lock furniture for use on burglary resistant doors																							
A 2.1	Design requirements			—																				
A 2.1.1	Security lock furniture shall have at least two fastening elements that pass through the door to connect the internal and external plates to each other. Plates and fastenings shall be so designed that, after fitting to the door, the fastenings cannot be detached from the external plate without access to the internal plate.	The product has three fastening elements; The fastenings cannot be detached from the external plate without access to the internal plate		P																				
A 2.1.2	When a trim plate can be removed with less force than that specified for the security grade claimed for the furniture, then the baseplate shall conform to the requirements of this annex.	Refer to A2.2.1 and A2.2.2		P																				
A 2.1.3	If the security lock furniture incorporates components such as levers, knobs or door pulls attached through the door or serving to anchor the lockplate to the door and cannot readily be removed from the exterior of the door when secured in the locked position, these elements shall be in position during the strength tests A 2.2.1 and A 2.2.2	Refer to A2.2.1 and A2.2.2		P																				
A 2.2	Performance requirements			—																				
A 2.2.1	Plate strength For cylinder and lever lockplates the deflection under load, measured at the centre of key rotation, when test in accordance with the specified requirement as below shall not exceed 5mm without a cylinder.	Applied 10kN The maximum deflection: 1,55 mm; Grade 2.		P																				
	<table border="1"> <thead> <tr> <th>Grade</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Force (kN)</td> <td>7</td> <td>10</td> <td>15</td> <td>20</td> </tr> <tr> <td>Maximum deflection(mm)</td> <td>5</td> <td>5</td> <td>5</td> <td>5</td> </tr> <tr> <td>Minimum engagement</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> </tbody> </table>	Grade	1	2	3	4	Force (kN)	7	10	15	20	Maximum deflection(mm)	5	5	5	5	Minimum engagement	2	2	2	2			
Grade	1	2	3	4																				
Force (kN)	7	10	15	20																				
Maximum deflection(mm)	5	5	5	5																				
Minimum engagement	2	2	2	2																				

EN 1906							
Clause	Requirement – Test				Result - Remark	Verdict	
A 2.2.2	Strength of fastening elements				Applied force: 10kN The maximum engagement: 0,78mm Grade 1	P	
	The deformation shall not exceed 2mm after test.						
	The detailed requirement specified as below,						
	Grade	1	2	3			4
	Force (kN)	10	15	20			30
A 2.2.3	Resistance to attack by drilling				Axial force: 200N After test , the drilling cannot penetrate within 30s. Grade 2	P	
	When security lock furniture is tested in the specified requirement, the drilling shall not penetrate within the drilling time specified. When the area of the drilling protection will not cover the complete area of the external plate, the area to be protected should be in accordance with the most likely vulnerable areas of the lock and the furniture fixing points. The minimum area of the drilling protection shall be 1500mm ² in class 2 and class 3, in class 4 the complete external plate has to be protected.						
	The detailed requirement specified as below,						
	Grade	1	2	3			4
	Test duration	no	≥30s	≥3 min			≥5 min
A 2.2.4	Resistance to attack by chisel				Long plate impact positions:1,2 After 3 impacts of the pendulum in each position, the plates connected to each other by 3 fastening elements and cannot be removed the outer plate without access to the inner plate. Grade 2.	P	
	When tested in the specified requirement, the inner and outer plates shall remain connected to each other by at least two fastening elements and it shall not be possible to remove the outer plate without access to the inner plate.						
	The detailed requirement specified as below,						
	Grade	1	2	3			4
	Long plate impact positions	no	1,2	1,3,4			1,2,3,4,5
Short plate impact positions	no	1,2	1,2,4	1,2,3,4			
Number of impacts of the pendulum	no	3	6	12			

EN 1906							
Clause	Requirement – Test				Result - Remark	Verdict	
A 2.2.5	The strength of plug protection plate.(if fitted) If the security lock furniture incarnates a plug protection plate, it shall not fracture and shall not be deformed during the test in the specified requirement, in such a way that it is possible for it to be removed from the backplate. The detailed requirement specified as below,				No plug protection plate.	N/A	
	Grade	1	2	3			4
	The strength of plug protection plate.(if fitted) (kN)	no	10	15			20
Annex C	Requirements for lock and latch furniture for use on fire/smoke door assemblies				Not approved for use on fire/smoke door assemblies	N/A	

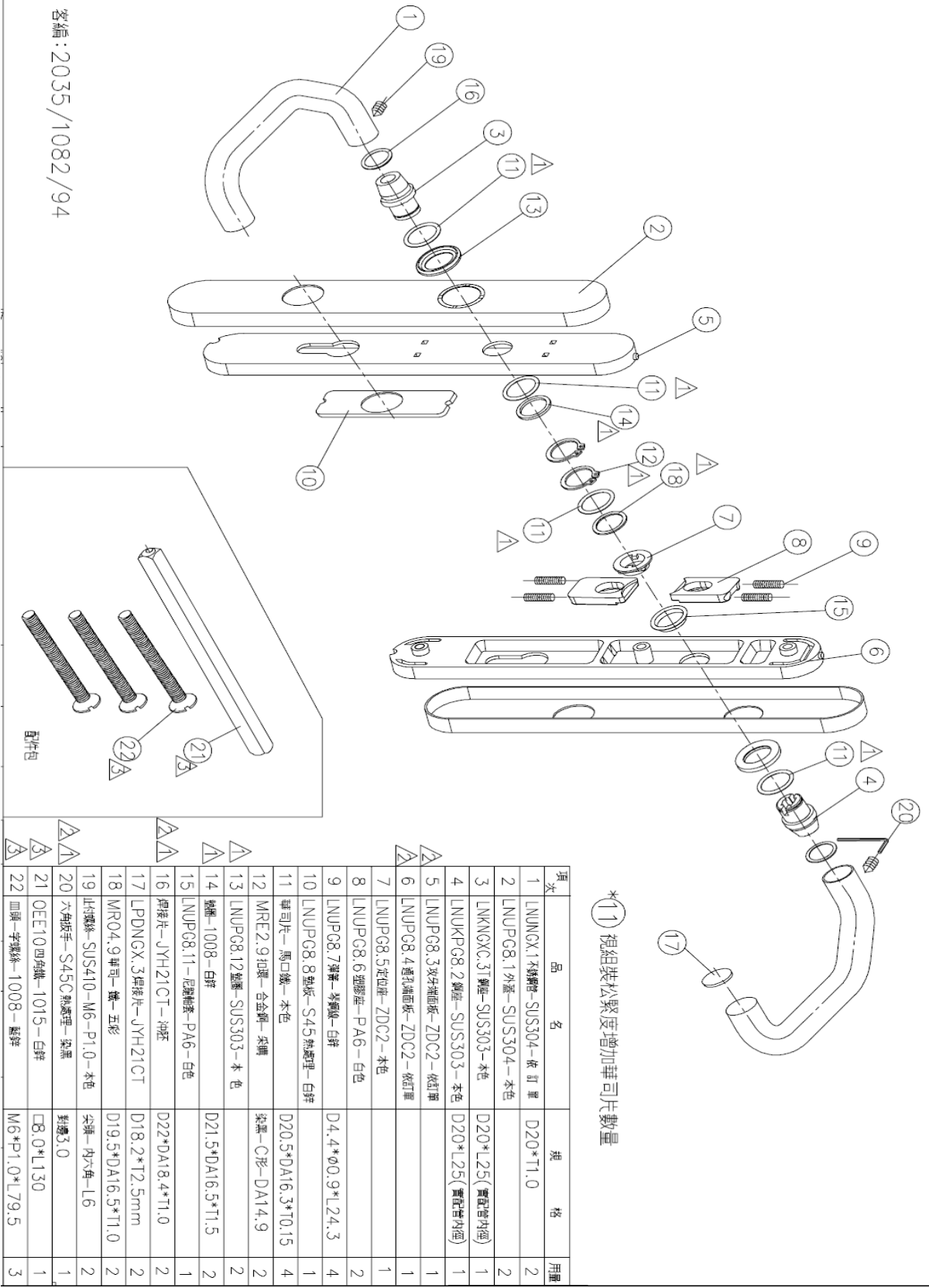
Appendix A

Product Photos and Drawings



Product Photo

客編: 2035 / 1082 / 94



*11 視組裝松緊度增加華司片數量

項次	品名	規格	用量
1	LNUNGX.1 外殼體-SUS304-依訂單	D20*T1.0	2
2	LNUPG8.1 外蓋-SUS304-本色		2
3	LNKKGX.3 封鎖座-SUS303-本色	D20*L25(實配管內徑)	1
4	LNUPG8.2 鎖座-SUS303-本色	D20*L25(實配管內徑)	1
5	LNUPG8.3 穿孔端面板-ZDC2-依訂單		1
6	LNUPG8.4 通孔端面板-ZDC2-依訂單		1
7	LNUPG8.5 定位座-ZDC2-本色		1
8	LNUPG8.6 塑膠座-PA6-白色		2
9	LNUPG8.7 彈簧-鈹鋼-白鉻	D4.4* ϕ 0.9*L24.3	4
10	LNUPG8.8 墊板-S45熱處理-白鉻	D20.5*D416.3*T0.15	4
11	華司片-馬口鐵-本色		2
12	MRE2.9 扣環-合金鋼-柒調	柒調-C形-DA14.9	2
13	LNUPG8.12 墊圈-SUS303-本色		2
14	螺絲-1008-白鉻	D21.5*D416.5*T1.5	2
15	LNUPG8.11-尼龍墊圈-PA6-白色		1
16	彈簧片-JYH21CT-沖壓	D22*DA18.4*T1.0	2
17	LPDNGX.3 彈簧片-JYH21CT	D18.2*T2.5mm	2
18	MR04.9 華司-鐵-五彩	D19.5*D416.5*T1.0	2
19	此項螺絲-SUS410-M6-P1.0-本色	柒調-內六角-L6	2
20	六角扳手-S45C熱處理-柒黑	長度3.0	1
21	OE110 四角鐵-1015-白鉻	C8.0*L130	1
22	皿頭一字螺絲-1008-柒紫	M6*P1.0*L79.5	3

Product Drawing and Bill of Material List

*****End of Report*****