ger\yurt info book
a technical pictorial
These pictures have been collected off the internet in januari2004. My sincere apologies to those people who made them available, for not asking their consent to use them for this project. However I think it is nessesary to clear-up a lot of mistakes in the available yurt-info, and these pictures serve my purpose very well. Thanks guys, I could never have gotten such a wide-ranging covering of this subject on my own.

*The pictures I have used are chosen for clarity in showing one or two details, and since these are mostly technical the pictures needed good resolution. Therefore they are quite big.

*They are grouped around their three countries of origin, which also clearly demarcates the division of yurt-styles. I will try to show that they are 2 totally different constructions:

*The mongolian/chinese style: relatively flat roof, Sharp angle at aeves because of straight roof-sticks, or UN. Un butt into the wheel, or TONOO, walls slope slightly inward, bagan stay in ger.

*The Kirgiz style, steeper pitched roof with bent un, which go through the roof-ring or TUNDUK, walls vertical, pitching-pole is stored outside.
I prefer to use the Mongolian words and names, for parts of the ger:
Lattice wall-pieces: HAN, a living-ger has 4, 5 or 6 han. All han are identical, except for the 'kitchen-han' which is half a crossing shorter.
Roof-sticks, or rafters: UN, 15 un on 1 han, and 6/8 on the door.
Roof-ring: TONOO, with 66, 81, or 98 holes (nught)
door and/or doorframe: HADDAGH
Tonoo-supports: BAGAN, normally 2 per ger.
Circumference-ropes: BUSS, 1 inside and 2 or 3 on the outside
Roof- or top-blanket: URGH
Small rope-loops on down end of un: Bridles (this is English!)
The best ger-frames are made of local larch, which splits easily and is rot-proof. The ger lasts 'a marriage' which means 30 to 40 years. The size of the ger is defined by the number of han, not by the metric diameter. However, since han and in fact all parts of ger are standardized throughout Mongolia, the rule is: 4-han=5.10 mtr, 5-han=6.2 mtr and 6-han=7.3 mtr. The latter is rarely used for living, because it is considered to be too heat.
A Mongolian ger is covered in several layers of different materials, but not all of them go all over, and not all tents have all of them:
1st: Inside liner, of white cotton,
2nd: felt, in several handy big pieces, on all tents. No ger without felt.
3rd: canvas for waterproofing and
4th: outer cotton cover (not waterproof) for sun-proofing.
I am known in the tent-world as FROIT, (get that spelling right), and have been living in, and building yurts/ger since 1996. In that summer I was taught the main dimensions and construction methods by my teacher Looda in Orchon valley, Mongolia. With living I mean year-round, northern european weather, out on a field with no protection from rains or winds (or sun, luckily). Living also means to move wherever the action has forced us to move, and we've come to appreciate the mongol ger as quick, easy, durable and repairable. So far (early 2004) I/we have built 20 ger and 3 yurt, while constantly looking to solve problems arising as they came, from the weather, from moving, as our knowledge and craftsmanship accumulate. From my visit to mongolia in 2002, to check-up on details, we have come to conclude that, their design being the best in the world, alas their economic situation does not allow them the perfection they were able to achieve. We, at home in holland, with nearly infinite energy-supplies and modern machinery and materials (glues, felt, canvas), can make a much better ger. Actually our mongolian friends here assure us that WE MAKE THE BEST GER IN THE WORLD. I find it sad to see so many young people searching and trying to make something that looks like a yurt, waisting a lot of materials and time and energy for lack of information. I hate waiste, so.... It is time to spread some of the original facts. From the people who know, me and over there..
Mongolia, independent, democratic, the only country in the world with a nomadic majority. More than half the population lives in gers, even in the city. Worst climate in the world to live in tents. No wonder the mongolian ger is by design the best tent in the world..
mong-welcome to mongolia
Big 6-han ger, painted door decoration, probably also inside. Applique decor of HAMMER on outside cover. Mounted on concrete base with wooden-slats winter-skirt. Concrete base is only a ring, filled in with rubble, then wooden floorpanels are laid.
mong-blue un

painting the frame makes cleaning easier. blue tops seem to be oldfashioned, today all I have seen are yellow/orange. The white rings in between are there "to quiet the eye". Buss is paced 2 crosses below top of han, to compensate for length-variations in un/reigns.
mong-pitching sequence
5-han ger. Ger is like living animal: bones, flesh, skin. The felt is the fat of the ger, and it’s muscle. Ger without felt is like skin-and-bones, not strong. Pattern on side is extra length of buss. Extra un are used for pushing up roof felt and then to press overlay next to haddagh.
mong-building ger
Nobody in mongolia ever questions the height of the han. Pitching becomes real hard work if they were higher. The low mongolian profile preserves heat inside, yet allows plenty standing room, since by the walls there is always beds and other furniture.
mong-pitching canvas walls!
5-han ger. striking picture:
only example of mongolians putting WALL-canvas on.
Usually walls are only felt and cover.
Picture is mirrored, haddagh opens wrong way. It always opens on the right with the hinges on the left, as seen from outside.
mong- kitchen
with floor!
5-han ger. Summer may be hot, especially with two stoves inside. This ger is a two-burner restaurant at Naadam festival. Wooden floor is for cleaning better, and stable furniture. Buss keep all the coverings from flying off in a storm, or gust. Buss make ger stronger.
mong-summer
sloping han
5-han ger.
Rolled up covers let in air, darkness of felt keeps sunlight out. Han-slat spacing is small enough to keep dogs OUT and small children IN. This picture shows how walls slope inward, which results from decreasing hole-spacing as they run upward. Makes ger stronger.
mong-summer,
lake
Summer-place by lake (Huuvsgool?). Sides are lifted, pile of fuel just outside. Life is great, even with part of the cover torn off after it rotted over winter. Wind is west, as usually. Ger faces always south, so this is early morning. Let's go have breakfast!
mong-solar ger

Although many people think you shouldn’t pollute ‘indigenous’ cultures with western ideas, mongolians are quick to pick up the possibilities to learn about new horizons. Favorite tv shows are ‘National Geographic’ and ‘Miami vice’...
Summer nights can be quite warm. Mongolians are very up-to-date on local and world information. Radio's and tv's everywhere in the countryside. Plenty solar-panels too, and generators and alas, tons of empty cheap batteries.
Just outside the city, 4-han and 5-han ger. Between the 2 poles is a high rope for "parking" horses, so they don't graze!
Check the marks left by earlier pitchings. Scars everywhere. In the back mares are being milked.
Airak is summer staple-diet.
mong-
motorcycle
5-hanl ger.
Summer wind blows
The felt is rolled down, door closed, yet tonoo is still without windows. Outside contraption is destillery boiler to make ARKHI from fermented cow-yogurt, started off with a cup of AIRAK, fermented mares-milk.
Door is blue as it should be.
Rains fall regularly every day in July and August, but never for very long. Annual precipitation is around 50 mm. Still, Mongols prefer to put a layer of waterproof (imported) canvas in between felt and cotton cover. Cotton covers protect canvas from sunlight (UV).
It takes two yak-carts to transport a 5-han ger. (count the holes, there must be 81). A 4-han fits on one cart. 4-han is 20sq mtr, 5-han is 30, one and a half times the surface and 2 times the weight. A yak can pull one ton, they said.
Being inhabited by professional nomads, Mongolia is one of the safest countries in the world for travellers. These two girls have nothing to fear from anyone, or anything not even a flat tyre.
mong-cart and lake, blue han!
Nice place, nice cart. It takes a man a week to make a cart, then it may last for five years.
Ger has blue-painted walls. No budget for decorated cover though.
mong-transport tractor
Moving goes anyway you can. Here comes a complete ger, with furniture and all, and the cattle-corral. Curved objects on bottom of pile are the bent walls, bagan go on the side and the tonoo on top.
Mong-transport carts
Unloading at new place. If not in a hurry pitching takes hours, but it can be done in one hour, including making food.
Packing-up takes a keen sense of space and sequence. Han go in first to raise trucksides, people go on last! The whole thing takes two hours, from last cup-of-tea to on-the-move. End of summer most mongols move from lower river-fields up into wooded areas, to find shelter and grazing.
Simple people, simple life, but what a tent! 5-han, three layers of felt, canvas and cover. This is a warm ger, so warm they opened a window for the well-clad visitors, who just left and made this picture. Note extra storm rope over front and back, held tight by stones. No garter on this ger.
mong-urgh on door!
Winter-pitching: skirts and gravel dyke against cold, as well as multiple layers of felt, plus a urgh of other ger. It works so well that one window is out!
Urgh (top blanket) is normally felt, covered with single cotton on both sides. Can close whole weel, but is NEVER opened more than halfway.
mong-winter
camp
Mongolian Motel
de luxe! Central
and right-hand
ger have windows
in roof.
In winter two ger
make one double-
thick ger. In
summer one
winter-ger will be
2 separate ger
again. Double
urgh doesn't work
so well, so it
hangs over the
haddagh, as an
extra felt-door.
mong-2 ger in snow
Path around ger shows the absence of guyropes. If you need you put the summer-camping 'maichen'over the top. Maichen is a blue canvas ridgepole tent used for short stays, and travelling. If mongols move the ger it is for at least a week or more. In Gobi some families move 20 times a year.
Winter can be hard. Winds may blow. Snow may pile up. Yet these gers have no guy-ropes or pegs or inner strenghtening! People wave to relief-helicopter leaving. 2001 and 2002 were very bad winters in some regions in Mongolia.
mong-skirts!

Altangerel, wife and grandchild show the use of canvas-skirt to keep draft out. Wooden haddagh is covered with a layer of felt to insulate, and keep it closed in a gust. Object next to haddagh is the holy horse-sweat wiper, with a blue ribbon attached. Horsesweat is good fortune.
mong-white!

mongolians will put glass, if they can afford, and paint everything orange if they have time. This haddagh is locked with the usual plank resting against it.

Confusing photo; cover is brandnew but badly placed or made, though ger has been there for quite a while. See grass around bottom.
mong-hotel
Jalmangers
Ger-hotel with wooden-slat skirts on all gers. Slats are not painted, so the whole place is probably brand new. Blue decoration on big ger is reminiscent of earlier garters.
mong-hotel plus
big ger
Ger-hotel with
restaurant-ger (2
stovepipes) and
many private
sleeper-ger.
Big ger has
canvas or felt
skirt. Haddagh is
blue on the inside,
to not disturb
Feng-shu, which
is the same with
haddagh open or
closed.
Row-pitching is standard, also outside of tourist camps. Everybody has free view out front, and privacy. Most westward ger is favorite position, because it gets no smoke from neighbours. Most families have 2 to 4 ger pitched in summer, 1 or 2 in winter. Check stone to keep urgh down, not pegs!
For big ger the decoration-budget stretches further. This ger is souvenir shop, (without stove). There are many tourist ger-camps like this all over the country. A night in a ger cost around 20 dollar. (one month’ wages for the cook.)
mong-inside
blue!
5-han blue ger.
Two single beds,
a 2 seeter couch,
washing cabinet
and one(!) chest.
Stove is standard
market-quality (1
mm thickness).
Stove platform is
very common.
Ger is pitched as
‘ready for sale’.
This ger may cost
an annual salary
for a
schoolteacher.
mong-inside decorated
Decorations enhance and up-value the ger by two. Urgh is never opened more than half. Check window-frames with toggles to prevent them from flying out in storms. Urgh will "float" up, filling vacuum suction created by curved ger-roof. (Like aeroplane-wing).
This is inside my first ger, a 5-han.
mong-bagan!
example
A little extra attention to the home-decoration is normal around the world. Check curved bagan-tops. This decoration is called "3-colour", which means 2 hues of the same colour plus white. Curly bits are 'dragons' that support 'heaven'. 
**mong-inside cloth!**
Inside wall-liner with it's two ribbons. (The second ribbon is where the un meet the han).
Furniture is normally all painted in one style. This is a four-bed arrangement, so it must be a 5-han ger. Bagan has electricity-socket!
Restaurant
Properly-hung inner-wall cloth takes two ribbons and a lot of fiddling. Most ger are orange, but nowhere you can buy orange paint. All decorators I asked say they mix themselves. Decorating is a specialism, as are most other jobs: han, tonoo, un, felt. Nobody makes a whole ger by himself.
Mong-Inside
Nice orange!
Motel-ger, with RED storm-rope. Stormrope is always RED, at least the tip of it. Mongols find this really important. Nice orange-and-decoration un. Inner liner is a hassle to hang, but provides dead-air space (hangs vertical, with a narrow edge on top coming forward.)
**mong-inside big ger**

High-wall restaurant. Han-cover is drawn aside to reveal guilded knot-covering studs. In big ger the han are not stretched to square angles. Walls are also much higher. Sitting is on low stools, mongols rarely seat their guests on the floor. Paintings are all roll-up, travel-ready.
Sad to see all the leopard-tails, but nice furniture and gold-covered hanknots. Rich nomads will pitch a ger like this for the wedding of a daughter, or to entertain friends at a big gathering.
mong-inside
cafe
Ger-cafe, check
newspaper
mounted in
wooden slats.
Nice chests are
always made in
pairs. Sewing-
machine is
optional.
Rich family presentation-ger. Striking position of bagan, centre-back. Bed-curtains can be closed for heat and privacy, but are not very common. Soetetse is brewing in the wok, expecting visitors. Check GREEN painted un and sweat-wiper.
mong-han to haddagh
Check haddagh-khan connection, pressed into a slot by buss-pressure. Wall-felt has no white cover, this is quite usual in countryside ger. Since walls rarely get canvas-clad, having no liner will dry wall-felts better after a rain.
mong-bridleless! un
Check fat hants, and bridleless un-to-wall connection. Looks like in the old Shelter-book. Roof and wall-liners seem to be sown into one piece. Bed is in cans with water to prevent climbing insects from disturbing the good sleep.
mong-fat han!

The proper way to wake up grandpa. Check fat hands. This tent is as old as his marriage. (see missing un). As raggedy as it is, 2 blue curtains give some kind of decorum to the old man’s bed. Tha men are exchanging snuff bottles, the way of greeting.
mong-felt only, window!

old style museum-ger, no canvas or cover. They even removed the haddagh (but forgot the hinges) to put the old-style felt-only haddagh. This ger is not for living, but tourists like it. Most likely it is a souvenir shop. Concrete base is for often-used spots, especially in tourist-camps. Check windows in tonoo.
mong-garter!

Oddball picture, strange haddagh (inverted?), but nice ‘garter’ which keeps the felt down in a gust. Today garters are used for decoration only on ‘covered’ gers, executed in thin cloth applique on the outer cover. Looks like this ger is maybe in china.
old-style ger, used for restaurant in 'djengis khan hotel', is historically dubious. "old-style ger" are only made for their attractiveness, in tourist camps and "open air museums". Mongolians today are frantically searching for their roots after 60 years communism.
mong-antique ger
5-han small ger. Han have 12 un each. (total 66 un, like in big-4 han ger) No canvas or cover, wooden haddagh, beautiful furniture and greenish painted un. Oldest surviving ger in mongolia. Went to many an exhibition. Was never used, which is why she survived.
mong-UB
outskirts
Ulan-bataar suburb, half ger, half shack and shanty. All gers here are either 4 or 5 han (5 or 6 meter diameter.) Nowadays many people are building log-cabins, because they fit better around a tv and a couch, but living conditions are still pioneer style. No running water or sewer.
Naadamgigatent
+maichen
Big portable
temple at
naadam. Blue tent
in front is
MAICHEN,
mongolian travel
tent. Material is
cotton duck,
backed with a
sewn-on layer of
bedsheet-cotton.
Waterproof to
mongol
standards.
Decorations are
stiched on,
perforating cloth.
Two uprights and
a ridgepole, 12
pins.
Naadam field. Plenty Maichen, plenty Ger, even the president’s stretch limo! For naadam they like western tents very much. It lasts only three to five days for most people, then the grass is gone—horses go hungry. 800 ger gathered in 2002, with 5000 horses and all the other food “on the hoof”.

The suburb of Ulaanbaatar, Mongolia is crowded as the Naadam starts on July 11.
That's what living in ger is all about. Since Mongolia is basically nomadic, there are no fences in the country, save for two, left and right of the railroad tracks. The best use shepherds have for fences is to make ger out of them, or burn them...
**orchon waterfall**

To prove there is water in Mongolia:

100ft (30mtr)
Orchon waterfall.
Only waterfall in the whole country, and I swam in it!
(very cold).
Mongols do not like to swim in streams, to avoid polluting the water for those downstream.
Fish is not eaten out of respect for Buddha, who was a pisces.
ourtz

Also in Mongolia they have tipi's, but they call’em Ourtz. 12 poles allways, 2 separate pieces for the cover, a lower and a top-piece. No smoke-flaps or lining. One new pole is cut every time they pitch. Poles are birch, with a limited life-span. People survive on/with rdeer.
For a long period today's Mongolia and today's China were one empire. It was unified by Jengis in the 12th century. After his death Kubilai moved the centre of government to Xanadu, the gardens of Beijing. Soon after the Mongols/Herdsman/nobles in the steppes north of the wall proclaimed the move illegal, and over a period of a few centuries the power drifted away, back to Karakorum, the old 'capital'. The life in the steppes changed very little, except maybe the arrival of Buddhism. Then disaster struck in the form of communism. Herdsmen need to be free in their roaming, since livestock in this climate allows no delays for administration. It dead or alive. Both in Mongolia and the province of Inner Mongolia in China collectivisation was implemented, with disastrous results. In no time all monasteries were closed, monks killed, and decision-making structures abolished. Both regions were overgrazed, but the fat was wasted or exported. While Mongolia saved its butt, Inner Mongolia was 'saved' by subsidised farmers immigration. It went through the same motions of success and disaster as the wild-west of America. Today Han-Chinese are a vast majority, and agriculture is fading out. Official programs to re-introduce the traditional herding founder on the demands of space by overpopulation. Inner-Mongolia is lost forever. Frantically trying to recover, the only ger left in China are showpieces, remembering a glorious past. Inner-Mongolia has its own RED BOOK...
According to mongolians"nearly right". Check missing un!
Tourist-hotel, worst pitching ever. Grass this high wouldn’t last a day in Mongolia, the cattle would eat it. Inner Mongolia is a repeating of the infamous Dustbowl-experience in America in the 1920’s. Beijing exploits the heritage of its oppressed peoples, like in Tibet.
mong-china-garter!

Nice garter on this otherwise poor ger. (cardboard on doorframe). Big pane of glass shows this is not a nomads tent, it would never last. Ger is covered with a separate piece of canvas for roof and wall each. The door has a lock, very un-inviting, and rare in Mongolia proper.
mong-china
garter!+skirt!
Tourist centre/ china. Ger have
electric light, and
guy ropes??? Ger have
nice (chinese?) blue
wooden skirts.
This is china-
disney, where
djengis was a
really bad guy, but
his poor sheperds
are so cute and in
need of help.
mong-inside
blue! ceiling
Interesting printed cloth for ceiling.
Seems to be mongol ger but without bagan.
Kirgiz yurt, and their differences with mongol ger

Most striking differences between mongol and kirgiz yurts are the curved roof-sticks, the storing of pitching-pole outside, and the general use of felt doors. Structurally the tents are seemingly the same, but at closer look you will see many differences. First, and most important is the flexibility of the kirgiz frame, which relies much more than the mongol on the strength of the cover (felts, canvas) and the buss/ropes to maintain it’s shape. Especially the made-to-shape felts with their low diagonal stretch define the final yurt. In the mongol ger the frame of it’s defined size will dictate the shape (flat) and cut of the felts, and not vice versa, as in kirgiz yurt.

Another difference is the tying of knots, un-to han in the kirgiz, where the mongols use loops. Same around the doorframe, where kirgiz tie their han with several knots, and the mongols slip it in a groove in the haddagh. Because of their curved un kirgiz must use protruding tips through their tonoo, mongols can do with ‘blind’ holes, allowing them to develop the much stronger built-up tonoo. With all their
kirk-twol bagan

Obviously a kirgiz-style yurt, but supported by two bagan this tent is really in between. Kirgiz for roof-ring is tunduk. Unlike this one they commonly are divided by an odd no. of saplings.
From the Mongolian book 'ger', a theoretical drawing of the evolution of tipi-style tent to round-house, and in to two style of ger/yurt. It also shows the lowering of the profile, as open fires were replaced by stoves and stovepipes.
KIRGIZ NATIONAL FLAG. Yes that is a steam-bent multiple-divider TUNDUK. Odd numbers usually, to fit the one bagan, a forked pitching pole of just the right length, catching the centre cross.
khirg-presidents
yurt
Presidential yurt, not really a tent but more like a fixed structure with 3 wooden floors. Like anything in the world you can move it, if you want, in other words, I don’t consider it a tent.
**kird-big!**

**wooden floor**

Pattern on roof is from ropes holding rear roof-felt. This is mirrored on the inside by those from the front. Pitching-pole outside, whereas mongols leave them always standing inside. Rope pattern on roof is from rear-roof-felt. Same pattern on inside is from front-roof-felt.
kirk-tourist
hotel
tourist-hotel. Yurt is felt-and-cotton covered, because tourists complain about leaks. Roof-openig is covered with plastic sheet. Kirgiz sew cover canvas and lining to felt, making replacement very hard, but pitching quicker. Still, a pitching-race is always won by mongol ger.
Some yurts have 2, others 3 ribbons on each side of each roof-felt, creating different patterns over the door. Bottom corner also has a short ribbon which ties to buss, circumference ropes that hold wall-felts (3 wall-felts on this ger) to frame
Open fire. Not such an old picture, but these people cannot afford a stove. Check the storm-ropes, tucked away as in all other pictures. It seems no foreigner was ever present when they tie to big stones, but all my teachers say they do it. Weight (stone) is the key to pegless tents.
Newlyweds in their new yurt, with their latest acquisition, the stereo in matching colour! Yurt is new, as seen from the whiteness of sewn-on white liner on felt. Zebra-patterned ribbons fix front-roof to frame. Floor is plain grass! Yurt is obviously freshly pitched.
Kirgiz yurt have 2, sometimes 3 or 4 tension-bands. One just below the top of the walls, and one up above the curve of the un. With weak or old frames one is added below the first and a wide band between first and second. Red paint is standard for frames.
**kird-twin! walls**

Typical bent-un to wall fixture is with ties and knots. Rope above is wrapped around each un, starting at the door, to stop them from tipping. Split walls give an option to use only one layer during winter, reducing height. Also makes use of more plentyfull short slats.
Kırghız-inde protruding un
Bent-un yurts have bent-wood (thinnish) tunduk with the un protruding THROUGH. This gives a little tolerance in length-variation. It is only after fitting the heavy felt that they all fit snugly.
**kurg-tunduk**

Clearly are seen the protruding un through the tunduk, to accommodate for slight varications in un-length, due to different curvatures. Each tree is different, therefore also each piece of wood, and each un. Un tips are ROUND. Strangely tunduk is divided by 4 (even).
Sad for us to see, for the local kirgiz shepard a snowleopard skin is just a sign of wealth/good fortune. Ropes in front of beds show this is an exhibition-yurt. Not many people can keep such a neat house.
Old yurt (un missing) with what constitutes the riches of the future: a stack of carded wool in striking colours, for any project in the future. Missing un are a sign of wear, not a design feature. Yurts are meant to last a lifetime, even with more than half their parts broken or missing.
kirk-oetmoek
twin doors
Nice plain yurt in the countryside, with double doors. It offers the possibility to use the one the wind is not blowing into. Opening one leaves a very narrow passage though, especially if you enter with a pail of fresh sheeps-milk.
kirg-bycicle

Simple cotton cover over felt. Strangely there are no ropes holding the roof-felt on the invisible side. They should come around the back, and cross over the other 2. Roll-up felt door is still common in Kirgizstan. High threshold keeps dust out.
kirk-roadside
kitchen!
Beautiful example of the rigging of roof-felt retaining ropes. Tunduk is divided by five strut each way, which seems to be most common. 2 stovepipes mean this is a food-processing yurt, which we would call a restaurant.
**kirg-spring cleaning**
After a winter comes the time to remove a layer of felt. This yurt has been here for a while (see bottom w/ stones). Normally kirgiz should move 'when the grass in front of the threshold is worn away'. Good practise if grass is the only edible crop to produce food, drink and fuel.
Camel with yurt waits patiently as its owner makes his 3 venerating rounds around the Ovoo, piles of stones found at important places, like mountain passes and crossroads. Signposts on the spiritual road, as well as the physical. Obeying tradition brings good luck.
kirk-transport-bagan!
Yurt on the move, this time on the back of horses. Where mongolians would never ever use a horse to carry loads, kirgiz see no harm in that. Check-out pitching-pole, with a fork to catch the centre cross in the wheel-struts. This is why there are always an odd number of struts.
So it takes 4 camels to move the yurt, and the household. On all camels may be seen the strange 'chair-bed' which serve later in the yurt as furniture.
kirk-bagan+stormrop
Make-shift bagan, 4 storm-ropes clearly visible. 2 seems to be more common. Han-to-door connection is whacky, un-rhythm will falter.(there will be a gap next to the door. Could be this is a reduced older yurt which has lost one of it's old han. Kitchen-han is always half a crossing shorter.
**kirk-bagan in use**

bagan and storm-rope are used to stabilize tunduk, at the right level. After all un are in place it is stored outside. Judging from the height this is a very big yurt. Strangely this tunduk has only 4 dividers, but hangs nicely level. Through holes may be seen clearly.
kirk-pitching

tourists
Tourists help(...) pitching.
Shepherds usually pitch with no more than two persons. Note man in centre with pitching-pole. In the far right is the stove. Yurt-tourism is a big thing in Kirgizstan. It shows in the abundance of Kirgz pictures on internet.
kirg-pitching-bagan!
After felt walls the front roof-felt goes on. Man in front pushes with pitching-pole, man in back pulls felt-edge ropes. This yurt is on a prepared concrete floor, so possibly it is a hotel-yurt.
kirk-door!

This is how you fix one of those felt doors. Note pitching-pole in front. Judging from the clothing it also rains sometimes in Kirgizstan, but waterproofing is not a concern for shepherds. Tourists complain and solutions are being sought. So far no real solution is found.
**kimg-pitching down**

Looks like taking down the yurt, because stones are around the outside base, as they have been for a while. In this yurt the reeds are on the outside of felt. Outer pictures show the contrary. It is probably added as needed, and taken away when supurfious.
kimg-blue! door

Nice to see the blue door-frame, and the village-like setting. Note pitching-pole, and tree-trunk for weight on the side. Judging from the grass in front of the door it is high time to move. Alas 50 years communist system has seriously curtailed the shepherds to roam as they would before.
kird-high tops

Most striking feature on this picture is steep pitch of roofs. I don’t know where this is, I suspect it is a local or tribal feature. Urgh are turned away from sunlight, to keep yurts darker, thus cooler. Closer yurt also has a big gap near the ground, to let in cool ground-air.
As the famous silk-road winds through Kirgizstan, you may be lucky and find this lonely yurt on its banks. (the gravel in front is a result of preparing 'the silk road' for increased 'Cultural tourism'. Kirgizstan ranks lowest on Kyoto-scale of sustainability.)
KIRG-PLASTIC! URG

Standard yurt, with stovepipe on the side, and plastic extra cover over tunduk. In Kirgiz tunduk it is nearly impossible to make framed windows, as the mongols do. Due to the many divisions of struts, and the irregular curve, a sheet of plastic is maybe not traditional, but very functional.
A nice row of yurts, with interesting patterns of tie-ropes on the roof. Loose rope to close urgh on every yurt. Reeds clearly go outside of felts on the walls. High thresholds keep the dust out.
kirk-kazakh

Is this a big yurt or are these small people? It's original internet-information says it is Khazakh, which means much more northward than kirgizia. Urgh is turned away from wind, to increase venturi-effect, drawing smoke out. Urgh may be changed very often, and easily, by 4 ropes on its corners.
hanloos frame

Not all yurts have han, see this example of a small tent I found in a mongolian book. It seems also in mongolia some people settle for less than a full ger. This frame gets covered with felts, probably second-hand ger roofs.

travel-yurts

Yurt without walls#2. I found drawings in old books, now here is a picture. Seems to be a summer-camp. In summer felt is a good insulator against heat, and it keeps the light out of the tent.
Yurt without walls#2. Shasavan people in northern Iran still use this type of tent. It is called a luxury as opposed to black goat-hair stretch-tents, which are in itself a totally different story. 'Black tents' are woven, not felted, and a perfect solution for a dry hot climate, as in sahara, saoudi and Persia.
Accounts of 'felt tents' go back to roman times, but descriptions are flimsy. Most of that information is available elsewhere on the net. My addition is the current 1000 tugrik bill (nowadays US$1). The pictures following first are copies of earlier drawings, or based on hearsay. They come from illustrated islamic books from the middle-east. Most tents look like guy-roped pavillion tents with a kirgiz-style tunduk. Whether this is authentic is unclear, but it could be an interesting option for making a fire in a pavillion. Could also be that it is a misinterpretation of the stories heard by the artist that made the drawings. Also, these drawings cover 4 centuries, and are very likely partially copies of each other.
oldpics-yurt+maichen
Of all the old pictures this is the only one that clearly shows the absence of guyropes, making this a real yurt/ger.

mong-1000
tuqrik
Fantasmagorical engraving from 17th century, portraying djengis' ger on the move. No scientific justification found. Background scenes are interesting, they show 'Kirgiz', older style yurts.
This picture was the start of my search for freedom, as it must have been for many others. If you still want to know more, go to www.yurt.nl, or www.shelter, or www.gerbouw.he adshake.nl. Or mail me stam126@zonnet.nl.