CITY OF GEARHART

Staff Report

For City Council Meeting - 11/3/2021

Subject - New Business - Playground Equipment Process

Synopsis: At the last Council meeting, City staff shared new, wooden playground equipment designs by Kompan with the Council. The current designs are attached. We are ready to proceed with Haywire, should the Council choose to do so. Next steps would be to involve the Planning Commission and the public. The City would complete a conditional use permit application for review on a Planning Commission meeting agenda. A public hearing for the public to provide feedback would also occur at the meeting. The Planning Commission then approves, approves with conditions, or declines the application. Planning and the public must support the placement of a playground in Centennial Park in order to move forward.

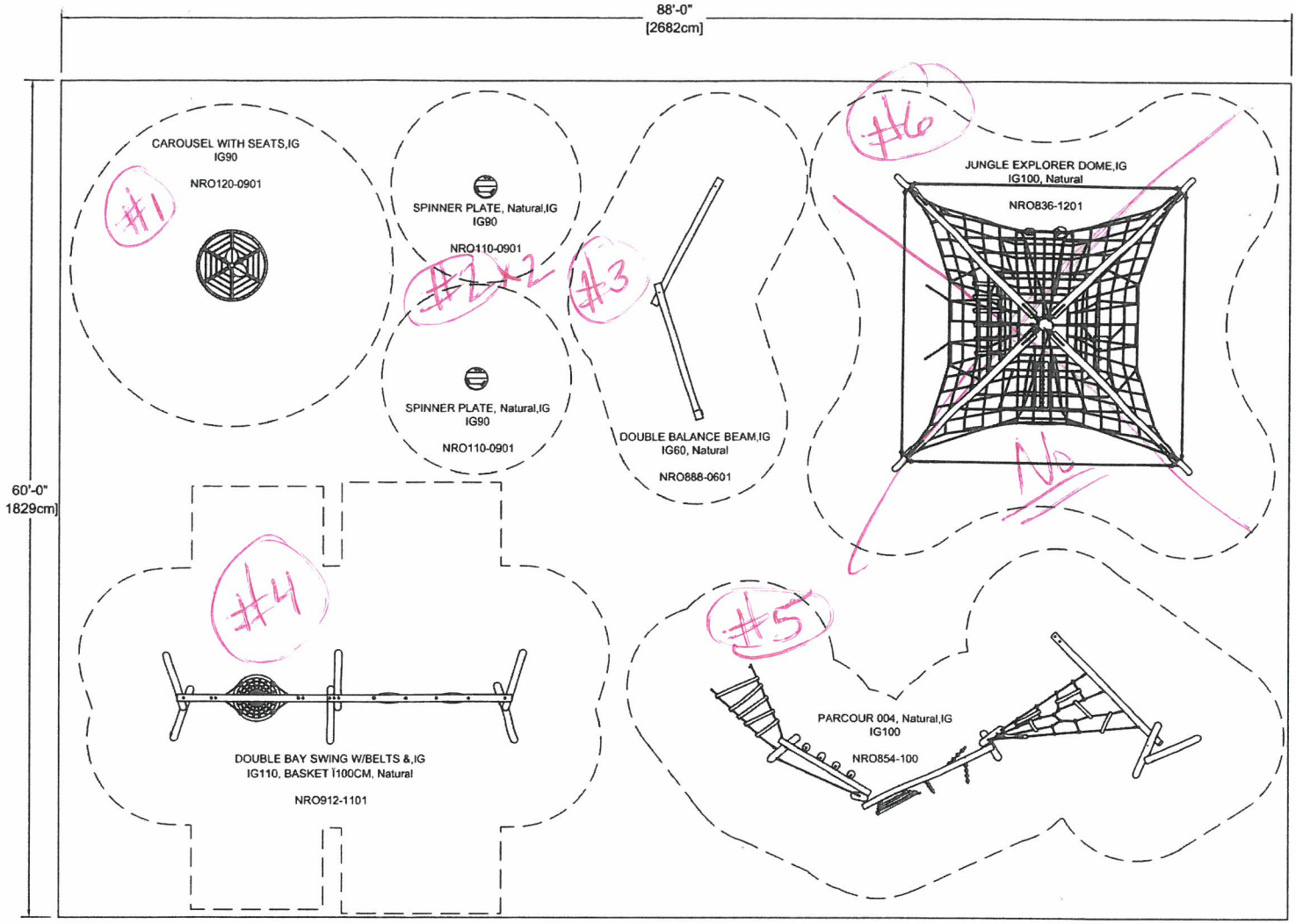
Recommended Motion: City staff requests the Council provide direction. If Centennial Park is the desired location, staff is requesting Council approval to move forward with the conditional use process.

Legal Analysis: N/A

Financial Analysis: The attached quote from Haywire does not include the border around the wood chips, land grading, and land prep. City residents have raised $33,633.27 in donations ($12,273.27 of which is from Berkley Sturgell's efforts). Additionally, the City has $104,982.31 available between Parks Equipment and Parks Maintenance & Repair.

Respectfully Submitted,

Chad



SAFETY SURFACE IS EWF, TOTAL AREA = 5280 SF
PERIMETER IS CONCRETE CURBING, PERIMETER = 296 LF

Highwire, Inc.
1116 N J St
Tacoma, WA 98403
+1 2066618320
info@highwireus.com

Estimate

ADDRESS
City of Gearhart
698 Pacific Way
Gearhart, OR 97138

SHIP TO
City of Gearhart
698 Pacific Way
Gearhart, OR 97138

ESTIMATE # 2951
DATE 10/13/2021
EXPIRATION DATE 12/31/2021

PROJECT NAME
Centennial Park

CONTACT
Chad Sweeet

EST LEAD TIME / EST DEL DATE
14 weeks (+/-)

ACTIVITY	QTY	PRICE	AMOUNT
1- Kompan:NRO854 Parkour 4, IG, Natural, NRO854-1001	1	10,190.00	10,190.00T
1- Kompan:NRO912 Double Swing Combination, Two Belt Seats, One Bird Nest, IG, Natural, NRO912-1101	1	7,350.00	7,350.00T
1- Kompan:NRO110 Angled Plate Spinner, IG, Natural, NRO110-0901	2	1,270.00	2,540.00T
1- Kompan:NRO888 Double Balance Beam, IG, Natural, NRO888-0601	1	1,000.00	1,000.00T
1- Kompan:NRO120 Carousel with Seats, IG 90, Natural, NRO120-0901	1	7,280.00	7,280.00T
shipping:Freight Freight to Gearhart OR (freight valid for 30 days)	1	3,697.00	3,697.00T
3 - Surfacing:Wood Fiber Wood Carpet- Cedar, for 4352 SF = 243 CY	243	30.00	7,290.00T
Misc landscape fabric, roll = 15' x 600', with Estimated Freight	1	376.00	376.00T
3 - Surfacing:Blower Install Blow-in of 243 CY EWF	243	13.00	3,159.00T
1- Kompan:Installation ESTIMATED Equipment installation - based on 40% of MSRP ($28,360)	0	28,360.00	0.00T

SUBTOTAL	42,882.00
TAX	0.00
TOTAL	**$42,882.00**

- Lead time for equipment from receipt of purchase order is 14 weeks (+/-).
- Price includes line items shown only.
- Installation pricing, if included, is an estimate only, definitive costs will be provided by installation contractor direct to customer. Offloading and disposal fees are not included.
- Customer is responsible for receiving and off-loading at time of delivery.
- Level dirt site not to exceed 1% grade and should be free of underground obstacles.
- Proposal assumes that site is accessible to class 8 vehicles.
- Highwire, Inc. assumes no responsibility for sub-grade failures or damage to hidden utilities, wires or other structures.
- Equipment pricing charges are valid for 60 days, freight charges are valid for 30 days.
- Payment terms: 50% deposit, net 30 upon shipment.
- Delinquent payments will be assessed late fees.
- Credit Card payments add 3.5%.
- All permits are the responsibility of the purchaser.

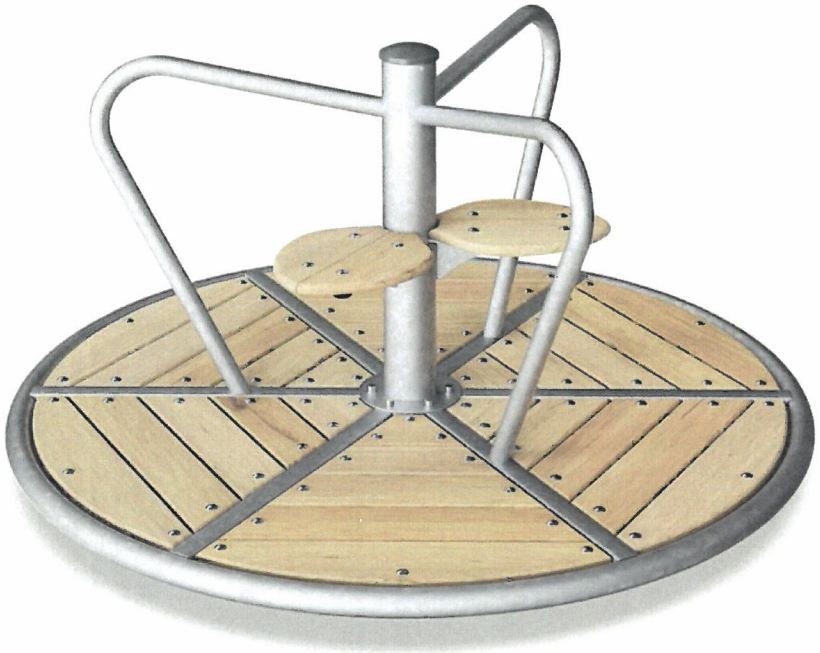
Credit Card payments add 3.5%.

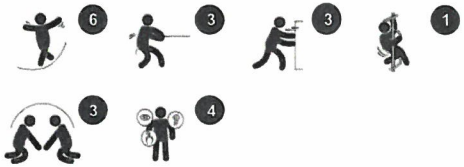
Payment terms: balance paid in full upon installation, late fees will apply

CAROUSEL WITH SEATS

NRO120

Item no. NRO120-0901	
General Product Information	
Dimensions LxWxH	5'1" x 5'1" x 2'8"
Age Group	5-12
Play Capacity	1 child
Color Options	

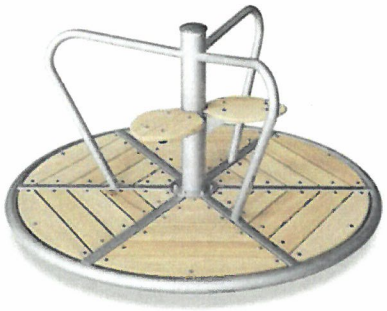




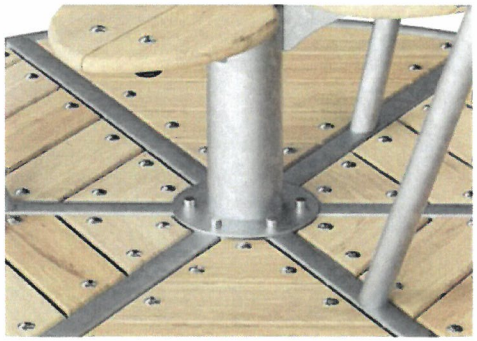
The Carousel with Seats is an attractive playground classic for children and adults alike. With its two seats and spinning option it invites social play and thrill, a winning combination for all play. Children can't get enough of that. The spinning starts by pushing or pulling the carousel into motion from the outside. The circular shape makes room for users both seated and standing, jumping on and off. Spinning on the carousel trains the vestibular system and the whole sense of balance. This is fundamental for the child's ability to navigate the world securely. It's fundamental for walking, running and being able to sit still and concentrate When the sense of balance is under-developed, children can focus on nothing but keeping equilibrium, seated or standing. So the fun of stomach tickling spinning serves a true purpose.

CAROUSEL WITH SEATS

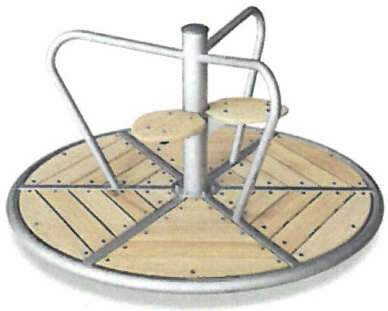
NRO120



All Organic Robinia products by KOMPAN are made of 100% Robinia wood from sustainable European sources. On request it can be supplied with 100% FSC™ certification.



The steel surfaces are hot dip galvanized inside and outside with lead free zinc. The galvanization has excellent corrosion resistance in outside environments and is maintenance free.



The large heavy bearing system with ball bearings is located below the deck well protected from dirt and soil. The bearing system is lubricated from a center point through an opening in the wooden deck

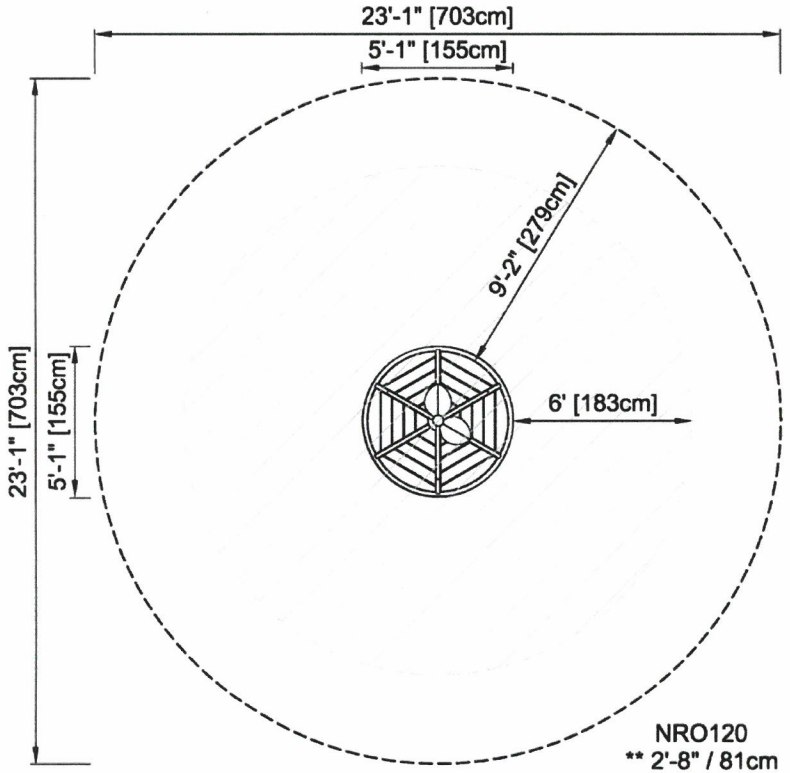
Item no. NRO120-0901	
Installation Information	
Max. fall height	2'8"
Safety surfacing area	419,8ft²
Numbers of Installers (persons)	2
Total installation time	3
Excavation volume	0,58 yd³
Concrete volume	0,54 yd³
Footing Depth (Standard)	3' 3"
Shipment Weight	401 lbs
Anchoring options	In-ground ✓
Warranty information	
Robinia wood	10 Years
Stainless steel	10 Years
Bearing system	5 Years
Spare parts guaranteed	10 Years

Elevated Activities 0	Accessible Elevated Activities	Accessible Ground Level Activities	Accessible Ground Level Play Types
Present	0	1	1
Required	0	1	1

CAROUSEL WITH SEATS

NRO120

Max fall height| Total height| Safety surfacing area



NRO120
** 2'-8" / 81cm
** 2'-8" / 81cm
***419.8ft² / 39m²
1/8" = 1'-0"

Max fall height| Total height

NRO120
1:100

Click to see 1:100 ratio TOP VIEW

Click to see 1:100 ratio SIDE VIEW

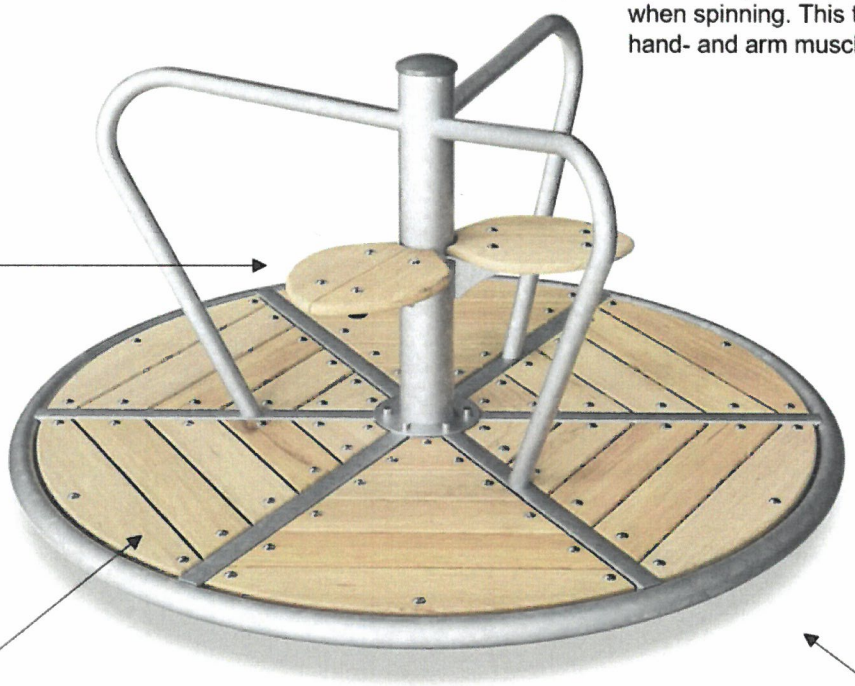
CAROUSEL WITH SEATS

NRO120

KOMPAN Let's play

Handhold
Physical: the possibility to hold onto more heights of the handhold ensures a good grip, necessary when spinning. This trains the hand- and arm muscles.

Seat
Social-Emotional: sharing, listening when having a break in the seating setting.
Cognitive: support language development when having a chat.



Rotation
Physical: pushing or puling it into motion, children use their muscle strength and get cardio training. The rotation trains the sense of balance and space, both important for e.g. navigating traffic safely.
Social-Emotional: Listening and negotiating e.g. speed of spinning, children develop their empathy and cooperation skills.

Open space
Social-Emotional: room for many users, to spin and play together. Training of cooperation and empathy.

CAROUSEL WITH SEATS

NRO120

PHYSICAL
Joy of movement:
motor skills, muscle, cardio and bone density

SOCIAL-EMOTIONAL
Joy of being together:
teamwork, tolerance and sense of belonging

COGNITIVE
Joy of learning:
curiosity, understanding of causal relationships and knowledge of the world

CREATIVE
Joy of creating:
co-creation and experimenting with materials

BALANCE
To balance is to stay upright when walking or standing on a surface that makes this challenging (e.g. a wobbly, inclined, or narrow surface).

BOUNCE
To bounce is the act of bouncing on a responsive, flexible, elastic or tensile surface.

CLIMB
To climb is the act of moving upwards, cross-coordinating arms and legs, on a vertical or inclined surface or net.

CONSTRUCT
To construct is the act of creating new patterns, shifting items or materials to new positions or constructing with materials that can be transformed or manipulated.

CRAWL
To crawl is the movement of moving forwards or backwards, cross-coordinating arms and legs, on a horizontal or slightly inclined surface.

DRAMATIC PLAY
Dramatic play is motivated through play items that stage a frame, place or environment for acting out make believe or role play scenarios.

GLIDE
To glide is the act of moving from one point to another without shifting the feet, in a horizontal or vertical movement, in a seated, lying or standing position, letting gravity do the work.

HANG IN ARMS
To hang in arms is the act of carrying the body with the hands or arms, possibly to traverse to another platform or play item.

JUMP
To jump is the act of jumping up or down on a hard surface.

PULL
To pull is the act of pulling an item towards you or you towards an item with one or both hands, or possibly using the entire body.

PUSH
To push is the act of pushing an item away from you with one or both hands, possibly with the entire body.

ROCK
To rock is the action of rocking back and forth, or sideways, on e.g. a piece of spring equipment.

ROTATE
To rotate involves a vertical or horizontal slower paced turn of the body, facilitated by a piece of equipment.

RULES PLAY
Rules play is motivated through play items that suggest games-with-rules, cooperation and team work, e.g. tic-tac-toe, timers or ball games.

SENSORY
To sense is the act of taking in information with the sensory system: seeing, feeling, hearing or sensing with the body.

SLIDE
To slide is the act of moving fast downwards seated on a slide.

SOCIALIZE
To socialize is the act of meeting, communicating or cooperating in an activity that stimulates and facilitates social interaction.

SPIN
To spin involves a fast, repeated horizontal or vertical turn of the body on a piece of equipment that facilitates the movement.

SWAY
To sway is the movement of swaying back and forth, or around, lying, seated or possibly standing, in a pendulant or circular movement, e.g. on a hammock or on a rope.

SWING
To swing is the movement of swinging back and forth, or in circular movement, seated, standing or lying, in an unhindered arc.

WONDER
To wonder is motivated through play items that make children need and use their logical, abstract or creative thinking skills, as well as their memory.

KOMPAN Product Info

SPINNER PLATE - NRO110

ROBINIA

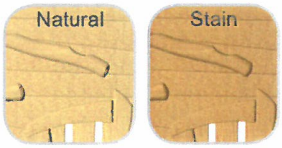
Best User Age: **5-12 years**

Footings: In-ground installation
Surface installation also available

Technical information available at kompan.com

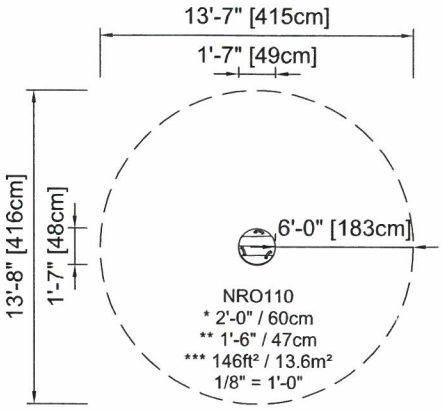
ADA ANALYSIS	Elevated Activities	Ground Level Activities	Ground Level Play Types
Present	0	1	1
Accessible	0	1	1
Required	0	1	1

Available Options:



-XX01 -XX11

#2



IPEMA CERTIFIED to ASTM F1487

IPEMA CERTIFIED to CAN/CSA-Z614

To verify product certification, visit www.ipema.org

* = Highest designated play surface.
** = Total height of product.
*** = Total area of safety zone.

Highest designated play surface, space required and total area of safety zone are according to ASTM F1487.

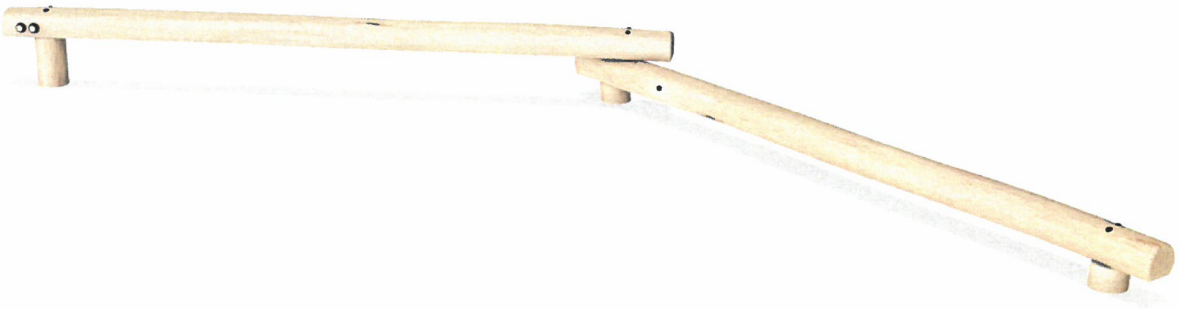
Equipment must be installed over resilient surfacing appropriate to the safety guidelines in your area.

Product development is an ongoing process. We reserve the right to make modifications on all our products. This product may not be mirrored, scaled or altered in any way. Safety zones must be retained for proper placement of equipment. If any changes are required, please contact your KOMPAN representative at 1.800.426.9788.

NRO888
Double balance beam

#3

KOMPAN
Let's play



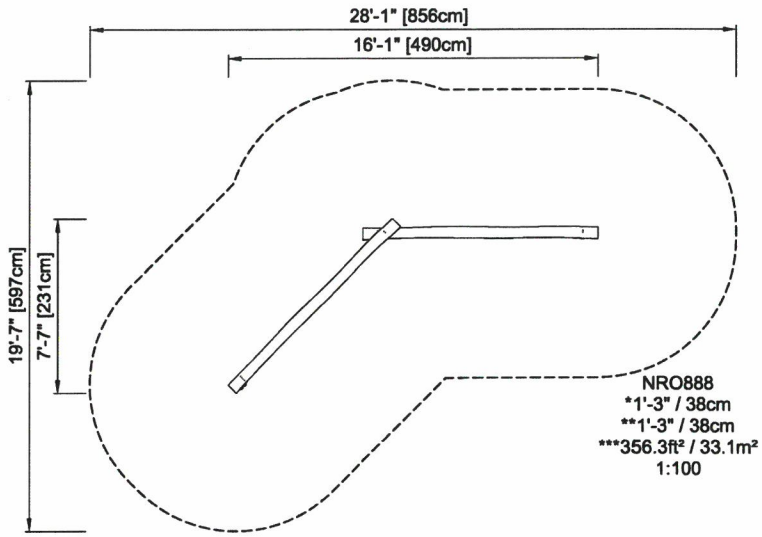
Balancing is always an attractive activity to children. This balancing beam invites children to compete individually or against each other. Through this activity children train and develop their balance and coordination, but they also use the balancing beam as a nice place to gather. FSC® Certified (FSC® C004450) robinia wood on request.

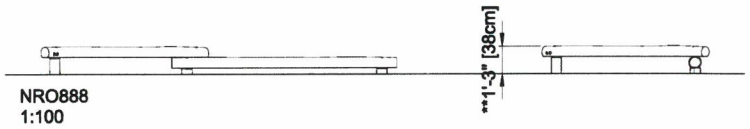
Product Line	Organic Robinia
Category	Traditional play, Sand and water play
Age from	5 - 12
Max. fall height (CM)	61
Total height (CM)	61
Safety Zone	24 m2

ADA / INCLUSIVE

ASTM

KOMPAN INC.605 W Howard Lane, Suite 101
Austin, TX 78753 Phone: 1 (800) 426-9788
USSales@kompan.com | www.kompan.us





* = Highest designated play surface.
** = Total height of product.

Weight/heaviest parts	kg.	**Installation (Manpower)**	Persons
Concrete required	NaN m3	**Installation (Hours)**	Hours
Foundation amount/footing	NaN	**Excavation**	NaN m3

To verify product ceritifcation, visit www.ipema.org

Highest designated play surface and space required are according to ASTM F1487. Equipment must be installed over resilient surfacing appropriate to the safety guidelines in your area. Product development is an ongoing process. We reserve the right to make modifications on all our products. This product may not be mirrored, scaled or altered in any way. Safety zones must be retained for proper placement of equipment. If any changes are required, please contact your KOMPAN representative at 1.800.426.9788.

KOMPAN INC.605 W Howard Lane, Suite 101
Austin, TX 78753 Phone: 1 (800) 426-9788
USSales@kompan.com | www.kompan.us

DOUBLE SWING COMBINATION

NRO912

#14

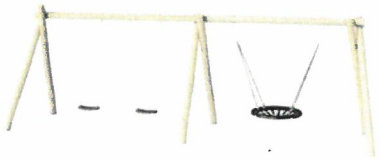
KOMPAN Let's play

Item no. NRO912-1101	
General Product Information	
Dimensions LxWxH	26' x 6'10" x 9'1"
Age Group	5-12
Play Capacity	9 children
Color Options	

Of all the play activities, swinging is a favorite: children love it, as it can be done individually and together. This swing set combines that joy and adds the possibility of different body positions and group sizes with two single swing seats and one nest swing seat. This is a great place to play, for all ages, for hours and days. Swinging, apart from being great fun, trains the children's ABC's: agility, balance and coordination, as well as their spatial awareness. These motor skills are crucial to being able to judge distances and navigate spaces safely. Swings allows for standing sitting, lying – and not least, jumping off. Apart from the motor skills training, this trains the arm, leg and core muscles. The jumping off strengthens bone density– the majority of which is built up during the first years of life.

DOUBLE SWING COMBINATION

NRO912

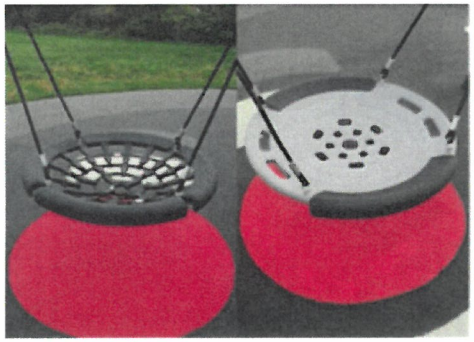


All Organic Robinia products by KOMPAN are made of 100% Robinia wood from sustainable European sources. On request it can be supplied with 100% FSC™ certification.

The standard seats of KOMPAN swings is engineered for maximum safety and durability. The seat two component plastic seat with a PP inner core and EDPM outside rubber is produced in one operation. The seats are available with swing chains of either hot dip galvanized steel or stainless steel for all swings heights.

Swing hangers for Robinia wood crossbeams are made of stainless-steel brackets and can move over two axis. The plastic flange bearings are silicone enriched to make the suspension maintenance free.

Item no. NRO912-1101	
Installation Information	
Max. fall height	7'9"
Safety surfacing area	912ft²
Numbers of Installers (persons)	2
Total installation time	10
Excavation volume	2,99 yd³
Concrete volume	0,24 yd³
Footing Depth (Standard)	3' 8"
Shipment Weight	1315 lbs
Anchoring options	In-ground ✓
Warranty information	
Robinia wood	10 Years
Stainless steel hardware	Lifetime
Chains	10 Years
Spare parts guaranteed	10 Years



KOMPAN designed the new bird's nest seats to be light in weight and in compliance with global safety standards. The soft, shock absorbent bumpers with non-slip surface makes the swing seat extremely user friendly. Choose between a rope version with reinforced PA rope or a molded plastic version. Both equipped with soft bumpers.

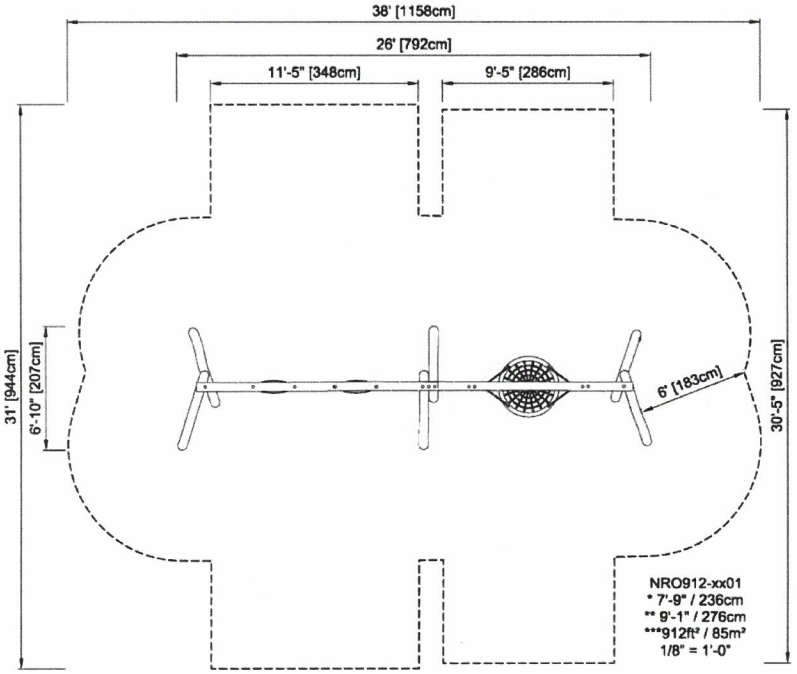
The Robinia wood can be supplied as untreated raw wood, painted with a brown colored transparent pigment that maintains the golden wood color or in a colored version where selected components are painted in different colors.

Elevated Activities 0	Accessible Elevated Activities	Accessible Ground Level Activities	Accessible Ground Level Play Types
Present	0	1	1
Required	0	1	1

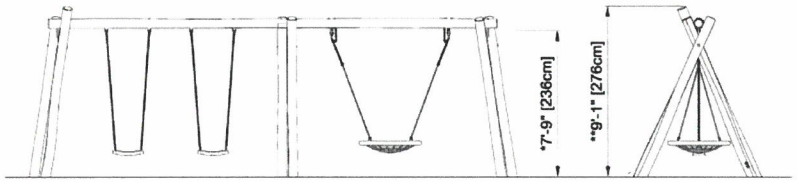
DOUBLE SWING COMBINATION

NRO912

Max fall height| Total height| Safety surfacing area



Max fall height| Total height



NRO912
1:100

Click to see 1:100 ratio TOP VIEW

Click to see 1:100 ratio SIDE VIEW

DOUBLE SWING COMBINATION

NRO912

Two single swings

Physical: agility, balance, coordination and spatial awareness are trained when swinging. All necessary when e.g. judging distances and managing traffic safely. The swinging movement trains the arm, leg and core muscles, and the bone density when jumping off.
Social-Emotional: parallel play invite cooperation and consideration.
Cognitive: cause and effect, managing rhythm and thinking skills for younger children when swinging. Rules games for bigger children, when swinging in same or different rhythm, or, e.g. jumping.

Birds nest

Physical: agility, balance, coordination and spatial awareness are developed when swinging. The swinging movement trains the arm, leg and core muscles, and strengthens bone density when jumping off.
Social-Emotional: the spacious seat allows for many children standing, lying, seated together and is inclusive for all.
Cognitive: cause and effect, rhythm and thinking skills are developed in younger children.

DOUBLE SWING COMBINATION

NRO912

PHYSICAL
Joy of movement:
motor skills, muscle, cardio and bone density

SOCIAL-EMOTIONAL
Joy of being together:
teamwork, tolerance and sense of belonging

COGNITIVE
Joy of learning:
curiosity, understanding of causal relationships and knowledge of the world

CREATIVE
Joy of creating:
co-creation and experimenting with materials

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To balance is to stay upright when walking or standing on a surface that makes this challenging (e.g. a wobbly, inclined, or narrow surface).

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PUSH
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ROCK
To rock is the action of rocking back and forth, or sideways, on e.g. a piece of spring equipment.

ROTATE
To rotate involves a vertical or horizontal slower paced turn of the body, facilitated by a piece of equipment.

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SWAY
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SWING
To swing is the movement of swinging back and forth, or in circular movement, seated, standing or lying, in an unhindered arc.

WONDER
To wonder is motivated through play items that make children need and use their logical, abstract or creative thinking skills, as well as their memory.

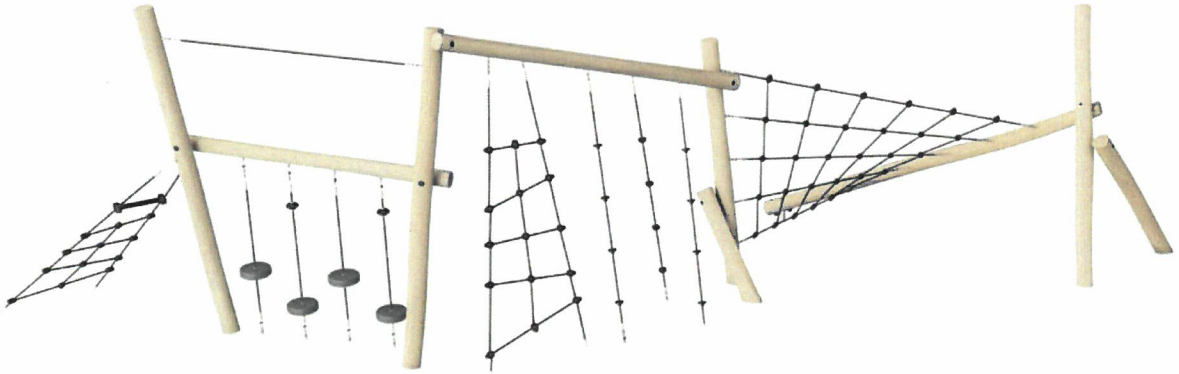
PARKOUR 4

NRO854

#5

KOMPAN Let's play

Item no. NRO854-1001	
General Product Information	
Dimensions LxWxH	32'9"x15'3"x8'11"
Age Group	5-12
Play Capacity	12 children
Color Options	



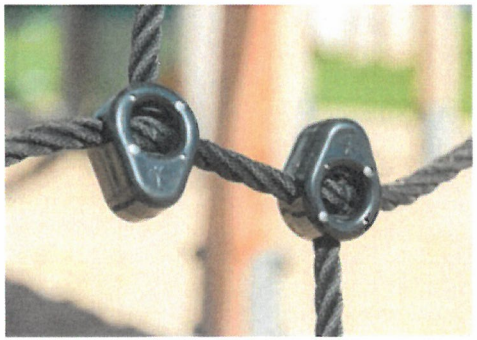
The Parkour 4 is a hugely appealing playpiece. Exactly what 5-12 year olds want: a trim trail that's fun. The variation in climbing, crawling and balancing activities will make children come back again and again. The many inclined, twisted and vertical nets and the different mesh directions make great playchallenges. Climbing or crawling up, down and through the big meshes greatly stimulates coordination and proprioception. Both are skills necessary to navigate the world confidently and to achieve physical confidence. The lovely rubber seating points and the inclined beams are great for meeting and exchanging. Their bouncy or inclined character make them a constant balance and muscle trainer, even when seated.

When climbing through the Parkour 4 children train their cooperation and turn-taking skills. These skills are difficult to teach, but they are easily learned in play.

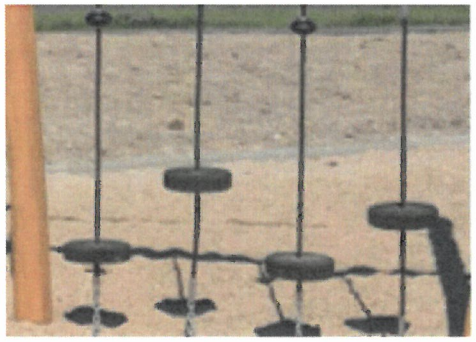
PARKOUR 4

NRO854

All Organic Robinia products by KOMPAN are made of 100% robinia wood from sustainable European sources. On request it can be supplied with 100% FSC™ certification.



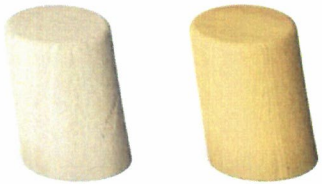
Nets and ropes are made of UV-stabilized PA with inner steel cable reinforcement. The rope is induction treated in order to create a strong connection between steel and rope which leads to good wear resistance.



Full colored EPDM rubber seats with smooth surface. The seats is are molded on a hot dip galvanized steel inlay that ensures durable fixation to the rope.

Item no. NRO854-1001		
Installation Information		
Max. fall height		8'11''
Safety surfacing area		758.9 ft²
Numbers of Installers (persons)		2
Total installation time		11
Excavation volume		4.75 yd³
Concrete volume		0.51 yd³
Footing Depth (Standard)		3' 6"
Shipment Weight		1,164 lbs
Anchoring options	In-ground	✓
	Surface	✓
Warranty information		
Stainless steel hardware		Lifetime
Robinia wood		10 Years
Rope		5 Years
EPDM seats		2 Years
Spare parts guaranteed		10 Years

The hardware is made of stainless steel or galvanized steel to ensure durable connections with a high corrosion resistance.



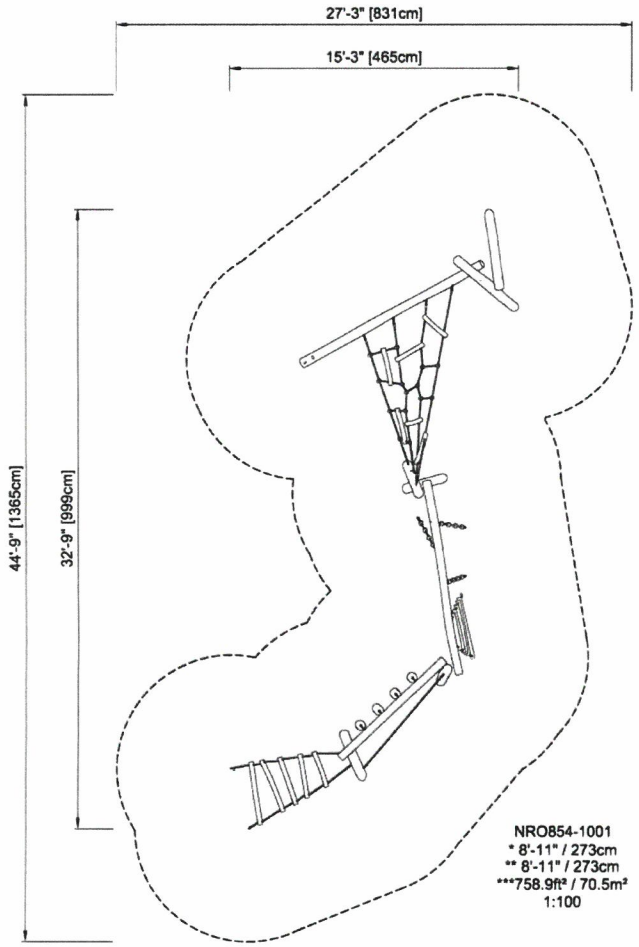
The Robinia wood can be supplied as untreated raw wood or painted with a brown colored transparent pigment that maintains the golden wood color of the wood.

Elevated Activities 0	Accessible Elevated Activities	Accessible Ground Level Activities	Accessible Ground Level Play Types
Present	0	4	2
Required	0	2	2

PARKOUR 4

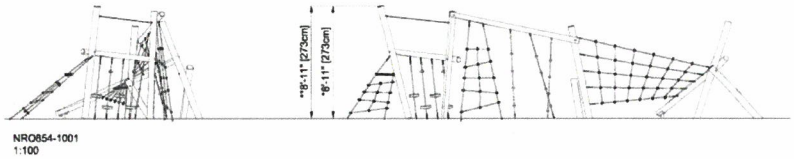
NRO854

*Max fall height| **Total height| ***Safety surfacing area



Click to see 1:100 ratio TOP VIEW

*Max fall height| **Total height



Click to see 1:100 ratio SIDE VIEW

Data is subject to change without prior notice.

PARKOUR 4

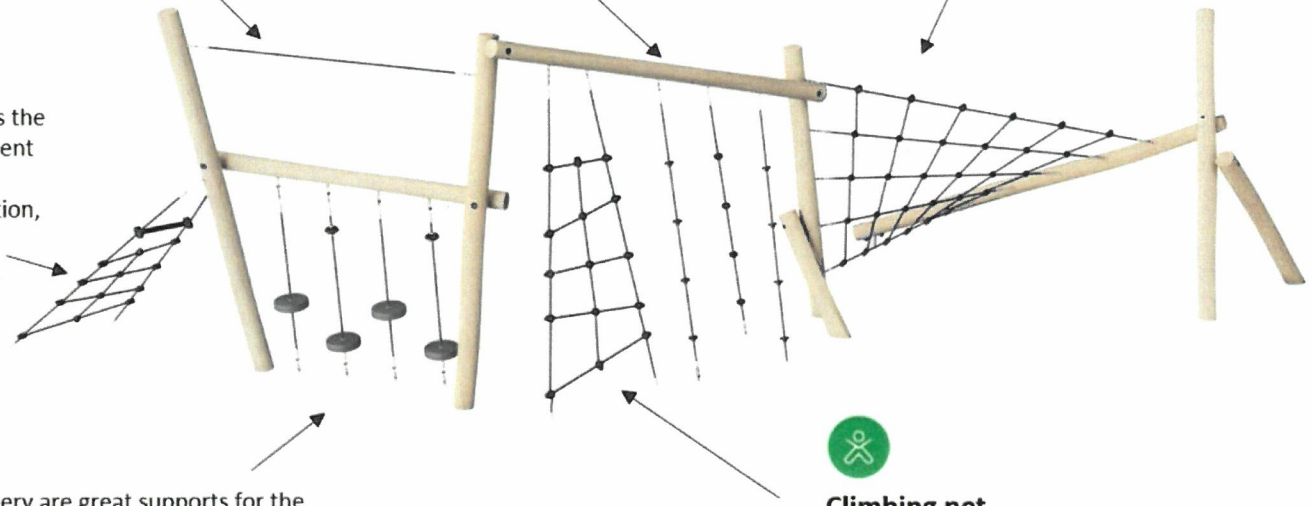
NRO854

KOMPAN Let's play

Top rope
Physical: The top rope adds support when balancing on the beam. This trains the dexterity, hand and arm muscles.

Parkour climbing knots
Physical: the small knots add support for hands and feet when clinging onto the rope, crawling up or down. This trains the spatial awareness, the cross-coordination and all muscle groups.
Social-Emotional: the ropes take cooperation when passing other children.

Twisted climbing net
Physical: the twisted, transparent climb trains cross-coordination as well as sense of balance and space. Core, leg and arm muscles are trained, too. These motor and muscle skills are crucial to e.g. prevent falling when doing vigorous physical activity.
Social-Emotional: the twisted shape creates varied seating possibilities and interaction from one side to the other. This trains empathy and cooperation.



Boarding net
The inclined net supports the upward climbing movement of the body.
Physical: cross-coordination, balance and physical strength, when climbing.

Parkour ropes
Physical: the big rubbery are great supports for the feet when climbing or crossing the module. This trains cross-coordination, sense of balance and arm and leg muscles. This combination adds to the child's general body adeptness and awareness, adding security to its movements, e.g. in traffic.
Social-Emotional: the seats make a nice destination and meeting point and take cooperation when crossing past others on the way through the module.

Climbing net
Physical: climbing on this net trains cross-coordination. Due to the inclined horizontal rungs, balance and proprioception are trained, too. These physical skills add to self awareness and helps when judging your body in time and space, a crucial skills for instance in managing traffic safely.

PARKOUR 4

NRO854

PHYSICAL
Joy of movement:
motor skills, muscle, cardio and bone density

SOCIAL-EMOTIONAL
Joy of being together:
teamwork, tolerance and sense of belonging

COGNITIVE
Joy of learning:
curiosity, understanding of causal relationships and knowledge of the world

CREATIVE
Joy of creating:
co-creation and experimenting with materials

BALANCE
To balance is to stay upright when walking or standing on a surface that makes this challenging (e.g. a wobbly, inclined, or narrow surface).

BOUNCE
To bounce is the act of bouncing on a responsive, flexible, elastic or tensile surface.

CLIMB
To climb is the act of moving upwards, cross-coordinating arms and legs, on a vertical or inclined surface or net.

CONSTRUCT
To construct is the act of creating new patterns, shifting items or materials to new positions or constructing with materials that can be transformed or manipulated.

CRAWL
To crawl is the movement of moving forwards or backwards, cross-coordinating arms and legs, on a horizontal or slightly inclined surface.

DRAMATIC PLAY
Dramatic play is motivated through play items that stage a frame, place or environment for acting out make believe or role play scenarios.

GLIDE
To glide is the act of moving from one point to another without shifting the feet, in a horizontal or vertical movement, in a seated, lying or standing position, letting gravity do the work.

Overhead HANG
Overhead hang is the act of carrying the body with the hands or arms, possibly to traverse to another platform or play item.

JUMP
To jump is the act of jumping up or down on a hard surface.

PULL
To pull is the act of pulling an item towards you or you towards an item with one or both hands, or possibly using the entire body.

PUSH
To push is the act of pushing an item away from you with one or both hands, possibly with the entire body.

ROCK
To rock is the action of rocking back and forth, or sideways, e.g. on a piece of spring equipment.

ROTATE
To rotate involves a vertical or horizontal slower paced turn of the body, facilitated by a piece of equipment.

RULE PLAY
Rule play is motivated through play items that suggest games-with-rules, cooperation and team work, e.g. tic-tac-toe, timers or ball games.

SENSORY
To sense is the act of taking in information with the sensory system: seeing, feeling, hearing or sensing with the body.

SLIDE
To slide is the act of moving fast downwards seated on a slide.

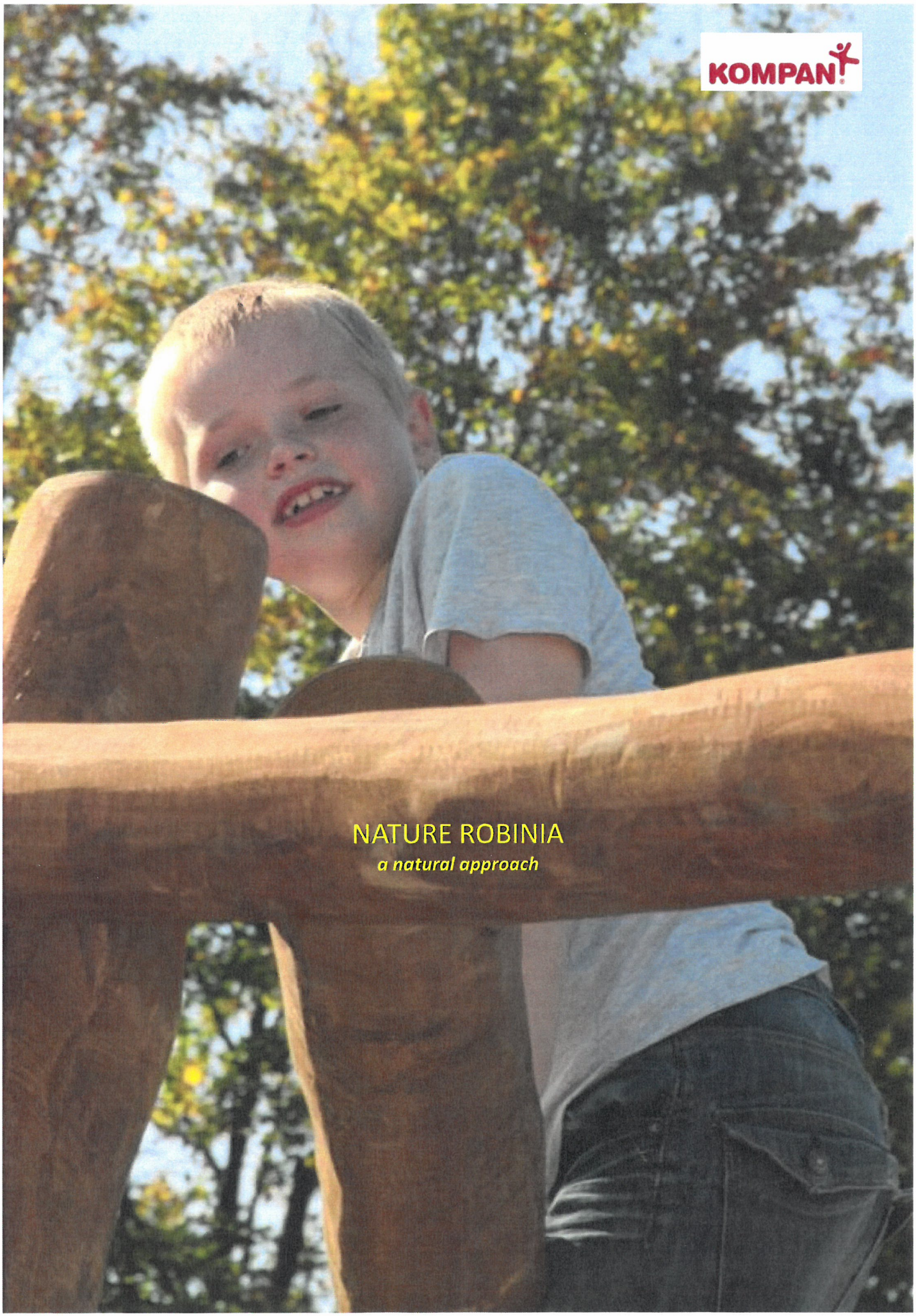
SOCIALIZE
To socialize is the act of meeting, communicating or cooperating in an activity that stimulates and facilitates social interaction.

SPIN
To spin involves a fast, repeated horizontal or vertical turn of the body on a piece of equipment that facilitates the movement.

SWAY
To sway is the movement of swaying back and forth, or around, lying, seated or possibly standing, in a pendulant or circular movement, e.g. on a hammock or on a rope.

SWING
To swing is the movement of swinging back and forth, or in circular movement, seated, standing or lying, in an unhindered arc.

WONDER
To wonder is motivated through play items that make children need and use their logical, abstract or creative thinking skills, as well as their memory.


KOMPAN
NATURE ROBINIA
a natural approach

General description of the robinia.

Robinia is like any other wooden specie, a natural and organic material. Potentially robinia contains a number of branch knots, wind scratches, openings in the surface and other patinas. The expression of the robinia changes according to the condition of weather and humidity. That's not necessarily a weakness but obviously a natural approach which gives our playground equipment the benefit of an ecological and adventurous design.

Compared to non organic materials robinia provide the user an explorative experience, and opens the gate to an imaginary world. Children discover and learn from the organic variation in wooden species, and contains the abilities of using the natural elements in the play.

For instance a branch knot is rapidly transformed into a "press the button" or "an eye watching you".

The huge tension in robinia causes endopenings in the wood as well as openings alongside the post. That does not affect the strength of the structure and does not cause any additional risk of attack from rot and fungus. This is just a natural reaction that might appear on robinia and is normally not a safety and quality issue. During routine inspection and maintenance, severe deformation must be taken into consideration, when appearing on vital areas inside the play structure. E.g. if an opening appears nearby a unit causing a forced movement (slides, firemans pole, etc) and a risk of entrapment occur, it is important to react. The issue of openings and wind scratches is taken into consideration according to current safety standards on the specific market. If a wooden deformation does not conflict with the current safety standard, it is considered a beneficial property provided by the organic wooden specie – robinia!

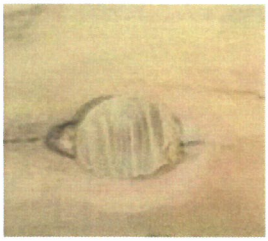
Cracks and openings

Cracks along the lines of the posts are to be expected to a certain degree, depending on changes in humidity and temperature.

Minor cracks does not affect the strength of the wood and will not require any action. In the event that they conflict with the allowed tolerances described in current safety standards or any other local regulations a repair is necessary according to the maintenance instruction.

Knots

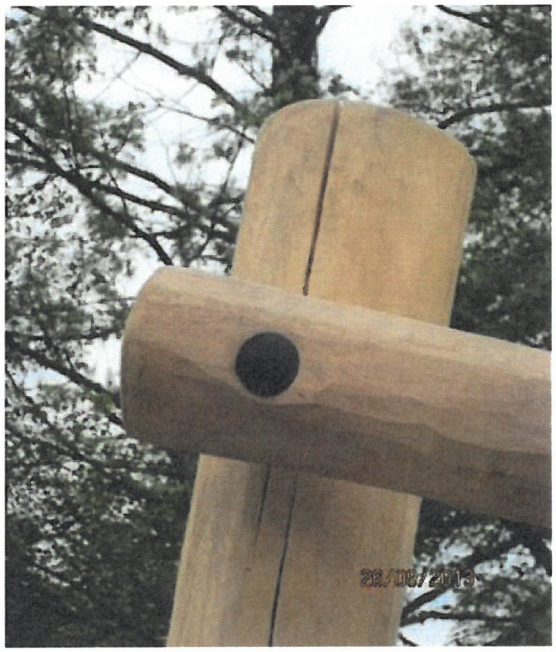
Knots occur as a natural part of robinia wood, this is where the branches have been attached to the timber while it's been growing. During the production all posts are carefully inspected, and damages, wounds and repairs are rejected from production site.

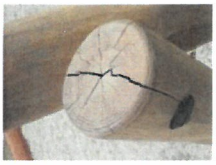


If healthy knots are removed or fall out over time, the hole might need an action according to the maintenance instruction. This should be checked as part of the routine inspection.

Following is what might appear as a natural approach from the robinia.

ACCEPTABLE BEHAVIOUR





Cracks and openings is a natural appearance and is unavoidable on any wooden specie. As long as the crack or opening does not conflict with the current safety standards, or constitute any potential risk of entrapment or weakening of the integrity, it is an expectable and accepted behavior of the robinia wood.

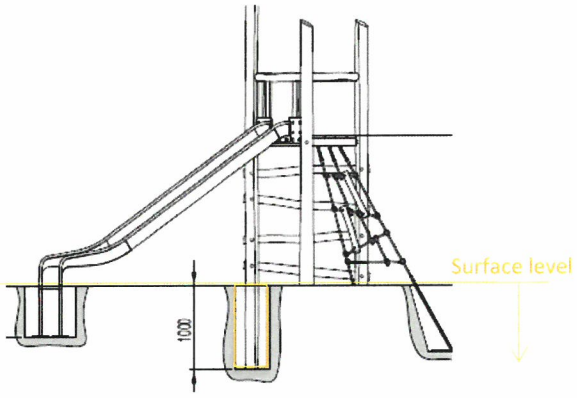
Minor wounds and knots on the surface of the robinia is acceptable and unavoidable. As long as it does not conflict with the current safety standards, or weakening the integrity of the product it is allowed and expectable. Cosmetic issues will be managed during the process of production.

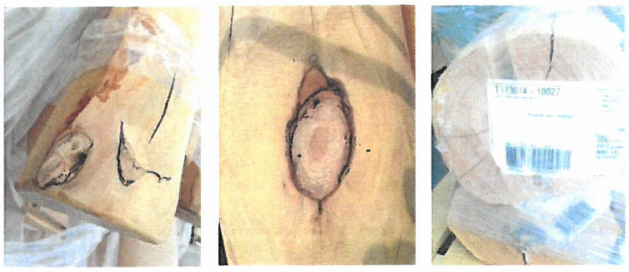
Wooden deformation below surface level

Wounds, cracks, openings and surface rot does not affect the strength of the posts, and are allowed below surface level. During production any deformation are carefully evaluated, and often accepted if it appear as installed in ground.

ACCEPTABLE BELOW SURFACE

Below surface level we have no requirements to the robinia.



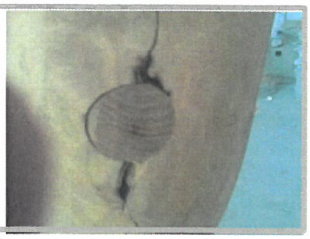


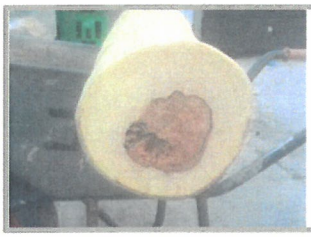
During production and internal quality inspection is carried out. We evaluate the quality and defects on raw material. Following issues are not accepted from production site, unless they are below surface level.

NOT ACCEPTABLE ISSUES

Large wounds containing potential risk of entrapments within short time. Cosmetic deterioration is a production evaluation.

Repairs contains a specific risk of falling out, and leave an entrapment.





Severe rot inside the posts or beams contains a potential risk of entrapments over time.

Cracks and openings are only accepted if they do not contain a potential risk of entrapments, according to current safety standards. Normally an opening goes from outside and in to the middle of the post, and leaves a V-shaped opening, which ***not*** contain a risk of entrapment.

Large openings with potential risk of effecting brackets or connections are not accepted if it influence the integrity of the equipment.

Cracks from end to end influence the integrity and is not acceptable.

ROBINIA

ROBINIA:

Wood
Posts, crossbars and other un-fabricated parts are made from de-barked and sap free Robinia trunks in various dimensions. Robinia is an native European wood specie with high strength and natural durability in various climatic conditions. The low degree of fabrication allow for a very natural look leaving posts bend and winding in some degree. Basic lines however are cut to meet safety requirements of EN1176.

KOMPAN uses wood from FSC-certified sources

Climbing walls are made from weather resistant plywood coated with anti-slip film on both sides.

Metal
Slides, fireman's poles, handles, spacers, chains and bars are made from stainless steel,.

Brackets, support legs and chains are hot dip galvanized steel tested for compliance with US CPSIA requirements regarding lead content as well as the European Standard EN 71-3 regarding migration of unwanted substances.

Springs are made of steel qualities that meet DIN 17221. The springs are subjected to shot peening to prevent crack formation and fatigue fracture. Spring durability and expected life in use are tested on a sampling basis to ascertain that the spring will function after more than 5 years of normal use. Springs are fitted with patented anti-pinch clamps of cast nylon

Rope
Nets and ropes – Nets and ropes are made of UV-stabilized PP (polypropylene) with inner steel cable reinforcement. Ultimate tensile strength of the rope is at least 2,500 kg. The net connectors are KOMPAN-designed and made from a specially formulated injection-molded PA (polyamide) in order to perform the maximum strength and UV stability. Nets and ropes are equipped with stainless steel chains in the end for adjustment due to variation in Robinia dimensions.

Plastic
Panels for decoration and attachment of slides are made of 19mm EcoCore™.
EcoCore™ is a highly durable, ecofriendly material, which is not only recyclable after use, but also consists of a core produced from 100% recycled material. The core has a thickness of 15mm and representing 80% of the total material.

Net connectors, handles and plugs are pressure molded Polyamide PA.

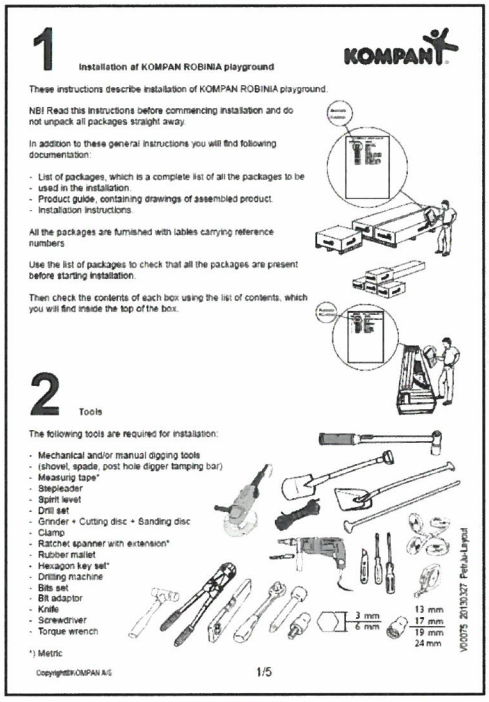
Swing seats, spring inserts, dampers for seesaws and manipulative items are made from synthetic rubber (PUR, TPE, EPDM and SBR). Swing seats are tested to meet the impact criteria of EN1176 as well as ASTM F 1487.

Sunshades are made of 100 pct. off white polyester. The fabric are Tested and certified according to UV standard 801.

Installation:

When installing robinia it's important to be well prepared. For easier approach on installation Kompan carried out a general description showing what's important when preparing the installation.

Most of the tools needed during installation are standard devices and available in almost any tool shop. Notice though, that special tool are needed additionally during most installations.



1 Installation af KOMPAN ROBINIA playground

KOMPAN

These instructions describe installation of KOMPAN ROBINIA playground.

NB! Read this instructions before commencing installation and do not unpack all packages straight away.

In addition to these general instructions you will find following documentation:

- List of packages, which is a complete list of all the packages to be used in the installation.
- Product guide, containing drawings of assembled product.
- Installation instructions.

All the packages are furnished with lables carrying reference numbers.

Use the list of packages to check that all the packages are present before starting installation.

Then check the contents of each box using the list of contents, which you will find inside the top of the box.

2 Tools

The following tools are required for installation:

- Mechanical and/or manual digging tools
- (shovel, spade, post hole digger tamping bar)
- Measurig tape*
- Stepleader
- Spirit level
- Drill set
- Grinder + Cutting disc + Sanding disc
- Clamp
- Ratchet spanner with extension*
- Rubber mallet
- Hexagon key set*
- Drilling machine
- Bits set
- Bit adaptor
- Knife
- Screwdriver
- Torque wrench

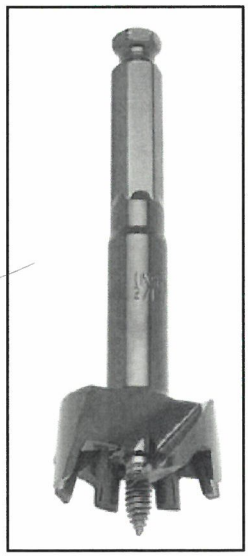
*) Metric

3 mm 6 mm 13 mm 17 mm 19 mm 24 mm

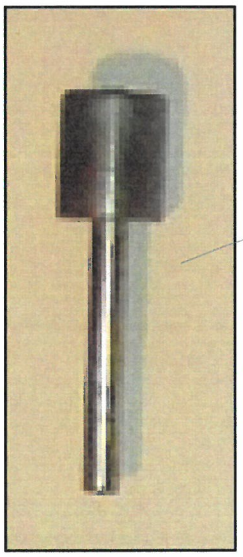
V00075 2013/327 Pet-Ju-Layout

CopyrightKIRKOMPAN A/S 1/5

The special tool 34 mm. wood drill and lead tap are often used when countersink drilling on site. These are available at Kompan by ordering from the item number shown below.



Item no. A173094-XX
38 mm. Countersink drill



Item no. A173095-XX
Lead tap

ROBINIER

Family: FABACEAE (angiosperm)

Scientific name(s): Robinia pseudoacacia

Commercial restriction: no commercial restriction

Note: Coming from East of USA, ROBINIA was introduced in Europe by Jean ROBIN in the 17th century. ROBINIA is frequently called "Acacia" which is source of mistake. The name "Acacia" must be used only for woods of the "Acacia" genus (tropical species). Some of them, coming from plantations are arriving on the European market today (i.e. ACACIA MANGIUM, cf. corresponding sheet).

WOOD DESCRIPTION

Color: yellow brown

Sapwood: clearly demarcated

Texture: coarse

Grain: straight

Interlocked grain: absent

Note: Yellow to greenish yellow when freshly cut, heartwood comes darker and rapidly takes a golden brown shade sometimes quite dark.

LOG DESCRIPTION

Diameter: from 15 to 50 cm

Thickness of sapwood:

Floats: pointless

Log durability: good

PHYSICAL PROPERTIES

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

	Mean	Std dev.
Specific gravity *:	0,74	
Monnin hardness *:	9,5	
Coeff. of volumetric shrinkage:	0,40 %	
Total tangential shrinkage (TS):	6,9 %	
Total radial shrinkage (RS):	4,4 %	
TS/RS ratio:	1,6	
Fiber saturation point:	30 %	

Stability: moderately stable to poorly stable

MECHANICAL AND ACOUSTIC PROPERTIES

	Mean	Std dev.
Crushing strength *:	70 MPa	
Static bending strength *:	126 MPa	
Modulus of elasticity *:	16900 MPa	

(*: at 12% moisture content, with 1 MPa = 1 N/mm²)

NATURAL DURABILITY AND TREATABILITY

Fungi and termite resistance refers to end-uses under temperate climate. Except for special comments on sapwood, natural durability is based on mature heartwood. Sapwood must always be considered as non-durable against wood degrading agents.
E.N. = Euro Norm

Funghi (according to E.N. standards): class 1-2 - very durable to durable

Dry wood borers: durable - sapwood demarcated (risk limited to sapwood)

Termites (according to E.N. standards): class D - durable

Treatability (according to E.N. standards): class 4 - not permeable

Use class ensured by natural durability: class 4 - in ground or fresh water contact

Species covering the use class 5: No

Note: This species is listed in the European standard NF EN 350-2.
It is the only temperate hardwood introduced in Europe which naturally covers the use class 4.
According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: does not require any preservative treatment

In case of risk of temporary humidification: does not require any preservative treatment

In case of risk of permanent humidification: does not require any preservative treatment

DRYING

Drying rate: slow
Risk of distortion: high risk
Risk of casehardening: no
Risk of checking: high risk
Risk of collapse: no

Possible drying schedule: 6

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
Green	42	41	94
50	48	43	74
30	54	46	63
20	60	51	62
15	60	51	62

This schedule is given for information only and is applicable to thickness lower or equal to 38 mm.
It must be used in compliance with the code of practice.
For thickness from 38 to 75 mm, the air relative humidity should be increased by 5 % at each step.
For thickness over 75 mm, a 10 % increase should be considered.

SAWING AND MACHINING

Blunting effect: normal
Sawteeth recommended: stellite-tipped
Cutting tools: tungsten carbide
Peeling: good
Slicing: nood
Note: ROBINIA wood has a good aptitude for bending.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
Gluing: correct
Note: Tends to split.

FIRE SAFETY

Conventional French grading: Thickness > 14 mm : M.3 (moderately inflammable)
Thickness < 14 mm : M.4 (easily inflammable)

Euroclasses grading: D s2 d0
Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

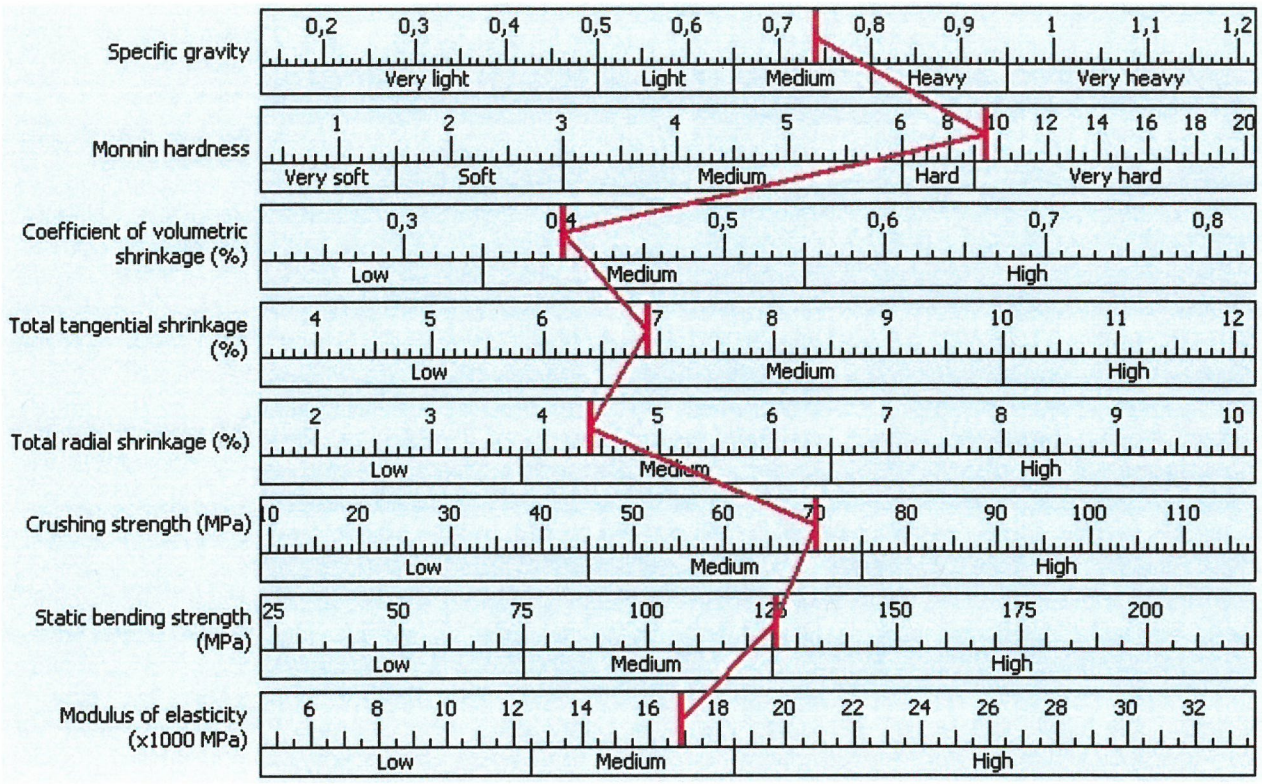
END-USES

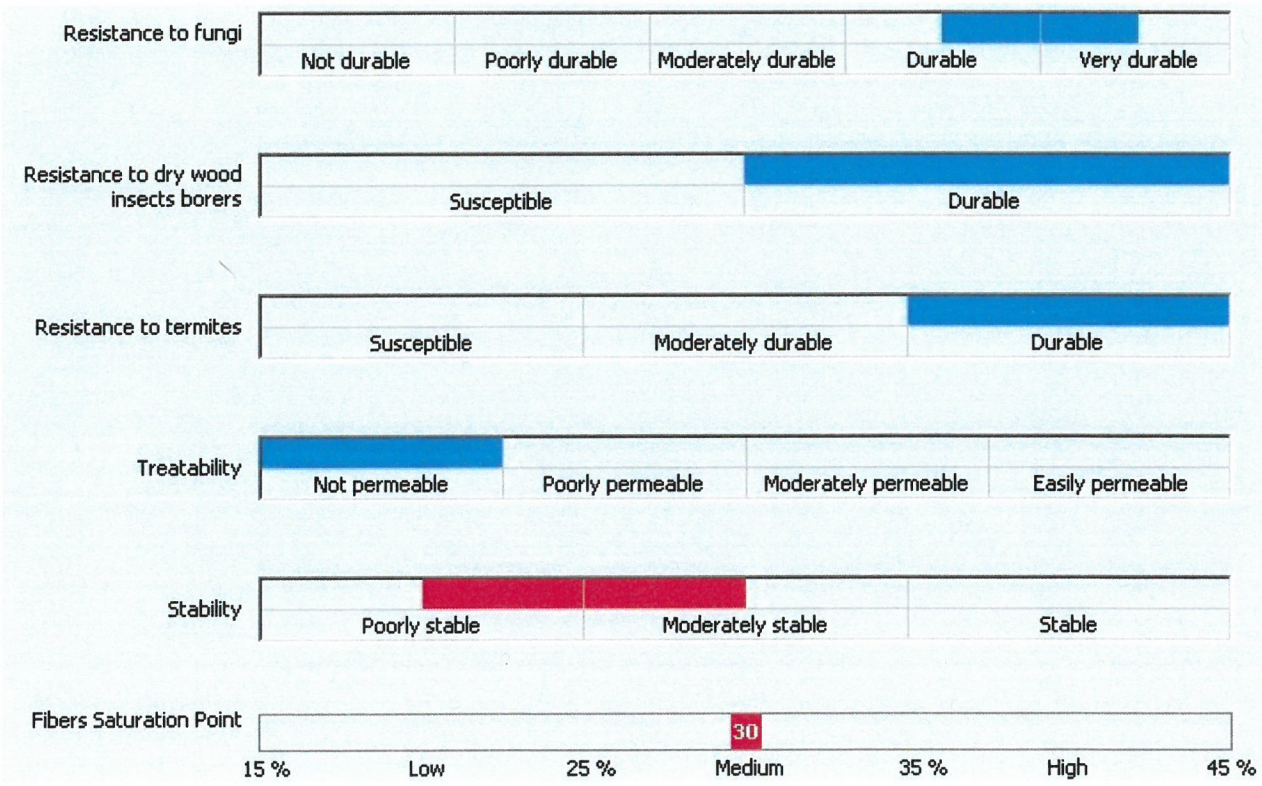
Stakes
Pit props
Ship building
Tool handles (resilient woods)
Hydraulic works (fresh water)
Exterior panelling
Sliced veneer
Wood-ware

MAIN LOCAL NAMES

Country	Local name
Germany (temperate timber)	FALSCHE AKAZIE
Spain (temperate timber)	ROBINIA
France (temperate timber)	ROBINIER
United Kingdom (temperate timber)	FALSE ACACIA
United States (temperate timber)	BLACK LOCUST

Country	Local name
Germany (temperate timber)	ROBINIE
France (temperate timber)	ACACIA
Italia (temperate timber)	ROBINIA
United Kingdom (temperate timber)	ROBINIA


Specific gravity
0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1 1,1 1,2
Very light
Light
Medium
Heavy
Very heavy
Monnin hardness
1 2 3 4 5 6 8 10 12 14 16 18 20
Very soft
Soft
Medium
Hard
Very hard
Coefficient of volumetric shrinkage (%)
0,3 0,4 0,5 0,6 0,7 0,8
Low
Medium
High
Total tangential shrinkage (%)
4 5 6 7 8 9 10 11 12
Low
Medium
High
Total radial shrinkage (%)
2 3 4 5 6 7 8 9 10
Low
Medium
High
Crushing strength (MPa)
10 20 30 40 50 60 70 80 90 100 110
Low
Medium
High
Static bending strength (MPa)
25 50 75 100 150 175 200
Low
Medium
High
Modulus of elasticity (x1000 MPa)
6 8 10 12 14 16 18 20 22 24 26 28 30 32
Low
Medium
High


Resistance to fungi
Not durable
Poorly durable
Moderately durable
Durable
Very durable
Resistance to dry wood insects borers
Susceptible
Durable
Resistance to termites
Susceptible
Moderately durable
Durable
Treatability
Not permeable
Poorly permeable
Moderately permeable
Easily permeable
Stability
Poorly stable
Moderately stable
Stable
Fibers Saturation Point
30
15 %
Low
25 %
Medium
35 %
High
45 %